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Vol. 16, No. 2, Part 2
Reactor Licensees

Enforcement Actions: Significant Actions Resolved Reactor Licensees

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Semiannual Progress Report
July - December 1997

U.S. Nuclear Regulatory Commission

Office of Enforcement

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ABSTRACT

This compilation summarizes significant enforcement actions that have been resolved during the period (July - December 1997) and includes copies of letters, Notices, and Orders sent by the Nuclear Regulatory Commission to reactor licensees with respect to these enforcement actions. It is anticipated that the information in this publication will be widely disseminated to managers and employees engaged in activities licensed by the NRC, so that actions can be taken to improve safety by avoiding future violations similar to those described in this publication.

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ENFORCEMENT ACTIONS: SIGNIFICANT ACTIONS RESOLVED REACTOR LICENSEES

JULY - DECEMBER 1997

INTRODUCTION

This issue and Part of NUREG-0940 is being published to inform Nuclear Regulatory Commission (NRC) reactor licensees about significant enforcement actions and their resolution for the second half of 1997. Enforcement actions are issued in accordance with the NRC's Enforcement Policy, published as NUREG-1600. "General Statement of Policy and Procedure for NRC Enforcement Actions." Enforcement actions are issued by the Deputy Executive Director for Regulatory Effectiveness (DEDE), and the Regional Administrators. The Director, Office of Enforcement, may act for the DEDE in the absence of the DEDE or as directed. The NRC defines significant enforcement actions or escalated enforcement actions as civil penalties, orders, and Notices of Violation for violations categorized at Severity Level I, II, and III (where violations are categorized on a scale of I to IV, with I being the most significant).

The purpose of the NRC Enforcement Program is to support the agency's safety mission in protecting the public and the environment. Consistent with that purpose, the NRC makes this NUREG available to all reactor licensees in the interest of avoiding similar significant noncompliance issues. Therefore, it is anticipated that the information in this publication will be widely disseminated to managers and employees engaged in activities licensed by NRC.

A brief summary of each significant enforcement action that has been resolved in the second half of 1997 can be found in the section of this report entitled "Summaries." Each summary provides the enforcement action (EA) number to identify the case for reference purposes. The supplement number refers to the activity area in which the violations are classified in accordance with the Enforcement Policy.

Supplement I	- Reactor Operations
Supplement II	- Facility Construction
Supplement III	- Safeguards
Supplement IV	- Health Physics
Supplement V	- Transportation
Supplement VI	- Fuel Cycle and Materials Operations
Supplement VII	- Miscellaneous Matters
Supplement VIII	- Emergency Preparedness

Section A of this report consists of copies of completed civil penalty or Order actions involving reactor licensees, arranged alphabetically. Section B includes copies of Notices of Violation that were issued to reactor licensees for a Severity Level I, II, or III violation, but for which no civil penalties were assessed.

The NRC publishes significant enforcement actions taken against individuals and involving materials licensees as Parts I and III of NUREG-0940, respectively.

SUMMARIES

A. CIVIL PENALTIES AND ORDERS

Baltimore Gas and Electric Company, Lusby, Maryland
(Calvert Cliffs Nuclear Power Plant), Supplement IV, EA 97-192

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$176,000 was issued August 11, 1997, to emphasize the seriousness of this event, and the importance of appropriate management control and oversight of such activities. The action was based on three violations constituting a Severity Level II problem involving inadequate radiological controls surrounding a spent fuel pool diving effort that very nearly caused a substantial radiation exposure in excess of regulatory limits when a diver inadvertently accessed an unauthorized and unsurveyed area of the spent fuel pool adjacent to fresh irradiated fuel. The licensee responded and paid the civil penalties on September 11, 1997.

Commonwealth Edison Company, Braceville, Illinois
(Braidwood Station), Supplement I, EA 97-265

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$55,000 was issued October 3, 1997, to emphasize the importance of compliance with Technical Specifications. The centrifugal charging system pump casings and discharge piping high points were not vented at least once every 31 days as required by the Technical Specifications. The licensee responded on October 28, 1997 and paid the civil penalty.

Commonwealth Edison Company, Byron, Illinois
(Byron Generating Station), Supplement I, EA 97-264

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$55,000 was issued October 3, 1997, to emphasize the importance of strict compliance with Technical Specifications and was based on two violations. The first violation consisted of two examples of failing to vent emergency core cooling system pump casings and discharge piping high points, at least once every 31 days. The second violation consisted of two examples of failing to perform a continuity check on Containment Isolation Phase "A" Isolation Valves on a quarterly basis. The licensee responded and paid the civil penalty on November 3, 1997.

Commonwealth Edison Company, Cordova, Illinois
(Quad Cities Nuclear Power Station), Supplement I, EAs 96-530 and 96-531

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$50,000 was issued June 24, 1997, to emphasize the need to understand the functional design of a safety-related system and the significance of the licensee's staff's limited questioning attitude when high winds damaged the reactor building siding. The action was based on a problem consisting of violations involving design control of the facility's secondary containment structure's blowout panels and exterior siding. The licensee responded and paid the civil penalty on July 24, 1997.

Commonwealth Edison Company, Zion, Illinois
(Zion Generating Station), Supplement V, EA 97-048

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$50,000 was issued June 17, 1997, to emphasize the importance of procedural compliance, attention to detail, compliance with Technical Specifications, compliance with radiation limits, and prompt identification of violations. The violations included failing to train personnel in accordance with procedures, inadequately maintaining radioactive material shipping procedures, inadequately implementing radiation control procedures, and exceeding the radiation limits specified in 49 CFR 173.425 for a shipment of radioactive material. The licensee responded and paid the civil penalty on July 17, 1997.

Commonwealth Edison Company, Zion, Illinois
(Zion Generating Station), Supplement I, EAs 97-222 and 97-223

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$330,000 was issued September 2, 1997, to emphasize the importance of effective management oversight of plant operations and the importance of timely, effective and lasting corrective actions. The action was based on violations pertaining to reactivity management problems and command/control problems that occurred during the February 21, 1997 shutdown; the nitrogen gas displacement of reactor coolant from the reactor vessel on March 8, 1997; and the failure of the corrective action program to implement effective and lasting actions for previous occurrence of these events. The NRC exercised enforcement discretion in accordance with Section VII.A of the Enforcement Policy and doubled the civil penalties for each of the three issues. The licensee responded and paid the civil penalties on October 1, 1997.

Consolidated Edison Company of New York, Inc., Buchanan, New York
(Indian Point 2), Supplement I, EA 97-367

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$110,000 was issued October 7, 1997, to emphasize the importance of promptly identifying and correcting problems at the facility. The action was based on two violations which involved the Overpressure Protection System being inoperable and poor response by management to a significant reduction in the observed differential head of one of the recirculation pumps in 1989, and to an engineer's identification in 1995 of this reduction in performance. The licensee responded and paid the civil penalties on November 6, 1997.

Duke Power Company, Seneca, South Carolina
(Oconee Nuclear Station), Supplement I, EAs 97-297 and 97-298

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$330,000 was issued August 27, 1997, to emphasize the importance of ensuring the operability of equipment required for accident mitigation and the need for comprehensive and lasting correction of significant conditions adverse to quality. The action was based on a Severity Level II violation involving the high pressure injection system being found in a condition where it would be unable to perform its intended function and a Severity Level III violation involving the failure to properly implement a required augmented inspection program for identifying cracks in the high pressure injection system piping that resulted in an unisolable reactor coolant leak on April 21, 1997. The NRC exercised discretion in accordance with Section VII.A of the Enforcement Policy and a \$220,000 civil penalty was proposed for the Severity Level II violation and a \$110,000 civil penalty was proposed for the Severity Level III violation. The licensee responded and paid the civil penalties on September 25, 1997.

GPU Nuclear Corporation, Middletown, Pennsylvania
(Three Mile Island Nuclear Station), Supplement I, EAs 97-070, 97-117, 97-127, 97-256

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$210,000 was issued October 8, 1997, to emphasize the importance of timely identification and comprehensive correction of problems. The action was based on violations involving design engineering, equipment classification, corrective actions, and emergency preparedness. A fifth violation involving environmental qualification was included in the Notice but a civil penalty was not proposed. The

licensee paid the civil penalties on November 3, 1997 and responded to the Notice of Violation on December 15, 1997.

Illinois Power Company, Decatur, Illinois
(Clinton Power Station), Supplements I and IV, EAs 96-412, 97-001, 97-002, and 97-060

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$450,000 was issued June 9, 1997, to emphasize the importance of strong management oversight and direction from both the site and utility in maintaining a clear focus in operational safety; the need for plant personnel to challenge and investigate discrepancies; the need to adequately plan safety-significant activities; the need to take timely and effective corrective actions; and the need for a strong self-assessment program. The action was based on Severity Level II problem involving two significant procedure violations that occurred on September 5, 1996, when licensee actions to obtain single loop operation resulted in reactor coolant leakage considerably exceeding allowed Technical Specification leakage limits that required a plant shutdown. This event resulted from deliberate actions of the operating crew and represented careless disregard by the licensee for procedural requirements. There were four Severity Level III violations involving 1) the use of procedures, 2) implementation of 10 CFR 50.59, 3) inoperability of an emergency diesel generator that exceeded the allowed out of service time, and 4) inoperable feedwater penetrations. The NRC exercised discretion in accordance with Section VII.A of the Enforcement Policy and issued the maximum amount (\$200,000) for the Severity Level II problem, \$100,000 for the procedural violations and \$150,000 for the additional Severity Level III problems. The licensee responded and paid the civil penalties on July 9, 1997.

Illinois Power Company, Decatur, Illinois
(Clinton Power Station), Supplement I, EA 97-132

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$110,000 was issued August 1, 1997, to emphasize the importance of strong and broad scope corrective action when deficiencies are identified relative to safety-related equipment. The action was based on a problem involving failure to properly maintain safety-related electrical breakers. The licensee responded and paid the civil penalties on August 29, 1997.

Nebraska Public Power District, Columbus, Nebraska
(Cooper Nuclear Station), Supplement I, EA 97-424

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$110,000 was issued December 1, 1997, to emphasize the importance of prompt identification and comprehensive correction of violations. The action was based on a Severity Level III problem involving numerous violations of failure to either identify or correct conditions adverse to quality. The most significant examples were failure to identify and correct water retention in the offgas system holdup line, potentially rendering both standby gas treatment trains inoperable, and failure to identify and correct significant fouling of a residual heat removal system heat exchanger. The licensee paid the civil penalty on December 31, 1997, and responded to the Notice of Violation on December 31, 1997 and January 28, 1998.

New York Power Authority, Buchanan, New York
(Indian Point 3 Nuclear Power Plant), Supplement I, EA 97-294

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$55,000 was issued August 19, 1997, to emphasize the importance of appropriately factoring design information into the licensee's EOPs, as well as critically self assessing all aspects of the licensee's program to ensure such deficiencies, when they exist, are promptly identified and corrected. The action was based on a violation involving three examples of design basis information not being correctly translated in Emergency Operating Procedures and appropriate direction not being provided to operators to ensure that adequate ultimate heat sink cooling was promptly available in certain accident scenarios. The licensee responded and paid the civil penalty on September 18, 1997.

Niagara Mohawk Power Corporation, Oswego, New York
(Nine Mile Point Nuclear Station, Unit 1), Supplement I, EA 97-007

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$50,000 was issued November 5, 1997, to emphasize the importance of implementation of effective Maintenance Rule programs, as well as adequate management oversight of such programs. The action was based on a problem involving failures to meet the requirements of the Maintenance Rule, 10 CFR 50.65. The licensee responded and paid the civil penalty on December 5, 1997.

Northeast Nuclear Energy Company, Waterford, Connecticut
(Millstone, Units 1, 2, and 3), Supplement III, EA 97-104

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$55,000 was issued June 11, 1997, to emphasize the importance of both adherence to security plan requirements and prompt and effective correction of violations. The action was based on: (1) multiple examples of failure to control Safeguards Information at the facility, and (2) multiple examples of failure to control vehicles in the protected area in that keys were left in the ignition. The licensee responded and paid the civil penalty on July 11, 1997.

Northern States Power Company, Minneapolis, Minnesota
(Prairie Island Nuclear Generating Station), Supplement I, EA 97-290

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$50,000 was issued October 16, 1997, to emphasize the importance of an Inservice Test (IST) program that ensures the design basis of plant systems is not compromised, the need to perform timely evaluations when USAR discrepancies are identified, and the need to maintain the fidelity of the USAR. The action was based on four violations involving the staff's failure to establish an IST procedure acceptance criteria that would not compromised the auxiliary feedwater system design basis requirements, to implement corrective actions when incorrect acceptance criteria for a safety injection pump IST procedure were identified, to analyze a discrepancy between the Updated Safety Analysis Report and the anticipated AFW flow, and to maintain the fidelity of the USAR. The licensee responded and paid the civil penalty on November 7, 1997.

Omaha Public Power District, Fort Calhoun, Nebraska
(Fort Calhoun Station), Supplement I, EA 97-251

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$55,000 was issued July 30, 1997, to emphasize the importance of maintaining all fire protection program requirements at Fort Calhoun. The action was based on violations of fire protection requirements at the licensee's facility. The licensee responded and paid the civil penalty on August 29, 1997.

Omaha Public Power District, Fort Calhoun, Nebraska
(Fort Calhoun Station), Supplement I, EA 97-432

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$110,000 was issued October 24, 1997, to emphasize the

significance of disabling plant safety features and the failure to assure that corrective actions for a previous escalated enforcement action were effective. The action was based on a problem involving the disabling of the containment spray system. The licensee responded and paid the civil penalty on November 21, 1997.

PECO Nuclear, Wayne, Pennsylvania
(Limerick Units 1 and 2), Supplement VII, EAs 97-050 and 97-115

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$80,000 was issued August 5, 1997, to emphasize the importance of performing activities as required, and maintaining accurate records of such activities, and holding staff accountable to these standards. The action included two violations involving instances of record falsification at the Limerick Generating Station. The first violation involved a chemistry technician and a former chemist, at the direction of the former chemistry manager, deliberately falsified a record. The former chemistry manager also pressured the technician and chemist to lie about their actions to licensee security personnel investigating the matter. In the second violation, a fire protection technical assistant deliberately failed to perform a fire hose station visual inspection surveillance test, yet falsified the surveillance test document to indicate the test was performed. The licensee responded and paid the civil penalty on September 4, 1997.

Pennsylvania Power & Light Company, Allentown, Pennsylvania
(Susquehanna Steam Electric Station), Supplements I and VII, EAs 96-270, 96-347, 97-054

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$210,000 was issued June 20, 1997, to emphasize the importance of performing activities as required, maintaining accurate records of such activities, and providing appropriate control and oversight of such activities. The action was based on: (1) a Severity Level II violation involving an inoperable diesel generator, the failure to follow procedures, inadequate procedures, and incomplete and inaccurate information; and (2) a Severity Level III problem involving an inoperable containment isolation valve. The NRC exercised discretion in accordance with Section VII.A.1 of the Enforcement Policy and issued twice the base amount for the Severity Level II problem. The licensee responded and paid the civil penalties on July 30, 1997.

Rochester Gas and Electric Corporation, Rochester, New York
(Ginna Nuclear Power Station), Supplement III, EA 97-339

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$55,000 was issued August 15, 1997, to emphasize the importance of appropriate attention to the security program at the licensee's facility, as well as aggressively assessing and correcting degradations at the facility. The action was based on two violations of security requirements. Each violation involved inadequacies in the vehicle barriers deployed outside the outer isolation zone to prevent the malicious use of a vehicle to gain entry to the protected and vital areas. The licensee responded and paid the civil penalty on September 12, 1997.

Tennessee Valley Authority, Chattanooga, Tennessee
(Browns Ferry Nuclear Plant), Supplement VII, EA 95-220

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$80,000 was issued to the licensee on February 14, 1996, to emphasize the importance of maintaining an environment where licensee and contractor employees feel free to raise safety concerns without fear of retaliation. The action was based on a Secretary of Labor decision finding that the licensee's contractor discriminated against an employee who raised concerns about firewatch requirements. The contractor appealed the decision. On July 2, 1997, the U.S. Court of Appeals for the 11th Circuit issued a decision upholding the Secretary of Labor's decision. The contractor petitioned for rehearing, which was denied on November 7, 1997. TVA paid the civil penalty on December 19, 1997.

The Detroit Edison Company, Newport, Michigan
(Enrico Fermi 2 Nuclear Power Plant), Supplement I, EA 97-201

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$50,000 was issued September 23, 1997, to emphasize the need to identify the root cause of safety significant problems. The action was based on the licensee's failure to implement timely and effective corrective actions to resolve electrical switch preventive maintenance problems. These problems resulted in the failure of several electrical disconnect switches installed in safety-related and non-safety-related systems. The licensee responded and paid the civil penalty on October 23, 1997.

Virginia Electric and Power Company, Glen Allen, Virginia
(Surry Power Station), Supplement I, EA 97-055

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$55,000 was issued August 29, 1997, to emphasize the importance of full compliance with 10 CFR 50.65, the Maintenance Rule, and the need for vigorous management oversight to ensure that prompt corrective actions are initiated to address significant conditions adverse to quality. The action was based on a problem consisting of violations related to the failure to meet the requirements of the Maintenance Rule. The licensee responded and paid the penalty on September 15, 1997.

Wisconsin Public Service Corporation, Green Bay, Wisconsin
(Kewaunee Nuclear Power Plant), Supplement I, EA 97-087

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$50,000 was issued July 11, 1997, to emphasize the importance of system operability, and of prompt identification of violations. The action was based on the licensee's failure to maintain the acceptance criteria for both the residual heat removal and the auxiliary feedwater flow tests consistent with plant accident analyses assumptions, and failure to use an adequate methodology to calculate instrument accuracy for in-service testing measurements. The licensee responded and paid the civil penalty on August 11, 1997.

B. SEVERITY LEVEL I, II, AND III VIOLATIONS. NO CIVIL PENALTY

Commonwealth Edison Company, Braceville, Illinois
(Braidwood Nuclear Power Station), Supplement I, EA 97-110

A Notice of Violation was issued October 2, 1997, based on two violations. The first violation involved an inadequate post-fire analysis for protection of safe shutdown capability. The second violation involved inadequate testing of roll-up fire doors where ventilation system configuration changes that affected door function were not considered in the test procedure and acceptance criteria. A civil penalty was not proposed because the licensee identified the violations and initiated prompt and effective corrective action.

Commonwealth Edison Company, Byron, Illinois
(Byron Nuclear Power Plant), Supplement I, EA 97-446

A Notice of Violation was issued November 25, 1997, based on one violation involving seven examples of the failure to provide adequate

fire protection for safe shutdown equipment. A civil penalty was not proposed because the licensee identified the violation and initiated prompt and effective corrective action.

Commonwealth Edison Company, Zion, Illinois
(Zion Nuclear Power Plant), Supplement I, EA 97-224

A Notice of Violation was issued September 12, 1997, based on violations involving the removal of a block wall during the Unit 2 refueling outage which bypassed the normal fuel building ventilation system. A civil penalty was not proposed because the licensee identified the violations and initiated prompt and effective corrective action.

Connecticut Yankee Atomic Power Company, East Hampton, Connecticut
(Haddam Neck Plant), Supplement I, EA 97-366

A Notice of Violation was issued October 9, 1997, based on violations involving: (1) failure to take timely corrective action from August 1996 to March 1997 on the potential for water hammer on the service water supply to the spent fuel pool system; (2) failure to take timely and adequate corrective actions on similar events in November 1996 and May 1997, involving repetitive procedural nonadherences for operating the turning gear on the emergency diesel generators; and (3) inadequate safety evaluation in June 1996, in which a dedicated operator was used to compensate for feedwater regulating valves that could not perform their intended design function under certain circumstances. Pursuant to Section VII.B.6 of the Enforcement Policy, civil penalties were not proposed because a \$650,000 civil penalty was proposed in May 1997, and these violations were additional examples of the performance problems addressed in that enforcement action.

Consumers Energy Company, Charlevoix, Michigan
(Big Rock Point Nuclear Plant), Supplements I and IV, EA 97-197

A Notice of Violation was issued August 12, 1997, based on violations involving: (1) an individual entered a high radiation area without meeting the appropriate procedural requirements, specifically the individual was not authorized to enter the high radiation area without radiation protection technician coverage, (2) a tour of a high radiation area was conducted without plant staff performing a proper evaluation of the radiological hazards which could have been present. During this tour two individuals received dosimetry alarms and failed to exit the high radiation area as procedurally required, and (3) radioactive waste filters were transferred without a proper evaluation of the potential radiological hazards. During this transfer, the ventilation

configuration was outside of the evaluated design basis, resulting in radioactive contamination being spread throughout the turbine building. A civil penalty was not proposed because the licensee identified the violations and took corrective actions to improve the ability to properly evaluate the extent of radiation levels and the potential radiological hazards that could be present.

Duke Energy Corporation, Huntersville, North Carolina
(McGuire Nuclear Station), Supplement III, EA 97-411

A Notice of Violation was issued September 26, 1997, based on violations involving multiple examples of failure to follow procedures for security badge and access control. A civil penalty was not proposed because the licensee identified the violations and took corrective actions which included review of each event, prompt correction of the discrepant condition, and counseling and retraining of the individuals involved to address individual performance failures and re-emphasize procedural requirements.

Duquesne Light Company, Shippingport, Pennsylvania
(Beaver Valley Power Station), Supplement I, EA 97-255

A Notice of Violation was issued July 3, 1997, based on violations involving the failure to comply with Technical Specification requirements for surveillance testing of safety equipment, namely (1) emergency diesel generators, (2) reactor coolant system pressure isolation valves, (3) hydrogen recombiners, (4) reactor protection system and engineered safety feature actuation system logic and interlocks, (5) control room emergency bottled air pressurization subsystem discharge trip valves, and (6) boron injection flowpaths. A civil penalty was not proposed because the licensee identified the violations and corrective actions were taken to retest the affected equipment and, while the staff found that the licensee's root cause analyses for some of the individual violations were narrowly focused and did not adequately assess programmatic weaknesses, ultimately the corrective actions were comprehensive.

Entergy Operations, Inc., Russellville, Arkansas
(Arkansas Nuclear One), Supplement I, EA 97-382

A Notice of Violation was issued November 18, 1997, based on violations involving (1) a failure to comply with 10 CFR Part 50, Appendix B Criterion IX in the use of data in bobbin coil sizing qualification criteria that did not conform to the requirements of the selected qualification method, (2) the failure to remove Unit 2 tubes from

service which contained flaws that exceeded the plugging limit of the Technical Specifications, and (3) the lack of prompt corrective action in November 1995 prior to returning potentially defective sleeved tubes to service. A civil penalty was not proposed because the licensee identified the violations and took comprehensive corrective action.

Florida Power and Light Company, Juno Beach, Florida
(St. Lucie Nuclear Plant), Supplement I, EA 97-501

A Notice of Violation was issued December 11, 1997, based on violations involving (1) the failure to maintain two trains of containment cooling operable as required by Technical Specification 3.6.2.1, (2) the failure to follow the procedure for a post maintenance test of containment cooler fan 2-HVS-1D, and (3) the failure to assure that appropriate testing was identified and performed to demonstrate that the Unit 2 containment cooler fans would perform satisfactorily while operating in the emergency configuration, i.e., the slow speed. A civil penalty was not proposed because the licensee identified the violations and took comprehensive corrective action.

Florida Power Corporation, Crystal River, Florida
(Crystal River Unit 3), Supplement I, EA 97-330

A Notice of Violation and Exercise of Enforcement Discretion was issued September 5, 1997, based on violations involving (1) the failure to perform an adequate safety evaluation for a 1987 modification which added five protective trips to each EDG, and (2) the failure to update the Final Safety Analysis Report to describe the added EDG protective trips. Enforcement Discretion in accordance with Section VII.B.6 of the Enforcement Policy was exercised to not propose a civil penalty because the facility is shut down and a civil penalty was issued earlier which included sanctions for engineering violations and the licensee's decision to restart Crystal River requires NRC concurrence.

GPU Nuclear Incorporated, Forked River, New Jersey
(Oyster Creek Nuclear Generating Station), Supplement I, EA 97-421

A Notice of Violation was issued November 17, 1997, based on violations involving the failure to adequately maintain and control equipment in accordance with the design basis, resulting in equipment important to safety being inoperable or degraded and failure to take adequate corrective actions to prevent recurrence of conditions adverse to quality. A civil penalty was not proposed because the licensee has not been the subject of an escalated action in the last two years and has taken prompt comprehensive corrective actions.

PECO Nuclear, Wayne Pennsylvania
(Limerick Generating Station), Supplement I, EA 97-340

A Notice of Violation was issued September 29, 1997, based on a violation involving the failure to implement and maintain in effect certain provisions of the licensee's approved fire protection program for the facility. Specifically, a temporary jumper cable did not exist, as required, to provide power to the Unit 2 automatic depressurization system solenoid pilot valves, in the event of a fire, in order to depressurize the reactor if needed. A civil penalty was not proposed because the licensee identified the violation, and took prompt and comprehensive corrective action.

Public Service Electric and Gas Company, Hancocks Bridge, New Jersey
(Hope Creek Generating Station), Supplement I, EA 97-160

A Notice of Violation was issued October 20, 1997, based on a violation involving inadequate safety evaluation for a modification that was installed in April 1994. The modification involved the installation of crosstie piping, with two isolation valves, between two trains of the Residual Heat Removal system. The safety evaluation did not identify that installation of the crosstie piping involved a USQ and they failed to identify the need to include the crosstie piping isolation valves in the monthly emergency core cooling system flowpath verification required by Technical Specifications. A civil penalty was not proposed because although the licensee did not identify the violation, they recognized the need to shut both crosstie isolation valves during a safety system functional review and the licensee took prompt and comprehensive corrective action.

Public Service Electric and Gas Company, Hancocks Bridge, New Jersey
(Salem, Units 1 and 2), Supplement I, EAs 97-182 and 97-257

A Notice of Violation was issued October 8, 1997, based on violations involving: 1) changes to the facility and procedures as described in the UFSAR that increased the probability of an occurrence of a malfunction of equipment important to safety and resulted in an unreviewed safety question, and 2) failure to report within one hour of a condition that is outside the design basis of the plant and a condition that alone could have prevented the fulfillment of the safety function of systems that are needed to remove residual heat. Pursuant to section VII.B.6 of the Enforcement Policy, a civil penalty was not proposed because a large civil penalty was issued in October 1995, which was based on similar deficiencies in the engineering programs, and subsequent to

identification of the concerns by the NRC the licensee's corrective actions were prompt and effective. Additionally, four other apparent violations which relate to a residual heat removal pump runout condition and the crediting of containment overpressure for residual heat removal NPSH calculations were not cited. Because these violations were related to licensee performance prior to the extended shutdown at the facility, they met the criteria for discretion.

Tennessee Valley Authority, Chattanooga, Tennessee
(Sequoyah), Supplement I, EA 97-232

A Notice of Violation was issued July 10, 1997, based on violations involving the failure to establish measures to assure that a significant condition adverse to quality was promptly identified and corrected and corrective action was taken to preclude repetition, and relevant information reflecting static or changing plant conditions was not recorded in at least one narrative log. A civil penalty was not proposed because the licensee identified the violations and took comprehensive corrective action.

Virginia Electric and Power Company, Glen Allen, Virginia
(Surry), Supplement I, EA 97-474

A Notice of Violation was issued December 24, 1997, based on violations involving the failure to provide adequate fire protection features for structures, systems, and components important to safe shutdown in that adequate means were not available to isolate the circuits from 120 volt alternating current power panels from the uninterruptable power supply panels, and failure to identify fully and correct a noncompliance with Appendix R requirements for the control room associated with a vital bus isolation issue discovered by the licensee in 1992. A civil penalty was not proposed because the licensee identified the violation and took adequate corrective action.

Wisconsin Electric Power Company, Milwaukee, Wisconsin
(Point Beach Nuclear Plant), Supplement I, EA 97-075

A Notice of Violation was issued August 8, 1997, based on violations involving 1) the licensee's failure to promptly identify and correct conditions adverse to quality, including failures associated with inconsistent technical specification interpretations, incorrect containment penetration testing frequencies, breaker coordination problems, and thermal overload conditions that could affect component operability, 2) failure to perform adequate safety reviews in accordance with 10 CFR 50.59, "Changes, Tests and Experiments," such that

unreviewed safety questions were created when the licensee's staff operated the RHR and the AFW systems in a manner that was not described in the FSAR, and 3) failure to properly implement TS requirements for portions of the emergency power supply system, or perform the tests at the required frequency. The NRC exercised enforcement discretion in accordance with Section VII.B.6 and refrained from issuing civil penalties for three Notices of Violation. Discretion was exercised because: (1) a large civil penalty was issued in December 1996 emphasizing the performance problems, (2) the licensee entered into a Confirmatory Action Letter which provided that the licensee would not operate its facility until it addressed the subject violations as well as other performance problems and met with the NRC to justify restart, (3) the licensee implemented comprehensive corrective actions, and (4) although the NRC identified a number of these issues as a result of its inspections, the NRC determined that the licensee dedicated significant resources to successfully address the performance issues and substantially improve Point Beach's conduct of operations.

Wisconsin Public Service Corporation, Green Bay, Wisconsin
(Kewaunee Nuclear Power Plant), Supplement I, EA 97-235

A Notice of Violation was issued August 6, 1997, based on a violation identifying a design error that rendered the reactor vessel level indication system incapable of accurately measuring reactor vessel water level. A civil penalty was not proposed because the licensee identified the violation and initiated prompt and effective corrective action.

A- CIVIL PENALTIES AND ORDERS

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

August 11, 1997

EA 97-192

Mr. Charles H. Cruse
Vice President - Nuclear Energy
Baltimore Gas and Electric Company (BGE)
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, Maryland 20657-4702

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTIES
- \$176,000
(NRC Inspection Reports Nos. 50-317/97-02 & 50-318/97-02;
50-317/97-03 & 50-318/97-03)

Dear Mr. Cruse:

This letter refers to the NRC inspection conducted at the Calvert Cliffs Nuclear Power Plant from March 2, 1997 to April 12, 1997 and on April 24, 1997, the findings of which were provided to you during an exit meeting on May 7, 1997. The inspection report was sent to you on May 29, 1997. During the inspection, several apparent violations were identified, including a number of violations related to the failure to effectively control activities conducted by a contractor diver in the Unit 2 spent fuel pool. Other apparent violations, related to inadequate radiation protection controls, as well as inadequate fuel handling operations, were also identified. On June 12, 1997, a Predecisional Enforcement Conference was conducted with you and members of your staff to discuss the violations, their causes, and your corrective actions. During the conference, two examples of an additional apparent violation of radiological protection program requirements were also discussed. Those additional apparent violations, which were identified by your staff, were reviewed by the NRC during an inspection conducted between April 13, 1997 to May 31, 1997, for which an exit meeting was held on June 19, 1997. That inspection report was sent to you on July 1, 1997.

Based on the information developed during the inspections, and the information provided during the enforcement conference, thirteen violations of NRC requirements are being cited and are described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice). The three most significant violations relate to the failure to implement appropriate radiological controls during the diving operations in the Unit 2 spent fuel pool, resulting in the potential for a diver to gain unauthorized or inadvertent access to very high radiation areas that could have resulted in significant radiological exposure to the individual. Specifically, due to insufficient controls, inadequate pre-job planning and communication, ineffective surveillance of the diver, and deficient supervisory oversight of the activity, the individual was inadvertently able to gain access to areas in which radiation levels could be encountered at 500 rads or more in an hour due to the proximity of spent fuel.

The specific violations associated with the diving activity involve (1) failure to ensure that the diver would not be able to gain unauthorized or inadvertent access to areas where radiation levels could be 500 rads or more in an hour; (2) failure to provide adequate instructions to the diver as to the nature and location of very high radiation fields and the authorized work tasks; and (3) failure to perform adequate surveys during and after the diver entered an area of the spent fuel pool that had not been previously surveyed. Your radiological control staff, responsible for planning and monitoring this activity, failed to provide control of this activity sufficient to assure that the diver would not be unexpectedly exposed to, or inadvertently enter, very high radiation fields within the spent fuel storage pool.

This event occurred during the fourth of five dives into the Unit 2 refueling cavity and spent fuel pool in April 1997 to inspect and repair malfunctioning fuel transfer equipment. During the fourth dive, the diver left the previously surveyed and approved dive location at the south end of the Unit 2 spent fuel pool, and moved into an unapproved, unsurveyed area in the north end of the pool. In doing so, the diver entered areas exhibiting significantly higher radiation fields, where he received an unplanned radiation exposure, and could have been occupationally exposed in excess of regulatory limits.

The fundamental controls provided to ensure that the diver could not gain unauthorized or inadvertent access to very high radiation fields were inadequate. Even though the diver was equipped with a tether, the individual monitoring the tether did not question the excessive amount of restraint that was let out as the diver traversed to the unsurveyed north end of the pool. While the diver was provided with multiple personal dosimetry devices that were remotely monitored by the radiation protection technicians, he was not continuously monitored by a television camera, as he had been during previous dives. Instead, the radiation protection personnel were expected to provide continuous coverage via a viewing glass placed on the surface of the pool. However, such coverage was flawed in that bubbles from the divers breathing air and to some degree, the refueling bridge, obscured direct observation. Also, the individual responsible for maintaining direct visual contact, by your own admission at the enforcement conference, became distracted from his responsibilities. As a result, the radiation protection personnel failed to observe the diver move away from the approved location. Further, when the dosimetry readouts indicated that the diver was being exposed to higher than expected fields, rather than confirming his whereabouts, the diver was inappropriately directed to reenter the area to locate the source of the radiation.

In addition, the prejob briefing with the diver and dive support personnel was ineffective in that a late change in the scope of the work directly resulted in the diver's misunderstanding of the work scope. Also, the radiation survey briefing at the job site did not identify to the diver the radiological hazard associated with the fresh irradiated fuel in the north end of the pool in that the diver was provided with a survey map of the south end of the pool, which he interpreted as representing the entire pool. Moreover, the diver was unaware that he was restricted from performing any activities at the north end of the spent fuel pool since the area was not surveyed.

After the fourth dive was completed, but prior to processing the diver's dosimetry, a decision was made to initiate a fifth dive, using another diver to complete the repair/inspection. Without his dosimetry first being processed to determine the exposure obtained during the fourth dive, the diver from the fourth dive was allowed to re-enter the spent fuel storage pool work area to support the other diver. Although he re-entered the radiological controlled area and worked in areas with low radiation dose rates, a comprehensive dose assessment had not been performed to determine whether the unauthorized entry into the unsurveyed area resulted in the diver receiving a dose in excess of the limits of 10 CFR Part 20. Preliminary calculations performed by your staff, indicated that the diver's right extremity (right knuckles) may have entered radiation fields of 155 to 310 rem/hr and the whole body (right arm) may have entered radiation fields ranging from 45 to 90 rem/hr.

Although subsequent detailed dose assessments for the diver indicated that no apparent radiation exposure in excess of NRC limits likely occurred, this was nonetheless a significant event given the serious consequences that could result from the diver being in close proximity to irradiated fuel. Weaknesses in the establishment and implementation of the type of radiological controls necessary to assure safety in the vicinity of very high radiation areas resulted in a substantial potential for an exposure in excess of regulatory limits at the facility.

