10 CFR 2.201

Boston Edison

Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, Massachusetts 02360

E. T. Boulette, PhD
Senior Vice President – Nuclear

November 20, 1996
BECo Ltr. #2.96.101

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Docket No. 50-293
License No. DPR-35

SUBJECT: Reply to Notice of Violation (reference NRC inspection Report No. 96-07 and NRC letter dated October 21, 1996)

Dear Sir:

Enclosed is Boston Edison Company's reply to the Notice of Violation contained in the subject NRC letter.

In this letter, the following commitments are made:

- Complete the implementation of modifications
- Conduct training on proper calculation summation and timeliness of corrective action
- Revise the long term program procedure and provide training on the revised procedure
- Revise the engineering calculation procedure
- Include this letter in the engineering and support personnel training program

Please do not hesitate to contact me if there are any questions regarding the enclosed reply.

E T Boulette
E. T. Boulette, PhD

Then personally appeared before me, E. T. Boulette, who being duly sworn, did state that he is Senior Vice President - Nuclear of Boston Edison Company and that he is duly authorized to execute and file the submittal contained herein in the name and behalf of Boston Edison Company and that the statements in said submittal are true to the best of his knowledge and belief.

My commission expires: March 25, 1999 James D Keyes

DWE/compmgmt/vio96-07

Enclosure 1: Reply to Notice of Violation

IE01

cc: Mr. Hubert J. Miller
Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Senior Resident Inspector

ENCLOSURE 1

REPLY TO NOTICE OF VIOLATION

Boston Edison Company
Pilgrim Nuclear Power Station

Docket No. 50-293
License No. DPR-35

"During an NRC inspection conducted July 8-12, 1996 and July 22-26, 1996, for which a telephonic exit meeting was held on September 3, 1996, two violations of NRC requirements were identified. In accordance with the 'General Statement of Policy and Procedure for NRC Enforcement Actions,' NUREG 1600, the violations are listed below:

A. Technical Specification Section 3.7.A., 'Primary Containment Integrity,' requires, in part, that the primary containment integrity shall be maintained at all times when the reactor is critical.

Contrary to the above, for an indeterminate but extended period prior to April 9, 1996, primary containment integrity was not maintained in that two electrical containment penetrations (Nos. Q105A and Q105B) were not properly protected due to improper trip-settings on the circuit breakers for the two affected electrical-penetrations. Specifically, under certain high-impedance electrical fault conditions during a postulated design basis accident, the trip settings for the circuit breaker, which were set too high, could allow excessive current to pass through the electrical penetration circuits, damaging the penetration seals, and causing the primary containment to lose its integrity. (IFS 01013).

B. 10 CFR 50, Appendix B, Criterion XVI, 'Corrective Action,' requires, in part, that measures shall be established to assure conditions adverse to quality such as deficiencies, deviations, and nonconformances are promptly identified and corrected.

Contrary to the above, prior to April 9, 1996, measures were not established to assure that conditions adverse to quality were promptly identified and corrected. Specifically a condition existed, at a minimum, from 1988 (and possibly as far back as before initial startup in 1972) in which 12 circuit breakers (magnetic-trip-only breakers) for two electrical penetrations (Nos. Q105A and Q105B) had been set improperly, and the licensee did not identify this condition adverse to quality until 1996. The condition adverse to quality involved the failure to maintain primary containment integrity in that under certain high-impedance electrical fault conditions during a postulated design basis accident, the trip-settings of the circuit breakers, which were set too high, could allow excessive current to pass through the electrical penetration circuits and damage the electrical penetration seals, causing a loss of primary containment integrity. The licensee had at least three opportunities to identify and correct the condition prior to 1996, but did not do so, as described below:

1. In July 1991, during a self-assessment that the licensee performed of Pilgrim's electrical distribution system, the licensee identified that electrical penetration protection for potential electrical faults within the primary containment had not been addressed for Pilgrim Station. Although the licensee performed an operability evaluation to address this problem at that time, the evaluation was based on an incorrect assumption that the 1300 percent thermal overload of the motor starters (for the motors powered by the 12 affected electrical

circuits) could provide adequate protection of the circuits. Therefore, the incorrect breaker trip setting problem was not corrected at that time.

2. In 1992, while performing calculation PS-119 for the purpose of evaluating electrical penetrations under normal plant operation, the licensee noted that some of the circuits protected from overload by thermal relays, were not adequately protected from short-circuits because the settings of the magnetic-trip-only circuit breakers exceeded National Electric Code (NEC) limits. The licensee failed to pursue this further to identify that the circuit breaker manufacturer's technical manual required adherence to the NEC limits. Therefore, the licensee again failed to correct the improper trip setting of the breakers.