In summary, the NRC considers that the event resulted from a serious lack of attention toward licensed responsibilities. The event involved a serious breakdown in controls that were to be provided for the diving evolutions. Significant deficiencies in communications, coordination, and management oversight and decision-making, also existed. As a result, a substantial and unnecessary occupational exposure nearly occurred. Therefore, the violations in Section I, which involve a very significant regulatory concern, have been classified in the aggregate as a Severity Level II problem in accordance with Section IV of the "General Statement of Policy and Procedure for NRC Enforcement Actions " (Enforcement Policy), NUREG-1600.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$88,000 is considered for a Severity Level II violation or problem. Also, since this is a Severity Level II problem, the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. Credit for identification is not warranted because there were several missed opportunities during the dive to identify these problems, particularly when dosimetry first alarmed, when the technician lost visual contact of the diver because of the bubbling, and when the diver asked a technician for more line and was not questioned. Credit for corrective actions is also not warranted because the immediate corrective actions after the fourth dive were deficient in that another diver was allowed to enter the pool without having obtained a thorough understanding of the cause of the earlier "near miss". Given the potential for substantial personnel exposures that could result from being in such close proximity to the irradiated fuel, a root cause analysis should have been performed before commencing the fifth dive, as you acknowledged at the enforcement conference. Additionally, even though you took action to change your radiological controlled area dive operations and formalize your job coverage standard into a radiation safety procedure, you did not adequately assess the full scope and root causes of the breakdown that occurred. For example, you did not determine the extent to which production pressure was a factor in causing the event. Further, during the enforcement conference, you did not appear to understand all potential contributors to the event, such as the cause of the inattentiveness of the individual assigned to observe the diver.

Therefore, to emphasize the seriousness of this event, and the importance of appropriate management control and oversight of such activities, I have been authorized, after consultation with the Director, Office of Enforcement, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of \$176,000 for the violations in Section I.

The remaining violations being cited are described in Sections II and III of the enclosed Notice and are classified at Severity Level IV. A number of these violations were identified by your staff and while a civil penalty is not being proposed for these violations, they are indicative of further programmatic weaknesses in radiological controls and protection, maintenance of refueling equipment, and conduct of refueling activities.

Two other apparent violations listed in Inspection Report 97-02, which you identified, involving (1) the failure to verify that each exhaust fan maintains the spent fuel storage pool at a measurable negative pressure relative to the outside atmosphere during system operation, and (2) the refueling machine's main hoist 3,000 pound overload limit being bypassed during portions of fuel movement within the reactor pressure vessel, are not being cited because they meet the criteria in Section VII.B.1 of the enforcement policy regarding the exercise of discretion. Further, another apparent violation in Inspection Report 97-02, involving drawings not being used to prepare either the troubleshooting form or contingency plans during assessment and repair of the stuck refueling transfer carriage, is being withdrawn because of information you provided at the conference where it was stated that drawings were used in a parallel assessment of the event.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

Hubert J. Miller
Regional Administrator

Docket Nos. 50-317, 50-318
License Nos. DPR-53, DPR-69

Enclosure: Notice of Violation and Proposed Imposition of Civil Penalties

ENCLOSURE

**NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY**

Baltimore Gas & Electric Company
Calvert Cliffs

Docket Nos. 50-317; 50-318
License Nos. DPR-53; DPR-69
EA 97-192

During an NRC inspection conducted between March 2, 1997 to April 12, 1997 and on April 24, 1997, and an inspection conducted between April 13, 1997 and May 31, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, 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 violations and associated civil penalty are set forth below:

I. VIOLATIONS RELATED TO INADEQUATE RADIOLOGICAL CONTROL OF DIVING ACTIVITIES IN THE SPENT FUEL POOL

- A. 10 CFR 20.1602 requires that in addition to the requirements in 10 CFR 20.1601, the licensee shall institute additional measures to ensure that an individual is not able to gain unauthorized or inadvertent access to areas in which radiation levels could be encountered at 500 rads or more in an hour at one meter from a radiation source or any surface through which the radiation penetrates.

Contrary to the above, on April 3, 1997, adequate measures were not provided to ensure that an individual working as a diver in the Unit 2 spent fuel pool was not able to gain unauthorized or inadvertent access to areas in which radiation levels could be encountered at 500 rads or more per hour. Specifically, while working in the Unit 2 spent fuel pool, a diver inadvertently accessed and worked in areas in which radiation levels could be encountered at 500 rads or more in an hour. (01012)

- B. 10 CFR 19.12 requires, in part, that all individuals working in or frequenting any portion of a restricted area be kept informed of the storage, transfer, or use of radioactive materials or of radiation in such portions of the restricted area.

Contrary to the above, on the morning of April 3, 1997, the licensee did not adequately inform a diver, diving in the Unit 2 spent fuel storage pool, a restricted area, of the storage of radioactive materials or of radiation in the spent fuel pool that the diver might encounter. Specifically, the instructions provided to the worker did not adequately provide the location of radiation surveys made to support the diver's work in the south end of the spent fuel pool, did not adequately limit the scope of work performed by the diver commensurate with those radiation surveys, and did not instruct the diver as to the location of irradiated fuel assemblies. As a result, the diver moved from

the dive area at the south end of the Unit 2 spent fuel pool (that had been comprehensively surveyed and had been approved for work), traversed an unsurveyed portion of the spent fuel pool, travelled to the north end of the spent fuel storage pool which had not been approved for entry, and entered high radiation fields caused by radiation emanating from irradiated spent fuel elements. (01022)

- C. 10 CFR 20.1501 requires, in part, that licensees make or cause to be made surveys that may be necessary to comply with the regulations in 10 CFR Part 20 and are reasonable under the circumstances to evaluate the extent of radiation levels and the potential radiological hazards that could be present. 10 CFR 20.1201 provides limits for occupational exposures, including exposure limits of 50 rems (shallow dose) to the skin or any extremity and 5 rems to the whole body (total effective dose).

Contrary to the above, on April 3, 1997, while the diver was supplied with radiation surveying instruments and multiple personal dosimetry devices capable of real-time indication, surveys performed with these devices were inadequate to assure compliance with occupational dose limits in that: (1) the diver was not trained in the use and limitations of the radiation survey instruments; (2) the diver failed to carry and use the survey instruments at all times when he was in the unsurveyed portion of the spent fuel pool; (3) no personal radiation dosimetry real-time measuring devices were sufficiently located to monitor exposure to the diver's lower extremities as he traversed the unsurveyed portion of the spent fuel pool; (4) the diver was directed to re-enter an area having unknown radiation levels without any verification or evaluation of the potential for personnel exposure in excess of regulatory limits; and (5) upon discovery that the diver had been in an unsurveyed area in which there was high potential for personnel exposure in excess of regulatory limits, the individual was permitted to re-enter radiologically controlled areas prior to evaluating personnel dosimetry devices for exposure assessment. (01032)

These violations have been categorized in the aggregate as a Severity Level II problem. (Supplement IV).

Civil Penalty - \$176,000

II. OTHER VIOLATIONS RELATED TO INADEQUATE RADIOLOGICAL CONTROLS

- A. Technical Specification 6.4.1, "Procedures", requires, in part, that the licensee establish, implement, and maintain the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Appendix A of Regulatory Guide 1.33 recommends, in Section 7.e., "Radiation Protection Procedures", that procedures be established for access control to radiation areas.

1. Licensee radiation protection procedure RSP 1-104, "Area Posting and Barricading", Revision 10, requires in Section 6.5, "Locked High Radiation Area", that areas exhibiting radiation levels in excess of 1000 millirem at 30 centimeters from the radiation source be provided with a locked barrier or ensure that the area is provided with continuous direct or electronic surveillance capable of preventing unauthorized entry.

Contrary to the above, on February 16, 1997, areas inside the Unit 2 Containment exhibited radiation levels greater than 1000 millirem at 30 centimeters, and at the time, the access door (Unit 2 Emergency Airlock door) was not locked, and the area was not provided with continuous direct or electronic surveillance capable of preventing unauthorized entry. (02014)

This is a Severity Level IV Violation (Supplement IV)

2. Licensee procedure RP-1-100, "Radiation Protection," states that a high radiation area shall be posted with a sign stating "Caution: High Radiation Area," and that entry into the area includes a requirement for dosimetry. Procedure RP-1-100 also defines a high radiation area as any area accessible to personnel in which radiation levels could result in an individual receiving a dose in excess of 100 millirem in one hour.
 - a. Contrary to the above, on May 1, 1997, a plant worker entered and worked in the Unit 2 reactor coolant pump bay, which is posted as a high radiation area, with no dosimetry. (03014)
 - b. Contrary to the above, on May 4, 1997, plant workers erected scaffolding into an area of approximately 300 millirem per hour that was not posted as a high radiation area. (04014)

These are each a Severity Level IV Violation (Supplement IV).

- B. 10 CFR Part 50, Appendix B, Criterion V, "Instruction, Procedures, Drawings," states that activities affecting quality shall be prescribed by procedures and shall be accomplished in accordance with the procedures.

10 CFR Part 50, Appendix B, Criterion II, "Quality Assurance Program," states that applicants shall identify the major organizations subject to the requirements of Appendix B through the Quality Assurance Program. Baltimore Gas and Electric Quality Assurance Policy, Revision 47, dated October 18, 1996, states the Plant General Manager is responsible for the radiation safety and also for directing investigations of significant events to determine the root cause and for recommending corrective actions. The Policy states the Issues Assessment Unit reviews issue reports, and assigns follow-up actions, under the direction of the Plant General Manager.

Procedure No. QL-2-100, Revision 5, "Issue Reporting and Assessment", provides that an issue report be used to document an actual or suspected condition adverse to quality or a significant condition adverse to quality and provides a method for notifying affected groups and initiating corrective actions. Further, Section 4.7, specifies that reviewing supervisors ensure issue reports are received by the issues assessment unit group within three working days of being initiated.

Contrary to the above, in February 1997, issue reports were written for a high radiation area access control concern and a safety concern associated with locking and control of Unit 2 containment emergency airlocks. The reviewing supervisor was aware of the issue reports; however, neither report was provided to the Issues Assessment Group for cause and corrective action determination. (05014)

This is a Severity Level IV Violation (Supplement IV).

III. VIOLATIONS RELATED TO INADEQUATE CONTROL OF REFUELING ACTIVITIES

- A. 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," states, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, deficiencies, defective equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition. The identification of the condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.

10 CFR Part 50, Appendix B, Criterion II, "Quality Assurance Program," requires that applicants establish in their Quality Assurance Programs those structures, systems, and components which are to be subject to the requirements of Appendix B. Baltimore Gas and Electric Quality Assurance Policy, Revision 47, dated October 18, 1996, states that systems and components subject to the requirements of the Quality Assurance Policy are specified on a Quality List (Q-List). All refueling equipment is specified on the Q-List.

Contrary to the above, as of March 30, 1997, the licensee's actions to identify and correct certain conditions adverse to quality were inadequate to preclude the numerous and repeated problems with refueling equipment during defueling of Calvert Cliffs Unit 2 in March 1997, as evidenced by the following examples, each of which is a separate violation:

1. On March 28, 1997, a missing capscrew for a limit switch actuating magnet had not been identified during preparations for spent fuel handling activities. Subsequently, the loose magnet became dislodged and caused the fuel transfer carriage carrying a spent fuel assembly to become stuck in the fuel transfer tube. (06014)

2. On March 28, 1997, after the stuck fuel assembly was removed from the fuel transfer carriage, but prior to completing defueling, metallic debris was identified in the carriage and noted in the refueling log; however, an evaluation of the debris was not done, and the problem was not reported to management. (07014)
3. On March 28, 1997, during initial fuel moves in the spent fuel pool, a grapple closed light remained lit when the grapple open light was lit; however, fuel movement continued without an evaluation of the cause or the corrective actions. (080104)
4. On March 31, 1997, a relief valve stuck open on the refueling upender, preventing lowering the upender; the cause of the valve being stuck open was sludge and other debris in the upender hydraulic system. Although the sludge had been identified in previous inspections, corrective actions to prevent recurring problems were not taken. (09014)
5. During fuel handling activities on March 27, 1997, a control element drive mechanism cable was caught by the moving refueling machine and damaged. Corrective action, including determining the cause of the problem to preclude recurrence, was not taken. (10014)

These are each a Severity Level IV Violation (Supplement IV).

- B. 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires that activities affecting quality be prescribed by documented procedures, of a type appropriate to the circumstances and be accomplished in accordance with these procedures. Operation of the spent fuel handling machine is accomplished in accordance with Operating Instruction OI-25A, "Spent Fuel Handling Machine," and OI-22D, "Fuel Handling Area Ventilation System", which states that spent fuel ventilation must be in service with charcoal filters when spent fuel handling will occur. Calvert Cliffs Updated Safety Analysis Report, Section 9.8, Revision 20, states, in part, that the limitations placed on the spent fuel pool area ventilation system were to ensure that in the event of a fuel handling accident, all of the radioactive material released would be filtered through the HEPA filters and charcoal absorbers prior to discharge to the atmosphere. OI-25A, Step 6.1.B.2.a requires that the charcoal filters be placed in operation prior to any fuel movement.

Contrary to the above, on April 23, 1997, activities were not accomplished in accordance with procedures when Unit 2 refueling commenced without properly aligning the spent fuel pool area ventilation system charcoal filters for operation in accordance with Step 6.1.B.2a of OI-25A. This condition existed until the following day, April 24, 1997, when it was identified during a shift change. (11014)

This is a Severity Level IV Violation (Supplement IV).

Pursuant to the provisions of 10 CFR 2.201, Baltimore Gas & Electric Company (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the receipt of this Notice of Violation and Proposed Imposition of Civil Penalty (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued as to 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 addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer payable to the Treasurer of the United States in the amount of the civil penalty proposed above, 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 in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 that 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 response noted above (Reply to Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: James Lieberman, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region I, and a copy to the NRC Senior Resident Inspector at the facility that is the subject of this Notice.

Enclosure

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Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR. If redactions are required, a proprietary version containing brackets placed around the proprietary, privacy, and/or safeguards information should be submitted. In addition, a non-proprietary version with the information in the brackets redacted should be submitted to be placed in the PDR.

**Dated at King of Prussia, Pennsylvania
this 11th day of August 1997**

**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

October 3, 1997

EA 97-265

Mr. H. G. Stanley
Site Vice President
Braidwood Station
Commonwealth Edison Company
RR #1, Box 84
Braceville, IL 60407

**SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -
\$55,000 (NRC Inspection Report No. 50-546/97009; 50-457/97009)**

Dear Mr. Stanley:

This refers to the inspection conducted from May 20 through June 30, 1997, at the Braidwood Unit 1 and Unit 2 reactor facilities. An exit meeting was conducted on June 30, 1997, and the inspection report was issued on August 26, 1997. A predecisional enforcement conference was conducted on September 11, 1997, to discuss the inspection issues related to strict compliance with Technical Specifications (TS) for the Emergency Core Cooling System (ECCS) subsystems. Specifically, these issues are related to the Centrifugal Charging (CV) system, a subsystem of ECCS.

Based on the information developed during the inspection and the information that you provided during the conference, the NRC has determined that a violation of NRC requirements occurred. The violation is cited in the enclosed Notice of Violation (Notice) and Proposed Imposition of Civil Penalty and the circumstances surrounding it are described in detail in the subject inspection report.

The violation in the enclosed Notice involves the failure to strictly comply with TS surveillance test requirement 4.5.2.b(1) which requires the ECCS pump casings and discharge piping high points outside of containment be vented at least once every 31 days. On February 16, 1996, a Braidwood Station system engineer discovered that the CV pump casing and high points were not being vented every 31 days as required. The decision to not strictly comply with the TS was partially based by the Braidwood Station staff on the fact that the CV pump casings did not have vents. A subsequent operability justification determined that the intent of the TS was being met based on factors such as the pressure in the piping and the CV system design and piping configuration. However, this operability justification failed to recognize that TS requirements were not being strictly met and that a TS change was needed. The failure to recognize that the TS requirements were not being strictly met and to seek a TS change was identified by the NRC.

The potential safety consequence of this violation was low. Venting of the ECCS is required to ensure that no air is entrained in the ECCS that could result in water hammer or air binding that could prevent proper pump/system performance. Due to the pressure in the CV system piping and the system configuration, this was not likely to occur. In addition, the ultrasonic testing, performed by the Braidwood Station staff, of selected CV high points found no entrained air. However, while the potential safety consequence is low, the regulatory significance is high. The Braidwood Station

staff continued to operate outside of TS requirements even after discovering that the TS was not being strictly complied with and NRC involvement was necessary in order to ensure that strict compliance with the TS requirements and the necessary TS changes were made. The failure to request the necessary TS changes denied the NRC the opportunity to determine whether safety issues were involved.

Based on the foregoing, this violation has been categorized in accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600 at Severity Level III. In accordance with the Enforcement Policy, a base civil penalty in the amount of \$55,000 is considered for a Severity Level III violation. Because your facility has been the subject of escalated enforcement actions within the last 2 years¹, the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment in Section VI.B.2 of the Enforcement Policy.

Identification credit was not warranted because Braidwood Station staff had an opportunity to correct the violation in February 1996 when the TS noncompliance was identified. The NRC identified the continued violation of the TS surveillance testing requirements during the 1997 inspection.

Corrective Action credit was warranted based on the corrective actions implemented and discussed at the enforcement conference. The corrective actions included (1) ultrasonic testing inspection of vulnerable areas in the CV system; (2) review of selected TS surveillance tests to verify strict compliance; (3) submittal of appropriate license amendment requests; (4) revision of affected procedures; and (5) distribution of a Station Manager letter which stresses strict compliance with TS requirements.

Therefore, to emphasize the importance of compliance with technical specifications, I have been authorized, after consultation with the Director, Office of Enforcement, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of \$55,000 for the Severity Level III violation.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

¹ A \$100,000 proposed civil penalty and a Notice of Violation was issued on May 16, 1996 for Severity Level III problems (EA 96-070 and EA 96-102) related to configuration control of the hydrogen monitoring system and out of service problems associated with the safety injection system.

H. Stanley

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In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

A. Bill Beach
Regional Administrator

Docket No. 50-456 & 50-457
License No. NPF-72 & NPF-77

Enclosure: Notice of Violation and Proposed
Imposition of Civil Penalty

cc w/encl: R. J. Manning, Executive
Vice President, Generation
M. Wallace, Senior Vice
President, Corporate Services
H. G. Stanley, Vice President
PWR Operations
Liaison Officer, NOC-BOD
D. A. Sager, Vice President,
Generation Support
D. Farrar, Nuclear Regulatory
Services Manager
I. Johnson, Licensing
Operations Manager
Document Control Desk-Licensing
Braidwood Station Manager
T. Simpkin, Regulatory
Assurance Supervisor
Richard Hubbard
Nathan Schloss, Economist
Office of the Attorney General
State Liaison Officer
Chairman, Illinois Commerce
Commission

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTIES

Commonwealth Edison Company
Braidwood Nuclear Power Plant Units 1 and 2

Docket Nos. 50-456; 50-457
License Nos. NPF-72, NPF-77
EA 97-265

During an NRC inspection conducted on May 20 through June 30, 1997, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the NRC 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:

Technical Specification 3.5.2 requires that two independent emergency core cooling system (ECCS) subsystems be operable with the units in Modes 1, 2, and 3 with each subsystem comprised of a) one operable centrifugal charging pump; b) one operable safety injection pump; c) one operable residual heat removal (RHR) heat exchanger; d) one operable RHR pump; and e) an operable flow path capable of taking suction from the refueling water storage tank on a safety injection signal and automatic opening of the containment sump suction valves.

Technical Specification Surveillance 4.5.2.b(1) requires that each ECCS subsystem be demonstrated operable at least once per 31 days by venting the ECCS pump casings and discharge piping high points outside of containment.

Contrary to the above, since commercial operation began in 1987 and 1988, respectively, for Unit 1 and Unit 2 and continuing until May 1997, an ECCS subsystem consisting of the centrifugal charging (CV) pump had not been demonstrated operable at least once per 31 days by venting the casing and CV high points outside containment when the units were in Modes 1, 2, and 3. (01013)

This is a Severity Level III violation (Supplement I).
Civil Penalty - \$55,000

Pursuant to the provisions of 10 CFR 2.201, Commonwealth Edison Company (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as 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 addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer 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 violation(s) 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 in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 response noted above (Reply to 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, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region III.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Lisle, IL
this 3rd day of October 1997

UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

October 3, 1997

EA 97-264

Mr. K. Graesser
Site Vice President
Byron Station
Commonwealth Edison Company
4450 N. German Church Road
Byron, IL 61010

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -
\$55,000 (NRC Special Inspection Report No. 50-454/97009; 50-455/97009)

Dear Mr. Graesser:

This refers to the special inspection conducted from May 27 through June 5, 1997, at the Byron Unit 1 and Unit 2 reactor facilities. An exit meeting was conducted on June 5, 1997, and the inspection report was issued on July 25, 1997. A predecisional enforcement conference was conducted on September 11, 1997, to discuss the inspection issues related to strict compliance with Technical Specifications (TS) for the Centrifugal Charging (CV) system and containment isolation valves and issues related to Emergency Core Cooling System (ECCS) written procedures.

Based on the information developed during the inspection and the information that you provided during the conference, the NRC has determined that violations of NRC requirements occurred. The violations are cited in the enclosed Notice of Violation (Notice) and Proposed Imposition of Civil Penalty and the circumstances surrounding them are described in detail in the subject inspection report.

Section I.A.1 of the Notice addresses two examples of failing to strictly comply with TS surveillance test requirement 4.5.2.b(1) which requires the ECCS pump casings and discharge piping high points outside of containment be vented at least once every 31 days. In the first example, on February 16, 1996, a Braidwood Station system engineer discovered that the CV pump casing and high point vents were not being vented every 31 days as required. The decision to not strictly comply with the TS was partially based by the Byron Station staff on the fact that the CV pump casings did not have vents. A subsequent operability assessment (96-007) determined that the intent of the TS was being met based on factors such as the pressure in the piping and the CV system design and piping configuration. However, this operability assessment failed to recognize that TS requirements were not being strictly met and that a TS change was needed. The failure to recognize that the TS requirements were not being strictly met and to seek a TS change was identified by the NRC.

The second example addresses the failure to include a high point vent valve (1RH027) in residual heat removal (RH) system surveillance test procedure 1/2 BOS 5.2.b-1. This procedure is used to meet the requirements of TS surveillance test 4.5.2.b(1). The failure to include this valve in the surveillance test procedure was identified by the NRC.

The potential safety consequence of this violation was low. Venting of the ECCS is required to ensure that no air is entrained in the ECCS that could result in water hammer or air binding that could prevent proper pump/system performance. Due to the pressure in the CV system piping and the system configuration, this was not likely to occur. In the RH system, high points that were adjacent to 1RH027 were vented on a quarterly basis. In addition, the ultrasonic testing, performed by the Byron Station staff, of selected CV high points and the venting of 1RH027 found no entrained air.

Section I.A.2 of the Notice addresses two examples of failing to comply with TS Table 4.3-2, Functional Unit 3.a.(2), which requires that Containment Isolation Phase A Isolation automatic actuation logic and actuation relays receive a slave relay test on a quarterly basis. The slave relay test shall include a continuity check, as a minimum, of associated testable actuation devices. In the first example, the continuity check for the slave relay contacts that actuate the CV letdown orifice isolation valves had not been performed since April 29, 1991. In the second example, the continuity check for the slave relay contacts that actuate the CV letdown isolation valves had not been performed since June 13, 1991. Prior to these time frames, actual stroking of the valves was performed, which provided the continuity check.

On September 25, 1990, Westinghouse Corporation notified Byron Station that stroking the CV letdown line valves, 1/2CV8152 and 1/2CV8160, which was done when performing the quarterly slave relay containment isolation tests, could result in thermal transients on the CV piping and nozzles and a high fatigue usage factor. To minimize this effect, Westinghouse recommended a visual verification and/or electrical continuity test of the slave relay contact actuation instead of stroking the valve. Although not specifically identified by Westinghouse, Byron Station determined that the letdown orifice isolation valve (1/2CV8149A/B/C) slave relay test should also be changed in the same manner for thermal transient concerns. To accomplish the test without stroking the valves, jumpers were installed across the letdown valve contacts and fuses were pulled on the letdown orifice isolation valves to prevent valve actuation when performing the TS required quarterly surveillance test. Verification of the slave relay contact actuation was not performed as part of this new testing methodology.

The potential safety consequence of this violation is low. Other contacts on the relay were verified to be operable by observing the actuation of other equipment and the valves were actually stroked using these contacts approximately every 18 months (every refueling outage) to satisfy other TS surveillance test requirements. In addition, had these valves failed to close during an accident, the emergency operating procedure would have instructed the operators to close the valves manually, which could be done without reliance on these contacts.

While the potential safety consequences of these violations is low, the regulatory significance is high. In the case of the CV system venting, the Byron Station's staff continued to operate outside of TS requirements even after discovering that the TS were not being strictly complied with and did not seek a TS change from the NRC in order to comply. NRC involvement was necessary in order to ensure that strict compliance with the TS requirements and the necessary TS changes were made. The failure to request the necessary TS changes denied the NRC the opportunity to determine whether safety issues were involved. In the case of the failure to perform the required continuity checks on Containment Isolation Phase A Isolation relays,

Byron Station's staff believed that the intent of the TS requirements were being met. Again, they did not realize the importance of strictly complying with TS requirements.

Based on the foregoing, these violations have been classified in the aggregate in accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600 as a Severity Level III problem. In accordance with the Enforcement Policy, a base civil penalty in the amount of \$55,000 is considered for a Severity Level III problem. Because your facility has been the subject of escalated enforcement actions within the last 2 years¹, the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment in Section VI.B.2 of the Enforcement Policy.

Identification credit was not warranted because the Byron Station staff had an opportunity to correct the violation in February 1996 when the TS noncompliance was identified for the CV pump venting. The NRC identified the continued violation of the TS surveillance testing requirements during the 1997 inspection. In addition, it was the NRC that identified the failure to perform the venting of the Unit 1 RHR heat exchanger high point vent valve. The NRC recognizes that the Byron Station staff identified the failure to perform quarterly continuity tests for the slave relay contacts. However, this occurred after the NRC identified the ECCS TS issues.

Corrective Action credit was warranted based on the corrective actions implemented and discussed at the enforcement conference. The corrective actions included: (1) ultrasonic testing inspection of vulnerable areas in the CV system; (2) review of selected TS surveillance tests to verify strict compliance; (3) submittal of appropriate license amendment requests; (4) revision of affected procedures; (5) distribution of a Station Manager letter which stress's strict compliance with TS requirements; (6) revision of Unit 1 monthly surveillance test procedure to incorporate the 1RH027 vent valve; (7) review of ECCS isometric drawings to verify all high point vent valves are included in the surveillance test procedures; (8) review of all slave relay surveillance test procedures (to be completed by November 7, 1997); and (9) evaluation of a slave relay test modification (to be completed by December 5, 1997).

Therefore, to emphasize the importance of strict compliance with Technical Specifications, I have been authorized, after consultation with the Director, Office of Enforcement, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of \$55,000 for the Severity Level III problem.

The violation described in Section II of the Notice discusses one Severity Level IV violation that was not assessed a civil penalty. This violation addresses a failure to provide adequate instructions to ensure the safety injection (SI) pump casings were vented. Specifically, procedure 1/2BOS 5.2.b-1 provided no specific direction to the operator as to what valves were

¹ A Notice of Violation for a Severity Level III problem was issued on December 11, 1995 (EA95-197) and a \$100,000 proposed civil penalty and a Notice of Violation was issued on February 27, 1997 (EA 97-508) for Severity Level III problems.

to be open to vent the SI pumps. Since operators routinely had to perform additional steps not included in the procedure in order to vent the SI system, numerous opportunities existed for the inadequate procedure to be identified. This violation is classified in accordance with the Enforcement Policy as a Severity Level IV violation.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

A handwritten signature in black ink, appearing to read "A. Bill Beach".

A. Bill Beach
Regional Administrator

Docket No. 50-454 & 50-455
License No. NPF-37 & NPF-66

Enclosure: Notice of Violation and Proposed
Imposition of Civil Penalty

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTIES

Commonwealth Edison Company
Byron Generating Station, Units 1 & 2

Docket Numbers 50-454; 50-455
License Numbers NPF-37, NPF-66
EA 97-264

During an NRC inspection conducted on May 27 through June 5, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the NRC 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 violations and associated civil penalty are set forth below:

I. Violations Assessed a Civil Penalty

A. Compliance with Technical Specifications

1. Technical Specification 3.5.2 requires that two independent Emergency Core Cooling System (ECCS) subsystems be operable with the units in Modes 1, 2, and 3 with each subsystem comprised of: a) one operable centrifugal charging pump; b) one operable safety injection pump; c) one operable Residual Heat Removal (RHR) heat exchanger; d) one operable RHR pump; and e) an operable flow path capable of taking suction from the refueling water storage tank on a safety injection signal and automatic opening of the containment sump suction valves.

Technical Specification Surveillance 4.5.2.b(1) requires that each ECCS subsystem be demonstrated operable at least once per 31 days by venting the ECCS pump casings and discharge piping high points outside of containment.

Contrary to the above:

- a. Since commercial operation began in 1985 and 1986, respectively for Unit 1 and Unit 2, and continuing until May 1997, the ECCS subsystem consisting of a Centrifugal Charging (CV) system had not been demonstrated operable at least once per 31 days by venting the pump casing and the CV high points outside containment when the units were in Modes 1, 2, and 3.
- b. A Unit 1 high point vent, 1RH027, on the discharge piping of the RHR heat exchanger outside of containment was not vented at least once per 31 days when the units were in Modes 1, 2, and 3, to demonstrate operability from 1985 through June 2, 1997.
(01013)

2. Technical Specification 3.3.2 requires that the Engineered Safety Features Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3-3 shall be operable with their trip setpoints set consistent with the values shown in the trip setpoint column of Table 3.3-4.

Technical Specification Surveillance 4.3.2.1 requires that each ESFAS instrumentation channel and interlock and the automatic actuation logic and relays be demonstrated operable by the performance of the ESFAS instrumentation surveillance requirements specified in Table 4.3-2.

Technical Specification Table 4.3-2, Functional Unit 3.a.(2), "Containment Isolation, Phase A Isolation" requires that automatic actuation logic and actuation relays receive a slave relay test on a quarterly basis.

Technical Specification Definition 1.31 states, in part, that a slave relay test shall include a continuity check, as a minimum, of associated testable actuation devices.

Contrary to the above:

- a. As of May 27, 1997, the continuity test for the slave relay contacts that actuate the CV letdown orifice isolation valves 1CV8149A/B/C and 2CV8149A/B/C, (Containment Phase A Isolation Valves) was not performed on a quarterly basis since April 29, 1991.
- b. As of May 27, 1997, the continuity test for the slave relay contacts that actuate the CV letdown isolation valves 1CV8152, 1CV8160, 2CV8152, and 2CV8160, (Containment Phase A Isolation Valves) was not performed on a quarterly basis since June 13, 1991.
(01023)

These violations represent a Severity Level III problem (Supplement I) - \$55,000

II. Violations Not Assessed a Civil Penalty

A. Written Procedures

1. 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality be prescribed by documented procedures of a type appropriate to the circumstances and shall be accomplished in accordance with these procedures. The procedures shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

Contrary to the above as of June 2, 1997, procedures 1BOS 5.2.b-1, "Unit 1 ECCS Venting and Valve Alignment Monthly Surveillance," Revision 5 and 2BOS 5.2.b-1, "Unit 2 ECCS Venting and Valve Alignment Monthly Surveillance," Revision 4, failed to have appropriate steps specified to vent the safety injection pumps. (02014)

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

Pursuant to the provisions of 10 CFR 2.201, Commonwealth Edison Company (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to 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 addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer 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, in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 234(c) of the Act, 42 U.S.C. 2282c.

The response noted above (Reply to 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, D.C. 20555 with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region III.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Lisle, IL
this 3rd day of October 1997

UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

June 24, 1997

EAs 96-530 & 96-531

Commonwealth Edison Company
ATTN: Mr. E. Kraft
Site Vice President
Quad Cities Station
22710 206th Avenue North
Cordova, Illinois 61242

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY
- \$50,000
(NRC Routine Inspection Report 50-254/365/96017(DRP) and NRC
Special Inspection Report 50-254/265/96019(DRP))

Dear Mr. Kraft:

This refers to the two inspections conducted from October 27 through December 6, 1996, at the Quad Cities Nuclear Power Station. One of the issues reviewed during the routine resident inspection (Report 50-254/365/96017(DRP)) was the potential inoperability of the control room emergency ventilation system. Special inspection (Report 50-254/365/96019(DRP)) evaluated the reactor building interior and external damage caused by high winds. The results of the inspections were discussed with your staff on November 26 and December 6, 1996. The inspection reports were issued on February 4, 1997. A predecisional enforcement conference to discuss the issues was held on February 27, 1997.

Based on the information developed during the inspection and the information that your staff provided during the conference, the NRC has determined that violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice). The circumstances surrounding each violation are described in detail in the subject inspection report.

On May 10, 1996, corrugated steel siding on the interior and exterior of the upper portion of the reactor building sustained wind damage. Your staff's initial evaluation concluded that the interior siding was required for the integrity of secondary containment, and the function of the exterior sidings was cosmetic. Based on this evaluation, your staff repaired the interior siding and elected to delay repairs to the exterior siding. The plant on-site review committee concurred with this course-of-action.

An NRC inspection team concluded that the reactor building interior and exterior siding are an integral part of the secondary containment and both are required to contain radiological releases in the event of a design basis accident. This conclusion was supported in several sections of the Quad Cities Updated

Safety Analysis Report (USAR) and eventually acknowledged by your staff. Each section of the interior siding was attached with explosive bolts that fail at a predetermined differential pressure of 7 inches water-gauge across the panels. This design feature protects the reactor building superstructure during a design basis accident. During the inspection, the team determined that many of the explosive bolts had been damaged at some time before the May 10, 1996, storm. The team reached this conclusion because the remains of damaged bolts had been painted over. As a result, the differential pressure that would cause the intact explosive bolts to fail was sufficiently below the design differential pressure specified for the structure. In addition, the team found two 1½ inch air line pipes rigidly attached to the interior siding. Subsequent review determined that the piping was installed without a modification package or an evaluation to analyze whether the installation affected the interior siding.

The findings discussed above indicated that your staff did not fully understand the functional design of the interior and exterior reactor building siding. In addition, they failed to translate the design into surveillance tests to ensure the structure remained operable.

Part I of the Notice includes three violations pertaining to your staff's failure to maintain the integrity of the reactor building interior and exterior siding. The first violation involves the failure of your design engineering group to adequately translate the design of the reactor building interior siding into procedures and instructions. Specifically, the installation of piping on the interior siding of the reactor building was done without the benefit of a design modification and was never adequately analyzed to determine if the modification affected the design function of the internal siding. The second violation involves the failure to develop appropriate surveillance procedures to periodically inspect reactor building interior siding blow-out panels and associated "explosive" bolts. The third violation involves the failure to adequately evaluate and correct degraded exterior reactor building siding.

These violations are significant because your staff did not fully understand the functional design of the interior and exterior reactor building siding. In addition, your staff failed to translate the design into surveillance tests to ensure the structure remained operable. Therefore, these violations are classified in the aggregate in accordance with the "General Statements of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600, as a Severity Level III problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$50,000 is considered for the Severity Level III problem. Because your facility has been the subject of escalated enforcement actions within the last 2 years¹, the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy.

Identification credit was not warranted because site managers and the on-site review committee reviewed and approved the inadequate safety evaluation that permitted the delayed replacement of the external reactor building siding. The functional requirements of the internal and external reactor building siding were not realized until the NRC inspection team specifically questioned the USAR description of the reactor building siding. In addition, it was the team's inspection of the internal siding that identified the unauthorized and unanalyzed installation of the air lines and the damaged explosive bolts.

Corrective Action credit was warranted based on the corrective actions implemented and discussed at the enforcement conference. Several of the corrective actions included: (1) the repair of all damaged bolts, (2) painting working labels on all blow-out panels to prevent unauthorized modifications, (3) routine inspections of the bolts and blow-out panels, (4) training to personnel on the importance of the blow-out panels and bolts, (5) training engineering supervisors on design basis requirements, (6) communicating the lessons learned to other Commonwealth Edison stations, (7) training the plant on-site review committee members on design basis requirements, and (8) revising operability determination procedures clarifying the process for evaluating reduced design margins.

Therefore, to emphasize the need to understand the functional design of a safety-related system and the significance of your staff's limited questioning attitude when high winds damaged the reactor building siding, I have been authorized, after consultation with the Director, Office of Enforcement, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the base amount of \$50,000 for the Severity Level III problem.

Part II of the Notice includes two Severity Level IV violations pertaining to the inoperability of the control room emergency ventilation system. The inoperability was the result of your staff's failure to translate the control room design specification into surveillance tests to ensure the continued operability of the control room emergency ventilation system. The severity level of each violation was based on your analysis (which was confirmed by the

¹

A Severity Level III violation and \$50,000 civil penalty was issued on June 13, 1996, for failure to implement corrective action to restore design margins to the structural steel for the low pressure coolant injection corner rooms (EA 96-114). A Severity Level III violation and \$50,000 civil penalty was issued on January 2, 1996, for failure to promptly correct the potential for 480 VAC motor control centers to trip on a current overload (EA 95-241).

NRC) that the projected dose to the control room staff, during an accident and based on the "as found" configuration, would never have exceeded the 10 CFR 20, "Standards for Protection Against Radiation," allowable dose limit. These violations were identified as the result of discussions between the Dresden and Quad Cities staffs when the Dresden staff identified testing problems with their control room ventilation. The communication between the two sites and the reviews by the Dresden site staff is commendable. However, the Quad Cities staff should have identified the testing deficiencies during their review of the system configurations before implementing restructured technical specifications. It is the NRC's expectation that your staff will communicate the lessons learned from these violations to the other Commonwealth Edison nuclear power plants so that similar problems can be avoided when implementing restructured technical specifications.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

A. Bill Beach
Regional Administrator

Docket Numbers: 50-254; 50-265
License Numbers: DPR-29; DPR-30

Enclosure: Notice of Violation and Proposed
Imposition of Civil Penalty

See Attached Distribution:

cc w/encl: T. J. Maiman, Senior Vice President
Nuclear Operations Division
D. A. Sager, Vice President,
Generation Support
H. W. Keiser, Chief Nuclear
Operating Officer
L. W. Pearce, Station Manager
C. C. Peterson, Regulatory Affairs
Manager
I. Johnson, Acting Nuclear
Regulatory Services Manager
Richard Hubbard
Nathan Schloss, Economist
Office of the Attorney General
State Liaison Officer
Chairman, Illinois Commerce
Commission
J. R. Bull, Vice President, General &
Transmission, MidAmerican Energy Company
Document Control Desk-Licensing

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY

Commonwealth Edison Company
Quad Cities Station
Units 1 and 2

Docket Nos. 50-254; 50-265
License Nos. DRP-29; DPR-30
EAs 96-530; 96-531

During two NRC inspections conducted from October 27 through December 6, 1996, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the NRC 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 violations and associated civil penalty are set forth below:

I. Violations Assessed a Civil Penalty

- A. 10 CFR Part 50, Appendix B, Criterion III, "Design Control" requires, in part, that measures be established to assure that the design basis of structures, systems, and components are correctly translated into specifications, drawings, procedures, and instructions.

10 CFR Part 50, Appendix B, Criterion XI, "Test Control" requires, in part, that a test program be established to assure that all testing required to demonstrate that structures will perform satisfactorily in service is identified and performed in accordance with written test procedures that incorporate the requirements and acceptance limits contained in applicable design documents.

Section 3.3.1.1.1, "Wind and Tornado Loadings-Reactor Building" of the Updated Safety Analysis Report (USAR) stated, in part, that the reactor building, including the steel superstructure, formed the secondary containment.

Section 6.0.1.1, "Secondary System-Containment Systems" of the USAR stated, in part, the secondary containment system limited the release of radioactive materials to the environment.

Section 6.2.3.1.E, "Secondary Containment-Design Basis" of the USAR stated, in part, the reactor building was designed to contain a positive pressure of 7 inches water-gauge without structural failure and without pressure relief.

1. Contrary to the above, as of October 4, 1996, measures established to ensure that the design basis of the reactor building (including interior siding blow-out panels that are part of the secondary containment boundary) was correctly translated into specifications, drawings, procedures, and instructions were inadequate. Specifically, on October 4, 1996, the inspectors identified rigid pipe supports installed on the reactor building siding blow-out panels without the appropriate analysis, procedures, or instructions that documented the pipe supports' effect on the secondary containment's design ability to relieve pressure beyond a positive pressure of 7 inches water-gauge.
 2. Contrary to the above, as of June 9, 1996, the licensee failed to establish a test program for periodic inspection of the reactor building interior siding blow-out panels to ensure that they would perform their pressure-relieving safety function. Specifically, on June 9, 1996, the licensee found that specially notched "explosive" bolts on the reactor building blow-out panels were damaged. The damaged bolts existed for an extended period of time without being identified or corrected. The damaged bolts would have permitted the blow-out panels to relieve at a differential pressure less than the design-basis value of 7 inches water-gauge during certain postulated high-energy line breaks, resulting in the secondary containment system not limiting the release of radioactive material to the environment.
- B. 10 CFR 50.59(a)(1), "Changes, Test, and Experiments" requires, in part, that a licensee may make changes to the facility as described in the safety analysis report, without prior Commission approval, unless the proposed change involves a change in the technical specifications or an unreviewed safety question.
- 10 CFR 50.59(a)(2) defines, in part, that a proposed change shall be deemed to involve an unreviewed safety question if a possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report may be created.
- Section 3.3.2.2.2, "Wind and Tornado Loadings-Pressure Drop Effects" of the USAR stated, in part, the side of the reactor building was designed to remain intact up to a wind velocity of 170 mph or 75 lbs/sq ft except for special sections. The special sections are designed to blow off at a pressure of 70 lbs/sq ft.

Section 6.2.3.1.E, "Secondary Containment-Design Basis" of the USAR stated, in part, the reactor building was designed to contain a positive pressure of 7 inches water-gauge without structural failure and without pressure relief.

Contrary to the above, the licensee's safety evaluation (USAR update Tracking No. 97-3, performed in mid-May of 1996) improperly concluded that a change to the facility did not involve an unreviewed safety question. The change involved removal of the reactor building exterior siding which decreased the reactor building's ability to remain intact with high winds and decreased its ability to contain a positive pressure, thereby creating the possibility for an accident or malfunction of a type not previously evaluated in the USAR.

This is a Severity Level III problem (Supplement I).
Civil Penalty - \$50,000.

II. Violations Not Assessed a Civil Penalty

- A. Technical Specification 3.8.D requires operability of the control room emergency ventilation system while the plant is in Modes 1, 2, or 3.

Section 6.4.4.1, "Control Room-Radiation Protection" of the USAR stated a positive pressure of $\geq 1/8$ inch water gauge is maintained between the control room emergency zone and adjacent areas.

Contrary to the above, between September 24, 1996 (the date that Technical Specification 3.8.D. was implemented), and November 3, 1996, while both Units 1 and 2 were in Mode 1, the control room emergency filtration system was inoperable because the required $\geq 1/8$ inch water gauge positive pressure between the control room and adjacent areas -- as stated in section 6.4.4.1 of the USAR -- did not exist.

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

- B. 10 CFR Part 50, Appendix B, Criterion XI, "Test Control" requires, in part, that a test program be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.

Notice of Violation and Proposed
Imposition of Civil Penalty

-4-

Section 6.4.4.1, "Control Room-Radiation Protection" of the USAR stated a positive pressure of $\geq 1/8$ inch water gauge is maintained between the control room emergency zone and adjacent areas.

Contrary to the above, since the control room ventilation was modified in 1985, the test program of the control room emergency ventilation system failed to verify that the control room emergency ventilation system could maintain the $\geq 1/8$ inch positive pressure that was specified in section 6.4.4.1 of the USAR.

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

Pursuant to the provisions of 10 CFR 2.201, Commonwealth Edison Company is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to 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 addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer payable to the Treasurer of the United States in the amount of the civil penalty proposed above, 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 answers 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

Notice of Violation and Proposed
Imposition of Civil Penalty

-5-

the penalty should not be imposed. In addition to protesting the civil penalty, in whole or in part, such answers may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 234© of the Act, 42 U.S.C. 2282c. The response noted above (Reply to 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, D.C. 20555 with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region III and a copy to the NRC Resident Inspector at the Quad Cities facility.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Lisle, Illinois
this 24th day of June 1997

**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

June 17, 1997

EA 97-048

Mr. J. H. Mueller
Site Vice President
Zion Generating Station
Commonwealth Edison Company
101 Shiloh Boulevard
Zion, IL 60099

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -
\$50,000
(NRC ROUTINE RADIATION PROTECTION INSPECTION REPORT
50-296/96021(DRS); 50-304/96021(DRS))

Dear Mr. Mueller:

This refers to the inspection conducted from December 3, 1996, through January 22, 1997, at your Zion Generating Station Unit 1 and 2 facilities. This inspection included a review of Zion's program for transportation of radioactive material. The written results of this inspection were provided to you on February 11, 1997. A predecisional enforcement conference was conducted on March 19, 1997.

Based on the information developed during the inspection and the information provided during the conference, the NRC has determined that violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty, and the circumstances surrounding them are described in detail in the subject inspection report. The violations involved numerous weaknesses in the transportation of radioactive material program and included: failure to train personnel in accordance with procedures; inadequately maintaining radioactive material shipping procedures; inadequately implementing radiation control procedures; and exceeding the radiation limits of 49 CFR 173.425 for a shipment of radioactive materials. These violations taken collectively demonstrate an overall programmatic deficiency and are described below.

First, two of the seven workers authorized to release and approve shipments of licensed radioactive materials were not adequately trained in accordance with station procedures. While the workers attended the appropriate training, they did not pass the associated examination. In addition, the training offered did not address facility instructions or operating procedures. While failing to train authorized personnel was significant, especially since the applicable regulations were substantially revised on April 1, 1996, the radioactive material shipments were reviewed by trained individuals.

Second, a number of Zion's radioactive waste and material shipping procedures were not properly maintained to meet the April 1, 1996, revisions to applicable transportation regulations. Since a computerized software program was used to accomplish the intent of the procedures, Zion's staff deemed these procedures to be obsolete without properly deleting these procedures, and without addressing or documenting the known procedural deficiencies. While not adequately implementing the station process for revising procedures was significant, the instructions in the procedures were not necessary for processing radioactive material shipments. The instructions in the procedures were for manual determinations of shipment requirements, but manual determinations were no longer being performed.

Third, certain of Zion's radiological control procedures were not implemented. On two occasions Zion's staff failed to analyze waste streams annually to determine radionuclide scaling factors as required by procedures. In failing to implement these procedures, Zion's staff did not provide reasonable assurance that the use of scaling factors to determine nuclide activity could be accurately correlated with actual measurements. This issue is significant because incorrect information could have been provided to the radioactive waste burial site as a result of inaccurate radioactivity estimations. It is unlikely that the difference would have changed the waste classification or would have exceeded the burial site license, but it is important for these activities to be accurate to ensure that waste is properly segregated and is stable. In addition, on January 8, 1997, operations personnel removed a potentially contaminated rod from a posted contaminated area without complying with procedural requirements to contain the rod or to have the rod released by a radiation protection technician. This particular event was not radiologically significant, but improperly removing contaminated items increases the potential of contaminating clean areas and personnel. This event was indicative of the ongoing problems with radiation worker practices at the station.

Finally, problems were observed concerning the December 9, 1996, limited quantity shipment of radioactive material to the Byron Nuclear Station. The Byron staff identified dose rates in excess of the Department of Transportation's (DOT) contact radiation limits for a limited quantity shipment. The original radiological survey of this shipment, conducted by Zion's staff, clearly indicated that the dose rates exceeded the limit of 0.5 millirem per hour. However, the dose rates were incorrectly documented on the shipping papers. These shipping papers had been reviewed by four members of Zion's staff without this error being identified. This issue is not radiologically significant, due to the low dose rates on the package; however, the issue is of regulatory significance because the classification allowed the shipment to be excepted from additional DOT requirements.

While individually each of these issues would not constitute a matter of high safety significance, collectively, these issues are significant because they indicate inadequate implementation and a lack of oversight of the program. We are particularly concerned that problems were identified in virtually every phase of the program. Additionally, an April 1996 audit conducted by Zion's

staff in this area lacked the depth and thoroughness necessary to identify the fundamental program weaknesses. Lack of an effective audit in this area was particularly noteworthy given that a major change to the applicable transportation regulations was made effective April 1, 1996. Coupled with the poor history in radiation protection performance over the past 12 months (violations have been identified concerning inadequate posting of radiological hazards, inadequate contamination control practices, inadequate procedures to control radiation monitors, and failure to perform compensatory actions for inoperable radiation monitors), these issues indicate a breakdown in this program and weaknesses in the ability to perform adequate self assessments. Therefore, these violations are classified in the aggregate in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600, as a Severity Level III problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$50,000 is considered for a Severity Level III problem. Because your facility has been the subject of escalated enforcement actions within the last 2 years,¹ the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. The NRC determined that no credit for Identification was warranted because this problem was identified by the NRC during a routine inspection, and not identified through Commonwealth Edison Company's self assessment process. The NRC determined that credit for Corrective Action was warranted because corrective actions were timely and thorough. Once these issues were brought to the attention of facility management, all shipments of radioactive material were suspended, and the assistance of the corporate subject matter expert was obtained. Training was completed for appropriate personnel, and the training process was enhanced. All outdated procedures were deleted, and procedural rebaselining was initiated. Considerable efforts were implemented to improve the waste stream analysis process through procedural revisions and additional training, and an emphasis was placed on complying with radiation control procedures. Finally, more descriptive guidelines and expectations were created for the approval of radioactive material shipments.

While your corrective actions were thorough, the initial audit of the radioactive material program was superficial and identified none of the above weaknesses. It is imperative that Commonwealth Edison Company can rely on self assessments to identify program deficiencies, and not depend solely on personnel rationalizations to supersede inadequate procedures to ensure the program is adequately implemented. The administrative barriers

¹ A Severity Level III Problem with a \$100,000 Civil Penalty was issued on March 12, 1997 (EA 96-355); a Severity Level III Violation with a \$50,000 Civil Penalty was issued on August 23, 1996 (EA 96-216); a Severity Level III Violation with a \$50,000 Civil Penalty was issued on February 21, 1996 (EA 95-283); a Severity Level III Violation with a \$50,000 Civil Penalty was issued on November 28, 1995 (EA 95-144); and a Severity Level III Violation with no Civil Penalty was issued on September 22, 1995 (EA 95-118).

to prevent this type of problem eroded to the point that the transportation program was significantly degraded. Poor oversight of the radioactive material shipping program is significant since this program controls radioactive material entering the public domain.

Therefore, to emphasize the importance of procedural compliance, attention to detail, compliance with technical specifications, compliance with radiation limits, and prompt identification of violations, I have been authorized, after consultation with the Director, Office of Enforcement, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the base amount of \$50,000 for the Severity Level III problem.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

A. Bill Beach
Regional Administrator

Docket Nos. 50-295; 50-304
License Nos. DPR-39; DPR-48

Enclosure: Notice of Violation and Proposed
Imposition of Civil Penalty

See attached distribution

cc w/encl: T. J. Maiman, Senior Vice President
Nuclear Operations Division
D. A. Sager, Vice President,
Generation Support
H. W. Keiser, Chief Nuclear
Operating Officer
R. Starkey, Plant General Manager
R. Godley, Regulatory Assurance
Supervisor
I. Johnson, Acting Nuclear
Regulatory Services Manager
Richard Hubbard
Nathan Schloss, Economist
Office of the Attorney General
Mayor, City of Zion
State Liaison Officer, Wisconsin
State Liaison Officer
Chairman, Illinois Commerce
Commission
Document Control Desk-Licensing

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY

Commonwealth Edison Company
Zion Generating Station, Units 1 and 2

Docket Nos. 50-295; 50-304
License Nos. DPR-39; DPR-48
EA 97-048

During an NRC inspection conducted from December 3, 1996, through January 22, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the NRC 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 violations and associated civil penalty are set forth below:

1. Technical Specification 6.1.5 requires that retraining and replacement training of station personnel shall be in accordance with ANSI N18.1, "Selection and Training of Nuclear Power Plant Personnel," dated March 8, 1971.

ANSI N18.1, dated March 8, 1971, step 5.1, requires that a continuing program of training be used for training replacement personnel and for retraining necessary to ensure that personnel remain proficient.

ZAP 200-09, "Training," revision 0, dated September 17, 1992, step 3.a.1, requires, in part, that personnel, other than station-men, involved in the transfer, packaging, or transport of radioactive material shall be trained in accordance with IE Bulletin 79-19, and retrained biennially.

IE Bulletin 79-19 states that personnel should be trained in the DOT and NRC regulatory requirements, the waste burial license requirements, and in the instructions and operating procedures for the transfer, packaging, and transport of radioactive waste.

Contrary to the above, since April 1992 and April 1994, two licensee personnel involved in the packaging of radioactive material and authorized by the licensee to release licensed material to carriers were not trained in the DOT and NRC regulatory requirements, the waste burial license requirements, and in the instructions and operating procedures for the transfer, packaging, and transport of radioactive waste in accordance with ZAP 200-9, revision 0.

2. Technical Specification 6.2.2.A requires, in part, that radiation control procedures be maintained and shall be consistent with the requirements of 10 CFR 20.

10 CFR 20.2006 requires, in part, that each shipment of radioactive waste intended for disposal at a licensed land disposal facility must be accompanied by a shipment manifest which includes a certification by the waste generator as specified in Section III of Appendix F to Part 20.

Section III of Appendix F to Part 20 requires that the waste generator certify that the transported materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and the Commission.

Contrary to the above, since April 1, 1996, the licensee failed to maintain ZRP 5600-7 "Off-site shipment of Radioactive Material," revision 0, to be consistent with the requirements specified in 10 CFR 20.2006. Specifically, ZRP 5600-7 was not updated to incorporate the April 1, 1996, revisions to the Department of Transportation regulations (49 CFR 100-179), and contained inaccurate instructions for the classification, description, packaging, marking, and labeling of radioactive material.

3. Technical Specification 6.2.2.A requires, in part, that radiation control procedures be implemented.

ZRP 5610-4, "Preparation and Shipment of Samples for Special Analysis," revision 0, dated November 12, 1993, step E.3, requires, in part, that primary spent resin and steam generator blowdown resin samples be sent out for analysis yearly, in accordance with 10 CFR 61 guidelines.

ZAP 610-3, "Unescorted Access to and Conduct in Radiologically Posted Areas," revision 1(G), dated September 12, 1996, step E.5, requires, in part, that personnel are to contain contaminated equipment removed from contaminated areas or have the equipment released by a radiation protection technician.

Contrary to the above:

- a. Between August 1993 and November 1996, the licensee failed to send out primary spent resin samples for analysis, in accordance with ZRP 5610-4.
- b. Since September 1994, the licensee failed to send out steam generator blowdown resin samples for analysis, in accordance with ZRP 5610-4.
- c. On January 8, 1997, operations personnel removed a potentially contaminated rod from a posted contaminated area without containing the rod or having the rod released by a radiation protection technician in accordance with ZAP 610-3.

4. 10 CFR 71.5 requires, in part, that each licensee who transports licensed material outside of the site of usage, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable Department of Transportation regulations in 49 CFR parts 170 through 189 appropriate to the mode of transport.

49 CFR 173.421 requires, in part, that a Class 7 (radioactive) material whose activity per package does not exceed the limits specified in 49 CFR 173.425 and its packaging are excepted from the specification packaging, marking, and labeling, and the shipping paper and certification requirements, if the radiation level at any point on the external surface of the package does not exceed 0.005 mSv/hr (0.5 mrem/hr).

Contrary to the above, on December 9, 1996, the licensee improperly transported a Class 7 (radioactive) material package as a package excepted from the specification packaging, marking, and labeling requirements, and the shipping paper and certification requirements. Specifically, this package exceeded the 0.005 mSv/hr maximum radiation limit on the external surface of the package required for excepted packages in 49 CFR 173.421.

This is a Severity Level III problem (Supplement V).
Civil Penalty - \$50,000.

Pursuant to the provisions of 10 CFR 2.201, Commonwealth Edison Company (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as 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 addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer 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

Notice of Violation and Proposed -4-
Imposition of Civil Penalty

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 in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 response noted above (Reply to Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: James Lieberman, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region III and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the

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Imposition of Civil Penalty

information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Lisle, IL
this 17th day of June 1997

**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

September 2, 1997

EAs 97-222, 97-223

Mr. John H. Mueller
Site Vice President
Zion Generating Station
Commonwealth Edison Company
101 Shiloh Boulevard
Zion, Illinois 60099

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTIES
- \$330,000 (NRC Augmented Inspection Report 50-295/97006 and Inspection Reports 50-295/304-97002 and 50-295/304-97007)

Dear Mr. Mueller:

The NRC conducted three inspections at the Zion Nuclear Power Plant from February 6, 1997, through April 28, 1997. These inspections reviewed several matters, including the reactivity management event that occurred on February 21, 1997, the displacement of reactor coolant from the reactor vessel on March 8, 1997, and the failure to comply with a Technical Specification Limiting Condition for Operation on February 24, 1997. The reports of these inspections were sent to you by letters dated April 29, May 21, and June 4, 1997. Because of the seriousness of the issues evaluated during these inspections, a predecisional enforcement conference was held in the Region III office on July 3, 1997, to discuss the issues.

Based on the information developed during these inspections and the information that was provided during the predecisional enforcement conference, the NRC has determined that several violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice) and the circumstances surrounding them are described in detail in the subject inspection reports.

Section I.A of the Notice refers to the reactivity management event of February 21, 1997 in which a licensed reactor operator was assigned a task of reducing reactor power to the point of adding heat and inadvertently made the reactor subcritical. When the operator realized that the reactor was substantially subcritical -- instead of stopping, evaluating, and communicating the unauthorized change in reactivity -- the operator started withdrawing rods to make the reactor critical at the point of adding heat. This activity was observed by a Qualified Nuclear Engineer who expressed some concerns but failed to adequately communicate technical advice for excessive control rod manipulation to shift management. The plant was in the process of shutting down pursuant to Technical Specifications due to an inoperable containment spray pump. Prior to the shutdown, the shift and site management team failed to appropriately plan the shutdown and effectively communicate to the operating staff their expectations for shutting down the reactor. Licensee senior management assumed that Unit 1 was being shut down since the containment spray pump could not be repaired within the Technical Specification allowed outage time. However, management was not

aware that the shift engineer directed that the unit be kept critical in anticipation of the pump being returned to service. Operations supervision was so focused on pump restoration activities, that appropriate oversight of control rod manipulations was not provided. In addition, the licensee's failure to control the ingress of personnel into the control room resulted in the impairment of the formality and professionalism of control room activities, which contributed to the reactivity management event. During the 8 minutes between tripping the main turbine and tripping the reactor, the same time period during which the primary nuclear station operator excessively manipulated control rods, 39 people were in the control room envelope, with 15 people in the immediate vicinity of the areas where the primary nuclear station operator and unit supervisor were stationed. Accordingly, the violations in this section concern both the direct failure to follow plant operating procedures and the failure to conform with station administrative procedures regarding responsibilities for reactivity control, supervisory oversight of control room activities, requirements for infrequently performed evolutions, maintenance of control room decorum, and proper control room communications. The failure to comply with plant operating and station administrative procedures during a power descent resulted in eight violations of NRC requirements, as discussed in Section I.A of the Notice. Collectively, these violations reflect a breakdown in management oversight and control of operational activities. Accordingly, these violations are classified in the aggregate, in accordance with the "General Statement of Policy and procedure for NRC Enforcement Actions," (Enforcement Policy), NUREG-1600, as a Severity Level III problem.

Section I.B of the Notice addresses the failure to implement effective corrective actions for previous reactivity control problems that had either been documented in the licensee's corrective action system or were the subject of NRC Notices of Violation. In April 1996 and January 1997, the licensee experienced previous reactivity management issues in which inadequate command, control, and communications were identified as causal factors. The NRC issued a Notice of Violation in each instance. Additionally, an internal Zion station memorandum dated February 1996, clearly identified an adverse trend in reactivity management to operations management, and corrective actions were not effectively implemented. The failure to implement effective corrective actions for previous reactivity control problems resulted in three violations of NRC requirements as discussed in section I.B of the Notice. The violations are classified in the aggregate, in accordance with the Enforcement Policy, as a Severity Level III problem.

Section I.C of the Notice addresses the failure to prevent the recurrence of reactor coolant displacement from the reactor vessel caused by undetected gas (primarily nitrogen) accumulation in the Unit 2, and to a lesser extent, Unit 1 reactor coolant systems while the units were in cold shutdown on March 8, 1997. This gas accumulation or voiding is of concern because it presents a threat to the ability to maintain shutdown cooling flow. This topic had been the subject of several generic correspondences and had previously occurred at Zion in September 1996, when Unit 1 was in cold shutdown. Corrective actions to preclude recurrence had been identified, but implementation of necessary procedure changes was deferred. The failure to implement effective corrective action for a previous occurrence of undetected gas accumulation in the reactor coolant resulted in one violation of NRC requirements as discussed in section I.C of the Notice. This violation is classified in accordance with the Enforcement Policy as a Severity Level III violation.

Collectively, the violations are of significant regulatory concern in that several administrative and managerial control systems were ineffective. The violations indicate that several licensee processes and barriers were not used to their fullest potential to permit the early detection and timely resolution of significant performance deficiencies. For example the licensee's line organization had failed to maintain command and control of control room activities during non-routine activities such as the February 21, 1997, plant shutdown and reactivity changes. In addition, the site management team failed to adequately plan activities with the potential for risk significance, and failed to adequately communicate their expectations for shutting down the unit. Lastly, the corrective action system suffered from a noticeable lack of senior management review, oversight, and prioritization which resulted in significant conditions adverse to quality -- such as the precursors to the reactivity management event and reactor coolant displacement by gas -- not being resolved in a timely manner. The NRC's concerns were heightened by continued poor performance in the area of plant operations and in a recent escalated enforcement action¹ caused by ineffective management of plant operation.

The actual safety consequences of these events were low. For the reactivity management event, numerous reactor protection system plant trips were enabled that would have precluded safety limits from being exceeded due to a power excursion. The reactor coolant displacement due to gas accumulation was detected by operators before the capability to remove decay heat was affected. However, the underlying causes for these events could have resulted in events of greater consequence. Had plant operating and administrative procedures been properly implemented and had effective corrective actions for previous precursor and actual events been taken, neither of these events would have occurred and operations personnel would not have been unnecessarily challenged to prevent further degradation of plant conditions. Furthermore, the NRC considers the action taken by your facility management in returning the individuals involved in the reactivity management event to licensed shift duties prior to understanding the causes of the event and prior to the completion of the operators' remediation training, to be a further indication of a lack of management oversight. Therefore, the regulatory significance of the reactivity management event and the coolant displacement event is high.

In accordance with the enforcement policy a base civil penalty of \$55,000 is assessed for each Severity Level III violation or problem. The NRC considered whether discretion was warranted to escalate the enforcement sanction in accordance with Section VII.B of the Enforcement Policy. After reviewing the merits of this enforcement action, the NRC has determined that discretion is warranted to double the base civil penalty for the reactivity management and command and control problems (discussed in Section I.A of the Notice) due to particularly poor licensee performance manifested in the poor management oversight of these plant activities. In addition, for the corrective action problem and corrective action

1 EA 96-216 issued a NOV with Severity Level III Violation with a \$ 50,000 civil penalty for a number of operator errors and unplanned mode changes that occurred from January - June, 1996 time frame.

violation (discussed in Sections I.B and I.C of the Notice), the NRC has determined that discretion is warranted to double the base civil penalty because the violations represent a history of poor past performance in the corrective action area.

Ineffective or untimely corrective actions at Zion have been the subject of previous enforcement action and have been discussed at a number of management meetings with Commonwealth Edison Company over the past year. For the violations in this case your short term Corrective Actions were only marginally acceptable as demonstrated by the previously detailed failure of the management oversight team to keep crew members involved in the reactivity management event off-shift until they had completed remedial training and the failure to ensure compliance with a Technical Specification action statement. By contrast, your plans for long term Corrective Actions were global in nature and pertained to developing communication skills, enhancing command and control, establishing an organization to preplan activities with the potential to be risk significant and manage the flow of work to the control room, improving the support of engineering organizations to plant operations, resolving plant material condition problems, improving the corrective action system, developing an effective plant oversight group, and the removal of both units from service until the corrective plan can be implemented. However, the inability to implement effective, long-standing corrective actions continues to impact performance at Zion.

Therefore, to emphasize the importance of effective management oversight of plant operations and the importance of timely, effective and lasting corrective actions, I have been authorized, after consultation with the Director, Office of Enforcement and the Deputy Executive Director for Regulatory Effectiveness, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$110,000 (twice the base) for each of the two Severity Level III problems and the Severity Level III violation described in the Notice. This results in total Civil Penalties of \$330,000.

The violations described in Section II of the Notice discussed three Severity Level IV violations that were not assessed a Civil Penalty. These violations address a less significant failure to comply with the action statement for a Technical Specification Limiting Condition for Operation, the failure to establish upper tier procedures to manage plant activities while a unit was in cold shutdown for an extended period of time, and the failure to make required reports.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements. In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

A. Bill Beach
Regional Administrator

Docket Nos: 50-295, 50-304
License Nos: DPR-39, DPR-48

Enclosure:
Notice of Violation and Proposed
Imposition of Civil Penalties

cc w/encl:

D. A. Sager, Vice President,
Generation Support
H. W. Keiser, Chief Nuclear
Operating Officer
R. Starkey, Plant General Manager
R. Godley, Regulatory Assurance
Supervisor
I. Johnson, Acting Nuclear
Regulatory Services Manager
Document Control Desk - Licensing
Richard Hubbard
Nathan Schloss, Economist,
Office of the Attorney General

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTIES

Commonwealth Edison Company
Zion Nuclear Generating Station

Docket Nos: 50-295 and 50-304
License Nos: DPR-39 and DPR-48
EAs 97-222 and 97-223

During NRC inspections conducted from February 6 through April 28, 1997, several violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the NRC proposes to impose a civil penalties 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 violations and associated civil penalties are set forth below:

I. Violations Assessed a Civil Penalty

A.1 Reactivity Management

Zion Technical Specification 6.2, Procedures and Programs, requires, in part, that "[w]ritten procedures including applicable checkoff lists covering items listed below shall be prepared, implemented, and maintained: a.) The applicable procedures recommended in Appendix A, of Regulatory Guide 1.33, Revision 2, February 1978."

Appendix A of Regulatory Guide 1.33, Revision 2 dated February 1978, recommends that written procedures should cover activities associated with "Authorities and Responsibilities for Safe Operation," (paragraph 1.b) and "General Plant Operating Procedures," (paragraph 2) activities associated with all modes of operation.

- a. General Operating Procedure (GOP) 4, "Plant Shutdown and Cooldown," Revision 13, partially implements paragraph 2 of Appendix A to Regulatory Guide 1.33. In Mode 2 with the reactor critical, step 5.21.f, states, Hold "#363, ROD MOTION CONTROL" switch IN to minimize dumping steam and establish power at or less than the point of adding heat." ($2.5 \times 10^{-2}\%$ intermediate range (IR) or 0.025 percent power).

Contrary to the above, on February 21 1997, with the reactor critical in Mode 2, the primary Nuclear Station Operator (NSO) manipulated the control rods, but did not accomplish this activity in accordance with GOP-4, step 5.21.f. Specifically, the primary NSO did not establish power at or less than the point of adding heat in accordance with GOP-4, step 5.21.f, but made the reactor sub-critical, i.e., entered Mode 3 (01013)

- b. Zion Administrative Procedure (ZAP) 300-01B, "Reactivity Management Guidelines," Revision 1, partially implements paragraph 1.b of Appendix A to Regulatory Guide 1.33. Section G.2.c.1, states that strict reactivity controls are

required to minimize the potential for core damage, and that all plant personnel, particularly operators, must stop and question unexpected situations involving reactivity, criticality, power level, or core anomalies.

Contrary to the above, on February 21, 1997, the primary Nuclear Station Operator failed to implement strict reactivity controls when he did not stop and question unexpected changes in reactivity, criticality, and power level. The primary Nuclear Station Operator made the reactor substantially sub-critical (non- power) and, instead of stopping and evaluating the unexpected change in reactivity and criticality, he attempted to return the reactor to the point of adding heat (0.025 percent power) by continuously withdrawing control rods. (01023)

- c. ZAP 300-01B, "Reactivity Management Guidelines," Revision 1, partially implements paragraph 1.b of Appendix A to Regulatory Guide 1.33. Section G.I.1, states the Qualified Nuclear Engineer's (QNE) responsibility to implement the reactivity management policy by providing technical advice on reactivity related matters.

Contrary to the above, on February 21, 1997, the QNE failed to provide technical advice on reactivity related matters to either the primary Nuclear Station Operator or the Shift Supervisor concerning the excessive control rod manipulations and resultant reactivity changes. Specifically, the QNE observed the Nuclear Station Operator (NSO) take the reactor subcritical and then observed the NSO inappropriately add positive reactivity by withdrawing control rods in an unauthorized manner in an attempt to reach criticality. Instead of promptly addressing the inappropriateness of the NSO's actions, the QNE, by his inaction, allowed the unauthorized control rod withdrawal to continue and left the control room to discuss the matter with the Lead Nuclear Engineer. (01033)

A.2 Command, Control, and Communication

Zion Technical Specification 6.2, Procedures and Programs, requires that "[w]ritten procedures including applicable checkoff lists covering items listed below shall be prepared, implemented, and maintained: a.) The applicable procedures recommended in Appendix A, of Regulatory Guide 1.33, Revision 2, February 1978."

Appendix A of Regulatory Guide 1.33, Revision 2 dated February 1978, states in paragraph 1.b, that written procedures should cover activities associated with "Authorities and Responsibilities for Safe Operation."