3. In July 1993, the licensee initiated action to resolve the 1991 self-assessment findings by developing plans to replace the magnetic-trip-only breakers. However, licensee staff mischaracterized the corrective actions as enhancements, and therefore, the affected circuit breakers were not replaced until 1996. (IFS 01023)

These violations represent a Severity level III problem (Supplement I)."

REASON FOR THE VIOLATION

Summary

The condition described in part 'A' of the violation was improper trip settings on certain circuit breakers that could have led to a degradation of primary containment integrity given the concurrence of several low probability events. An extensive design and licensing basis review was conducted to determine the reason(s) for this condition. The scope of the review included the original architect-engineer calculation for circuit protection and all related Boston Edison Company calculations produced in the interim. Also part of the review were related operability evaluations and corrective action program documents.

From this review, the primary cause for the improper trip settings was determined to be a general unawareness that circuit protection components within 480 vac motor control centers (MCCs) had to be coordinated. The coordination requirement was implied by reference to the National Electric Code (NEC) in the manufacturer's component sizing documents.

The condition described in part 'B' of the violation was untimely identification and correction of the improper trip settings. From the design review, it was also determined that improper circuit protection for the affected electrical penetrations was not discovered until the end of 1992 when a design calculation was completed as part of a design reconstitution effort for primary containment electrical penetration protection. This effort was undertaken to resolve an observation that design documentation for circuit protection was incomplete.

The primary reason the improper trip settings were not corrected until April 1996 was the mischaracterization of the required corrective actions as enhancements. The body of the calculation correctly characterized the improper trip settings as inadequate (not meeting the NEC) and recommended certain corrective actions (e.g., decreasing the circuit breakers' trip settings). The summary of the calculation and the coordination

curves drawn for the subject circuits, however, did not indicate this concern. These corrective actions were later termed enhancements because engineering judgment concluded the combination of events necessary to impair containment integrity was not credible. More specifically, it was judged that the contactors/overload relays would operate properly beyond the NEC limits to clear any fault, and penetration integrity would not be challenged.

The need for corrective actions was subsequently carried forward into the work planning and prioritization process. Here, the corrective actions competed with other tasks that were judged to be of higher priority. Prior to April 1996, the modification documents necessary to effect the corrective actions were scheduled to be developed for implementation during the 1997 refueling outage.

It was not until April 1996 that confidence in the ability of a contactor/overload relay to clear a high impedance fault was questioned. At that time, the circumstances relating to a fault in one of the subject circuits was being investigated by electrical engineering personnel. The fault had fused the contactor contacts in the motor starter thereby preventing the overload relay from clearing the fault. It was then recognized that a scenario was possible in which a fault could make the overload relay trip function inoperable and potentially impair containment integrity. At that time, corrective action was promptly taken.

Discussion

Circuit protection for primary containment electrical penetrations is accomplished through coordination of the circuit breaker, contactor, and the overload relay. The contactor size is based on the size of the motor in the circuit. The overload relay functions to trip (open) the contactor if a motor overload occurs. The circuit breaker functions to trip (open) the circuit if a circuit fault occurs. The magnetic-trip-only circuit breakers and associated contactors and thermal overload relays were manufactured by the Westinghouse Corporation. The Westinghouse design for magnetic-trip-only circuit breakers that are used in conjunction with motor starters (contactors and overload relays) requires the breaker to be set in accordance with the NEC.

The NEC requires magnetic-trip-only circuit breakers be set at seven times the motor's full load current. If necessary, the breaker trip setting can be increased to a maximum of 13 times the motor full load current to prevent a trip during the start of a motor. Therefore, relative to contactor size/motor rating, the circuit breaker trip setting should be no greater than 182 amperes. The magnetic-trip-only circuit breakers were set to trip between 300 - 400 amperes, instantaneously. For overall protection of the subject circuits, the magnetic-trip-only circuit breakers should have been set at the minimum trip setting (approximately 160 amperes).

Relative to electrical protection, the Pilgrim Station Updated Final Analysis Report section 8.9.5 (Cable Protection and Process Instrumentation Location Criteria) states, "Overload protection is provided by the proper selection and settings of relays, circuit breakers, heaters, and fuses."

The original architect-engineer (Bechtel Corporation) calculation EI-3 (dated in 1971) includes coordination curves for a number of protective devices for 4.16 KV switchgear, 480 vac load centers and 480 vac motor control centers (MCCs). The calculation neither identifies the basis for trip settings nor the need for coordination of the circuit breakers and motor starters. Calculation EI-3 and other electrical calculations by the architect-engineer were obtained in the December 1987 time frame.

The original MCC drawings by the MCCs' fabricator, Nelson Electric, did not identify or specify breaker trip settings. The drawings included the provision for motor data but did not indicate motor horsepower or overload relay size. The drawings (E8 series) did not include or identify test/acceptance criteria.

During initial installation (c. 1971), it appears the majority of magnetic-trip-only circuit breakers were tested at the breaker's minimum trip setting. After initial Pilgrim Station startup in 1972, the settings were recorded on visi-records maintained by electrical maintenance. Discussions were conducted with knowledgeable electrical maintenance personnel in the late April - May 1996 time frame to determine the settings of the magnetic-trip-only circuit breakers since initial startup. The results of these discussions indicate the magnetic-trip-only circuit breakers' trip settings were "usually" set at the breaker's maximum setting to prevent a spurious trip during the start of a motor, potentially at a critical time. The maintenance and settings of electrical components including circuit breakers and overload relays are currently controlled in accordance with approved procedures and drawings.

In November 1986, engineering provided test and setting criteria for molded case type circuit breakers installed in 480 vac MCCs. The breaker settings were based on electrical coordination studies that were completed in 1986. These studies evaluated coordination between circuit breakers/overload relays in 480 vac MCCs and circuit breakers in 480 vac load centers. These studies used existing trip settings from the visi-records. The trip settings of some of the magnetic-trip-only circuit breakers were decreased subsequently to coordinate with the trip settings of the related 480 vac load center breakers. The studies did not address circuit protection of the circuits powered from the 480 vac MCCs.

In the 1987 - 1988 time frame the 480 vac MCC circuit breakers were replaced. The existing HFA circuit breakers were replaced with HFB circuit breakers because HFA breakers were no longer available. The trip settings for the circuit breakers remained unchanged. The E8 series 480 vac MCC drawings including E8-13-8 (MCC-B17 circuits) and E8-15-7 (MCC-B18 circuits) were revised in May 1988 to reflect the replacements. The revision of these drawings added test/acceptance criteria for circuit breaker settings.

Calculation PS-74 (rev. 0), "Electrical Power Penetration Protection Assemblies," was approved on June 14, 1989. PS-74 evaluated the long-time, overload settings of protective devices versus the allowable electrical penetration conductor current and verified the maximum heating within the penetration was within acceptable levels. PS-74 identified certain circuits associated with electrical penetrations where the long-time, overload protection was set higher than desirable. PS-74 did not address penetration conductors' fault protection.

On July 9, 1991, several corrective action program documents including potential condition adverse to quality (PCAQ) 91-152 were written as part of preparation activities for an NRC inspection of the electrical distribution system. PCAQ 91-152 documented that calculation PS-74 needed to be revised because: (1) it did not address all values of current for which the penetrations should be protected; and, (2) the calculation did not reflect the HFB breakers that replaced the original HFA breakers. This document was later consolidated with another document (PCAQ 91-165) and was closed on August 17, 1992. The finding regarding electrical penetration protection initiated an engineering evaluation relative to operability.

During the period July 22 - 26, 1991, the NRC electrical distribution system functional inspection (91-80) was conducted. During the inspection, questions were raised involving electrical penetration protection. The questions involved:

- primary protection only (i.e., no backup protection)
- the lack of electrical penetration protection coordination curves
- the lack of an evaluation for penetration performance during design basis events such as a LOCA
- evaluation of the overload protection provided for the circuits listed on calculation PS-74 sheet 15 of 20. These circuits were those associated with electrical penetrations for which the protection was set higher than desirable

In response to these questions, PCAQ 91-165 was written on July 29, 1991, and the engineering evaluation that was initiated before the inspection was completed on August 1, 1991. As part of the evaluation, time-current curves for selected worst case circuits were prepared based on existing protective equipment settings that had been previously established. The curves showed the electrical penetration assemblies were adequately protected for short-circuit fault conditions. Westinghouse time-current curves and overload relay tables were used to develop these curves. Westinghouse documents specifying, by reference to the NEC, the required circuit breaker - motor starter coordination were not reviewed because the focus of the evaluation was on installed equipment, not the selection or sizing of new equipment. The evaluation reviewed the adequacy of the largest protective devices for low voltage power and medium voltage power circuits associated with primary containment electrical penetrations.