- a. ZAP 300-01, "Conduct of Operations," Revision 3, partially implements paragraph 1.b of Appendix A to Regulatory Guide 1.33. Section VI.A, states, in part, that all operations personnel from the Operations Manager to the Nuclear Station Operator share the responsibility for the reactor core. The Nuclear

Station Operator, Unit Supervisor and station Reactor Engineer have a greater responsibility, and share this ownership on a continuous basis. Section VI.A further states, in part, that: (1) Operations personnel SHALL be attentive to the condition of the plant at all times and (4) the Unit Supervisor and Shift Engineer should NOT become so involved in any single operation that distracts them from the overall perspective of plant operations.

Contrary to the above, on February 21, 1997, while the licensee was performing a Unit 1 shutdown, the Shift Engineer and the Unit Supervisor were so focused on containment spray pump restoration activities that they failed to be attentive to the fact that the Nuclear Station Operator had made the reactor substantially subcritical and was withdrawing control rods, in an attempt to return the reactor to criticality. (01043)

- b. ZAP 300-01, "Conduct of Operations," Revision 3 partially implements paragraph 1.b of Appendix A to Regulatory Guide 1.33. Attachment A, Section VI.A.3, requires that a briefing be conducted prior to the conduct of an infrequently performed evolution.

ZAP 300-01, "Conduct of Operations," Revision 3, Section IV.G.2 defines infrequently performed evolutions as evolutions whereby the performance frequency is greater than annually AND the evolution requires the coordination of two or more departments, OR three or more individuals, AND has the potential to adversely affect reactivity control, OR core cooling.

Contrary to the above, on February 21, 1997, the licensee failed to perform a briefing prior to conducting an activity to maintain the reactor at the point of adding heat ($2.5 \times 10^{-2}\%$ IR), which was an infrequently performed evolution in that it had not been performed in more than a year, required the coordination of three individuals, and had the potential to adversely affect reactivity control. (01053)

- c. ZAP 300-01, "Conduct of Operations," Revision 3 partially implements paragraph 1.b of Appendix A to Regulatory Guide 1.33. Section IX.E.3, requires the individual who is to perform the activity to be responsible for adequately reviewing the procedure and fully understanding assigned responsibilities, and cognizant of all the limitations, precautions, and requirements.

Contrary to the above, on February 21, 1997, the primary Nuclear Station Operator and Unit Supervisor, failed to adequately review GOP-4, "Plant Shutdown and Cooldown," prior to performing the Unit 1 shutdown and failed to understand their assigned responsibilities as evidenced by the actions of the NSO in driving in control rods until the point of adding heat as measured on the intermediate range monitors. In doing so, the NSO failed to account for the time delay associated with the addition of substantial negative reactivity and as

a result inadvertently made the reactor subcritical. The inadequate review and failure to understand assigned responsibilities was further demonstrated by the Nuclear Station Operator's actions in subsequently withdrawing control rods once he recognized that he had made the reactor subcritical. (01063)

- d. ZAP 300-01A, "Control Room Access and Conduct," Revision 4 partially implements paragraph 1.b of Appendix A to Regulatory Guide 1.33. Section VIII.A.2, requires that Control Room business SHALL be conducted at a location and in such a manner that neither on-shift licensed personnel attentiveness nor the professional atmosphere is compromised.

Contrary to the above, on February 21, 1997, the presence of an excessive number of individuals in the control room -- 39 people were in the control room envelope, with 15 people in the immediate vicinity of the primary Nuclear Station Operator and Unit Supervisor -- caused a loud and disruptive environment. The high ambient noise level due to the large number of individuals present made communications between operators and operations supervision difficult. This created a control room environment that was not conducive to conducting a controlled and orderly shutdown. As a result, licensed personnel attentiveness and the professional atmosphere of the control room were compromised. (01073)

- e. ZAP 300-09, "Station Operational Communications," Revision 3 partially implements paragraph 1.b of Appendix A to Regulatory Guide 1.33. Section VII.A.3., requires, in part, that if the receiver does not understand an operational communication, then the receiver shall promptly inform the sender and ask the sender to repeat or rephrase the message.

Contrary to the above, on February 21, 1997, the primary Nuclear Station Operator (the receiver) failed to promptly inform the Unit Supervisor (the sender) that he did not understand the communication concerning establishing power at the point of adding heat and ask the Unit Supervisor (the sender) to repeat or rephrase his message. The Nuclear Station Operator did ask the Unit supervisor if he wanted him (the Nuclear Station Operator) to drive rods in, indicating he did not understand the instruction, and instead of explaining or rephrasing, the Unit supervisor simply reread the step aloud. (01083)

These violations represent a Severity Level III problem (Supplement I) - \$110,000

B. Corrective Actions -- Reactivity Management Event

10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," requires, in part, that measures be established to assure that conditions adverse to quality are promptly corrected, and in the case of significant conditions adverse to quality, that measures be established to assure that the cause of the condition is determined and corrective actions taken to preclude recurrence.

1. Contrary to the above, as of February 21, 1997, following the identification by the licensee of an adverse trend in reactivity management activities, which was documented in an internal Zion Station memorandum, "ZNG:96-002" dated February 12, 1996, and which constituted a significant condition adverse to quality, corrective actions were not prompt and commensurate with the safety significance of the issue and failed to preclude recurrence of a reactivity management event on February 21, 1997. (02013)
2. Contrary to the above, as of February 21, 1997, following issuance of a Notice of Violation (50-304/96005-03) on April 8, 1996, that identified an inadvertent mode change -- a significant condition adverse to quality that was caused by poor communications, weak command and control, and poor reactivity management -- corrective actions taken to preclude recurrence were not adequate as demonstrated by the February 21, 1997, actions of the Unit 1 operating crew, where failures in communications, command and control, and reactivity management directly caused an unauthorized and uncontrolled positive reactivity addition.(02023)
3. Contrary to the above, as of February 21, 1997, following a command and control, communication and reactivity management problem during the Unit 1 startup on September 16, 1996, which was a significant condition adverse to quality, corrective actions taken to preclude recurrence were not effective as demonstrated by the February 21, 1997, reactivity management event. The problem that occurred on September 16, 1996 was the subject of a Notice of Violation (50-295/96014-02) issued on January 28, 1997. (02033)

These violations represent a Severity Level III problem (Supplement I) - \$110,000

C. Corrective Actions -- Reactor Voiding Event

10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," requires, in part, that measures be established to assure that conditions adverse to quality are promptly identified and corrected, and in the case of significant conditions adverse to quality, that measures be established to assure that the cause of the condition is determined and corrective actions taken to preclude recurrence.

Contrary to the above, from September 2, 1996, through March 8, 1997 the licensee failed to take prompt corrective actions commensurate with the undetected accumulation of gas in the reactor vessel head which displaced reactor coolant and threatened the ability to maintain decay heat removal. Engineering and Operations personnel had determined the corrective actions necessary to preclude recurrence but failed to revise appropriate operations procedures prior to the recurrence of the event on March 8, 1997, in both Units 1 and 2. (03013)

This is a Severity Level III Violation (Supplement I) - \$110,000

II. Violations Not Assessed a Civil Penalty

A. Failure to Comply With a Limiting Condition for Operation (LCO)

Technical Specification (TS) 3.1. "Reactor Protection Instrumentation and Logic," requires, that with the minimum number of operable channels below the limits specified by Table 3.1-1, "Reactor Protection Systems - Limiting Operation Conditions and Setpoints," plant operation shall be as specified in Column 5 of Table 3.1-1. Table 3.1-1 specifies that if there are less than a minimum of two operable channels per loop of Low Primary Coolant Flow, maintain Hot Shutdown and, if the minimum conditions are not met within 24 hours, the unit shall be in the Cold Shutdown condition within an additional 24 hours.

Contrary to the above, on February 24, 1997, the licensee failed to comply with the Limiting Condition for Operation of TS 3.1 when Unit 1 was not placed in cold shutdown conditions within 48 hours of rendering all three-reactor coolant system loop "A" flow instrumentation channels inoperable. (04014)

This is a Severity Level IV Violation (Supplement I)

B. Undetected Displacement of Reactor Coolant

10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and be accomplished in accordance with these instructions, procedures, or drawings.

Contrary to the above, as of March 8, 1997, procedures for activities affecting quality, extended operation in cold shutdown, were not appropriate to the circumstances. Specifically, no operating procedures were prescribed which included measures to diagnose or prevent the displacement of reactor coolant from the reactor vessel caused by the undetected accumulation of nitrogen gas in the reactor coolant system. (05014)

This is a Severity Level IV Violation (Supplement I)

C. Failure to Report the Accumulation of Gas in the Reactor Coolant System

10 CFR Part 50.72(b)(2)(iii)(B) requires that the licensee shall notify the NRC as soon as practical, and in all cases within four hours, of any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to remove residual heat.

10 CFR Part 50.73(a)(2)(v)(B) requires that the licensee shall submit a

Licensee Event Report within 30 days after the discovery of the event, for any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to remove residual heat.

Contrary to the above, the licensee did not notify the NRC within four-hours and did not submit to the NRC a Licensee Event Report within 30 days after discovery that nitrogen gas had accumulated in the reactor vessel head on both Unit 1 and Unit 2 on March 8, 1997. This condition (nitrogen gas accumulation in the reactor coolant system) alone could have caused the loss of both trains of shutdown cooling prior to the nitrogen gas bubble reaching the size where pressurizer level would have provided direct indication of reactor vessel water level and, therefore, could have prevented the fulfillment of the safety function of a system needed to remove residual heat. Additionally, the nitrogen gas in the reactor coolant system could have accumulated in the steam generators which would have resulted in the obstruction of natural circulation cooling. This condition also could have prevented the fulfillment of the safety function of a system needed to remove residual heat. (06014)

This is a Severity Level IV Violation (Supplement I)

Pursuant to the provisions of 10 CFR 2.201, Commonwealth Edison Company (the Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalties (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to 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 penalties by letter addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer payable to the Treasurer of the United States in the amount of the civil penalties 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 penalties 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 penalties will be issued. Should the Licensee elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalties, in whole or in part, such answer should be clearly marked as an "Answer to a Notice of Violation" and may: (1) deny the violation(s)

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 penalties should not be imposed. In addition to protesting the civil penalties, in whole or in part, such answer may request remission or mitigation of the penalties.

In requesting mitigation of the proposed penalties, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 penalties.

Upon failure to pay any civil penalties 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 penalties unless compromised, remitted, or mitigated, may be collected by civil action pursuant to Section 234c of the Act, 42 U.S.C. 2282c.

The response noted above (Reply to Notice of Violation, letter with payment of civil penalties, 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, D.C. 20555 with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region III and a copy to the NRC Resident Inspector at the Zion facility.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Lisle, Illinois
this 2nd day of September 1997

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

October 7, 1997

EA 97-367

Mr. Stephen B. Bram
Senior Vice President - Central Operations
Consolidated Edison Company of
New York, Inc.
Indian Point 2 Station
Broadway and Bleakley Avenues
Buchanan, New York 10511

**SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTIES -
\$110,000
(NRC Inspection Report No. 50-247/97-08)**

Dear Mr. Bram:

This letter refers to the NRC inspection conducted between June 16, 1997, and July 21, 1997, at your Indian Point 2 nuclear facility. During the inspection, apparent violations of NRC requirements were identified and were discussed with you and members of your staff at an exit meeting on July 29, 1997. The inspection report was sent to you on August 8, 1997. On September 5, 1997, a Predecisional Enforcement Conference was conducted with you and members of your staff, to discuss the violations, their causes, and your corrective actions. Based on the information developed during the inspection, and the information provided during the September 5, 1997, enforcement conference, five violations of NRC requirements are being cited and are described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice).

The first three violations are set forth in Section I of the enclosed Notice. These violations, identified through NRC questioning during observation of control room activities, relate to the Overpressure Protection System (OPS) being inoperable for approximately two and one half days in June 1997 while the reactor was shutdown. The OPS is designed to provide pressure relief of the Reactor Coolant System (RCS) while at low temperatures to protect the reactor vessel during overpressure transients. Since the OPS was inoperable, and there was not a required minimum vent area, Technical Specification (TS) Figure 3.1.A-3, required pressurizer level to be less than or equal to 30%, and the actual reactor coolant system temperature and pressure to be maintained within acceptable limits. This TS figure was not adhered to by the operations crew in that pressurizer level was as high as 80%. The OPS was inoperable in that the power operated relief valve (PORV) control switches were in the trip-pull out position and their associated block valves were closed, thereby defeating its pressure relief capability.

An inadequate procedure for performing the Reactor Coolant System filling and venting operations contributed to the violation of the technical specifications, in that the procedure did not refer to, or require verification of the operability of, the OPS prior to or during the RCS fill and vent evolution. In addition, although the inoperability of the OPS constituted a condition adverse to quality that existed for approximately two and a half days, this adverse condition

was not identified by your staff despite numerous opportunities to do so, including: (1) during surveillance tests of pressurizer pressure and level as required by your technical specifications; (2) during several operators' shift turnover reviews of the reactor operator turnover logs (which documents whether OPS is required or not); and (3) during several senior watch supervisors' reviews, each shift, of the reactor operator logs. In addition, although the control room board provided indications of OPS inoperability, the RCS parameters of temperature, pressure and pressurizer level were not properly assessed with respect to technical specification surveillance requirements.

Collectively, these three violations raised questions, not only regarding the quality of procedures at your facility, particularly "infrequently used" procedures as occurred in this case, but also the adequacy of operator training, as well as control of equipment configuration at the facility. It is of particular concern that these violations were not identified until the NRC questioned your operations staff regarding this matter. As such, these violations set forth in Section I collectively represent a significant lack of attention towards licensed responsibilities and therefore are classified in the aggregate as a Severity Level III problem in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600 (Enforcement Policy).

The fourth violation, which is set forth in Section II of the enclosed Notice, involved the poor response by management to (1) a significant reduction in the observed differential head of one of the recirculation pumps in 1989, and to (2) an engineer's identification in 1995 of this reduction in performance. The pump's differential head, which had been trending around 520 feet during the tests conducted each outage prior to 1989, was observed to have decreased significantly to 480 feet during the 1989 outage, only 5 feet above the limit. Following restart from the 1995 refueling outage, one of your engineers identified that the pump barely met the minimum engineering acceptance limit during the 1995 test, and based on his subsequent review of past performance data on the pump, the engineer informed site management that a significant decline in the pump performance had occurred, especially since 1989. The engineer also stated to managers that he believed the pump would not pass the next scheduled surveillance test during the 1997 refueling outage. However, the engineer's concern was not entered into the site corrective action system and, therefore, did not receive a formal evaluation. As a result, the pump remained in service without further testing until the 1997 outage, at which time it failed the test and was replaced.

Subsequent inspection of the pump revealed a 25 foot section of hose wrapped around the impeller. That hose, which likely entered into the system during refueling outage testing in 1989, was the likely cause of the degraded pump performance, raising questions regarding the adequacy of your foreign materials exclusion program at the time. After the engineer raised his concern in 1995, your attention to this matter focused on whether it was acceptable to lower the test limit, rather than determine the cause of the reduced pump performance. Two years later, when the recirculation pump failed its surveillance test during the 1997 outage, your initial response again was to perform analysis to see if the acceptance limit could be lowered, rather than determine the cause of the reduced performance trend, and the pump was not replaced until the system engineer, who had raised concerns in 1995, provided additional arguments for replacing the pump. Given the failure to resolve the degradation of this safety related system sooner, despite the opportunities to do so, this violation is also

classified at Severity Level III in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600.

A common thread among the violations in Sections I and II was your failure to identify and correct the existing adverse conditions despite several clear opportunities to do so. Furthermore, these failures involved more than one discipline, including the operations staff who did not identify the inoperable OPS system until the NRC began questioning the matter in June 1997, as well as the engineering staff and management who did not aggressively deal with the engineer's identification of the reduced differential head for one of the recirculation pumps. The failure to identify the OPS issue occurred in June 1997, subsequent to the May 1997 civil penalty, and demonstrates that concerns remain regarding your ability to identify and correct problems.

The NRC recognizes that the recirculation pump problem actually occurred prior to the NRC issuance of a \$205,000 civil penalty on May 27, 1997, and this is another example of the fundamental performance problem for which the May 1997 civil penalty was issued, namely, the failure to aggressively pursue anomalous conditions. Nonetheless, this finding regarding your ineffective resolution of the recirculation pump anomaly provides additional insight into the scope and depth of the performance problem that has existed at Indian Point 2. In addition, this violation was identified when the pump failed its surveillance test in May, rather than via an aggressive review to look for any other anomalous conditions after the problems that resulted in the May 1997 civil penalty had been identified by the NRC in late 1996 and early 1997. As such, it appears that you had not aggressively questioned your staff, following those previous findings, as to whether they were aware of other significant anomalous conditions at the facility. Even at the recent enforcement conference on September 5, 1997, there were no indications that you had taken action to further seek from your staff whether any other similar anomalies exist at Indian Point 2 that could significantly impact the operability of equipment.

A base civil penalty in the amount of \$55,000 is considered for each Severity Level III violation or problem. Since Indian Point 2 has been the subject of escalated enforcement actions within the last 2 years,¹ the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy for each of the Severity Level III issues. Credit for identification is not warranted in any of these cases. With respect to the violations in Section I, credit for identification is not warranted because the violations were identified by the NRC. With respect to the violation in Section II, credit for identification is not warranted because of the prior opportunity in 1995 to identify the degradation that likely occurred in 1989. Credit was given for your corrective actions. These actions included (1) revisions of procedures, including those that are not performed frequently; (2) planned retraining of operators and engineering personnel regarding the technical specifications; (3) outage logic sequencing for OPS; (4) programmatic review of vendor safety evaluations; (5) replacement

¹ e.g., A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$205,000 was issued on May 27, 1997 for numerous violations of NRC requirements, including several violations of failure to identify and correct problems at the facility.

of the recirculation pump; and (6) performing a root cause analysis of the handling of the recirculation pump issue. The NRC plans to continue to follow your actions closely to determine the effectiveness of your actions in precluding future problems.

Based on the above, separate \$55,000 civil penalties are warranted for the Severity Level III problem in Section 1 and the Severity Level III violation in Section II of the enclosed Notice. With respect to the violation in Section II, the NRC considered exercising discretion and not proposing a civil penalty for that violation because it occurred prior to the NRC issuance of the May 1997 civil penalty that principally focused on that same performance problem. However, the staff has decided not to exercise discretion, given this violation raised serious concerns regarding the scope and depth of your prior corrective actions, particularly with respect to pursuing and raising anomalous conditions. While the NRC recognizes that the problems that led to the May 1997 civil penalty are deep rooted cultural issues that take time to correct, the NRC would have expected that all engineers and staff had been apprised of the importance of surfacing any anomalous conditions they were aware of, as well as continually looking for others, and that this issue would have been raised before the test failure.

Therefore, to emphasize the importance of promptly identifying and correcting problems at the facility, I have been authorized, after consultation with the Office of Enforcement, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice) in the cumulative amount of \$110,000 for the violations.

One other violation identified during the inspection, involving the failure to consider the effects of ambient temperature during the testing of pressurizer code safety valves, has been classified at Severity level IV and is described in Section III of the enclosed Notice.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should specifically describe (1) what confidence you have that there are not other anomalies involving safety-related systems that may exist at Indian Point 2 and are being handled informally without being entered into your formal corrective action systems, and (2) plans to ensure your staff understands the need for promptly entering new safety-related issues, when they arise, into the formal systems. In this regard, your response should indicate the extent of your discussions with all engineers and staff to determine whether they are aware of such anomalous conditions at Indian Point 2. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

Hubert J. Miller
Regional Administrator

**Consolidated Edison Company of
New York, Inc.**

5

**Docket No. 50-247
License No. DPR-26**

**Enclosure: Notice of Violation and
Proposed Imposition of Civil Penalties**

cc w/encl:

P. Kinkel, Vice President, Nuclear Power

C. Jackson, Manager, Nuclear Safety and Licensing

B. Brandenburg, Assistant General Counsel

C. Faison, Director, Nuclear Licensing

**C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law
Director, Electric Division, Department of Public Service, State of New York**

W. Stein, Secretary - NFSC

F. William Valentino, President, New York State Energy Research and Development Authority

J. Spath, Program Director, New York State Energy Research and Development Authority

ENCLOSURE

NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY

Consolidated Edison Company of New York, Inc.
Indian Point 2 Nuclear Generating Station

Docket No. 50-247
License No. DPR-26
EA 97-367

During an NRC inspection conducted from June 16, 1997 to July 21, 1997, for which an exit meeting was held on July 29, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the Nuclear Regulatory Commission proposes to impose civil penalties 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 violations and associated civil penalties are set forth below:

I. VIOLATIONS RELATED TO INOPERABLE OVERPRESSURE PROTECTION SYSTEM

- A. Technical Specification (TS) 3.1.A.4.a. states, except as permitted by Table 3.1.A-2, the overpressure protection system (OPS) shall be armed and operable when the RCS temperature is less than or equal to 305°F. TS Table 3.1.A-2 states that OPS is not required to be operable at or below 305°F if the conditions of Column I are met for the specified conditions. Column I requires, that with a maximum number of 3 charging pumps and one safety injection pump energized, operating restrictions identified in TS Figure 3.1.A-3 shall be observed. Use of TS Figure 3.1.A-3 requires pressurizer level less than or equal to 30%.

TS 3.1.A.4.b. states, in part, that if both power operated relief valves (PORVs) and their associated block valves are inoperable, action shall be initiated immediately to place the reactor in a condition where OPS operability is not required.

Contrary to the above, between 2:30 a.m. on June 15 until 10:15 a.m. on June 17, 1997, Con Edison did not operate within the restrictions of TS Figure 3.1.A-3, in that pressurizer level was greater than 30% (as high as 80%) with the OPS inoperable and Con Edison did not initiate immediate actions to place the plant in compliance with the TS until the NRC raised questions about the OPS TS curves. (01013)

- B. Technical Specification 6.8.1 requires that written procedures be established covering activities referenced in Appendix A of Regulatory Guide 1.33, November 1972. Regulatory Guide 1.33, Section 3.A, requires, in part, written procedures for filling and venting the Reactor Coolant System.

Contrary to the above, as of June 17, 1997, an adequate written procedure for filling and venting the Reactor Coolant System was not established, in that System Operating Procedure SOP 1.1.1, "Vacuum Filling and Venting the Reactor Coolant System," Revision 35, did not refer to, nor require verification of, the operability of OPS during an RCS fill evolution. As a result, after vacuum filling and venting the RCS on June 14, 1997, when the OPS was inoperable, while the system was maintained within the pressure and temperature limits imposed by TS Figure 3.1.A-3, the pressurizer level was outside the requirements of TS Figure 3.1.A-3. (01023)

- C. Technical Specification surveillance requirement 4.18.C., states that, when pressurizer pressure and level control is being used for overpressure protection, as permitted by TS 3.1.A.4, then these parameters shall be verified to be within their limits at least once per shift.

Contrary to the above, between June 15 and 17, 1997, while the OPS was inoperable and pressurizer pressure and level control were being used for overpressure protection, operators did not adequately verify parameters were within limits, in that pressurizer level was not maintained less than or equal to its limit of 30%. (01033)

These violations are classified in the aggregate at Severity Level III (Supplement 1).
Civil Penalty - \$55,000

II. VIOLATION RELATED TO DEGRADED RECIRCULATION PUMP FLOW

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

Contrary to the above, between September 1995 and May 1997, a condition adverse to quality existed at the facility, namely, degradation of the performance of the No. 21 recirculation pump. The degradation involved reduced pump differential head as determined during the periodic refueling outage surveillance test, which was very near the lower limit of 475 feet when tested in 1995. Subsequently, during the same test in May 1997, the pump failed its surveillance test, in that pump differential head was found to be 471 feet. Following examination of the pump internals, a rubber hose was found wrapped around the impeller, and was believed to have been drawn into the pump prior to or around 1989. Under certain conditions, this pump would not have been able to perform its post-accident safety function and thus would have been inoperable, contrary to Technical Specification 3.3.A.1.f. This adverse condition to quality was not identified despite prior opportunities to do so, in that:

1. prior to 1989, pump differential head, as identified during the surveillance test conducted each outage, was in the range of 520 feet. Beginning with the 1989 test thru the 1995 test, differential head was determined to be around 480 feet, providing clear evidence of some pump degradation; and

2. following the pump test in 1995, an engineer brought a concern to management's attention regarding the degraded pump performance since 1989, and also predicted that the pump would not pass the next test in 1997, yet the engineer's concern was not entered into the problem identification system to ensure a formal review of the concern was performed. (02013)

This violation is classified at Severity Level III (Supplement 1).
Civil Penalty - \$55,000

III. VIOLETIONS RELATED TO RCS PRESSURIZER CODE SAFETY VALVES' LIFT SETPOINTS BEING ABOVE TS LIMITS

Technical Specification 4.2.1 requires, in part, that inservice testing of pumps and valves whose function is required for safety shall be performed in accordance with the applicable edition and addenda of Section XI of the ASME Boiler and Pressure Vessel Code of 10 CFR 50.55a(g). Since 1994, the applicable edition and addenda of Section XI for Indian Point 2 has been the 1989 edition. ASME Section XI (1989 edition) section IWV-1100, Valve Test, refers to ASME/ANSI OM-1987, Part 1. Paragraph 8.1.1.5 of this document states that the operating environment shall be simulated during set pressure testing of safety valves. The implementing procedure to test pressurizer safety valves is PT-R5A, Hot Setting of Pressurizer Safety Valves by Wyle Labs.

Contrary to the above, in April 1995, during performance of PT-R5A, Con Edison failed to implement the provisions of ASME/ANSI OM-1987 part 1, paragraph 8.1.1.5, in that the operating environment was not adequately simulated during set pressure testing. Specifically, ambient conditions surrounding the pressurizer code safety valves were not incorporated into procedure PT-R5A. (03014)

This violation is classified Severity Level IV (Supplement 1).

Pursuant to the provisions of 10 CFR 2.201, Consolidated Edison Company (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the receipt of this Notice of Violation and Proposed Imposition of Civil Penalties (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued as to 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 penalties by letter addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer payable to the Treasurer of the United States in the amount of the civil penalties proposed above, or may protest imposition of the civil penalties, 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 penalties will be issued. Should the Licensee elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalties, 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 penalties should not be imposed. In addition to protesting the civil penalties in whole or in part, such answer may request remission or mitigation of the penalties.

In requesting mitigation of the proposed penalties, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 that 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 response noted above (Reply to Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: Mark Satorius, Deputy Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region I, and a copy to the NRC Senior Resident Inspector at the facility that is the subject of this Notice.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR. If redactions are required, a proprietary version containing brackets placed around the proprietary, privacy, and/or safeguards information should be submitted. In addition, a non-proprietary version with the information in the brackets redacted should be submitted to be placed in the PDR.

Dated at King of Prussia, Pennsylvania
this 7th day of October 1997

UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303

August 27, 1997

EA 97-297
EA 97-298

Duke Power Company
ATTN: Mr. W. R. McCollum
Vice President
Oconee Nuclear Station
P. O. Box 1439
Seneca, SC 29679

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTIES -
\$330,000 (NRC INSPECTION REPORT NOS. 50-269, 270, AND
287/97-07, AND 50-269, 270, AND 287/97-08)

Dear Mr. McCollum:

On June 6, 1997, the Nuclear Regulatory Commission (NRC) completed two special inspections at your Oconee Nuclear Station (ONS). During the inspections, the NRC examined the facts and circumstances surrounding an April 21, 1997, unisolable, reactor coolant leak on Unit 2 and a May 3, 1997, event which resulted in degradation of the high pressure injection (HPI) system during Unit 3 cooldown. The results of the inspections were discussed with members of your staff on June 6, 1997, and were formally transmitted to Duke Power Company (DPC) by separate letters, both dated June 27, 1997. An open predecisional enforcement conference was conducted in the Region II office on July 23, 1997, to discuss the apparent violations, the root causes, and your corrective actions to preclude recurrence of the violations. A summary of the conference was sent to DPC by letter dated July 29, 1997.

Based on the information developed during the inspections and the information that you provided during the conference, the NRC has determined that violations of NRC requirements occurred. The violations are cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice), and the circumstances surrounding them are described in detail in the subject inspection reports.

Violation A in Part I of the Notice involves the failure to meet Technical Specification (TS) operability requirements for the Unit 3 HPI system. Specifically, between at least May 1 and May 2, 1997, and potentially since March 6, 1997, when Oconee Unit 3 reactor coolant was above 350 degrees Fahrenheit (°F), the HPI system would not have been able to perform its intended safety function in that there was inadequate level in the letdown storage tank (LDST) to provide the necessary net positive suction head required for HPI pump operability. On May 3, 1997, during a Unit 3 controlled shutdown, two of the three HPI pumps were damaged due to the loss of net positive suction head.

A contributor to the decreased inventory in the LDST was due to an erroneously high LDST level indication. The cause of the erroneous indication was the loss of water from the common reference leg on the LDST level instrumentation. The last instance of assured operability of the HPI system was on February 22, 1997, when the LDST level instrumentation was last calibrated. At the conference, DPC admitted the violation and stated that the root causes of Violation A in Part I of the Notice were design deficiencies related to a common reference leg for the LDST level instrumentation and a leaking instrument fitting caused by inadequate maintenance practices.

Violation A in Part I of the Notice is of very significant regulatory concern because of the potential safety consequences associated with extended inoperability of the HPI system. For example, two HPI pumps are needed to meet the success criteria for HPI in the Oconee accident analysis. Due to the design of the HPI system at Oconee, there was a potential for a common mode failure of two or more HPI pumps whenever there was a problem with the HPI pump suction source. As discussed previously, such pump failures occurred while the system was performing its normal makeup function during Unit 3 cooldown on May 3, 1997. Also, contributing to the May 3, 1997, HPI event was the performance of control room operators. Operators were less than attentive to plant parameters and failed to recognize that, while used as a suction source for the HPI pumps, the indicated LDST level was not decreasing as would be expected. In addition, DPC failed to adequately assess operating experience both within DPC and the industry in order to recognize and correct the design vulnerability associated with the HPI system. As an example, several modifications to the HPI system were contemplated and/or proposed in the past which may have provided opportunities to identify and address the single failure vulnerabilities of the system earlier. Based on all of the above, the NRC concluded that the HPI system would not have been able to perform its intended safety function to mitigate a serious safety event. Therefore, this violation has been categorized in accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600, at Severity Level II.

In accordance with Section VI of the Enforcement Policy, a base civil penalty in the amount of \$88,000 is considered for a Severity Level II violation. In this case, the NRC has decided to exercise enforcement discretion, in accordance with Section VII.A of the Enforcement Policy, and propose a civil penalty of \$220,000, twice the maximum, statutory daily penalty of \$110,000, to appropriately reflect the safety and regulatory significance of the violation. This determination is based on: (1) the high risk significance of HPI inoperability; (2) the fact that DPC had a similar event in the past and numerous opportunities were available to identify and correct the design vulnerabilities through industry experience; and (3) the significant length of time that the violation may have existed. Although the specific duration of the violation was not conclusively determined by the licensee nor the NRC, it could have existed since the time of the last instrument calibration, nearly two months. For the purposes of this enforcement action, the NRC asserts that the condition existed at least two days prior to the May 3, 1997, event. The NRC acknowledges that your corrective actions described at the predecisional enforcement conference, both taken and planned, address the causes of the problems.

Violations B(1) and B(2) in Part I of the Notice involve two instances of the failure to establish adequate measures to identify and correct conditions adverse to quality. The first violation involves DPC's failure to implement an adequate augmented inservice inspection program for the detection of HPI cracks. This program, which was the subject of NRC Information Notice 82-09 and Generic Letter 85-20, had been established following the identification of cracks and other damage in HPI piping at Oconee and other Babcock & Wilcox plants. By letter to the NRC dated February 15, 1983, DPC formally committed to the NRC to conduct the inspection program; however, DPC failed to properly perform these inspections. As a result of the failure to implement effective corrective action via the augmented inservice inspection program, cracks in the Unit 2 and Unit 3 HPI piping remained undetected until a Unit 2 crack penetrated the wall of the piping and resulted in an unisolable reactor coolant leak on April 21, 1997. Inadequacies in the inspection program, implementation included the lack of acceptance criteria for radiographic testing and the failure to conduct ultrasonic testing on certain susceptible piping areas. The second violation involves the failure to take actions to assure that indications of thermal stratification, a mechanism known in the industry as a potential cause of pipe cracking, were evaluated and factored into the augmented inspection program. Specifically, in 1990, temperature measurements revealed that thermal stratification in the HPI lines was more severe than previously assumed. At the conference, DPC admitted these violations and stated that the root causes were inadequate commitment tracking and management of change.

The actual safety significance of Violations B(1) and B(2) in Part I of the Notice was limited by the immediate shutdown of Unit 2; however, the violations had the potential for a significant impact on safety. Evidence of thermal sleeve loosening was present on the film from 1996 radiographic tests, but DPC failed to identify and fully investigate the indications. The deficiencies in the licensee's augmented inspections resulted in a delay in identification of HPI cracks and ultimately led to the unisolable reactor coolant leak on April 21, 1997. The NRC is concerned that the April 21, 1997, event involved a known failure mode and that the program designed to detect precursors to such leaks was ineffective. The violation affected all three units, even though Unit 1 was less susceptible to cracking due to a different design. Not only did DPC fail to track and implement regulatory commitments effectively, it is also evident that DPC's examiners exhibited a poor questioning attitude with regard to the absence of acceptance criteria for the radiographic testing. Furthermore, the failure to pursue indications of thermal stratification in the HPI lines is an additional indicator of programmatic deficiencies. Based on the above, Violations B(1) and B(2) in Part I of the Notice have been categorized in accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600, as a Severity Level III problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$55,000 is considered for a Severity Level III problem. However, the NRC considers these violations to be of high regulatory significance and to involve particularly poor licensee performance. Specifically, the violations (1) affected all three units; (2) involved a known failure mode; (3) involved

a significant failure to implement an inspection program intended to identify the failure mode; and (4) resulted in an unisolable reactor coolant leak which was clearly preventable. For these reasons, the NRC is exercising discretion in accordance with Section VII.A of the Enforcement Policy and is proposing a civil penalty of \$110,000, twice the base, for this Severity Level III problem. The NRC acknowledges that the corrective actions as described at the predecisional enforcement conference are appropriate to the circumstances.

Therefore, to emphasize the importance of ensuring the operability of equipment required for accident mitigation and the need for comprehensive and lasting correction of significant conditions adverse to quality, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Regulatory Effectiveness, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$330,000 for the Severity Level II violation and the Severity Level III problem.

In addition, Part II of the enclosed Notice addresses four violations which have been categorized at Severity Level IV. These violations, associated with the LDST, include (1) the failure to follow operations procedures for monitoring plant conditions; (2) the failure to assign a dedicated Low Temperature Overpressure Protection operator on May 2-3, 1997; (3) the failure to have adequate maintenance procedures for compression fittings; and, (4) the failure to maintain configuration control for certain LDST instrument line valves.