PCAQ 91-165 remained open pending revision of calculation PS-74 (rev. 0) to incorporate the results of the evaluation.

PCAQ 91-167 was written on August 5, 1991. This document involved the heat dissipation capability of each electrical penetration assembly during normal ambient drywell atmosphere temperature conditions and during a loss of coolant accident (LOCA). The document also addressed overload protection of the penetration conductors after the conductors were derated for normal ambient drywell atmosphere temperature, grouping and diversity. These findings did not impact the trip settings of the circuit breakers of concern. The document (PCAQ 91-167) was consolidated with PCAQ 91-165 and closed on August 17, 1992

On November 25, 1991, a letter was submitted to the NRC in response to inspection report 91-80. The letter included actions pertaining to the questions involving electrical penetration protection. The letter indicated the time-current curves for each penetration circuit were to be documented in calculation PS-74. Instead, a new calculation, PS-119, was performed to develop the time-current curves. Moreover, the letter indicated PS-74 would be revised to evaluate the penetrations' circuits that are active during a LOCA. Instead, a new calculation, PS-124, was performed (approved in January 1993) to evaluate the derating factors for the penetrations that are active during a LOCA.

Calculation PS-119 (rev. 0), "Containment Electrical Penetrations," was approved on December 18, 1992. The calculation included numerous references but did not include any Westinghouse Corporation documents that provide circuit breaker - starter

coordination criteria. The summary section of PS-119 noted the penetrations' rated short-time overload capacity, rated short-circuit current, and rated short-circuit thermal capacity were not exceeded. The summary also noted problems with the penetrations' rated continuous current for which required action was identified, including the correction of the trip settings for some magnetic-trip-only circuit breakers. In contrast, within the body of the calculation, it was noted that some circuits were not adequately protected for short-circuit fault conditions because the settings of the magnetic-trip-only circuit breakers exceeded NEC limits. The calculation did not indicate that Westinghouse required coordination in accordance with the NEC. The time-current coordination curves developed as part of PS-119 showed the overload relays' protection extending up to the trip settings of the magnetic-only-trip circuit breakers. There was no indication the overload relay protection was only applicable up to 13 times the motor full load current rating. A review of the curves would not indicate a coordination problem.

A conceptual scope and justification approval document (CSJA 93-006) was prepared on May 25, 1993, to initiate the corrective actions identified within the body of PS-119.

PCAQ 91-165 was reviewed on May 25, 1993, as part of corrective actions stemming from a notice of violation (92-27-01). The action involved the review of all open corrective action program documents, including PCAQ 91-165, that had been entered into the integrated action database for tracking as a problem report (PR 91.2165). The purpose of the review was to ensure appropriate assignment of significance level and that action plans were commensurate with safety significance. Essentially, the significance level and priority of PR 91.2165 (PCAQ 91-165) were determined appropriate because of the August 1, 1991, operability evaluation.

On May 28, 1993, CSJA 93-006 was approved and a long term program item (LTP-639) was created to track this project. Prompt corrective action, however, was not taken because the project was misprioritized based on the understanding that the project was an enhancement to restore design margin. This mischaracterization was based on the August 1, 1991, operability evaluation and electrical engineering judgment that: (1) it was unlikely an electrical fault would result in short-circuit currents within the unprotected range (> 182 amperes and < 300 - 400 amperes); and, (2) if such a fault were to occur, it was unlikely the overload protection would fail to function. The electrical engineers were not aware of the Westinghouse design requirement pertaining to the coordination requirements of the NEC at that time.

The mischaracterization of the modifications as enhancements versus required corrective actions caused the project to have a lower priority than other nuclear electrical engineering work assignments. The mischaracterization was the primary root cause for not expediting the modifications. Causes contributing to untimely corrective action included: (1) design requirements that were not properly identified; (2) the summary of calculation PS-119 was not accurate; and, (3) understanding of procedure NOP 89A1, "Long Term Plan."