At the conference, several other apparent violations described in the subject inspection reports were discussed and are dispositioned as follows. The apparent violation associated with the failure of operators to implement procedures promptly at the initiation of the May 3, 1997 event, is being withdrawn. This conclusion is based on the additional information that DPC provided at the conference indicating a supplemental reactor operator entered several Alarm Response Guides and an Abnormal Procedure within minutes of receiving the HPIP DISCHARGE HEADER PRESSURE LOW alarm on May 3, 1997. The apparent violations associated with the failure to implement corrective actions for design vulnerabilities and operational concerns identified subsequent to the November 1979 event are also being withdrawn. Specifically, DPC stated that the design deficiencies which were the subject of several cancelled modifications would not have prevented the May 3, 1997, event. However, DPC did acknowledge that the failure to evaluate properly and to take actions on industry operating experience was a significant contributor to its failure to correct the design deficiency associated with the LDST common reference leg. This causal factor is addressed in the discussion of Violation A in Part I of the Notice. The apparent violation regarding the failure to provide adequate design control measures for LDST level and pressure instrumentation is also being withdrawn. Specifically, DPC provided adequate justification, that, in accordance with the Oconee licensing basis, the instrumentation was not required to be classified as Quality Assurance (QA) Category 1. However, at the conference, DPC informed the NRC staff of its decision to voluntarily reclassify the instrumentation as QA Category 1.

Lastly, at the conference DPC denied the apparent violation of 10 CFR 50.72 regarding the failure to report, within four hours, the fact that the HPI system would not have been able to perform its safety function from "February 22 until May 3, 1997." NRC has reevaluated this issue and has concluded that a violation of 10 CFR 50.72 (b)(2)(i) and/or (c) did occur. Enclosure 2 provides the NRC staff's analysis of why a violation of reporting requirements did occur. However, enforcement discretion is being exercised in accordance with Section VII.B.6 of the Enforcement Policy, and the violation will not be cited. The bases for the exercise of discretion are: (1) DPC was in a declared emergency at the time the past operability determination was made; (2) DPC was in periodic communication with the NRC during the event; and, (3) the lack of the operability information did not result in a delayed or inappropriate response by the NRC as an Augmented Inspection Team had already been dispatched to the site.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

Luis A. Reyes
Regional Administrator

Docket Nos.: 50-269, 50-270, 50-287
License Nos.: DPR-38, DPR-47, DPR-55

Enclosures: 1. Notice of Violation and Proposed
Imposition of Civil Penalties
2. Staff Analysis of Reportability Violation

cc w/encls: (See Page 6)

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NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTIES

Duke Power Company
Oconee Nuclear Station
Units 1, 2, and 3

Docket Nos. 50-269, 270, and 287
License Nos. DPR-38, 47, and 55
EAs 97-297 and 97-298

During Nuclear Regulatory Commission (NRC) inspections conducted from April 22 to June 6, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions," NUREG-1600, the NRC proposes to impose civil penalties pursuant to Section 234 of the Atomic Energy Act of 1954 (Act), as amended, 42 U.S.C. 2282, and 10 CFR 2.205. The particular violations and associated civil penalties are set forth below:

I. Violations Assessed a Civil Penalty

- A. Technical Specification (TS) 3.2.1, "High Pressure Injection and Chemical Addition Systems," requires that the reactor shall not be critical unless two high pressure injection (HPI) pumps per unit are operable except as specified in TS 3.3.

TS 3.3.1.a(1), "High Pressure Injection System," requires that when the reactor coolant system (RCS), with fuel in the core, is in a condition with temperature above 350 degrees Fahrenheit (°F) and reactor power less than 60 percent full power, two independent trains, each comprised of an HPI pump and a flow path capable of taking suction from the borated water storage tank and discharging into the RCS automatically upon Engineered Safeguards Protective System actuation, shall be operable. TS 3.3.1.c(1) further requires that when reactor power is greater than 60 percent full power that the remaining HPI pump shall be operable.

Contrary to the above, between at least May 1 and May 2, 1997, with fuel in the Oconee Unit 3 core and RCS temperature greater than 350°F, the licensee failed to maintain the HPI system operable, as required by TSs. Specifically, the licensee operated with the HPI system outside of the letdown storage tank (LDST) level versus pressure analyzed limitation curve which resulted in all of the HPI pumps being inoperable and unable to perform their safety-related function if called upon to operate, due to inadequate net positive suction head. (01012)

This is a Severity Level II violation. (Supplement I)
Civil Penalty - \$220,000

Enclosure 1

Notice of Violation and Proposed 2
Imposition of Civil Penalties

- B. 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances, are promptly identified and corrected.
- (1) Contrary to the above, as of April 21, 1997, the licensee failed to establish measures to assure that cracks in High Pressure Injection (HPI) safe end nozzles, adjacent HPI piping, and nozzle thermal sleeves, which are significant conditions adverse to quality, were promptly identified and corrected. Consequently, the licensee did not promptly identify and correct a crack in the safe end weld of HPI makeup nozzle 2A1 of Oconee Unit 2 that resulted in an unisolable, reactor coolant leak on April 21, 1997. (02013)
 - (2) Contrary to the above, as of April 21, 1997, the licensee failed to take corrective action for temperature differentials that the licensee measured in June 1990 in the safety-related HPI makeup piping. These temperature differentials were indicative of thermal stratification in the HPI makeup piping, which is a condition adverse to quality in that such stratification could contribute to HPI pipe cracking. (02023)

This is a Severity Level III problem. (Supplement I)
Civil Penalty - \$110,000

II. Violations not Assessed a Civil Penalty

- A. TS 6.1.1.1, requires, in part, lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated.

TS 6.4, "Station Operating Procedures," requires, in part, that the station be operated and maintained in accordance with approved procedures. TS 6.4.1.a requires, in part, that procedures be provided for normal startup, operation, and shutdown of the complete facility and of all systems and components involving nuclear safety of the facility.

Operation Management Procedure (OMP) 2-1, "Duties and Responsibilities of On Shift Operations Personnel," Revision (Rev.) 40 implements, in part, TS 6.1.1.1 and TS 6.4.1.a. Enclosure 4.5 of this procedure, "Responsibilities of the Reactor Operators," describes the responsibilities of the Operator at the Controls and the Balance of Plant Operator. Step 2 of the section on shared responsibilities states: "The Reactor Operators

assigned to any Control Room are charged with the responsibility of operating their assigned unit. They are to operate the plant with a questioning attitude, keeping nuclear safety and 'Operations Conservatism' in mind." Step 9 of the shared responsibilities delineated in Enclosure 4.5 further states: "All Reactor Operators shall ensure that his/her normal or selected instruments monitoring their associated parameters are responding as expected for the existing condition."

Contrary to the above, the licensee failed to operate the station in accordance with approved procedures prescribing operator responsibilities and authorities in that between 7:45 a.m. and 9:12 a.m., on May 3, 1997, the Reactor Operators (RO) failed to ensure that LDST indication was responding as expected for the reactor cooldown. Specifically, level indication remained constant; however, during a reactor cooldown, with the pressurizer being maintained at a constant level, the LDST level is expected to be constantly decreasing, as was demonstrated during the previous shift, when the operations crew repeatedly added water to the LDST. (03014)

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

- B. TS 6.1.1.1, requires, in part, lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated.

TS 6.4, "Station Operating Procedures," requires, in part, that the station be operated and maintained in accordance with approved procedures. TS 6.4.1.a requires, in part, that procedures be provided for normal startup, operation, and shutdown of the complete facility and of all systems and components involving nuclear safety of the facility.

Licensee Operation Management Procedure (OMP) 2-1, "Duties and Responsibilities of On Shift Operations Personnel," Revision (Rev.) 40 implements, in part, TS 6.1.1.1. Enclosure 4.5, Step 3 of the section on the responsibilities of the Operator at the Controls (OATC) states: "Under the direction of the Control Room SRO, the OATC shall have the responsibility for the operation of the assigned unit. Step 4 of this section further states, in part: "The OATC shall provide surveillance of operations and instrumentation monitored from the Control Room to ensure the safe operation of the Unit."

Licensee Operations Procedure OP/3/A/1104/49, "Low Temperature Overpressure Protection (LTOP)," Rev. 6, implements, in part, TS 6.4. Step 2.8 of the procedure, requires, in part, that a dedicated LTOP operator be assigned whenever RCS temperature is

less than or equal to 325°F, the RCS is closed (no LTOP vent path is established), an HPI pump is operating and capable of injecting into the RCS via 3HP-120 (Reactor Coolant Volume Control), and the 3HP-120 travel stop is inoperable. Enclosure 4.3, "Dedicated LTOP Operator Guidelines," Step 1.3, states: "Prevention of low temperature overpressurization is the only responsibility and duty of the dedicated low temperature overpressure protection operator."

Contrary to the above, the licensee failed to operate the station in accordance with approved procedures in that at 11:58 p.m., on May 2, 1997, LTOP operation was established with the OATC as the designated dedicated LTOP operator. This resulted in the dedicated LTOP operator having responsibilities for operation of the assigned unit in addition to his responsibility to prevent low temperature overpressurization. (04014)

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

- C. Technical Specification 6.4, "Station Operating Procedures," requires that the station be operated and maintained in accordance with approved procedures. TS 6.4.1.e requires, in part, that procedures be provided for preventative or corrective maintenance which could affect nuclear safety.

Licensee Procedure SI/O/A/5090/001, "Tube Fitting and Tubing Installation," Rev. 0, Enclosure 4.12, "Tube Cap Installation," provides guidance for the proper installation of tube caps, but includes a note that states the procedure is for guidance only and did not have to be used as long as the technician was knowledgeable of the practices.

Contrary to the above, on October 21, 1996 and February 22, 1997, the licensee failed to use procedural guidance provided by SI/O/A/5090/001 for the installation of instrument tubing caps, which was required to be used because the technicians performing the maintenance activities were not knowledgeable of tube fitting and tube installation practices. (05014)

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

- D. 10 CFR 50, Appendix B, Criterion III, Design Control, requires, in part, that measures be established to assure that applicable regulatory requirements and the design basis for systems, structures, and components which affect the safety-related functions of those systems that prevent or mitigate the consequences of postulated accidents, are correctly translated into specifications, drawings, procedures, and instructions.

Contrary to the above, as of May 3, 1997, the licensee failed to assure that the design basis for the valves in the Unit 1, 2,

Notice of Violation and Proposed 5
Imposition of Civil Penalties

and 3 LDST instrument lines, which were safety-related, were correctly translated into station procedures. Specifically, design configuration control was not maintained for six of twelve valves on the LDST instrumentation lines in that the valve labelling was not as shown on their respective drawings. (06014)

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

Pursuant to the provisions of 10 CFR 2.201, Duke Power Company (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalties (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, and if denied, the reasons why;
- (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 will be achieved.

If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued as to 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 penalties by letter addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer payable to the Treasurer of the United States in the amount of the civil penalties proposed above, or may protest imposition of the civil penalties 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 penalties will be issued. Should the Licensee elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalties, 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 penalties should not be imposed.

In addition to protesting the civil penalties in whole or in part, such answer may request remission or mitigation of the penalties.

In requesting mitigation of the proposed civil penalties, the factors addressed in Section VI.B.2 of the Enforcement Policy 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

Notice of Violation and Proposed
Imposition of Civil Penalties

6

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 civil penalties.

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 response noted above (Reply to Notice of Violation, letter with payment of civil penalties, and Answer to a Notice of Violation) should be addressed to: Mr. James Lieberman, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region II and a copy to the NRC Resident Inspector at the Oconee Nuclear Station.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Atlanta, Georgia
this 27th day of August 1997

NRC STAFF RATIONALE FOR OCCURRENCE OF 10 CFR 50.72 REPORTING VIOLATION

At the conference, the DPC staff expressed the view that events reported under 10 CFR 50.72(a) do not need to be reported again under 10 CFR 50.72(b) and that the new information determined on May 5, 1997, did not appear to meet the supplemental reporting requirements of 10 CFR 50.72(c). DPC also indicated that the criteria for followup notifications were not well understood and requested further NRC staff input on the matter. Accordingly, the following explanation of why the NRC staff considers that a violation occurred is provided.

At 3:45 p.m. (EDT) on May 3, 1997, DPC declared and reported an Unusual Event pursuant to 10 CFR 50.72(a)(i). The emergency classification was based on the identification that two of three high pressure injection (HPI) pumps were inoperable during a planned shutdown.

Following this notification, communications with the NRC Operations Center were frequent and commensurate with the significance of the event. Therefore, the NRC staff concludes there is no violation for failure to report under 10 CFR 50.72(a). According to our records, at no time during the period 3:45 p.m. on May 3, 1997, until 7:46 p.m. on May 5, 1997, when the Unusual Event was terminated, was there any communication that a determination had been made regarding the past inability of the HPI system to perform its intended safety function for an extended period of time. The notification and subsequent communications of May 3, 1997 through May 5, 1997, only conveyed to the NRC that two of three HPI pumps were inoperable at the time they were called upon to provide makeup during the May 3, 1997 planned shutdown.

Your May 6, 1997, followup report, which was only made after NRC expressed concern with your failure to report, stated that at 3:45 p.m. on May 5, 1997, your engineering staff concluded that the Oconee Unit 3 HPI system would not have been able to perform its intended safety function during power operations from February 22, 1997 until May 3, 1997. This is a substantially different communication than the initial emergency notification that conveyed two of three HPI pumps were inoperable when called upon during a planned shutdown.

To reiterate the NRC's position, 10 CFR 50.72(b)(2)(i) requires that if not reported under paragraphs (a) or (b)(i) of that section, the licensee shall notify the NRC as soon as practical and in all cases, within four hours of the occurrence of any of the following:

"(i) Any event, found while the reactor is shutdown, that, had it been found while the reactor was in operation, would have resulted in the nuclear power plant, including its principal safety barriers, being seriously degraded or being in an unanalyzed condition that significantly compromises plant safety."

The May 5, 1997, engineering evaluation, which was completed with the reactor shutdown, concluded that during power operations from February 22, 1997 through May 3, 1997, the unit, because the HPI system was inoperable, operated

Enclosure 2

in a condition that significantly compromised plant safety. Therefore, the conclusions of the engineering evaluation were reportable pursuant to 10 CFR 50.72(b)(2)(i).

Further, 10 CFR 50.72(c), "Followup Notification," requires that,

"With respect to the telephone notifications made under paragraphs (a) and (b) (emergency and non-emergency reports), in addition to making the initial notification, each licensee, shall during the course of the event:

(2) Immediately report (i) the results of ensuing evaluations or assessments of plant conditions,..."

Therefore, the NRC considers that the results of the engineering evaluation, which became available while the emergency classification of unusual event was still in effect, were reportable under 10 CFR 50.72(c)(2)(i).

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

October 8, 1997

EAs 97-070
97-117
97-127
97-256

Mr. James W. Langenbach
Vice President and Director, TMI
GPU Nuclear Corporation
Three Mile Island Nuclear Station
P. O. Box 480
Middletown, PA 17057-0191

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL
PENALTIES - \$210,000
(NRC Inspection Reports Nos. 50-289/96-201; 97-01;
97-02; 97-03; & 97-04)

Dear Mr. Langenbach:

This letter refers to the five referenced NRC inspections conducted between November 12, 1996, and May 15, 1997, at the Three Mile Island Nuclear Station in Middletown, Pennsylvania, the findings of which were discussed with you and members of your staff during several exit meetings, the last of which was held on May 28, 1997. These inspections included: (1) a design inspection conducted by the NRR Special Inspection Branch that focused on the capability of certain systems to safely perform functions required by their design basis, your adherence to the design and licensing basis, and the consistency of the plant configuration to the Final Safety Analysis Report (FSAR); (2) two routine inspections conducted by the Region I resident and region based staff during which the NRC reviewed your process for classification of plant components and the environmental qualification of the reactor building (RB) emergency cooling fans; and (3) two special inspections conducted by NRC Region I emergency preparedness staff to review your emergency response capabilities and performance during a full participation emergency exercise on March 5, 1997, as well as during a remedial exercise on May 13, 1997. The related inspection reports were sent to you previously.

On May 22, 1997, and July 25, 1997, predecisional enforcement conferences (conferences) were conducted with you and members of your staff, to discuss the violations, their causes, and your corrective actions. The apparent violations identified in NRC Inspection Report 97-03, issued on May 29, 1997, related to RB emergency cooling fans not being environmentally qualified, as well as your failure to address this condition in a timely manner, were discussed at the May 22, 1997, conference, even though the inspection report had not been issued at the time of that conference. On May 28, 1997, you informed Mr. P. Eselgroth of the NRC Region I office that you agreed that another conference was not needed to further discuss these environmental qualification issues.

Based on the information developed during the five referenced inspections, and the information provided during the two conferences, a number of violations of NRC requirements are being cited and are described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice). The most significant violations relate to several areas of plant performance, and consist of: (1) inadequate engineering design controls, including incorrect design inputs for certain design basis calculations, inadequate verifications to assure the adequacy of design, and inadequate safety evaluations prior to making design changes; (2) poor implementation of the process for classifying components, resulting in a number of nuclear safety related components being downgraded to a lower classification without an appropriate safety evaluation or other supporting engineering documentation; (3) failure to ensure the RB emergency cooling fans were environmentally qualified; (4) failure to take timely and appropriate corrective actions for conditions adverse to quality that existed at the facility, including conditions related to the Decay Heat Removal system, to the quality assurance findings regarding inappropriate equipment classification downgrades, and to the environmental qualification deficiency; and (5) inadequate implementation of the emergency preparedness program.

With respect to the violations related to inadequate design engineering control and implementation, which are set forth in Section I of the enclosed Notice, several significant concerns were identified. For example, the design bases regarding the switchover of suction for the decay heat removal system (DHRS) pumps from the borated water storage tank (BWST) to the reactor building sump, were not correctly translated into operating procedures. The procedures are used by operators for commencing manual operations to perform this switchover during a large break loss of coolant accident (LOCA). In the calculation of the BWST level setpoint specified in the abnormal transient procedures, nonconservative assumptions and input data were used. As a result, the calculated BWST level setpoint determined for the switchover phase may not have prevented air entrainment in the DHRS pumps and the reactor building spray (RBS) pumps, due to vortexing in the BWST. In turn, this could have resulted in air binding and/or cavitation of the pumps, causing them to be inoperable during the critical recirculation phase of a large break LOCA. Additionally, design control measures were inadequate for changes that were made to remove the sodium thiosulfate tank and revise the BWST low-low level alarm setpoint. Specifically, containment overpressure was credited in DHRS pump net positive suction head (NPSH) calculations, contrary to the design bases, and the safety evaluation that was performed to support the changes failed to identify that the changes involved an unreviewed safety question. In addition to the calculational errors and inadequate safety evaluation, adequate design control measures did not exist for verifying or checking the adequacy of design in several instances, as described in the enclosed Notice.

With respect to the violations related to improper downgrading of the classification of equipment, which are set forth in Section II of the enclosed Notice, the quality classification checklists (QCLs) for several components, including the nuclear river (NR) water discharge valve motor operator, decay river (DR) water strainer motor, and auxiliary building ventilation system (ABVS), were inappropriately revised to downgrade the components from nuclear safety related (NSR) to a non-safety related classification. As a result, the downgraded components were not subjected to the quality assurance (QA) program requirements needed to assure system operability for postulated accident conditions was maintained. More

specifically, these included requirements for the maintenance, testing, calibration, receipt inspection and procurement of parts. In addition, the procedure for performing the component classification and downgrade processes, did not receive the required review and, in some instances, was not followed by your engineering personnel, as detailed in the enclosed Notice.

With respect to the violation related to a lack of environmental qualification of certain equipment, which is set forth in Section V.A of the enclosed Notice, your staff determined that between March 17, 1986 and March 24, 1997, the three reactor building emergency cooling fans were not environmentally qualified in that the application of heat shrink tubing left a small length of exposed conductor at the spark plug connector to the fan motors. As a result, there was not reasonable assurance that the fans would function as required during post LOCA reactor building atmospheric conditions. Inoperability of these fans is contrary to the technical specifications, and given the eleven year duration of this problem, represents a significant regulatory concern. The NRC commends your engineering staff who, during repairs of a motor failure of one of the fans, questioned the qualification of the heat shrink tubing application which was not sealed. However, while the deficiency on the fan in question was promptly corrected, the same deficiency which existed on the other two fans was not corrected for an additional 33 days. The failure to take timely corrective action for this condition adverse to quality represented a violation of 10 CFR 50, Appendix B, Criterion XVI as described in Section III of the enclosed Notice.

With respect to the remaining violations related to inadequate identification and correction of problems in Section III of the enclosed Notice, several of the concerns previously discussed herein should have been identified and corrected sooner. In addition to the failure to correct the environmental qualification of the two reactor building emergency cooling fans after a third fan was found to not be environmentally qualified as discussed above, you also failed to take prompt corrective action to include the DHRS pump vent valves in the environmental qualification program, a deficiency that was identified during the safety system functional inspection (SSFI) of the DHRS conducted in 1993. Additionally, during several internal audits between June 1, 1992 and March 2, 1997, your staff identified concerns that the documentation to support the quality classification of components was insufficient. The Independent Safety Review (ISR) of one of those audits specifically raised concerns regarding the quality classification of components being changed without a documented or approved basis, without any independent review, and without a written safety evaluation documenting the basis for the change. Given the longstanding nature of some of these issues, and the failure to correct them, these failures represent an additional significant regulatory concern.

With respect to the violations related to emergency preparedness, which are set forth in Section IV of the enclosed Notice, the NRC observed, during the full-participation emergency exercise on March 5, 1997, that your Emergency Director failed to classify a general emergency when such a declaration was warranted due to the simulated loss of the three fission product barriers. In addition, your staff, in responding to the exercise scenario, did not assess the need for protective action recommendations (PARs) for residents beyond the 10-mile emergency planning zone (EPZ) when plume dose projections appeared to indicate that protective action guidelines would be exceeded beyond that zone. This was a result of inadequate training and procedures that did not contain guidance for considering protective action recommendations beyond the 10-mile EPZ. Following the identification of these

deficiencies, a Confirmatory Action Letter was issued on March 12, 1997, setting forth prompt corrective actions needed to address the exercise weaknesses, including the performance of a remedial exercise. The training and procedural weaknesses associated with the violations identified during the exercise, as well as the deficiencies associated with your dose assessment activities and qualification of ERO personnel which were identified as Severity Level IV violations in Inspection Report 97-04 issued on June 27, 1997, indicated that management oversight and involvement in EP was insufficient. Therefore, while citations are not normally made for violations involving emergency preparedness that occur during exercises, in this case, enforcement action is appropriate because of the seriousness of the weaknesses in your emergency preparedness program revealed by the exercise. Further, the NRC was concerned that your critique of the exercise did not identify two of the four exercise weaknesses, including the failure to assess PARs beyond the 10-mile EPZ. The NRC notes that the remedial exercise was successfully conducted on May 13, 1997.

Five separate Severity Level III problems or violations are being cited for the specific violations set forth in Sections I - V.A of the enclosed Notice. The violations in each section have been classified either individually, or in the aggregate, at Severity Level III in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600. Collectively, these violations demonstrate the need for, and importance of, management actively overseeing the implementation of important program activities and assuring that personnel are self-critical and aggressively pursue identification and correction of problems. For many of the issues described herein, adequate recognition and resolution of these violations did not occur in a timely manner.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$55,000 is considered for each of the five Severity Level III violations or problems¹. Since Three Mile Island has been the subject of escalated enforcement actions within the last 2 years,² the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy for each of the Severity Level III violations/problems. With the exception of the environmental qualification (EQ) violation in Section V.A, credit for identification is not warranted because all but one of the violations in Sections I, II, III, and IV were identified by the NRC. Credit for corrective actions is warranted for all five violations/problems because, in general, your actions were considered prompt and comprehensive. Your initial response to the problems identified by the inspectors with respect to the equipment downgrades tended to underestimate the scope, depth, and significance of the problems; however, once you recognized the significance of the problem, you took comprehensive corrective actions to address the problems at both Three Mile Island and Oyster Creek.

¹The violations in Sections I and II occurred prior to November 12, 1996, which is the date that the base amount for a Severity Level III violation or problem changed from \$50,000 to \$55,000. Therefore, the base penalty for the violations in Sections I and II is \$50,000.

²e.g., A Notice of Violation without a civil penalty was issued on March 26, 1996 for a repetitive violation of security requirements (EA 96-057), and a Notice of Violation without a civil penalty was issued on March 11, 1996 for a violation involving the failure to adequately control a modification to the reactor coolant system drain line piping (EA 95-238).

Therefore, to emphasize the importance of timely identification and comprehensive correction of problems and in recognition of your previous escalated enforcement actions, I have been authorized, after consultation with the Director, Office of Enforcement, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice) in the total amount of \$210,000 (\$50,000 each for the violations in Sections I and II, and \$55,000 each for the violations in Sections III and IV). No civil penalty is proposed for the violation in Section V.A in recognition of your identification and correction of the problem with the 'A' reactor building emergency cooling fan.

Overall, the penalties described above reflect the NRC concern about current station performance. The violations have brought to light weaknesses in operations and management oversight that need attention, and reflect a philosophy that has not led to aggressive identification and correction of problems in the areas cited. The fact that many of these issues were identified by the NRC, despite prior opportunities to identify and correct them, exacerbates the seriousness of these issues.

Several other violations were also identified during the design inspection and are described in Section V of the Notice. These violations are classified individually at Severity Level IV. Additionally, it was determined that the failure to update the FSAR to correct the discrepancies identified during the design inspection constituted violations of minor significance. These violations are being treated as Non-Cited Violations (NCVs) consistent with Section IV of the Enforcement Policy.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

Hubert J. Miller
Regional Administrator

Docket No. 50-289
License No. DPR-50

Enclosure: Notice of Violation and Proposed Imposition of
Civil Penalties

cc w/encl:

E. Blake, Shaw, Pittman, Potts and Trowbridge (Legal Counsel for GPUN)

J. Fornicola, Director, Licensing and Regulatory Affairs

M. Ross, Director, Operations and Maintenance

D. Smith, PDMS Manager

TMI-Alert (TMIA)

J. Wetmore, Manager, TMI Regulatory Affairs

Commonwealth of Pennsylvania

ENCLOSURE

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTIES

GPU Nuclear Corporation
Three Mile Island Nuclear Station

Docket No. 50-289
License No. DPR-50
EAs 97-070; 97-117;
97-127; 97-256

During NRC inspections conducted between November 12, 1996, and May 28, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the Nuclear Regulatory Commission proposes to impose civil penalties 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 violations and associated civil penalties are set forth below:

I. VIOLATIONS ASSOCIATED WITH DESIGN ENGINEERING

- A. 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires, in part, that measures shall be established to assure that applicable design bases are correctly translated into specifications, drawings, procedures, and instructions.
1. Contrary to the above, on June 1, 1994, the design bases were not correctly translated into operating procedures regarding switchover of the decay heat removal system (DHRS) pumps from the borated water storage tank (BWST) to the reactor building sump. Nonconservative assumptions and input data, such as operator response times, valve stroke times, instrument errors for the BWST low-low level alarm setpoint, containment pressure, and input data for estimating vortex depth were used in calculation C-1101-212-5310-050, "TMI-1 BWST Vortex Determination." This calculation provided the BWST level setpoint specified in abnormal transient and alarm response procedures for commencing manual operations to switchover the suction of the DHRS pumps from the BWST to the reactor building sump during a large break loss of coolant accident (LOCA). The BWST level setpoint determined in the switchover phase design calculations may not have prevented air entrainment in the DHRS pumps and the reactor building spray (RBS) pumps, due to vortexing in the BWST. This could have resulted in air binding and/or cavitation of the DHRS pumps and the RBS pumps causing them to be inoperable during the critical recirculation phase of a large break LOCA. (01013)
 2. Contrary to the above, as of January 10, 1997, design bases were not correctly translated into operating procedures in that the calculations that support the makeup tank pressure/level limit curves in these procedures were based on incorrect inputs. Specifically:

- a. Calculation C-1101-211-5310-0047, Revision 0, did not include a section of the makeup pump suction piping and fittings, used nonconservative values for maximum high pressure injection flow rates, and did not consider the effects of vortexing.
- b. Calculation C-1101-211-5360-003, Revision 1, did not consider a conservative high pressure injection flow when the reactor pressure is 0 psig during loss of coolant accidents.

The use of the inaccurate makeup tank pressure/limit curves during operation of the high pressure injection pumps after a high pressure injection line break could have caused the pumps to operate under degraded net positive suction head conditions. (01023)

- B. 10 CFR Part 50, Appendix B, Criterion III, states, in part, that the design control measures shall provide for verifying or checking the adequacy of design.
 1. Contrary to the above, as of January 10, 1997, field sketches contained in engineering evaluation request (EER) 88-070-E were not verified for use by engineering in an evaluation request for incorporating static head correction in the calibration of a BWST level switch. The sketches had no drawing numbers assigned, did not show plant elevations or survey marks, and had no documentation that they had been reviewed or approved. (01033)
 2. Contrary to the above, between July 1988 and January 1996, safety-related calculations were performed in memoranda, Technical Data Requests (TDRs), and EERs that were not verified or approved as evidenced by the following examples each of which constitutes a separate violation:
 - a. Memorandum 5310-92-024, "DH-V-14A/B, DH-V-5A/B, BS-V-52A/B Valves and IST Program," dated March 1, 1994, incorporated a calculation to omit leak testing of check valves DH-V14A and DH-V14B as part of the inservice testing (IST) program. An incorrect value for reactor building (RB) pressure was used in the calculation. As a result, the analysis incorrectly concluded that these valves did not perform a safety function in the closed position. Consequently, testing of DH-V14A and B in the closed position was not included in the IST program, contrary to Technical Specification 4.2.2 which requires testing of safety-related valves in accordance with 10 CFR 50.55a and Section XI of the American Society of Mechanical Engineers and Pressure Vessel Code. (01043)

- b. Memorandum 5310-92-366, "Evaluation of TMI-1 HPI SSFI Observation No. 211-10," dated December 22, 1992, incorporated a calculation to resolve a concern from GPUN's safety system functional inspection (SSFI) of the makeup and purification (MU&P) system regarding dead heading of makeup pumps under various combinations of operating pumps. (10153)
- c. TDR No. 836, Revision 6, dated January 31, 1995, contained a safety-related analysis for "Evaluation for Loading of the Emergency Diesel Generator and Engineered Safeguards (ES) Buses." (10163)
- d. TDR No. 995, Revision 3, "Voltage Drop Study for Degraded Grid Condition," dated January 18, 1996, contained safety-related electrical system design calculations. (10173)
- e. EERs 88-060-E, "BWST Level Alarm Setpoint Change," dated July 29, 1988, and 88-070-E, "Calibration of DH-DPS-914," dated August 10, 1988, contained safety-related setpoint correction calculations for specific gravity. (10183)

These memoranda, TDRs, and EERs were not verified or approved in order to check the adequacy of the design.

- C. 10 CFR 50.59 states, in part, that changes in the facility as described in the safety analysis report may be made without prior Commission approval, unless the change involves an unreviewed safety question. A change shall be deemed to involve an unreviewed safety question, in part, if the probability of malfunction of equipment important to safety previously evaluated in the safety evaluation report may be increased.

Contrary to the above, on February 20, 1990, a change that involved an unreviewed safety question was made without prior Commission approval. Specifically, the sodium thiosulfate tank was removed and the BWST low-low level alarm setpoint was changed which caused the calculated post-accident reactor building sump water level at the time of switchover to recirculation to decrease. With the reduced sump level, the available net positive suction head (NPSH) for the DHRS pumps was less than the required NPSH with indicated low pressure injection (LPI) flow of 3300 gpm unless credit was taken for containment overpressure. Updated Final Safety Analysis Report (UFSAR) Section 6.4.2 was revised to indicate that credit was taken for containment overpressure in determining that sufficient NPSH would be available for the maximum LPI flows. This was contrary to the original safety evaluation which did not consider containment overpressure in the NPSH evaluation. Without taking credit for containment overpressure the required NPSH might not be

available during an accident and the probability of malfunction of the DHRS pumps may be increased. Therefore, an unreviewed safety question was involved. (01093)

These violations in Section I represent a Severity Level III problem (Supplement 1).
Civil Penalty - \$50,000.

II. VIOLATIONS ASSOCIATED WITH EQUIPMENT DOWNGRADES

- A. 10 CFR 50.59, "Changes, tests and experiments," permits the licensee, in part, to make changes to the facility as described in the safety analysis report without prior Commission approval provided the change does not involve an unreviewed safety question (USQ). The licensee shall maintain records of changes in the facility and these records must include a written safety evaluation which provides the bases for the determination that the change does not involve a USQ.

Contrary to the above, between September, 1992, and December, 1994, the licensee made changes to downgrade the quality classification of components and systems described in the UFSAR without performing a written safety evaluation for the majority of these changes to provide the basis for the determination that the changes did not involve a USQ. With regard to nuclear safety related component quality, section 12.3.1.2 of the UFSAR states, "Materials and parts utilized in the repair and maintenance of the nuclear-related portions of the unit will be of the same quality as, or better than, the original materials." The facility was changed by excluding the component quality assurance (QA) program requirements for the maintenance, testing, calibration, receipt inspection and procurement of parts for the following components, each of which constitutes an individual violation, without performing a written safety evaluation for any of the changes.

1. The quality classification checklists (QCLs) for the nuclear river (NR) water motor operator discharge valves NR-V-1A/1B&1C were revised on July 18, 1994, to downgrade the components from nuclear safety related (NSR) to a non-safety related classification. The valve operator is required to maintain NR system operability for postulated accident conditions as required by Technical Specification section 3.3.1.4 and as described in UFSAR section 9.6.2.3. (02013)
2. The QCLs for the decay river (DR) water strainer motors DR-S-1A&1B were revised on July 18, 1994, to downgrade the components from NSR to a non-safety related classification. The strainer is designed to automatically operate to maintain DR system operability as required by Technical Specification section 3.3.1.4 and as described in UFSAR section 9.6.2. (02023)

3. The QCLs for the auxiliary building ventilation system (ABVS) fans, fan motors, HEPA filters, flow transmitters and other components were revised on November 10 and December 22, 1994, to downgrade the components from regulatory required (RR) to "other", a non-safety related classification. The system is designed to maintain the Auxiliary Building at a negative pressure to preclude the release of radioactive material, and mitigate the consequences of the postulated waste gas tank rupture and maximum hypothetical accident as described in the UFSAR sections 9.8.3, 14.2.2.5, and 14.2.2.6. (02033)
 4. The QCLs for the valve operator and positioner for make-up (MU) valve MU-V-17 were revised on March 18, 1993, to downgrade the valve components from NSR to RR. The QCLs for the valve operator and positioner for MU-V-17 were revised on November 9, 1994, to downgrade the valve components from RR to "other", a non-safety related classification. The QCL for the regulator for MU-V-17 was revised in September, 1992, to downgrade the valve component from NSR to RR. The QCL for the regulator for MU-V-17 was revised on February 1, 1994, to downgrade the valve component from RR to "other", a non-safety related classification. MU-V-17 provides a safety function to isolate the normal reactor coolant system (RCS) MU line during a postulated small break LOCA to ensure adequate core cooling as described in UFSAR section 6.1.3.1. (02043)
- B. Technical Specification 6.5.1.1 requires, in part, that each procedure which affects nuclear safety, and substantive changes thereto, be prepared by a designated individual(s)/group knowledgeable in the area affected by the procedure. Each procedure, and substantive changes thereto, shall be reviewed for adequacy by an individual(s)/group other than the preparer, but who may be from the same organization as the individual who prepared the procedure or change.
- Technical Specification 6.5.1.12 requires, in part, that individuals responsible for reviews performed in accordance with Technical Specification (TS) 6.5.1.1 render determinations in writing with regard to whether or not a change to a procedure which affects nuclear safety, as noted in 6.5.1.1, constitutes a USQ.
- Contrary to the above, on June 16, 1993, Technical Functions Division procedure EP-011, "Methodology For Preparing The Quality Classification List," Revision 4, a procedure which affects nuclear safety, was revised and no safety evaluation was performed to determine that the change did not involve a USQ. (02053)
- C. 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings" requires that activities affecting quality be prescribed by documented instructions, or procedures of a type appropriate to the circumstances and be accomplished in accordance with these instructions, or procedures.

Technical Functions Division procedure EP-011, Rev. 4, "Methodology for Preparing the Quality Classification List (QCL)," provides instructions for performance of the component classification, downgrade, and upgrade processes, an activity affecting quality.

1. Section 2.2 of EP-011 states: "This procedure is applicable to hardware only and not activities, as detailed in paragraphs 2.1 and 2.2 of the Operational Quality Assurance (OQA) Plan." The OQA plan defines, in part, activities as maintenance, calibration and testing.

Contrary to the above, between the period of December 1990 through February 1996, safety related QCL activities were not accomplished in accordance with section 2.2 of EP-011 in that several QCL checklists were revised and contained changes to component activities such as maintenance, calibration, and testing. (02063)

2. Section 5.1 of EP-011 requires that QCL worksheets and checklists be prepared in accordance with Exhibit 2 of EP-011. Exhibit 2 of EP-011 requires that the criteria in Exhibit 3 of EP-011 be used to determine the functional class (classification) of components.

Contrary to the above, between the period of December 1990 through February 1996, safety related QCL activities were not accomplished in accordance with section 5.1 and Exhibit 2 of EP-011 in that the criteria in Exhibit 3 were not used to determine the functional class of some NSR and RR components. As a result, components were improperly downgraded. (02073)

These violations in Section II represent a Severity Level III problem (Supplement 1). Civil Penalty - \$50,000.

III. VIOLATIONS ASSOCIATED WITH INADEQUATE CORRECTIVE ACTIONS

10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," states, in part, that measures shall be established to assure that conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition.

- A. Contrary to the above, as of December 2, 1996, a condition adverse to quality, identified by GPUN during the safety system functional inspection (SSFI) of the decay heat removal system in 1992, had not been promptly corrected. Specifically, SSFI Observation 212-42 identified that the DHRS pump vent valves were not included in the environmental qualification (EQ) program. As of October 20, 1992, GPUN had determined that the DHRS pump vent valves had a safety function, and therefore, should have been included in the EQ

program. However, as of December 2, 1996, these valves were not included in the EQ program. (03013)

B. Contrary to the above, between June 1, 1992, and March 2, 1997, identified deficiencies in the supporting documentation for the safety classification of components were not promptly corrected. Specifically:

- In audit report O-COM-91-13, finding 1, dated June 1, 1992, the licensee identified that procedure EP-011 or the Quality Classification List worksheet did not always provide sufficient details to support the classification of items without recourse to the originator. This significant condition adverse to quality was not corrected until May 25, 1993.
- In audit report O-COM-95-09, finding 12, dated December 21, 1995, the licensee identified that EP-011 did not define how to prepare a revision to a Quality Classification List Checklist and did not require that the bases for revisions be documented so those other than the Quality Classification List engineer who prepared the change could understand the basis of the change. This significant condition adverse to quality was not corrected as of March 2, 1997.
- In the Independent Safety Review (ISR) of audit report O-COM-95-09, initiated on May 16, 1996, the Independent Safety Reviewer identified the concern that changing the quality classification of components without documented or approved basis, independent review, and without a written safety evaluation documenting the basis of the change may be a violation of 10 CFR 50.59. This significant condition adverse to quality was not corrected as of March 2, 1997.

The corrective actions for the findings of O-COM-91-13 were ineffective in that they did not preclude repetition of the problem of insufficient documentation to support the QCL activities. (03023)

C. Contrary to the above, from March 21, 1997 until April 24, 1997, the licensee failed to take prompt and adequate corrective action for a condition adverse to quality. Specifically, on March 21, 1997, the licensee identified that reactor building emergency cooling fan, AH-E-1A was not environmentally qualified, in that the application of heat shrink tubing left a small length of exposed conductor at the spark plug connector to the fan motor. The licensee failed to conduct sufficient additional reviews to identify and resolve the similar condition for the other two reactor building emergency cooling fans, AH-E-1B and AH-E-1C, until April 24, 1997. As a result, reactor building emergency cooling fans, AH-E-1B and AH-E-1C, were inoperable contrary to TS 3.3. (03033)

These violations in Section III represent a Severity Level III problem (Supplement 1). Civil Penalty - \$55,000.

IV. VIOLATIONS ASSOCIATED WITH EMERGENCY PREPAREDNESS

10 CFR 50.54(q) states, in part, that "a licensee authorized to possess and operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in 10 CFR 50.47(b) and the requirements in Appendix E of this part."

- A. 10 CFR Part 50, Appendix E, Section IV.B, "Assessment Actions," requires, in part, that the means to be used for determining the magnitude of and for continually assessing the impact of the release of radioactive materials be described, including the emergency action levels that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety.

The GPU Nuclear Corporate Emergency Plan, which was developed in accordance with the provision of 10 CFR Part 50, Appendix E and 10 CFR 50.47, Section 5.1.3.1, "Direction and Coordination," states, in part, that the Emergency Director is vested with certain authority and responsibility that shall not be delegated to a subordinate, including classification of emergency events.

The licensee's Emergency Plan Implementing Procedure (EPIP) TMI-.01, "Emergency Classification and Basis," Item G4.2, requires the declaration of a general emergency for the loss of two of three fission product barriers with a potential loss of the third barrier.

Contrary to the above, during the full-participation exercise on March 5, 1997, the EPIP procedure TMI-.01 was not followed in that the Emergency Director failed to classify a general emergency when such a declaration was warranted due to the simulated loss of the three fission product barriers. (04013)

- B. 10 CFR 50.47(b)(10) requires, in part, that a range of protective actions have been developed for the plume exposure pathway emergency planning zone (EPZ) for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place.

Section 2.0 of the GPU Nuclear Corporate Emergency Plan states, in part, that the Emergency Plan is consistent with the guidelines given in NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," dated November, 1980.

Section I.D.2 of NUREG-0654 states, in part, that for the worst possible accidents, protective actions would need to be taken outside the planning zones.

Contrary to the above, as of March 5, 1997, emergency response training was not adequate and procedures contained insufficient guidance for considering protective action recommendations (PARs) beyond the 10-mile EPZ. As a result, emergency response management did not communicate recommendations for PARs for residents beyond the 10-mile EPZ when plume dose projections appeared to indicate that protective action guidelines would be exceeded beyond that zone during the full participation exercise on March 5, 1997. (04023)

These violations in Section IV represent a Severity Level III problem (Supplement 1).
Civil Penalty - \$55,000.

V. VIOLATIONS NOT ASSESSED A CIVIL PENALTY

- A. 10 CFR 50.49(f) requires each item of electrical equipment important to safety to be environmentally qualified by testing or by combination of testing and analysis.

10 CFR 50.49(j) requires that a record of the environmental qualification be maintained in an auditable form to permit verification that each item of electric equipment important to safety is qualified for its application and meets its specified performance requirements when it is subjected to the conditions predicted to be present when it must perform its safety function.

Contrary to the above, from March 17, 1986, until March 24, 1997, the three reactor building emergency cooling fans were not environmentally qualified by testing and/or analysis for post loss of coolant accident (LOCA) reactor building atmospheric conditions. Specifically, the application of heat shrink tubing left a small length of exposed conductor at the spark plug connector to each of the fan motors. There was no documentation to support the qualification of the motors with the exposed conductors in the post-LOCA environment in which they would be required to function. As a result, the reactor building emergency cooling fans were inoperable contrary to TS 3.3. (05013)

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

- B. 10 CFR Part 50, Appendix B, Criterion V, states, in part, that activities affecting quality shall be accomplished in accordance with instructions, procedures, or drawings.

Procedure SP-9000-44-001, "Instrument and Control Instrument Installation," Revision 0, Section 3.3, specifies the use of protective barriers where separation criteria cannot be met.

Procedure 1420-HT1, "Heat Trace Repair and Replacement," Revision 11 and the vendor drawing ET-30250, Revision 2, provide instructions for the installation of heat tracing.

Contrary to the above, as of December 2, 1996, the as-installed configuration of BWST level transmitter DH-LT-808 was not in accordance with the applicable specifications, procedures, and drawings. Specifically:

1. The protective barrier for level transmitter DH-LT-808 was not intact in that the cover plate was open and the fasteners for the cover were missing.
2. The heat tracing for level transmitter DH-LT-808 was not installed in accordance with procedure 1420-HT1 and the vendor drawing in that the heat tracing was not wrapped around the sensing lines or the transmitter.

Without the proper electrical separation between redundant components or proper heat tracing, the level transmitter could have been subject to a single failure or freezing. (06014)

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

- C. 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," requires, in part, that a test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.

1. Contrary to the above, as of January 10, 1997, the test program failed to assure that the tests specified by IEEE Report No. NSG/TSC/SC4-1, "Proposed IEEE Criteria for Class 1E Electrical Systems for Nuclear Power Generating Stations." June 1969, were identified and performed. Specifically, molded case circuit breakers in safety-related motor control centers 1A ES ESF VENT and 1B ESF VENT had not been tested since they were installed in 1986 contrary to IEEE Report No. NSG/TSC/SC4-1 which specifies that tests shall be performed at scheduled intervals to demonstrate that components that are not exercised during normal operation are operable. UFSAR Section 8.1, "Design Basis," states that the electrical system design satisfies IEEE Report No. NSG/TSC/SC4-1. (07014)

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

2. Contrary to the above, as of December 2, 1996, the test program failed to assure that testing of safety related check valves required by TS 4.2.2 in accordance with 10 CFR 50.55a and Section XI of the American Society of Mechanical Engineers (ASME) and Pressure Vessel Code (The Code), was identified and performed. Specifically, the DHRS pump discharge check valves (DH-V16A and B) and the ball check valves located in the floor drains of the DHRS pump vaults were not

tested in the closed position as specified by part 10 (OM-10) of ASME/ANSI ONa-1988 which is referenced by Section XI of the ASME Code. DHRS pump discharge check valves have a safety function for preventing back flow thus maintaining low pressure injection flow when the discharge header cross-connect valves are open. Ball check valves located in the floor drains of the DHRS pump vaults have a safety-related function in preventing flooding of the other DHRS vault if excessive water leakage occurs in one vault. (08014)

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

Pursuant to the provisions of 10 CFR 2.201, GPU Nuclear Corporation (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the receipt of this Notice of Violation and Proposed Imposition of Civil Penalties (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued as to 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 penalties by letter addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer payable to the Treasurer of the United States in the amount of the civil penalties proposed above, or may protest imposition of the civil penalties, 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 penalties will be issued. Should the Licensee elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalties, 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 penalties should not be imposed. In addition to protesting the civil penalties in whole or in part, such answer may request remission or mitigation of the penalties.

In requesting mitigation of the proposed penalties, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 that 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 response noted above (Reply to Notice of Violation, letter with payment of civil penalties, and Answer to a Notice of Violation) should be addressed to: James Lieberman, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region I, and a copy to the NRC Senior Resident Inspector at the facility that is the subject of this Notice.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR. If redactions are required, a proprietary version containing brackets placed around the proprietary, privacy, and/or safeguards information should be submitted. In addition, a non-proprietary version with the information in the brackets redacted should be submitted to be placed in the PDR.

Dated at King of Prussia, Pennsylvania
this 8th day of October 1997

**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

June 9, 1997

EAs 96-412, 97-001, 97-002, and 97-060

Mr. John G. Cook
Senior Vice President
Illinois Power Company
500 S. 27th Street
Decatur, IL 62525

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTIES - \$450,000 (NRC Routine Inspection Report 50-461/96009(DRP), Special Inspection Report 50-461/96010(DRP), Operational Safety Team Inspection Report 50-461/96011(DRS), Inspection Report 50-461/96012(DRS), Special Inspection Report 50-461/96014(DRP), and Office of Investigations Report 3-96-047)

Dear Mr. Cook:

This refers to five inspections conducted from July 30, 1996, through January 23, 1997, at the Clinton Power Station (CPS). The inspections included evaluations and assessments of the 1) September 5, 1996, reactor recirculation pump seal failure, 2) operations and engineering activities supporting operations, 3) Division III emergency diesel generator inoperability, 4) feedwater containment isolation check valves' inoperability, and 5) radiation protection program. A management meeting was held on September 23, 1996, to discuss Illinois Power Company's assessment of the September 5, 1996, reactor recirculation pump seal failure event, and a public exit meeting was held on October 4, 1996, to present the NRC's inspection findings. Exits for the other inspections were conducted on November 21, 1996, December 12, 1996, and January 23, 1997. In addition, the NRC Office of Investigations conducted an investigation of the circumstances of the September 5, 1996, event. Because of the seriousness of the issues emanating from the inspections, predecisional enforcement conferences were conducted on February 4, March 4, and March 20, 1997.

Based on the information developed during the inspections and the information CPS provided during the predecisional enforcement conferences, the NRC has determined that a number of significant violations of NRC requirements occurred from September 5, 1996, through January 23, 1997. The violations demonstrate a lack of conservative decision-making, pervasive procedural adherence problems, inappropriate procedures, and a lack of rigor in conducting routine plant activities. These violations have occurred throughout various site organizations. Enclosure 1 contains a Notice of Violation and Proposed Imposition of Civil Penalties (Notice), that describes the violations.

The violations in the Notice are grouped in five sections as follows:

- Section A of the Notice, "Reactor Recirculation Pump Seal Failure," describes two significant procedure violations during an activity undertaken on September 5, 1996, to allow continued plant operation by isolating the "B" reactor coolant loop, thereby stopping, or limiting, the suspected leaking pump shaft seal package. The procedural violations directly resulted in reactor coolant leakage considerably exceeding the allowed Technical Specification Limit and requiring a plant shutdown. CPS site supervision and management inappropriately emphasized attaining a single loop configuration to allow continued power operation. This resulted in a focus to operate the plant rather than the more conservative decision to shut down the unit. The deliberate actions of members of the shift crew on September 5, 1996, resulted in very significant violations. Based on a review of the evidence obtained from the Office of Investigations, NRC inspections, and enforcement conferences, CPS's actions demonstrated careless disregard for procedural requirements.
- Section B of the Notice, "Failure to Follow Procedures," involves seventeen violations involving operations and radiation protection procedures which collectively demonstrates a breakdown in the control of activities involving the adherence to procedures. The violations demonstrated that CPS had established an environment that condoned procedure compliance through accomplishment of the user's interpretation of the procedures' intent without regard for the actual procedural steps.
- Section C of the Notice, "Inoperable Emergency Diesel Generator," involves two violations associated with the Division III Emergency Diesel Generator (EDG). The licensee failed to maintain design control with this EDG and failed to identify and correct a condition adverse to quality. As a result, the EDG was inoperable for more than a year.
- Section D of the Notice, "Failure to Perform Safety Evaluations," involves seven violations for a failure to perform safety evaluations required by 10 CFR 50.59. Safety evaluations were not performed to justify operating the plant differently than described in the updated safety analysis report (USAR); to justify the acceptability of performing tests on operable equipment; or to justify continued operation when as-found plant conditions were different than the USAR description. The examples represented a significant lack of attention toward the process for performing 10 CFR 50.59 evaluations.
- Section E of the Notice, "Ineffective Corrective Actions to Resolve Inoperable Containment Penetrations," involves two violations for inoperable feedwater primary containment isolation valves caused by inadequate corrective action for a longstanding equipment problem and a failure to perform adequate testing to assure Technical Specification surveillance requirements were met. This resulted in the serious degradation of two containment penetrations such that they may not have been able to function when required.

Individually and collectively, the violations are serious. These violations included a pervasive problem regarding procedural quality and adherence which you acknowledged during the predecisional enforcement conference, weaknesses in the conduct of operations, and weaknesses in engineering support to operations. CPS management failed to ensure that its economic expectations had been put in proper focus with safe, conservative facility operation. In the aggregate, given the depth and breadth of the violations, it is evident that existing management control systems were not used effectively to ensure early detection and timely resolution of conditions adverse to safe plant operation. For example, a number of procedures, written to ensure that systems were operated and tested consistent with the facility's design bases, were inappropriately changed or not followed. Site-wide procedures were usually looked upon as guidance rather than as requirements to be followed. Tests were performed on operating systems without procedures and without required reviews to ensure that unreviewed safety questions did not exist. Beyond the operations oriented-violations, significant deficiencies existed in the engineering program with regards to safety evaluations and operability assessments. Other inspection activities identified a significant issue involving the Division III EDG being inoperable for almost a year due to an inadequate calibration procedure. In addition, the feedwater outboard containment isolation valves' ability to fully perform their intended safety function was not determined over the past operating cycle due to inadequate test configurations. Lastly, several radiation protection violations were caused by procedure compliance problems which were similar to those identified in operations and engineering. These violations occurred well after the September 5, 1996, reactor recirculation pump seal failure event indicating CPS was having difficulty implementing effective corrective actions for procedure compliance problems. In that regard, it is of particular concern that the corrective actions discussed at the March 20, 1997, predecisional radiation protection enforcement conference were narrowly focused on the individual items. Your staff failed to discuss the issues as an integrated theme from a radiation protection perspective and as they related to the broader procedure compliance problems discussed at the two previous enforcement conferences. This indicated that CPS was not looking at the identified problems in an integrated fashion.

In summary, the inspection findings demonstrated 1) a lack of conservative decision-making, 2) pervasive procedural adherence problems as indicated by individuals believing it was acceptable to not follow existing procedures in order to accomplish work activities, and 3) poor-quality procedures. Extensive NRC intervention was required to ensure CPS recognized and understood the problems' scope and magnitude. This included management's lack of recognition of its failure to make the conservative decision to shut down the unit on September 5, 1996, and CPS's lack of understanding of the associated procedure violations.

Due to the safety significance of the violations discussed above, their relationship to operational safety, and in accordance with the NRC Enforcement policy, NUREG-1600, the violations in Section A of the Notice have been categorized in the aggregate as a Severity Level II problem. The violations in Sections B - E have each been categorized as Severity Level III problems.

Significant civil penalties are warranted to emphasize to you and to other reactor licensees the importance of strong management oversight and direction from both the site and utility in maintaining a clear focus on operational safety; the need for plant personnel to challenge and investigate discrepancies; the need to adequately plan safety-significant activities; the need to take timely and effective corrective actions; and the need for a strong self-assessment program. Enforcement discretion is being exercised as provided by Section VII.A. of the Enforcement Policy to assess civil penalties of \$200,000, (the maximum statutory amount) for the violations in Section A of the Notice, and civil penalties of \$100,000 for the violations in Section B. In accordance with Section VI.B.2 of the Policy, civil penalties of \$50,000 for the violations in each of Sections C - E are being assessed. The assessments are more fully described in Enclosure 2.

Accordingly, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Regulatory Effectiveness, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$450,000. But for the extended shutdown of CPS and the substantial corrective actions taken during this shutdown period to improve performance, a larger civil penalty would have been proposed.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to this Notice, including your proposed corrective actions and the results of future inspections, the NRC will determine whether further NRC enforcement action is necessary to ensure compliance with NRC regulatory requirements. I further note that my staff continues to review activities at CPS, and further enforcement actions may be taken if additional violations are identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

A. Bill Beach
Regional Administrator

Docket No. 50-461
License No. NPF-62

Enclosures: 1. Notice of Violation and Proposed
Imposition of Civil Penalties
2. Civil Penalty Assessment

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTIES

Illinois Power Company
Clinton Power Station
Clinton, IL

Docket No. 50-461
License No. NPF-62
EA Nos: 96-412, 97-001, 97-002,
and 97-060

During five NRC inspections conducted from July 30, 1996, to January 23, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the NRC proposes to impose civil penalties 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 violations and associated civil penalties are set forth below:

A. Reactor Recirculation Pump Seal Failure

Clinton Power Station (CPS) Technical Specification 5.4.1.a requires, in part, that written procedures shall be implemented covering the applicable procedures recommended in Regulatory Guide (RG) 1.33, Revision 2, Appendix A, February 1978.

Regulatory Guide 1.33, Revision 2, Appendix A, "Typical Procedures for Pressurized Water Reactors and Boiling Water Reactors," states, in part, that procedure adherence (Section 1.d) and recirculation system (Section 4.a) are typical safety-related activities which should be covered by written procedures.

CPS 1005.14 (Rev. 4), "Formatting of Procedures and Documents," a procedure required by Section 1.d of RG 1.33, at Step 8.1.11.4 states, in part, that if a specific order of performing the procedure is required, an asterisk (*) at the beginning of the section to annotate that the steps are to be performed in the sequence that they are written.

CPS 3302.01 (Rev. 18), "Reactor Recirculation," a procedure required by Section 4.a of RG 1.33, specified that Section 8.2.4 was required to be performed in sequence as indicated by the "*" next to the section heading.

Section 8.2.4 of CPS 3302.01 specified, in part, the sequence to isolate an idle reactor coolant loop as follows:

- Step 8.2.4.4: Cool the idle loop to < 250°F
- Step 8.2.4.5: Shut 1B33-F075B, "Pump B Seal Stage Shutoff Valve"
- Step 8.2.4.6: Shut 1C11-F026B, "CRD Supp Isol to RR Pump B"

Notice of Violation and Proposed
Imposition of Civil Penalty

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1. Contrary to the above, on September 5, 1996, the operators failed to perform the steps in the sequence specified in Section 8.2.4 as demonstrated by their failure to wait until the idle reactor coolant loop had cooled to < 250°F as specified in Step 8.2.4.4 before performing step 8.2.4.5 and shutting 1B33-F075B.
2. Contrary to the above, on September 5, 1996, the operators failed to perform the steps in the sequence specified in Section 8.2.4 as demonstrated by their failure to wait until the idle reactor coolant loop had cooled to < 250°F before performing Step 8.2.4.6 and shutting 1C11-F026B.

This is a Severity Level II problem (Supplement I). Civil Penalty - \$200,000.

B. Failure to Follow Procedures

1. Clinton Power Station (CPS) Technical Specification 5.4.1.a requires, in part, that written procedures shall be implemented covering the applicable procedures recommended in Regulatory Guide (RG) 1.33, Revision 2, Appendix A, February 1978.

Regulatory Guide 1.33, Revision 2, Appendix A, "Typical Procedures for Pressurized Water Reactors and Boiling Water Reactors," states, in part, that the following are typical safety-related activities that should be covered by written procedures: shift and relief turnover (Section 1.g); log entries (Section 1.h); changing loads (Section 2.f); fuel storage cooling system (Section 4.k); control room heating and ventilation system (Section 4.s); and loss of coolant (including leak-rate determination (Section 6.a)).

- a. CPS 3317.01 (Rev. 16), "Fuel Pool Cooling Cleanup," a procedure required by Section 4.k of RG 1.33, at Step 8.1.2.14, required that valve 1FC004A or 1FC004B on the idle spent fuel pool loop be closed.

Contrary to the above, between September 18 and 25, 1996, operators failed to close 1FC004A in the idle "A" train fuel pool cooling loop as required by CPS 3317.01.

- b. CPS 3402.01 (Rev. 14), "Control Room HVAC," a procedure required by Section 4.s of RG 1.33, at Step 8.1.1.1.1, required the final position of OVC043B, "Moisture Separator Drain Valve," be open and OVC096B, "Loop Seal Fill Valve," be closed upon completion of filling the makeup air filter moisture separator loop seal.

Notice of Violation and Proposed
Imposition of Civil Penalty

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Contrary to the above, on September 18, 1996, after filling the makeup air filter moisture separator loop seal, the licensee failed to open the moisture separator drain valve (OVC043B) and close the loop seal fill valve (OVC096B) as required by CPS 3402.10.

- c. CPS 4001.01 (Rev. 7), "Reactor Coolant System Leakage," a procedure required by Section 6.a of RG 1.33, at Step 4.4, required the control room to notify radiation protection (RP) and request area samples and or AR/PR trending information to assist in detecting the location/source of the leak.

Contrary to the above, on September 5, 1996, RP was not notified of the need to assist in identifying the unidentified leakage.

- d. CPS 3005.01 (Rev. 18), "Unit Power Changes," a procedure required by Section 2.f of RG 1.33, at Step 6.1.b, required the control room to notify the chemistry department, after a thermal power change of greater than 15% in one hour, to perform the applicable sections of CPS 9940.01, "Weekly Chemistry Surveillance Log". In this case, the applicable sections required a gaseous sample.

Contrary to the above, on September 6, 1996, thermal power was changed from 55% to 38%, an amount greater than 15%, within a one-hour period, and the control room failed to notify the chemistry department so it could take a gaseous sample.

- e. CPS 1401.01 (Rev. 20) "Conduct of Operations," is a procedure required by sections 1.g and 1.h of RG 1.33.
- (1) Section 8.4.3.13 of CPS 1401.01 required the Line Assistant Shift Supervisor (LASS) to inform the relief operator of, at a minimum, current plant status, operations in progress and work to be performed in the immediate future.

Contrary to the above, on September 17, 1996, the LASS failed to inform the relief operator of work to be performed in the immediate future which was going to affect fuel building differential pressure.

Specifically, the relief operator was not informed that the work activity would result in a high differential pressure fuel building annunciator alarm

Notice of Violation and Proposed
Imposition of Civil Penalty

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in the control room. Consequently, an operator was unnecessarily dispatched to investigate the cause of the expected alarm.

- (2) Section 8.3.3.1 of CPS 1401.01 required the shift supervisor to remain in a monitoring role during off normal operation unless he determines that the LASS is not able to deal with the situation.

Contrary to the above, on September 6, 1996, the shift supervisor failed to remain in a monitoring role and directed activities to place the unit in single loop operation without determining that the LASS was not able to deal with the situation.

- (3) Section 8.4.4.10. e) and f) of CPS 1401.01 required that significant plant operating data, such as abnormal plant conditions and plant transients, be entered in the shift supervisor and main control room journals.

Contrary to the above, on September 6, 1996, no entry was made in the shift supervisor's journal for an abnormal condition, when suppression pool level exceeded the technical specification limit requiring entry into a limiting condition for an operation action statement.

- (4) Section 8.1.6.2.1 of CPS 1401.01 required the Shift Technical Assistant (STA) to assist the shift supervisor in evaluating conditions for possible entry into an emergency classification condition.

Contrary to the above, on September 5, 1996, the STA failed to assist the shift supervisor in evaluating conditions for possible entry into an emergency classification condition.

2. CPS Technical Specification 5.2.2e, "Unit Staff," requires, in part, that administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions. Controls shall be included in the procedures such that individuals shall be reviewed monthly by the plant manager, or his designee, to ensure that excessive hours have not been assigned.

Notice of Violation and Proposed
Imposition of Civil Penalty

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CPS 1001.10 (Rev. 6), "Control of Working Hours," Step 8.7, which implements the overtime control and review requirements of Technical Specification Section 5.2.2e, requires that individual overtime records shall be reviewed at least monthly by department management to ensure that excessive hours have not been assigned, and to ensure that overtime limits have not been exceeded without prior authorization.

Contrary to the above, during the period from April 1996 through August 1996, the required reviews of overtime usage by the Operations Department personnel were not performed.

3. 10 CFR 50.54(m)(2)(iii) states that when a nuclear power unit is in an operational mode other than cold shutdown or refueling, as defined by the unit's technical specifications, such licensees shall have a person holding a senior operator license of the nuclear power unit in the control room at all times. In addition to this senior operator, for each fueled nuclear power unit, a licensed operator or senior operator shall be present at the controls at all times.

CPS 1001.05 (Rev. 8) "Authorities and Responsibilities of Reactor Operators for Safe Operation and Shutdown," which implements the requirements of 10 CFR 50.54(m)(2)(iii) at Section 2.1.2, defines the "A" reactor operator (RO) as the licensed RO present "at the controls" of a fueled nuclear power unit.

Contrary to the above, on September 18, 1996, with the reactor fueled, the "A" RO left the "at the controls" area for approximately 3 minutes without obtaining an appropriate relief.

4. Clinton Power Station Technical Specification 5.4.1.a requires that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide (RG) 1.33, Revision 2, Appendix A, February 1978.
 - a. Section 7(e)(1) of Appendix A to RG 1.33, requires a radiation protection (RP) procedure for access control to radiation areas including a Radiation Work Permit system.

Station Procedure No. 1905.10 (Rev. 17), "Radiation Work Permit," implemented the requirement of Section 7(e)(1) of Appendix A to RG 1.33 and stated at step 6.2 that deviations from a Radiological Safety Work Plan (RSWP) are not permitted without the approval of the Supervisor-Radiological Operations.

Notice of Violation and Proposed -6-
Imposition of Civil Penalty

RSWP 96-01 (Rev. 1), states:

- If an extended time window (12 hours minimum) exists in which no irradiated core components or fuel movements are to occur, the requirements of this RSWP may be relaxed (Section C(2));
- If the RSWP is temporarily suspended, the restricted area posting on the drywell 790' elevation and the notification posting restricting access to the drywell 767' elevation shall be removed and the dropped fuel bundle warning system shall be placed in standby (Section II(a)).

Contrary to the above, on November 14, 1996, workers were allowed to enter the 796' elevation of the drywell under the following deviations from RSWP 96-01 that had not been approved by the Supervisor-Radiological Operations:

- i. Fuel movement was suspended for a maximum 8 hour period and not for the minimum 12 hour period specified in section C(2) of RSWP 96-01 prior to the entry.
 - ii. The restricted area posting on the drywell 790' elevation and the notification posting restricting access to the drywell 767' elevation were not removed, and the dropped fuel bundle warning system was not placed in standby prior to suspension of RSWP 96-01 as specified in section II(a) of RSWP 96-01.
- b. Section 7(e)(7) of Appendix A to RG 1.33 requires a radiation protection (RP) procedure for Personnel Monitoring.

Station Procedure No. 1032.02 (Rev. 23), "Security Access Control," implemented Section 7(e)(7) of Appendix A to RG 1.33 and required at Step 8.8.2 that an individual remain in the immediate area and contact RP personnel if the individual alarms a radiation portal monitor twice.

Contrary to the above, on December 28, 1996, and on January 7, 1997, a records supervisor and auxiliary operator, respectively, exited the plant after twice alarming the gatehouse radiation portal monitor and without contacting RP personnel as specified at Step 8.8.2 of Station Procedure No. 1032.02.

Notice of Violation and Proposed -7-
Imposition of Civil Penalty

- c. Section 7(e)(1) of Appendix A to RG 1.33 requires a radiation protection (RP) procedure for access control to radiation areas.

Station Procedure 1024.02 (Rev. 4) "Radiological Work Control," implemented Section 7(e)(7) of Appendix A to RG 1.33 and required at Step 6.1.1 that workers adhere to established RP control requirements unless issued written or verbal guidance from RP personnel.

RP control requirements contained specific prohibitions against eating, drinking and smoking in the Radiological Controlled Area (RCA) were posted at various locations in the plant, communicated during Nuclear General Employee Training (NGET) and were listed on page 15 of the refueling outage (RF-6) handbook distributed to all personnel. Also, during NGET workers were instructed on the proper radiological controls which shall be used during ingress/egress to/from a contaminated area including removing protective clothing when exiting contaminated areas.

- i. Contrary to the above, on November 22, 1996, the licensee identified that an unapproved sleeping/smoking area had been set up inside the Radiological Controlled Area (730' elevation of the radiological waste building), comprising of three sleeping places and used (freshly smoked) cigarette butts.
- ii. Contrary to the above, on January 7, 1997, a worker exited a posted contaminated area prior to removing his protective clothing.
- d. Section 7(b)(1) of Appendix A to RG 1.33 requires procedures for limiting the release of solid radioactive waste material such as spent resin and filter sludge to the environment.

Procedure STD-P-03-028 (Rev 1) , "Waste Sluicing Procedure" was written to implement Section 7(b)(1) of Appendix A to RG 1.33.

Contrary to the above, on January 7, 1997, procedure STD-P-03-028 was found to be inadequate because it did not describe the vent path for the waste evaporator tank used during the sludge sluicing and did not describe the actual sluicing wand used during the job. The result of following this inadequate procedure, was the spread of radioactive material and the contamination of several workers when they disconnected a pressurized sludge hose.

Notice of Violation and Proposed -8-
Imposition of Civil Penalty

- e. 10 CFR 20.1501 requires, in part, that each licensee make or cause to be made surveys that may be necessary for the licensee to comply with the regulations in Part 20 and that are reasonable under the circumstances to evaluate the extent of radiation levels, concentrations or quantities of radioactive materials, and the potential radiological hazards that could be present.

10 CFR 20.1701 requires, in part, that the licensee shall use, to the extent practical, process or other engineering controls to control the concentrations of radioactive material in air.

Pursuant to 10 CFR 20.1003, *survey* means an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources of radiation.

- i. Contrary to the above, on January 7, 1997, the licensee's evaluation failed to adequately evaluate the radiological conditions and potential radiological hazards present, or use appropriate engineering controls to control the concentrations of radioactive material in air, prior to disconnecting a hose which had become clogged during the transfer of radioactive material.
- ii. Contrary to the above, on January 3, 1997, the licensee's evaluation failed to adequately evaluate the radiological conditions and potential radiological hazards present, or use appropriate engineering controls, during the removal of mirror insulation from reactor water cleanup system piping.

This is a Severity Level III problem (Supplements I and IV). Civil Penalty - \$100,000.

C. Inoperable Emergency Diesel Generator

1. Technical Specification Limiting Condition for Operation (LCO) 3.8.1 requires that three diesel generators be operable. The LCO is applicable during Modes 1, 2, and 3 of operation.

Technical Specification Surveillance Requirement (SR) 3.8.1.11.c.1 requires that once every eighteen months it be verified that on an actual or simulated loss of offsite power signal each emergency diesel generator energizes permanently connected loads in < 12 seconds. Licensee Procedure CPS 9080.23, "Diesel Generator 1C Integrated," was intended to satisfy this SR.

Notice of Violation and Proposed -9-
Imposition of Civil Penalty

SR 3.0.1 states, in part, that "failure to meet a SR, whether such failure is experienced during performance of the SR or between performances of the SR, shall be failure to meet the LCO."

Contrary to the above, from September 26, 1995, until November 5, 1996, Diesel Generator 1C was inoperable in that SR 3.8.1.11.c.1 could not be satisfied. On September 26, 1995, the licensee miscalibrated relay K54X. The miscalibration directly caused, on November 2, 1996, the inability of Diesel Generator 1C to satisfy SR 3.8.1.11.c.1 in that it could not be demonstrated that permanently connected loads were energized in less than 12 seconds. As demonstrated through the performance of Procedure CPS 9080.23, loads were not energized until 20 seconds after receipt of the actuation signal.

2. 10 CFR Part 50, Appendix B, Criterion III, "Design Control," states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis as specified in the license application, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions.

10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions" states, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.