On August 17, 1993, PR 91.2165 (PCAQ 91-165) was closed. This action was taken based on the operability evaluation (August 1, 1991), the issuance of calculations PS-119 and PS-124, and the approved CSJA 93-006/LTP-639. In the nuclear electrical engineering department request for close-out, the modifications were termed, "...enhancements to the protective circuit design. These enhancements will correct circuit breaker settings to be consistent with National Electric Code recommendations. Therefore, this problem report can now be closed without further tracking." The modifications were identified as enhancements based on nuclear electrical engineering

judgment that the overload relay(s) would sense a faulted condition and trip (open) the contactor(s) to clear a low probability, high impedance electrical fault that could exceed the NEC limits for the overload relay(s) and contactor(s). Again it was not recognized the Westinghouse design required, via reference to the NEC, that the trip settings were required to be established via coordination of the magnetic-trip-only circuit breakers and their associated motor starter unit (contactor and overload relay).

On January 26, 1996, an engineering evaluation for electrical penetrations' operability was conducted as a result of a problem report (PR 96.9092) that identified errors in calculations PS-119 and PS-124. The operability evaluation concluded the penetrations were operable.

On February 7, 1996, a problem with a circuit breaker for one of the drywell ventilation area coolers, VAC-205E2, was discovered during normal power operation by an operator on a routine tour. The circuit breaker, MCC B18 circuit breaker 52-1834, was found tripped. An attempt to reset the breaker was made but the breaker tripped free during the attempt. The breaker was tagged, a maintenance request was written to correct the problem and PR 96.9048 was written to document the problem. On February 7 - 8, 1996, in situ troubleshooting of breaker 52-1834 indicated a failure of the fan motor.

On or about April 4 - 5, 1996, during continued engineering review of the protection for the electrical penetrations, an additional problem was identified. The problem involved the January 26, 1996, engineering evaluation of short-circuit protection for the electrical penetrations in calculations PS-119 and PS-124. A problem report (PR 96.9159) was written to document the problem. The problem was evaluated relative to operability on April 5, 1996. The evaluation concluded the electrical penetrations were operable. The February 7, 1996, problem with circuit breaker 52-1834, however, was not known to the engineers who performed and reviewed the evaluation and, consequently, the problem with the circuit breaker was not considered as part of the April 5, 1996, operability evaluation.

Later on April 5, 1996, after learning of the problem with circuit breaker 52-1834, engineering personnel became concerned the problem might impact electrical penetration protection. On April 8, 1996, engineering personnel inspected the cubicle of circuit breaker 52-1834, by then removed from MCC-B18. Thermal damage of the contactor was found during the inspection. Of specific concern was the evidence of fusion of the contactor. Such fusion could prevent the circuit from de-energizing (i.e., the opening of the contactor contacts due to the operation of the overload relay) during certain fault conditions. Engineering personnel began a review of the electrical coordination of protective devices used to protect the penetration circuits because of the implications resulting from the evidence of fusion of the contactor contacts.

On April 9, 1996, a possible unacceptable failure mode was identified for 480 vac MCC circuits supplying power to the drywell ventilation system area coolers inside the drywell. The circuits of concern were those supplied via magnetic-trip-only circuit breakers whose trip settings could be set too high to ensure proper protection of the associated motor starter. Evaluation of these circuits identified 12 that were unacceptable, those having magnetic-trip-only circuit breakers set to trip between 300 - 400 amperes with size 1 contactors.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

Upon discovery on April 9, 1996, PR 96.9169 was written and the senior on-shift licensed operator was notified. A technical specification 3.7.A.2 limiting condition for operation (LCO) was entered because the trip settings were set too high for the 12 subject circuit breakers that are part of the protection for the containment electrical penetrations Q105A and Q105B.

An engineering modification document (FRN 96-02-22) was written to decrease the trip settings of the applicable breakers to less than 182 amperes. The trip settings of 10 of the 12 affected circuit breakers were decreased to the minimum trip setting in accordance with FRN 96-02-22. The trip settings of the other 2 circuit breakers were not changed because those circuit breakers were not installed or not in service at that time. The LCO was terminated at 2105 hours on April 9, 1996.

LER 96-004-00 reported the specific concern and corrective actions.

The integrity of penetration Q105B was verified with satisfactory results on April 12, 1996. This action was taken because of the potential for conductor overheating and, hence, the possible failure of the epoxy seals of the electrical penetration for circuit breaker 52-1834 that had been found tripped on February 7, 1996. The verification consisted of a visual inspection of the penetration test pressure gauge. This gauge and other penetration test pressure gauges are used for primary containment leak rate testing while shut down. The pressure gauge was found pressurized at a pressure consistent with the last leak rate test pressure and temperature. The integrity of penetration Q105A was also verified with satisfactory results.