Contrary to the above, on August 1, 1995, the licensee failed to correctly translate the design basis for the closing time of Diesel Generator 1C output breaker when the preventative maintenance task evaluation request sheet PEMDGM025 to calibrate relay K54X, "Permissive Signal for Closure of the Division III EDG Output Breaker" was issued. Specifically, the licensee incorporated the wrong delay time in PEMDGM025 which directly caused the closure time of Diesel Generator 1C output breaker to be in noncompliance with Technical Specifications. On September 26, 1995, the licensee failed to identify and correct a condition adverse to quality when workers found a substantial discrepancy between the as-found set point of .55 seconds and as-left set point (specified in PEMDGM025) of 11.28 seconds for the K54X relay. The licensee's failure to properly translate design requirements into working instructions (PEMDGM025), and the failure to both identify as a nonconformance and take corrective actions for the substantial difference between the as found and as left setpoints for the K54X relay contributed to Diesel Generator 1C being inoperable from September 26, 1995, to November 5, 1996, as described in violation C.1.

This is a Severity Level III problem (Supplement I). Civil Penalty - \$50,000.

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Imposition of Civil Penalty

D. Failure to Perform Safety Evaluations

1. 10 CFR 50.59(a)(1), "Changes, Tests and Experiments," states, in part, that the holder of a license authorizing operation of a utilization facility may make changes to the facility as described in the safety analysis report and conduct tests or experiments not described in the safety analysis report, without prior Commission approval, unless the proposed change, test or experiment involves a change in the technical specifications incorporated in the license or an unreviewed safety question.

10 CFR 50.59(b)(1) requires, in part, that the licensee shall maintain records of changes in the facility made pursuant to this section, to the extent that these changes constitute changes in the facility as described in the safety analysis report. The licensee shall also maintain records of tests carried out pursuant to paragraph (a) of 10 CFR 50.59. These records must include a written safety evaluation which provides the bases for the determination that the test does not involve an unreviewed safety question.

The applicable sections of the Updated Safety Analysis Report (USAR) include Figure 9.1-4, which shows the piping configuration for the spent fuel pool cooling system and provided the system configuration for an idle spent pool cooling loop; Section 5.4.7, which describes the design and functional basis of the Residual Heat Removal System (RHR); and Section 3.9.4, which describes the control rod drive system.

- a. Contrary to the above, from 1989 until October 1996, the licensee had operated the fuel pool cooling and cleanup system, as prescribed in CPS 3317.01 (Rev. 16) at step 8.1.1.6 with a valve line up different from that shown on USAR Figure 9.1-4 and a written safety evaluation had not been performed to determine that the change to the system configuration specified in the USAR did not involve an unreviewed safety question. Specifically, the procedure required fuel pool cooling pump valve 1FC011A or B, for the idle loop, to be open, not closed as prescribed in Figure 9.1-4.

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Imposition of Civil Penalty

- b. Contrary to the above, on August 1, 1996, the licensee performed a test that was not described in the safety analysis report, to verify that there was no negative impact on RHR system (Section 5.4.7 of the USAR) when cycled condensate to the containment was isolated. The test was performed without performing a written safety evaluation to determine that the test did not involve an unreviewed safety question.
 - c. Contrary to the above, on August 1, 1996, the licensee performed a test that was not described in the safety analysis report, to verify functionality of RHR (Section 5.4.7 of the USAR) water leg pump check valve 1E12F085A. The test was performed without performing a written safety evaluation to determine that the test did not involve an unreviewed safety question.
 - d. Contrary to the above, between August 2 and September 18, 1996, the licensee performed a weekly test that was not described in the safety analysis report, to verify the operability of RHR (Section 5.4.7 of the USAR) check valve 1E12F085A. The test was performed without performing a written safety evaluation to determine that the test did not involve an unreviewed safety question.
 - e. Contrary to the above, on May 3, 1995, with the reactor at power, the licensee performed a test that was not described in the safety analysis report, to determine if the control rod drive (CRD) pump's (Section 3.9.4 of the USAR) drop in CRD pressure was due to leaking valves or CRD pump degradation. The test was completed without performing a written safety evaluation to determine that the test did not involve an unreviewed safety question.
2. 10 CFR 50.59, "Changes, Tests and Experiments," permits the licensee, in part, to make changes to the facility as described in the safety analysis report without prior Commission approval provided the change does not involve an unreviewed safety question. The licensee shall maintain records of changes in the facility and these records must include a written safety evaluation which provides the bases for the determination that the change does not involve an unreviewed safety question.

10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," states, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.

Notice of Violation and Proposed
Imposition of Civil Penalty

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10 CFR 50.71(e), "Maintenance of Records, Making of Reports" requires, in part, that the licensee update the safety analysis report originally submitted as part of the application for the operating license to assure that the information included in the safety analysis report contains the latest material developed. The updated safety analysis report shall be revised to include the effects of, in part, all safety evaluations performed by the licensee in support of conclusions that changes did not involve an unreviewed safety question.

10 CFR 50.9(a), "Completeness and Accuracy of Information," requires, in part, that information provided to the NRC by a licensee or information required by regulation to be maintained by a licensee shall be complete and accurate in all material respects.

The applicable sections of the Updated Safety Analysis Report (USAR) are Section 9.4.5.2, which describes the cathodic protection and table 8.3-13 which describes the delay time for equipment to sequence on the emergency diesel generators.

- a. Contrary to the above, the description of the facility in the USAR was not accurate in all material respects in that the USAR did not match the facility, required safety evaluations were not performed, corrective action was not implemented when conditions adverse to quality were identified, and the USAR was not properly updated. Specifically, in August 1995, the licensee had identified a condition adverse to quality, in that the cathodic protection system was not adequate to protect buried piping as stated in the USAR Section 9.4.5.2. As of October 1996, the licensee had neither taken prompt corrective action nor performed a written safety evaluation to determine if an unreviewed safety question existed for the degraded cathodic protection system.
- b. Contrary to the above, the description of the facility in the USAR was not accurate in all material respects in that the USAR did not match the facility, required safety evaluations were not performed, corrective action was not implemented when conditions adverse to quality were identified, and the USAR was not properly updated. Specifically, in 1993 the licensee had identified a condition adverse to quality, in that a discrepancy existed between the as-built condition of the control room chillers and the system as described in USAR table 8.3-13. The licensee had identified that the chillers may auto-start in about 2.5 minutes after an event while the USAR documented that they would start 20 minutes after an event. As of

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Imposition of Civil Penalty

October 1996, the licensee had neither taken prompt corrective action nor performed a written safety evaluation to determine if an unreviewed safety question exists for the auto-restart of the control room chillers after loss of power.

This is a Severity Level III problem (Supplement I). Civil Penalty - \$50,000.

E. Ineffective Corrective Actions to Resolve Inoperable Containment Penetrations

1. Clinton Power Station (CPS) Technical Specification 3.6.1.a requires that feedwater primary containment isolation valves be operable.

Technical Specification 3.6.1.3.8, the surveillance requirement for Technical Specification 3.6.1, requires verification that the combined leakage rate for all secondary containment bypass leakage paths is $\leq .08L_a$ when pressurized to $\geq P_a$.

10 CFR Part 50 Appendix J Section III.C.2.(a) requires, in part, that valves be pressurized with air at a pressure of P_a .

CPS surveillance procedure 9861.02 (Rev. 26), "Local Leak Rate Testing Requirement and Type C (Air) Local Leak Rate Testing," which implemented Technical Specification 3.6.1.3.8 and 10 CFR Part 50, Appendix J, requires at step 5.16.1 that both sides of the valve seat shall be drained below the valve seating surfaces prior to performing air leak testing of containment isolation valves.

Contrary to the above, on April 2 and 10, 1995, the licensee did not drain water from the outboard feedwater primary containment isolation valves (1B21F032 B & A, respectively) to below the valves' seating surfaces prior to leak testing the valves. This resulted in the failure to ensure that the primary containment isolation valves were operable during operating cycle 6.

2. 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action" requires, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, and defective material and equipment, are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective actions taken to preclude repetition.

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Imposition of Civil Penalty

Contrary to the above, during refueling outages 1, 2, 3, 4, 5, and 6 that were performed between January 1991 and October 1996, the licensee failed to establish corrective actions to preclude repeated failures of the outboard feedwater containment isolation check valves to pass the as-found local leak rate air test performed during each refueling outage, thus resulting in a significant condition adverse to quality.

This is a Severity Level III problem (Supplement I). Civil Penalty - \$50,000.

Pursuant to the provisions of 10 CFR 2.201, Illinois Power Company is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalties (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to 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 penalties by letter addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer 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 penalties 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 penalties will be issued. Should the Licensee elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalties, in whole or in part, such answers 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 penalties should not be imposed. In addition to protesting the civil penalties in whole or in part, such answers may request remission or mitigation of the penalties.

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In requesting mitigation of the proposed penalties, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 civil penalties.

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

The response noted above (Reply to Notice of Violation, letter with payment of civil penalties, and Answer to a Notice of Violation) should be addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region III and a copy to the NRC Resident Inspector station at the Clinton facility.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Lisle, Illinois
this 9th day of June 1997

CIVIL PENALTY ASSESSMENT

A. Reactor Recirculation Pump Seal Failure

Section A of the Notice contains two violations. These violations pertain to the operating crew's deliberate actions which resulted in failing to comply with the specific procedure step sequence when isolating the idle reactor coolant loop. Specifically, the crew failed to allow the idle loop to cool to the specified temperature before completing the isolation procedure. Failing to allow the loop to cool directly contributed to further degradation of the seal, drywell leakage exceeding the technical specification limits, and the seal's ultimate failure.

These violations demonstrated that the administrative system for procedure compliance, which was designed to prevent or mitigate a serious safety event, did not perform its intended function. The evolution demonstrated that Illinois Power Company inappropriately emphasized attaining a single loop configuration to allow continued power operation over the conservative decision to shut down the unit. During the predecisional enforcement conference, the CPS managers acknowledged that the management team had defined procedure compliance as "meeting the intent of procedures" and not complying with the written procedure. In addition, CPS managers acknowledged that the crew was "set up." Their acknowledgement was based on the established definition of procedure compliance; the material condition of the plant; the number of operator work arounds; the lack of simulator training on the event; the fact that a reactor operator, the shift supervisor and the line assistant shift supervisor were not part of the regular crew, and the crew was thrown into a situation that was very complicated and different from something that they had performed before. These actions demonstrated a careless disregard by CPS for procedural requirements. Therefore, in accordance with NUREG-1600, the two violations are of very significant regulatory concern and have been categorized in the aggregate as a Severity Level II problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$80,000 is normally considered for a Severity Level II violation. As noted above, particularly poor performance was demonstrated by CPS before, during, and after the event. Specifically, the event and NRC follow-up activities revealed fundamental weaknesses in the CPS operations and engineering departments in the areas of safety focus, procedure quality and adherence, conservative decision making, and engineering support to operations. Substantial NRC involvement was needed to assure that CPS conducted a comprehensive assessment of the issues and implement subsequent corrective actions. The corrective actions proposed by CPS focused on conservative decision-making, appropriate safety focus, procedure compliance, procedure adequacy, and appropriate 10 CFR 50.59 appreciation and implementation. The NRC would expect these corrective actions to be effective at improving

performance. However, at the March 20, 1997, enforcement conference held to discuss the radiological control violations --discussed in paragraph B, "Failure to Follow Procedures" below-- the licensee's corrective actions were focused narrowly on each violation, and did not address the fundamental root causes of procedure quality and adherence problems. In addition, several of the violations discussed in paragraph B, occurred significantly after the September 5, 1996, event. This demonstrated that the initial procedure compliance corrective actions were not fully effective.

In view of the circumstances of these very significant violations, NRC is exercising discretion in accordance with Section VII.A of NUREG-1600 and assessing a civil penalty in the maximum amount of \$100,000 for each violation for a total of \$200,000. This represents the maximum daily civil penalty allowed each violation.

E Failure to Follow Procedures

Section B of the Notice contains ten violations associated with operations and seven violations associated with radiation protection. These violations address a breakdown in the control of activities involving adherence to procedures and collectively represent a potentially significant program breakdown. The ten operational violations pertained to fundamental procedure adherence problems pervasive in the operations and engineering departments. They included failure to control valve status (spent fuel pool cooling and control room heating and ventilation); failure to notify other departments (chemistry and health physics) after power level changes; and lack of rigor in conduct of operations (individual turnovers, SRO monitoring plant conditions). These violations demonstrated that site management accepted an environment that permitted and accepted that procedures were treated as guidance and did not have to be followed as written.

The seven radiation protection violations pertained to CPS's failure to implement its radiation protection program and were indications of a programmatic breakdown. The root causes for these violations are similar to the operational violations. The procedural adherence and procedural adequacy problems were clearly demonstrated by the unauthorized entry of workers into the upper levels of the drywell, the unnecessary spread of contamination when workers disconnected a pressurized sludge sluicing line without properly evaluating the potential radiological hazards, the failure to appropriately respond to alarming personnel portal monitors, the failure to properly exit a posted contaminated area, and the failure to adequately evaluate radiological conditions prior to permitting workers to remove insulation.

Therefore, in accordance with NUREG-1600, these seventeen violations have been categorized in the aggregate as a Severity Level III problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$50,000 is normally considered for a Severity Level III problem. Accordingly, the corrective action deficiencies, and need for NRC intervention as discussed in paragraph A are also applicable to this item. It was noted that during the inspection, individuals rationalized that it was acceptable to not follow existing procedures in order to accomplish work activities. Moreover, during the May 20, 1997, predecisional enforcement conference, CPS failed to discuss the radiation protection issues from a broad perspective and as they related to the procedural adherence problems discussed at the previous enforcement conferences. This indicated to the NRC that CPS was not taking this opportunity to look collectively at all of its programs and implement effective long-term corrective actions. In addition, the radiation protection violations occurred sufficiently after the September 5, 1996 event, to demonstrate that CPS was having difficulty implementing effective corrective actions for procedure compliance problems. Therefore, corrective action credit is not warranted. In view of the circumstances of this significant problem, NRC has decided to exercise discretion in accordance with section VII.A of NUREG-1600 and collectively assess a civil penalty in the amount of \$100,000 (twice the base) for this Severity Level III problem.

C. Inoperable Division III Emergency Diesel Generator (EDG)

Section C of the Notice contains two violations. These violations relate to the Division III EDG being inoperable for approximately a year. The inoperability was caused by an inadequate calibration procedure for a relay associated with the Division III EDG output breaker. The procedure had been changed without sufficient engineering reviews to ensure that the proper setting had been incorporated. In addition, this error should have been identified during the calibration, if the CPS staff had questioned the large discrepancy between the as-found and as-left settings or documented this discrepancy on an upper-tier corrective action document for subsequent review and resolution. This violation demonstrates a significant failure during the development of the calibration procedure, a failure to resolve a discrepancy between the as-found and as-left sequencer relay, and a failure to capture the discrepancy on an upper tier corrective action document. These failures resulted in the Division III EDG rendered inoperable for approximately a year. Therefore, in accordance with NUREG-1600 the two violations have been categorized in the aggregate as a Severity Level III problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$50,000 is normally considered for a Severity Level III problem absent prompt and comprehensive corrective action. The corrective actions described at the predecisional enforcement conference included the replacement and calibration of the relay, verifying correct operation of the relay through an integrated surveillance test, clarifying the related drawing, verifying correct relay setpoints on the other EDGs, and lowering the threshold for documenting out-of-tolerance

conditions in the corrective action systems. Although the NRC acknowledges these corrective actions, it was concluded that credit for corrective action credit was not warranted, because CPS had ample opportunity to identify this problem from the time that an engineering clerk discussed the setpoint with a design engineer because the setpoint range specified on the electrical drawing was not clear. The Engineering department failed to refer to other documentation to verify the correct setpoint and there was no engineering review of the preventive maintenance package for revising the setpoints. In addition, maintenance personnel did not initiate a condition report when they discovered the new setpoint was much greater than the as-found setting on the relay. Finally, two 1996 condition reports had been written regarding failures to trend instrumentation preventive maintenance failures which should have alerted CPS to this issue. A proper response on any of these occasions could have prevented the diesel generator from being inoperable for an extended period. For this reason, corrective action credit is not warranted. In view of the circumstances of this significant problem, the NRC, in accordance with Section VI.B.2 of NUREG-1600, is assessing a civil penalty in the amount of \$50,000 for this Severity Level III problem.

D. Failure to Perform Safety Evaluation

Section D of the Notice contains seven violations where safety evaluations required by 10 CFR 50.59 were not performed. These included examples where tests affecting safety-significant operable systems (residual/heat removal) were performed without safety evaluations or approved procedures; procedures were changed without safety evaluations; and systems identified as different from the plant's Updated Safety Analysis Report were not evaluated to ensure unreviewed safety questions did not exist. The seven violations are collectively considered a Severity Level III problem. These violations demonstrate a significant failure to meet the requirements of 10 CFR 50.59 in that, these evaluations failed to ensure unreviewed safety issues were not introduced by the tests, procedure changes, or design changes. Therefore, in accordance with NUREG-1600, the seven violations have been categorized as a Severity Level III problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$50,000 is normally considered for a Severity Level III problem in the absence of prompt and comprehensive corrective action. Corrective actions included the establishment of trained reviewers to review all 10 CFR 50.59 evaluations and the implementation of a new screening process. Corrective action credit was not warranted because the licensee's initial corrective actions were to correct deficiencies with regard to the specific examples identified by the NRC; NRC intervention was required for the licensee to address the programmatic weaknesses in the 10 CFR 50.59 process. In view of the circumstances of this significant problem, NRC in accordance with Section VI.B.2 of NUREG-1600 is assessing a civil penalty in the amount of \$50,000 for this Severity Level III problem.

E. Ineffective Corrective Actions to Resolve Inoperable Containment Penetrations

Section E of the Notice contains two violations which address CPS's failure to implement effective corrective actions and resolve inoperable feedwater containment penetrations. These penetrations have routinely failed their as-found refueling frequency surveillance tests since the first refueling outage to the current (sixth) refueling outage. Additionally, CPS changed the test method during the fifth refueling outage, resulting in a containment penetration test configuration different than the system configuration that the containment penetration would see subsequent to a design basis accident. As a result of this change, the license was not able to demonstrate that repairs performed to the penetration during the fifth refueling outage were successful. Therefore, in accordance with NUREG-1600 the two violations have been categorized in the aggregate as a Severity Level III problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$50,000 is normally considered for a Severity Level III problem absent prompt and comprehensive corrective action. The licensee's corrective actions included revising the applicable surveillance procedures, implementing a continuing review of other surveillance procedures to identify and correct other testing deficiencies, and implementing an extensive modification to the penetrations to address the root cause of the failures. Although the NRC acknowledges these corrective actions, it concluded that credit for Corrective Action was not warranted, based on the fact that the licensee had ample opportunities to collectively address the test failures during previous outages and implement effective corrective action. It was not until the NRC intervened during the current refueling outage that the licensee attempted to address and resolve the repeated failures of the penetrations. For this reason, Corrective Action credit is not warranted. In view of the circumstances of this significant problem, the NRC, in accordance with section VI.B.2 of NUREG-1600, is assessing a civil penalty in the amount of \$50,000 for this Severity Level III problem.

UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

August 1, 1997

EA 97-132

Mr. John G. Cook
Senior Vice President
Illinois Power Company
500 S. 27th Street
Decatur, IL 62525

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTIES
- \$110,000 (NRC Engineering and Technical Support and Startup Readiness
Inspection Report 50-461/97003(DRS))

Dear Mr. Cook:

This refers to the inspection conducted from January 6, 1997, through March 7, 1997, at the Clinton Power Station (CPS). The inspection included aspects of engineering and technical support and selected startup readiness review action items. An exit for the inspection was conducted on March 7, 1997. A predecisional enforcement conference was conducted on May 15, 1997, to discuss issues related to safety-related electrical breaker maintenance.

Based on the information developed during the inspection and the information CPS provided during the predecisional enforcement conference, the NRC has determined that a significant violation of NRC requirements occurred. The enclosure contains a Notice of Violation and Proposed Imposition of Civil Penalties (Notice) that describe the violation. The circumstances surrounding the violation are described in detail in the subject inspection report.

The violation represents a significant program breakdown in that assurance was lost in that safety-related electrical breakers would function if required. Both industry information and a previous related violation should have triggered broad-scoped corrective actions to identify, correct, and prevent electrical breaker degradation. Failure to aggressively implement the requirements of 10 CFR 50, Appendix B, resulted in inadequate corrective action for a longstanding equipment problem and the serious degradation of safety-related electrical breakers.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$55,000 is considered for a Severity Level III violation. Because Clinton has been the subject of escalated enforcement actions within the last two years,¹ the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. The NRC determined that credit for

¹ Enforcement actions 96-412, 97-001 and 97-002 were issued June 9, 1997, for issues related to the September 1996 seal failure event, the Division III emergency diesel and feedwater isolation valves.

identification was not warranted because the issue was identified by the NRC during an inspection. Corrective actions described at the predecisional enforcement conference included establishment of a team to focus attention on breakers, a refurbishment plan for GE, Westinghouse, and ABB breakers, reviews of industry information, an improved review process for vendor information, a lowered threshold for condition reports, procedure improvements to specify lubricants, increased supervisory presence in the field, and training on procedure compliance. Your staff also discussed a maintenance review group responsible for tracking equipment failures and detailed system reviews to be performed over a five-year period. While these actions appeared adequate to restore the condition of the breakers, your staff did not address the broader problem of repetitive equipment failures. Specifically, CPS did not look at maintenance work requests or other equipment failure data to determine if there was a history of repetitive problems with other components. Therefore, credit for corrective action was not warranted.

I have been authorized, after consultation with the Director, Office of Enforcement, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$110,000. The need for this action is to emphasize the importance of strong and broad scope corrective action when deficiencies are identified relative to safety-related equipment.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to this Notice, including your proposed corrective actions and the results of future inspections, the NRC will determine whether further NRC enforcement action is necessary to ensure compliance with NRC regulatory requirements. I further note that my staff continues to review activities at CPS, and further enforcement actions may be taken if additional violations are identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

A. Bill Beach
Regional Administrator

Docket No. 50-461
License No. NPF-62

Enclosure: Notice of Violation and
Proposed Imposition of Civil Penalties

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTIES

Illinois Power Company
Clinton Power Station
Clinton, IL

Docket No. 50-461
License No. NPF-62
EA 97-132

During an NRC inspection conducted from January 6, 1997 to March 7, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the NRC proposes to impose civil penalties 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 violations and associated civil penalty are set forth below:

- A. 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," requires, in part, that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the conditions is determined and corrective actions are taken to preclude repetition.

A Notice of Violation (Notice) was issued on June 16, 1995, which identified that a significant condition adverse to quality, hardening of grease in ABB K-line breakers, had not been properly identified and corrected.

Contrary to the above, as of March 7, 1997, the licensee failed to assure that the above significant condition adverse to quality was promptly corrected in that further examples of these problems were identified that had not been corrected as a result of actions taken in response to the Notice. Specifically, the licensee failed to adequately correct the hardened/hardening grease on ABB, GE and Westinghouse electrical breakers. The lack of prompt corrective action resulted in binding of various breaker components and the failures of safety-related and critical non-safety related breakers to operate during testing and on demand. (01013)

- B. 10 CFR 50, Appendix B, Criterion VIII, "Identification and Control of Materials, Parts, and Components", requires, that measures shall be established for the identification and control of materials, parts, and components, including partially fabricated assemblies. These measures shall assure that identification of the item is maintained by heat number, part number, serial number, or other appropriate means, either on the item or on records traceable to the item, as required throughout fabrication, erection, installation, and use of the item. These identification and control measures shall be designed to prevent the use of incorrect or defective material, parts, and components.

Notice of Violation and Proposed
Imposition of Civil Penalties

-2-

Contrary to the above, as of March 7, 1997, adequate measures were not established to prevent the use of incorrect lubricants or cleaning agents to clean or lubricate safety related electrical breaker components in an approved manner. Specifically, an unapproved lubricant ("Never Seize") was utilized on breaker 2B for RR pump 1A and other breakers, and an unapproved cleaning agent, Freon, was utilized as a degreaser on breaker 5B for RR pump 1B and other breakers in an uncontrolled manner. In addition, an approved lubricant (Mobil 28 grease) was used in an incorrect, unauthorized fashion on numerous breakers. (01023)

This is a Severity Level III problem (Supplement 1). Civil Penalty - \$110,000.

Pursuant to the provisions of 10 CFR 2.201, Illinois Power Company is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalties (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to 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 penalties by letter addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer 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 penalties 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 penalties will be issued. Should the Licensee elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalties, in whole or in part, such answers should be clearly marked as an "Answer to a Notice of Violation" and may: (1) deny the violation(s) 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 penalties should not be imposed. In addition to protesting

the civil penalties in whole or in part, such answers may request remission or mitigation of the penalties.

In requesting mitigation of the proposed penalties, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 civil penalties.

Upon failure to pay any civil penalties 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 penalties, unless compromised, remitted, or mitigated, may be collected by civil action pursuant to Section 234c of the Act, 42 U.S.C. 2282c.

The response noted above (Reply to Notice of Violation, letter with payment of civil penalties, and Answer to a Notice of Violation) should be addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region III and a copy to the NRC Resident Inspector stationed at the Clinton facility.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Lisle, Illinois
this 1 day of August 1997

UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV

611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

December 1, 1997

EA 97-424

G. R. Horn, Senior Vice President
of Energy Supply
Nebraska Public Power District
1414 15th Street
Columbus, Nebraska 68601

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -
\$110,000
(NRC Inspection Report Nos. 50-298/97-07 and 97-12)

Dear Mr. Horn:

This refers to the inspections conducted on June 29 through August 9, 1997, and July 8 through September 5, 1997, at your Cooper Nuclear Station facility. The inspections were conducted to review the circumstances surrounding several instances of failures to identify, correct, or prevent recurrence of conditions adverse to quality. These issues were discussed with you during an exit briefing conducted on September 5, 1997, and were documented in NRC Inspection Report Nos. 50-298/97-07 and 97-12 dated September 4, and October 3, 1997, respectively. A predecisional enforcement conference was held in the NRC Region IV office in Arlington, Texas, on October 17, 1997, to discuss apparent violations identified during these inspections.

Based on the information developed during the inspection and the information that you provided during the conference, the NRC has determined that violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty and the circumstances surrounding them were described in detail in the subject inspection reports. These violations involve several examples of failures to meet the requirements of 10 CFR Part 50, Appendix B, Criterion XVI. The first example involves a failure to recognize and correct instances whereby large volumes of water could cause both trains of the standby gas treatment system to be inoperable under certain circumstances. This problem had been identified in 1994 (reference LER 94-035 and NRC Inspection Report 96-26) when plant personnel recognized that backflow of water from Sump Z, under design basis accident conditions, could render both trains of the standby gas treatment system inoperable. However, the corrective actions taken in 1994 were ineffective and the District identified this as an issue again in July 1997 (reference LER 97-010).

The second example involves a failure to identify and correct significant blockage of Residual Heat Removal (RHR) Heat Exchanger B which reduced the heat transfer capability below design requirements. After questioning by an NRC inspector, the District opened a condition adverse to quality tracking number (CAQ 97-0742) regarding the issue of mud found in the heat exchanger. The CAQ was closed after concluding that the heat

exchanger had been operable, that the condition was not reportable, and (of concern to the NRC) that no condition adverse to nuclear safety or unexpected condition existed. After significant involvement from the NRC expressing concerns about the District's conclusion that the condition was not adverse to nuclear safety, several months later, the CAQ 97-0742 and related CAQs were reopened to more thoroughly review the issues.

The remaining seven violations also involve situations in which the District inadequately identified or corrected conditions adverse to quality. These violations occurred during similar timeframes and had similar causes.

During the conference, your staff discussed several initiatives that the District has implemented to improve its safety focus, especially in the area of problem identification and resolution. The District noted that an alert radwaste operator identified the issue involving the standby gas treatment system (the first example in the Notice). The NRC recognizes that the District identified this issue, but notes that this condition could have resulted in a common mode failure for a safety system, and was not corrected for over 2 years. There also were prior missed opportunities to identify this problem. The situation involving RHR Heat Exchanger B (the second example in the Notice) is significant because your staff did not recognize a significant condition adverse to quality on a safety system, even after significant NRC involvement. The circumstances surrounding these two violations, as well as the other seven, indicate contemporary weaknesses in your staff's ability to recognize and correct problems. Therefore, these violations are classified in the aggregate in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600, as a Severity Level III problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$55,000 is considered for a Severity Level III problem. Because your facility has been the subject of escalated enforcement actions within the last 2 years,¹ the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. Given the circumstances surrounding the identification of the violation involving RHR Heat Exchanger B, and the fact that NRC identified most of the violations, the NRC has determined that the District is not deserving of *Identification* credit. In evaluating whether credit is warranted for the *Corrective Action* factor, the NRC considered whether the District's corrective actions will prevent recurrence of the specific violations, and are sufficiently comprehensive, given the significance and complexity of the violations, to prevent recurrence of violations with similar root causes. The District has been undertaking actions to improve personnel performance in problem identification and resolution. Examples of the District's actions include evaluating self-identification rates, focusing on engineering teamwork, better

¹ A Notice of Violation and Exercise of Discretion (EA97-017) was issued on June 25, 1997, involving a Severity Level III problem related to failures to update the USAR and to perform adequate safety evaluations in accordance with 10 CFR 50.59. The NRC exercised discretion and did not propose a civil penalty.

focusing on conservative decision-making, emphasizing fundamentals such as procedure use and adherence, reducing challenges in the control room, enhancing training, conducting self-assessments, and improving the tracking and trending of programs such as CAQ/SCAQ. Many of these actions were ongoing at the time of the violations, and little information was provided at the conference relative to additional actions, timetables, etc., that would result in improved performance. Given the District's past performance as well as the circumstances surrounding the violations, the NRC was unable to justify giving the District credit for the *Corrective Action* factor.

Therefore, to emphasize the importance of prompt identification and comprehensive correction of violations, and in recognition of your previous escalated enforcement actions, I have been authorized, after consultation with the Director, Office of Enforcement, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of \$110,000 for the Severity Level III problem.

It should be noted that, on the basis of information provided to the NRC during the conference, the apparent violation related to the Automatic Depressurization System relief valve accumulator low pressure alarm was not a violation. As such, this issue was not cited in the enclosed Notice.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room.

Sincerely,

Ellis W. Merschoff
Regional Administrator

Docket No. 50-298
License No. DPR-46

Enclosure: Notice of Violation and
Proposed Imposition of Civil Penalty

cc w/Enclosure: (see next page)

cc w/Enclosure:

John R. McPhail, General Counsel
Nebraska Public Power District
P.O. Box 499
Columbus, Nebraska 68602-0499

P. D. Graham, Vice President of
Nuclear Energy
Nebraska Public Power District
P.O. Box 98
Brownville, Nebraska 68321

B. L. Houston, Nuclear Licensing
and Safety Manager
Nebraska Public Power District
P.O. Box 98
Brownville, Nebraska 68321

Dr. William D. Leech
MidAmerican Energy
907 Walnut Street
P.O. Box 657
Des Moines, Iowa 50303-0657

Mr. Ron Stoddard
Lincoln Electric System
11th and O Streets
Lincoln, Nebraska 68508

Randolph Wood, Director
Nebraska Department of Environmental
Quality
P.O. Box 98922
Lincoln, Nebraska 68509-8922

Chairman
Nemaha County Board of Commissioners
Nemaha County Courthouse
1824 N Street
Auburn, Nebraska 68305

Nebraska Public Power District

-5-

Cheryl Rogers, LLRW Program Manager
Environmental Protection Section
Nebraska Department of Health
301 Centennial Mall, South
P.O. Box 95007
Lincoln, Nebraska 68509-5007

R. A. Kucera, Department Director
of Intergovernmental Cooperation
Department of Natural Resources
P.O. Box 176
Jefferson City, Missouri 65102

Kansas Radiation Control Program Director

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY

Nebraska Public Power District
Cooper Nuclear Power Station

Docket No. 50-298
License No. DPR-46
EA 97-424

During NRC inspections conducted on June 29 through August 9, and July 8 through September 5, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, 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. These violations and associated civil penalty are set forth below:

- A. 10 CFR Part 50, Appendix B, Criterion XVI requires that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the conditions is determined and corrective action taken to preclude repetition. The identification of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.
1. Contrary to the above, between December 1994 and July 1997, established measures did not identify and correct water retention in the offgas system holdup line, a significant condition adverse to quality. This condition could have, under certain circumstances, rendered both trains of the standby gas treatment system inoperable. (01013)
 2. Contrary to the above, as of August 1997, established measures did not identify or correct inadequacies in the heat exchanger testing program which allowed significant degradation of the "B" Residual Heat Removal System heat exchanger, a significant condition adverse to quality. Additionally, the cause of the significant condition adverse to quality was not identified and, once identified to the licensee by the NRC, corrective action to preclude repetition had not been identified or taken. (01023)
 3. Contrary to the above, for the following conditions adverse to quality, each of which constitutes a separate violation, established measures did not:
 - a. Identify and correct degraded seats of four torus-to-drywell vacuum breaker valves, which were evident during testing in May 1997 and required modification of the testing procedure to allow completion. The valve conditions became evident again during testing in July 1997, and the licensee corrected the condition. (01033)

- b. Preclude recurrence of failure to follow Procedure 4.15, "Elevated Release Point and Building Radiation Monitoring Systems," used to return to service the continuous iodine and particulate sample radiation monitor for the elevated release point flow path. As a result, on July 14, 1997, there was no sampling of the elevated release point discharge flow during a routine effluent release. (01043)
- c. As of August 1, 1997, identify and correct long-standing, recurring test failures associated with emergency diesel generator breaker testing, a condition adverse to quality, in that the operability assessment did not address the possibility that previous surveillance results had been invalid, or the inadequacy of long-standing instructions to technicians to repeat the test until acceptable results were achieved. (01053)
- d. Preclude recurrence of failure to follow procedures, in that corrective actions for the June 19 and 20, 1996, failure to use procedures for opening and closing of the secondary containment hatch did not implement the procedure to secure the hatch, as required. (01063)
- e. Correct conditions adverse to quality in that the corrective actions for a May 1996 unauthorized modification to the No. 2 Emergency Diesel Generator that installed a J-tube on the Emergency Diesel Generator failed to identify until July 17, 1997, that five additional unauthorized modifications that had been installed at the same time as the J-tube. (01073)
- f. Correct wrong acceptance criteria in Surveillance Procedure 6.EE.602, identified on June 5, 1997, with the result that the incorrect criteria for the specific gravity of the diesel fire pump batteries, a condition adverse to quality, was used again during a surveillance on June 11, 1997. (01083)
- g. Correct failure of the Service Water Booster Pump breaker anti-pump mechanism, a condition adverse to quality, identified on February 28, 1997 and documented in Problem Identification Report 2-13047. (01093)

These violations represent a Severity Level III problem. (Supplement I)
Civil Penalty - \$110,000.