Another engineering modification document (FRN 96-02-23) was issued on April 9, 1996, to replace the 12 magnetic-trip-only circuit breakers in the affected circuits. The replacement breakers are Westinghouse model HFB-3020L thermal-magnetic design circuit breakers. Thermal-magnetic design circuit breakers provide better protection because the thermal element in a thermal-magnetic breaker provides a backup to the circuit's overload relay. The trip settings of the new installed circuit breakers were tested in accordance with the revised testing/acceptance criteria specified in the respective drawings, E8-13-8 and E8-15-7, that were impacted and issued as part of FRN 96-02-22. The replacement of the circuit breakers was completed by April 23, 1996.

Calculations PS-119 (rev. 2) and PS-124 (rev. 1) were identified as impacted by FRN 96-02-23 because of the change from magnetic-trip-only circuit breakers to the thermal magnetic trip design circuit breakers. The calculations will be revised as part of the modification close-out process.

The problems with calculations PS-119 and PS-124 were discussed during two electrical engineering department weekly meetings, one held in March 1996 and one held on April 17, 1996.

The primary containment electrical penetrations were evaluated for operability based on the proper conductor derating factors and the maximum drywell atmosphere accident temperature. The evaluation concluded the penetrations were operable. The evaluation was approved on May 6, 1996. The evaluation superseded the April 5, 1996, operability evaluation performed for PR 96.9159.

Nuclear Engineering Services Group (NESG) calculations have been reviewed. The focus of the review was to determine if other similar conditions existed (i.e., improper summarizing of the calculation results in the calculation summary). The reviews identified no other instances of a calculation having been improperly summarized in the calculation summary. The review consisted of at least 10 calculations in each of the five engineering disciplines that had been approved from January 1, 1990, to October 30, 1996. The review was performed as a self-assessment.

The nuclear electrical engineering design guide standards EB19 and EB20 have been revised (to rev. E1) for improvement relative to design considerations for primary containment electrical penetration protection. This action was completed on October 29, 1996.

CORRECTIVE STEPS TO BE TAKEN TO AVOID FURTHER VIOLATIONS

The other modifications stemming from calculation PS-119 are being implemented with some scheduled for implementation during the next refueling outage (RFO-11) that is scheduled to begin on February 1, 1997. The modifications will be completed by the end of RFO-11.

Nuclear engineering procedure 3.05 (currently rev. 19), "Design Calculations," will be revised. The focus of the revision is to require verification that, if corrective action(s) is identified as a result of a calculation, the corrective action(s) is tracked. This action was initially expected to be completed by November 15, 1996. The review of NESG departments' calculations identified additional improvements to the calculation procedure. Consequently, the completion date for the procedure revision was changed and this action is currently expected to be completed by December 23, 1996.

Procedure NOP 89A1 (currently rev. 1), "Long Term Plan," has been reviewed and will be revised. The focus of the revision is to improve the procedure from a human factors perspective. This action is expected to be completed by December 31, 1996. After the procedure is revised, training on NOP 89A1 will be conducted. The training is expected to be completed in the first quarter 1997.

Actions taken and/or planned regarding procedure use and quality (NOP 89A1) are described in the response to NRC Inspection Report 96-80. Those actions are being separately tracked.

Training on the proper summarizing of calculations is planned. The focus of the training is to assure a calculation summary reflects the conclusions identified in the body of the calculation. This training will be conducted as a special training activity in the engineering and support personnel (ESP) training program. This training is expected to be completed by December 31, 1996.

Training on the communication of potential issues having safety significance is planned. The focus of the training is to emphasize management expectations regarding the timeliness of corrective action. This training will be conducted as a special training activity in the ESP training program. This training is expected to be completed by December 31, 1996.

This letter will be included in the ESP training program. The purpose of this training is for broad awareness of the violation, the reasons for the violation, and the corrective actions taken and planned. This action is expected to be completed in the second quarter 1997.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance for the coordination design issue was achieved on April 9, 1996, when the trip settings of 10 of the 12 subject circuit breakers were set to the minimum trip setting. The other two circuit breakers were tagged out of service when the trip setting of the 10 circuit breakers were set to the minimum trip setting. The integrity of primary containment electrical penetrations Q105A and Q105B was verified on April 12, 1996. All 12 magnetic-trip-only circuit breakers were replaced with thermal-magnetic trip circuit breakers by April 23, 1996.

Full compliance for the remaining design issues identified in calculation PS-119 will be achieved during the next refueling outage (RFO-11) when the associated modifications will be implemented.

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