Pursuant to the provisions of 10 CFR 2.201, the Nebraska Public Power District (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as 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 addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer 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 violation 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 in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 response noted above (Reply to Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: James Lieberman, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive,

Suite 400, Arlington, Texas 76011, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Arlington, Texas,
this 1st day of December 1997

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

August 19, 1997

EA 97-294

Mr. Robert J. Barrett
Site Executive Officer
New York Power Authority
Indian Point 3 Nuclear Power Plant
Post Office Box 215
Buchanan, New York 10511

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY
- \$55,000
(NRC Inspection Report No. 50-286/97-80)

Dear Mr. Barrett:

This letter refers to the NRC engineering team inspection conducted at the Indian Point 3 facility between April 7 and May 1, 1997, the results of which were discussed with you at exit meetings on May 1, 1997, and June 10, 1997. During the inspection, one apparent violation of NRC requirements was identified. The inspection report was sent to you on June 19, 1997. On July 30, 1997, a predecisional enforcement conference was conducted with Mr. J. Knubel, Chief Nuclear Officer, yourself, and members of your staff to discuss the apparent violation identified during the inspection, its causes, and your corrective actions.

Based on our review of the inspection findings, and information provided during the conference, one violation of NRC requirements is being cited and is described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice). The violation involves three examples where design basis information was not correctly translated into Emergency Operating Procedures (EOPs). The examples include: (1) no technical basis for operating with the component cooling water (CCW) heat exchanger service water outlet valves throttled during sump recirculation when the heat exchanger is placed in service following a postulated accident; (2) no instructions for throttling the recirculation pump discharge valve to prevent pump runout under certain conditions; and (3) inadequate instructions for isolating nonsafety-related CCW loads.

In the first case, the EOP for transferring to cold leg recirculation did not require operators to properly re-position the CCW heater exchanger service water outlet valves prior to entering the recirculation phase of a postulated design basis accident. These valves are normally throttled to maintain acceptable CCW temperatures. Either the EOP should have required that the valves be re-positioned (to their analyzed position), or an analysis should have been performed to demonstrate that the CCW system would perform its intended safety function during the initial transition to recirculation with the valves in their normally throttled position. The CCW system functions to remove decay heat from the reactor core and provides cooling to other safety-related emergency core cooling equipment. Poor communications between site and corporate organizations, as well as inadequate engineering involvement in procedure changes, contributed to this deficiency in that important design information regarding the function of the service water system was not properly translated into the EOPs.

In another case, the EOP for transferring to cold leg recirculation, directed the operator to adjust total recirculation flow to less than 6000 gpm to satisfy the net positive suction head requirements, with both recirculation pumps running. However, no guidance was provided in that EOP to reduce flow to less than 3000 gpm in the event that only one recirculation pump was operating, so as to prevent runout in a single pump configuration. While a step to throttle pump flow during these conditions had previously been included in that EOP, that step was inadvertently omitted during a procedure revision which was approved in September 1996, and the elimination of that step was not documented in the change history form. Inattention to detail, a lack of a questioning attitude, and no written standard regarding the use of the history forms, contributed to this violation.

In the third case, the EOP directed the operator to isolate CCW flow to the non-regenerative heat exchanger by closing an air-operated outlet temperature control valve (TCV) to prevent diversion of CCW flow to other safety-related components. The EOP further instructed that if the TCV cannot be closed, the operators were to isolate CCW flow to the non-regenerative heat exchanger by closing manual isolation valves in accordance with the system operating procedure. However, this EOP was deficient since the instrument air system supplying air to the TCV is nonsafety-related, and therefore, cannot be relied upon to function. Therefore, credit could not be taken for the availability of this air supply. Without a reliable source of air supply, the TCV can fail to its open position after being successfully closed early in the event, resulting in diversion of CCW flow from safety-related components during the recirculation phase of the accident. A previous revision of this procedure correctly directed the closure of a manual valve to isolate the non-regenerative heat exchanger; however, a 1995 procedure revision inappropriately incorporated a vendor recommendation to first attempt to close the TCV, and close the manual isolation valve as a contingency. Contributing to this deficiency was your acceptance of the recommendation without an adequate review.

These three examples represent a significant regulatory concern because they are indicative of inadequate controls to properly incorporate design basis information into the EOPs. Apparently, your process did not require sufficient reviews of EOPs by engineering staff. Furthermore, all three of these examples were identified by the NRC, raising significant questions regarding the adequacy of your self assessments of EOPs. As such, these violations represent a breakdown in control of licensed activities, and raise questions both of the adequacy of your EOPs, as well as the effectiveness of the EOP reviews. Therefore, the violation has been categorized at Severity Level III in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy), NUREG-1600.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$55,000 is considered for a Severity Level III problem or violation. Your facilities have been the subject of escalated enforcement actions within the last 2 years¹. Therefore, the NRC considered whether credit was warranted for *Identification and Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. Credit is not warranted for *Identification* since all three examples of the violation were identified by the NRC. The NRC also considered your corrective actions, as described at the enforcement conference. These actions included, but were not limited to, (1) revision to the affected EOPs; (2) plans to perform a broad review of procedures, including a review by design engineering; (3) plans to review all EOPs, to determine if applicable design information has been incorporated; (4) plans to change the relevant administrative procedure to ensure an engineering review of proposed EOP revisions prior to implementation to ensure that the revisions do not result in the omission of pertinent procedural steps; and (5) training of engineers performing EOP reviews, as well as development of a program to qualify individuals performing EOP reviews.

Therefore, to emphasize the importance of appropriately factoring design information into your EOPs, as well as critically self assessing all aspects of your program to ensure such deficiencies, when they exist, are promptly identified and corrected by your staff, rather than by the NRC, I have been authorized, after consultation with the Director, Office of Enforcement, to propose civil penalty of \$55,000 for this Severity Level III problem.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

Hubert J. Miller
Regional Administrator

Docket No. 50-286
License No. DPR-64

Enclosure: Notice of Violation and Proposed Imposition of Civil Penalty

¹ A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$50,000 was issued to New York Power Authority on January 2, 1996, for the Indian Point 3 facility exiting the cold shutdown facility with the control switches for the recirculation and containment spray pumps in the trip pullout condition.

cc w/encl:

C. Rappleyea, Chairman and Chief Executive Officer
R. Schoenberger, President and Chief Operating Officer
J. Knubel, Chief Nuclear Officer and Senior Vice President
H. Salmon, Jr., Vice President of Nuclear Operations
W. Josiger, Vice President - Engineering and Project Management
J. Kelly, Director - Regulatory Affairs and Special Projects
T. Dougherty, Director - Nuclear Engineering
R. Deasy, Vice President - Appraisal and Compliance Services
R. Patch, Director - Quality Assurance
G. Goldstein, Assistant General Counsel
C. Faison, Director, Nuclear Licensing, NYPA
K. Peters, Licensing Manager
A. Donahue, Mayor, Village of Buchanan
C. Jackson, Nuclear Safety and Licensing Manager (Con Ed)
C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law
Chairman, Standing Committee on Energy, NYS Assembly
Chairman, Standing Committee on Environmental Conservation, NYS Assembly
T. Morra, Executive Chair, Four County Nuclear Safety Committee
Chairman, Committee on Corporations, Authorities, and Commissions
The Honorable Sandra Galef, NYS Assembly
P. Eddy, Director, Electric Division, Department of Public Service, State of New York
G. Goering, Consultant, New York Power Authority
J. Gagliardo, Consultant, New York Power Authority
E. Beckjord, Consultant, New York Power Authority
F. William Valentino, President, New York State Energy Research and Development Authority
J. Spath, Program Director, New York State Energy Research and Development Authority

ENCLOSURE

NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY

New York Power Authority
Indian Point Unit 3

Docket No. 50-286
License No. DPR-64
EA 97-294

During an NRC inspection conducted between April 7 and May 1, 1997, for which exit meetings were held on May 1, 1997, and June 10, 1997, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, 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:

10 CFR Part 50, Appendix B, Criterion III, requires that measures shall be established to assure that applicable regulatory requirements and the design basis, are correctly translated into specifications, drawings, procedures, and instructions.

Contrary to the above, prior to May 20, 1997, measures were not established to assure that applicable regulatory requirements and the design basis, were correctly translated into Emergency Operating Procedures (EOPs), as evidenced by the following examples:

1. Design basis information for the component cooling water heat exchangers' service water outlet valve position was not correctly translated into EOP ES 1.3, Revision 10, Transfer to Cold Leg Recirculation. The EOP did not provide instruction for operators to re-position these valves (from their normally throttled position) at the beginning of the recirculation phase of a postulated design basis accident. Under certain conditions, failure to re-position the valves, may have caused the loss of function of the component cooling water and other supported systems.
2. Design basis information for protection of the recirculation pumps from runout was not correctly translated into EOP ES-1.3, Revision 10, Step 18(b). The EOP did not provide appropriate instructions to reduce flow to less than 3000 gpm to assure that net positive suction head requirements are satisfied when only one recirculation pump is operating.
3. Design basis information for isolating nonsafety-related equipment was not correctly translated into EOP ES-1.3, Revision 10, Step 60(a), which directed operators to isolate component cooling water flow to the non-regenerative heat exchanger using air-operated temperature control valve AC-TCV-130. This procedure step was inadequate because valve AC-TCV-130 could fail open, due to a non safety-related source of supply air, and divert cooling water flow from other safety-related components. (01013)

This violation is classified at Severity Level III. (Supplement I).
Civil Penalty - \$55,000.

Pursuant to the provisions of 10 CFR 2.201, New York Power Authority (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued as to 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 addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer 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 violation 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, in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 234(c) of the Act, 42 U.S.C. 2282c.

The response noted above (Reply to 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, D.C. 20555 with a copy to the Director, Special Projects Office, NRR, U.S. Nuclear Regulatory Commission, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at King of Prussia, PA
this 19th day of August 1997

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

November 5, 1997

EA 97-007

Mr. B. Ralph Sylvia
Executive Vice President, Generation Business
Group and Chief Nuclear Officer
Niagara Mohawk Power Corporation
Nuclear Learning Center
450 Lake Road
Oswego, New York 13126

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY
- \$50,000
(NRC Inspection Report No. 50-220/96-12)

Dear Mr. Sylvia:

This letter refers to the NRC inspection of your Maintenance Rule implementation program conducted between October 7 and October 11, 1996, at the Nine Mile Point Nuclear Station, Unit 1. The findings of the inspection were discussed with you and members of your staff during an exit meeting held on October 11, 1996. The inspection report was sent to you on January 15, 1997. Based on the inspection, apparent violations of NRC requirements were identified. On February 25, 1997, a Predecisional Enforcement Conference (Conference) was conducted with you and members of your staff to discuss the findings of several inspections including the violations addressed herein, their causes, and your corrective actions.

Based on the information developed during the inspection and, after evaluation of the information that you provided during the Conference, the NRC has determined that violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) and the circumstances surrounding them are described in detail in the subject inspection report.

The violations set forth in the Notice represent a significant failure to implement key aspects of the Maintenance Rule. These violations, collectively, represent a programmatic breakdown in the development and implementation of Niagara Mohawk Power Corporation's (NMPC's) program to ensure compliance with the regulatory requirements of the Maintenance Rule. Escalated enforcement is warranted due to the significant regulatory concern with the common underlying root causes of the violations. The root causes included a lack of individual accountability, inadequate management oversight, and insufficient self-assessment of Maintenance Rule implementation. These findings demonstrate that management did not apply sufficient resources to assure adequate implementation of the Maintenance Rule program. These violations are indicative of a programmatic failure to implement key aspects of the Maintenance Rule. Therefore, the violations have been categorized in the aggregate as a Severity Level III problem in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy), NUREG-1600.

The Commission determined that a maintenance rule was necessary to assure licensees monitor the effectiveness of maintenance to minimize the likelihood of failure of safety-significant equipment that could initiate or adversely affect a transient or accident. Even though the final rule was issued in July 1991, it did not become effective until July 1996. During the five year interim period before the rule became effective, the staff and the industry worked in concert to assure licensees had developed useful guidance and clearly understood the manner in which NRC would inspect implementation. This was accomplished through public workshops and a pilot inspection program, the results of which were documented and shared with the industry.

Notwithstanding the time allotted to implement this program, as well as the guidance provided for establishing a program to meet the Maintenance Rule, your program at Nine Mile Point, Unit 1, was determined to be weak in a number of key aspects. At the Conference, you acknowledged the program deficiencies and noted that implementation of the Maintenance Rule program did not meet your expectations. You identified inadequate management oversight, ineffective integration of industry insights, and insufficient self assessments as some of the overall causes of the program weaknesses.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$50,000 is considered for a Severity Level III problem that occurred prior to November 12, 1996. Since Nine Mile Point has been the subject of escalated enforcement actions within the last 2 years,¹ the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy for the Severity Level III problem. Credit is not warranted for *Identification* because the violations were identified by the NRC. Credit is warranted for *Corrective Actions* because your corrective actions, once the violations were identified by the NRC, were considered prompt and comprehensive. These actions, which were discussed during your presentation at the Conference, included, but are not limited to: (1) improvement of senior management oversight of the Maintenance Rule program, including establishing a full-time Maintenance Rule Manager; (2) administrative control procedure enhancements; (3) plans to conduct periodic internal and external assessments of the program; (4) plans to use your Project and Task Management process to improve the program; and (5) plans to benchmark the program against plants recognized as leaders in Maintenance Rule implementation.

Therefore, to emphasize the importance of implementation of effective Maintenance Rule programs, as well as adequate management oversight of such programs, I have been authorized, after consultation with the Director, Office of Enforcement, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the base amount of \$50,000.

A \$200,000 civil penalty was issued on April 10, 1997 (EAs 96-474, -475, -494, and -541) for several Severity Level III violations; an \$80,000 civil penalty was issued on July 24, 1996 (EA 96-116) for a Severity Level II violation; and a \$50,000 civil penalty was issued on June 18, 1996 (EA 96-079) for a Severity Level III violation.

Additionally, based on further NRC review, the failure to have effective goals and monitoring for the reactor recirculation system and the failure to have effective and timely monitoring and trending of maintenance activities were determined not to be violations of NRC requirements. However, these failures were considered significant weaknesses in your Maintenance Rule program that warrant corrective actions.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

A handwritten signature in black ink, appearing to read "Hubert J. Miller", written in a cursive style.

Hubert J. Miller
Regional Administrator

Docket No. 50-220
License No. DPR-63

Enclosure: Notice of Violation and Proposed Imposition
of Civil Penalty

cc w/encl:

R. Abbott, Vice President & General Manager - Nuclear
C. Terry, Vice President- Safety Assessment and Support
J. Conway, Vice President - Nuclear Engineering
K. Dahlberg, Vice President - Nuclear Operations
D. Wolniak, Manager, Licensing
J. Warden, New York Consumer Protection Branch
G. Wilson, Senior Attorney
M. Wetterhahn, Winston and Strawn
J. Rettberg, New York State Electric and Gas Corporation
P. Eddy, Director, Electric Division, Department of Public Service, State of New York
C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law
J. Vinqvist, MATS, Inc.
F. Valentino, President, New York State Energy Research and Development Authority
J. Spath, Program Director, New York State Energy Research and Development Authority

ENCLOSURE

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY

Niagara Mohawk Power Corporation (NMPC)
Nine Mile Point, Unit 1

Docket No. 50-220
License No. DPR-63
EA 97-007

During an NRC inspection conducted between October 7 and October 11, 1996, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the NRC 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 violations and associated civil penalty are set forth below:

- A. 10 CFR 50.65(b)(2) requires that the scope of the monitoring program specified in paragraph (a)(1) include non-safety related structures, systems, and components (SSCs): (i) that are relied upon to mitigate accidents or transients or are used in plant emergency operating procedures (EOPs); (ii) whose failure could prevent safety related SSCs from fulfilling their safety related function; or (iii) whose failure could cause a reactor scram.

10 CFR 50.65(a)(1) states that licensees shall monitor the performance or condition of SSCs against licensee established goals, in a manner sufficient to provide reasonable assurance that such SSCs, as defined in paragraph (b), are capable of fulfilling their intended functions.

Contrary to the above, on October 11, 1996, the following non-safety related SSCs were not included in the 10 CFR 50.65 monitoring program:

1. Control rod position indication system which is used in the EOPs.
2. Communications system (plant announcement system) which is used to mitigate accidents or transients and used in EOP implementation.
3. Emergency lighting which is relied upon to mitigate accidents or transients and used in EOP implementation.
4. Instrument air system isolation function which is used to prevent failures in the non-safety related portions of the system from affecting the safety related portions of the system.
5. Reactor building sumps and drains which are used in EOP implementation.

6. Annunciator system which is used to mitigate accidents or transients and used in EOP implementation.

7. Circulating water system which, if failed, could cause a reactor scram. (01013)

B. 10 CFR 50.65(a)(1) requires, in part, that the holders of an operating license shall monitor the performance or condition of SSCs, as defined by 10 CFR 50.65(b), against licensee-established goals, in a manner sufficient to provide reasonable assurance that such structures, systems, and components are capable of fulfilling their intended functions. When the performance or condition of a structure, system, or component does not meet established goals, appropriate corrective action shall be taken.

10 CFR 50.65(a)(2) requires, in part, that monitoring as specified in 10 CFR 50.65 Section (a)(1) is not required where it has been demonstrated that the performance or condition of a structure, system, or component is being effectively controlled through the performance of appropriate preventive maintenance, such that the structure, system, or component remains capable of performing its intended function.

Contrary to 10 CFR 50.65(a)(2), as of July 10, 1996, (the time that the licensee elected to not monitor the performance or condition of the following SSCs against licensee-established goals pursuant to the requirements of 10 CFR 50.65 (a)(1)), the licensee failed to demonstrate that the performance or condition of the following risk significant systems, within the scope of 10 CFR 50.65, had been effectively controlled through the performance of appropriate preventive maintenance in accordance with the requirements of 10 CFR 50.65(a)(2). Specifically, the licensee failed to adequately evaluate the appropriateness of the performance of preventive maintenance on these SSCs prior to placing these SSCs under Section (a)(2). The licensee failed to establish unavailability measures for the systems and system's function identified below. Without these unavailability measures, the licensee was unable to demonstrate that the performance of the following SSCs was effectively controlled through the performance of appropriate preventive maintenance, such that these SSC's remain capable of performing their intended function.

1. Electric system - function: provide power in order to shut down the facility and maintain it shutdown.

- 120 Volt AC system
- 600 Volt AC system
- 4160 Volt AC system
- 125 Volt DC system

2. Automatic depressurization system - function: depressurize the reactor coolant system in order to permit injection with low pressure pumps of the Emergency Core Cooling System (ECCS).
3. Anticipated transient without scram (ATWS) system - function: provide alternate negative reactivity injection to safely shutdown the reactor.
4. Main steam system - functions: provide overpressure protection for the reactor and remove decay heat and provide isolation of reactor from the balance of plant systems.
5. Primary containment structure vacuum relief system - function: protect structural integrity of the containment.
6. Reactor protection system - functions: shutdown the reactor and initiate (1) reactor coolant and primary containment isolations; and (2) ECCS and emergency safeguards features (ESF) SSCs.
7. Reactor vessel instrumentation system - function: provide reactor level and pressure indication and actuation for ESF.
8. Control rod drive system (scram function) - function; provide capability to insert negative reactivity to safely shutdown the reactor.
9. Containment spray system (torus cooling function) - function: reduce temperature in the torus to maintain containment pressure suppression capability. (01023).

This is Severity Level III problem (Supplement I).
Civil Penalty - \$50,000.

Pursuant to the provisions of 10 CFR 2.201, Niagara Mohawk Power Corporation (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued as to 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 addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer 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, in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 civil penalties.

Upon failure to pay any civil penalty due which subsequently have 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 234(c) of the Act, 42 U.S.C. 2282c.

The response noted above (Reply to 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, D.C. 20555 with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region I and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. However, if you find it necessary to include such information, you should clearly indicate the specific information that you desire not to be placed in the PDR, and provide the legal basis to support your request for withholding the information from the public.

Dated at King of Prussia, Pennsylvania
this 5th day of November, 1997

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 11, 1997

EA 97-104

Mr. Bruce D. Kenyon
President and Chief Executive Officer
Northeast Nuclear Energy Company
Post Office Box 128
Waterford, Connecticut 06385-0128

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -
\$55,000
(NRC Inspection Reports No. 50-245/97-03; 50-336/97-03;
50-423/97-03)

Dear Mr. Kenyon:

This letter refers to the NRC security inspection conducted at the Millstone facilities on February 3-7, 1997. During the inspection, three apparent violations of NRC requirements were identified, as noted in the inspection report sent to you on March 26, 1997. On April 7, 1997, a predecisional enforcement conference was conducted with Mr. Frank Rothen and other members of your staff to discuss the apparent violations identified during the inspection, their causes, and your corrective actions.

Based on our review of the inspection findings, and information provided during the conference, two violations are being cited and are described in Section I of the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice). The violations involve (1) multiple examples of the failure to control Safeguards Information (SGI) at your facility; and (2) multiple examples of failure to control vehicles in the protected area (keys were left in the ignition in unlocked/unattended vehicles).

Although these violations were identified by your staff, the NRC is particularly concerned with the frequency with which these two violations have occurred, as well as the fact that the violations are repetitive of violations previously cited by the NRC based on inspections conducted in October 1994 and May 1996, respectively. For example, since February 1995 until the time of the February 1997 inspection, your staff identified 37 incidents where keys were found in unattended vehicles in the protected area, contrary to your security plan that requires vehicles to be immobilized with keys controlled (ignition locked) when not in use. In addition, since May 1996, your staff identified seven incidents where material containing Safeguards Information was not controlled. Although these findings clearly indicated an adverse performance trend regarding adherence to security requirements, your management and staff were not effective in ensuring that prompt and aggressive corrective actions were taken to correct these problems. After each occurrence, corrective actions taken appeared to focus solely on the specific occurrence, rather than the broader problem indicated by the number of incidents which have occurred.

These violations represent a significant lack of attention to security responsibilities by not only your security staff and supervision, but also, and more importantly, by those site employees and contractor employees who did not follow security requirements. At the enforcement conference, your staff acknowledged that site personnel did not consistently assume appropriate individual responsibility of security requirements, and that corrective actions for previous occurrences of the same violations have been ineffective. Given the repetitive and continuing nature of these two violations, they represent a significant regulatory concern with respect to degradation of the security program at the facility. Therefore, the violations have been categorized in the aggregate as a Severity Level III problem in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$55,000 is considered for a Severity Level III problem or violation. Base civil penalties for Severity Level III problems were increased from \$50,000 to \$55,000 effective November 12, 1996 (61CFR 53553, October 11, 1996). The higher base penalty is warranted in this case since a substantial number of the noncompliances occurred after November 12, 1996. Your facilities have been the subject of escalated enforcement actions within the last 2 years, for example, a \$100,000 civil penalty was issued on June 4, 1996, for a Severity Level III violation involving the discrimination against an individual who engaged in protected activities (Reference: EA 96-059). Given this enforcement history, in accordance with Section VI.B.2 of the Enforcement Policy, the NRC considered whether credit was warranted for *Identification and Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. Credit is warranted for *Identification* because the violations involving control of safeguards information and control of vehicles were identified by your staff. The NRC also considered your corrective actions as described at the enforcement conference. These actions included, but were not limited to: (1) clearly defining expectations at the officer level regarding control of vehicles and communicating those expectations to the entire Millstone site; (2) denial of unescorted access to individuals who violate security requirements, with the requirement that prior to reinstatement, the violator's supervisor must certify that the offender understands the rules and will comply in the future; (3) posting of signs in vehicles indicating that if an individual leaves keys unattended in an unlocked vehicle, the individual will lose unescorted access; (4) incorporation of vehicle control into plant access training; (5) publishing and discussing expectations for control of SGI at shift briefings; and (6) reduction in SGI repositories not located in security spaces with the assignment of a responsible custodian for each repository. Although these actions appear comprehensive, the NRC concluded credit is not warranted for *Corrective Action* because the corrective actions taken for the violations involving control of safeguards information and control of vehicles were not prompt. In addition, corrective actions taken for earlier occurrences were not fully effective as demonstrated by the fact that multiple, subsequent violations continued to recur over an extended period of time.

Therefore, to emphasize the importance of both adherence to security plan requirements and prompt and effective correction of violations, I have been authorized, after consultation with the Director, Office of Enforcement, to propose a civil penalty of \$55,000 for this Severity Level III problem.

In addition to the Severity Level III problem, Section II of the Notice describes the failure to perform a hand search of an individual granted access to the protected area after the individual caused an alarm while being checked with a hand held metal detector. This violation has been classified at Severity Level IV, in accordance with the Enforcement Policy.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

William D. Travers, Director
Special Projects Office
Office of Nuclear Reactor Regulation

Docket Nos. 50-245, 50-336, 50-423
License Nos. DPR-21, DPR-65, NPF-49

Enclosure: Notice of Violation and Proposed Imposition of
Civil Penalty

cc w/encl: See Next Page

cc w/encl:

N. Carns, Senior Vice President and Chief Nuclear Officer
P. Loftus, Director - Regulatory Affairs for Millstone Station
M. Brothers, Vice President - Millstone, Unit 3
J. McElwain, Unit 1 Recovery Officer
M. Bowling, Jr., Unit 2 Recovery Officer
D. Goebel, Vice President, Nuclear Oversight
J. Thayer, Recovery Officer, Nuclear Engineering and Support
P. Hinnenkamp, Director, Unit Operations
F. Rothen, Vice President, Work Services
J. Stankiewicz, Training Recovery Manager
R. Johannes, Director - Nuclear Training
L. Cuoco, Esquire
J. Egan, Esquire
V. Juliano, Waterford Library
Department of Public Utility Control
S. Comley, We The People
State of Connecticut SLO Designee
D. Katz, Citizens Awareness Network (CAN)
R. Bassilakis, CAN
J. Block, Attorney, CAN
S. Luxton, Citizens Regulatory Commission (CRC)
Representative T. Concannon
E. Woollacott, Co-Chairman, NEAC

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY

Northeast Nuclear Energy Company
Millstone, Units 1, 2 and 3

Docket Nos. 50-245, 50-336, 50-423
License Nos. DPR-21, DPR-65, NPF-49
EA 97-104

During an NRC inspection conducted between February 3-7, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, 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 violations and associated civil penalty are set forth below:

I. Violations Assessed a Civil Penalty

- A. 10 CFR 73.21(d) requires, in part, that while in use, matter containing Safeguards Information shall be under the control of an authorized individual, and while unattended, Safeguards Information shall be stored in a locked security storage container."

Contrary to the above, between May 1996 and January 1997, the licensee identified seven incidents where items containing Safeguards Information had not been under the control of an authorized individual and not locked in a security storage container. Four of the incidents occurred after November 12, 1996 (December 24, 1996 and February 3, February 15, and March 22, 1997), indicating that corrective actions for earlier occurrences were not effective.

- B. License Condition 2.C.4 of License Number DPR-21, License Condition 2.C.4 of License Number DPR-65, and License Condition 2.E of License Number NPF-49 for the Millstone Units 1, 2 and 3, respectively, require, in part, that the licensee fully implement and maintain in effect all provisions of the physical security, guard training and qualification, and safeguards contingency plans approved by the Commission and all amendments and revisions to such plans made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p).

The Millstone Nuclear Power Station Physical Security Plan, dated June 4, 1996, Revision 25, Section 6.5.8, provides controls for designated licensee vehicles inside the protected area, and states, in part, that "Designated licensee vehicles are immobilized (example: ignition locked) when not in use and the keys controlled."

Contrary to the above, from February 1995 to February 1997, the licensee identified 37 incidents where designated vehicles in the protected area were not immobilized and keys were not controlled for vehicles that were not in use. Specifically, in these cases, the keys were left unattended in unlocked, unattended vehicles.

At least five of these incidents occurred after November 12, 1996 (December 7(2), December 8, 1996 and January 13 and April 2, 1997) indicating that corrective actions for earlier incidents were not effective.

These violations are classified in the aggregate as a Severity Level III problem (Supplement III).
Civil Penalty - \$55,000.

II. Violations Not Assessed a Civil Penalty

- A. The Millstone Nuclear Power Station Physical Security Plan dated June 4, 1996, Revision 25, Section 6.4.1.4, states, in part, that "All personnel entering the protected area...are searched...for firearms, explosives and incendiary devices prior to entry. ... If the individual fails that (metal detector) search they will be subject to a "Hands-On" search."

Contrary to the above, on February 3, 1997, NRC inspectors observed a security officer performing searches with a hand-held metal detector to meet the above requirements, and when the hand-held metal detector alarmed, the security officer allowed the individual to access the protected area, without having performed a "hands-on" search to identify the cause of the alarm.

This is a Severity Level IV Violation (Supplement III).

Pursuant to the provisions of 10 CFR 2.201, Northeast Nuclear Energy Company (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued as to 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 addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer 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 violation 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, in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 234(c) of the Act, 42 U.S.C. 2282c.

The response noted above (Reply to 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, D.C. 20555 with a copy to the Director, Special Projects Office, NRR, U.S. Nuclear Regulatory Commission, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Rockville, Maryland
this 11th day of June 1997

UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

October 16, 1997

EA 97-290

Mr. M. D. Wadley
Vice President, Nuclear Generation
Northern States Power Company
414 Nicollet Mall
Minneapolis, MN 55401

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL
PENALTY - \$50,000 (NRC INSPECTION REPORT 50-282/306-97008(DRS))

Dear Mr. Wadley:

This refers to the System Operational Performance inspection conducted from April 14 to June 13, 1997, at your Prairie Island Nuclear Generating Plant. The inspection team assessed the auxiliary feedwater (AFW) system operational performance during a detailed review of the design, maintenance, operation, and surveillance testing of the AFW system. The report was issued by letter dated July 16, 1997, and a predecisional enforcement conference was held in the Region III office on August 8, 1997.

Based on the information developed during this inspection and the information that your staff provided during the predecisional enforcement conference, the NRC has determined that four violations of NRC requirements occurred. The violations are cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) and the circumstances surrounding each violation are described in the subject inspection report. The violations concern Prairie Island staff's failure to implement a test program that ensured that the AFW system would meet its design expectations inservice and failure to understand and maintain aspects of the AFW system design. Further, these or similar issues were known to the Prairie Island staff but not adequately corrected.

The first issue concerned the Prairie Island staff's failure to establish an Inservice Test (IST) procedure acceptance criteria that would ensure the AFW system met certain design basis requirements. The site engineering staff developed the acceptance criteria for the AFW IST procedure using Section XI of the American Society of Mechanical Engineers code. However, the engineering staff never compared the acceptance criteria with the design requirements for the AFW system. As a result, the IST procedure would permit an AFW pump to be considered operable even though it had degraded below minimum design requirements. Although the potential existed for the operability of the AFW system to be compromised, members of the engineering staff confirmed that none of the AFW pumps had degraded below minimum system design requirements. In addition, your engineering staff identified, in 1991, a similar failure to establish IST procedure acceptance criteria for the safety injection pump design basis requirements. The engineering staff did not take prompt corrective action and identify that this problem also existed in the AFW system testing program. In our view, if your staff had implemented broader corrective action, it is likely this violation would not have occurred.

The second issue concerned the Prairie Island staff's failure to analyze a discrepancy between the Updated Safety Analysis Report (USAR) and anticipated AFW flows. The Prairie Island engineering staff failed to maintain the USAR when discrepancies in the published flow requirements for the AFW system were identified during a 1992 AFW design basis reconstitution effort. Although your engineering staff recognized that the USAR value was incorrect, your staff failed to resolve the discrepancy or update the USAR. These violations collectively represented a failure to maintain the design basis for the AFW system and assure the system would perform satisfactory in service, and have been classified in the aggregate in accordance with the NUREG-1600, "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), as a Severity Level III problem.

Individually and collectively the safety significance of the violations was low since the AFW system always met the design basis requirements. However, the regulatory significance was high because: (1) your existing administrative processes and barriers failed to ensure that IST acceptance criteria considered the design basis requirements; (2) the engineering staff failed to appreciate the need to maintain the fidelity of the USAR; and (3) the engineering staff failed to implement timely and comprehensive corrective actions when they identified test program deficiencies and AFW flow discrepancies.

According to the Enforcement Policy, a base civil penalty for \$50,000 is considered for a Severity Level III problem occurring before November 12, 1996. Since most of the noncompliance period occurred before November 12, 1996, a base civil penalty of \$50,000 was considered for this case. Because your facility has been the subject of escalated enforcement actions within the last two years,¹ the NRC considered whether credit was warranted for *Identification* and *Corrective Action* according to the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. *Identification* credit was not warranted because these violations were identified by the NRC or plant staff identified the problem but failed to recognize the significance until prompted by the NRC. However, *Corrective Action* credit was warranted based on the corrective actions that have been implemented or were proposed at the enforcement conference. Several of your corrective actions included: (1) a verification of the correct flow rate to the intact steam generator and a resultant revision to the USAR; (2) a review of the design change program and a review of sample calculations for accuracy; (3) a revision to the acceptance criteria for the AFW pumps and training to the technical staff on the need to maintain the design basis; (4) an evaluation of the Section XI program and the acceptance criteria to ensure that the design basis is not compromised; (5) a review of the outstanding corrective action items for regulatory significance and prioritization; and (6) a bench marking of the condition reporting system with industry standards.

1. EA 97-073 issued a Severity Level III violation with no civil penalty on April 30, 1997 for the failure to comply with heavy loads requirements during the movement of a heavy load over a fully fueled reactor vessel. EA 96-402 issued a Severity Level III violation with a \$50,000 civil penalty on January 23, 1997, for an unreviewed safety question that was created by the licensee when they took credit for the non-seismic intake canal and operator actions following an earthquake.

Therefore, to emphasize the importance of an IST program that ensures the design basis of plant systems is not compromised, the need to perform timely evaluations when USAR discrepancies are identified, and the need to maintain the fidelity of the USAR, I have been authorized, after consultation with the Director, Office of Enforcement, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty in the base amount of \$50,000 for this Severity Level III problem.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements. According to 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

A. Bill Beach
Regional Administrator

Docket Nos. 50-282 and 50-306
License Nos. DPR-42 and DPR-60

Enclosure: Notice of Violation and Proposed
Imposition of Civil Penalty

cc w/encl: Plant Manager, Prairie Island
State Liaison Officer, State
of Minnesota
State Liaison Officer, State
of Wisconsin
Tribal Council
Prairie Island Dakota Community

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY

Northern States Power Company
Prairie Island Nuclear Generating Plant

Docket Nos. 50-282 and 50-306
Licenses No. DPR-42 and DPR-60
EA 97-290

During an NRC inspection from April 14 to June 13, 1997, four violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the NRC 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 violations and associated civil penalty are set forth below:

1. 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," requires, in part, that a test program shall be established to assure that all testing required to demonstrate that systems will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.

Updated Safety Analysis Report (USAR) at Section 11.9.3.a, "Loss of Main Feedwater Transients" documented that during a loss of offsite power transient a single Auxiliary Feedwater (AFW) pump will provide sufficient flow to prevent water relief from the pressurizer relief valves. USAR Table 11.9-2, "Summary of Assumptions used in the AFW System Design Verification Analysis," stated that the minimum required AFW flow during a loss of offsite power transient was 200 gallons per minute to a steam generator.

Contrary to the above, since at least May 31, 1991, and continuing until April 24, 1997, the test program failed to assure that written test procedures incorporated the 200 gallons per minute acceptance limits contained in Section 11.9.3.a of the USAR; the applicable design documents. Specifically, the acceptance criteria for the Unit 1 and Unit 2 monthly and refueling outage AFW surveillance tests listed below would have permitted the AFW pumps to degrade below (and remain operable) the minimum flow -- 200 gallons per minute -- to a steam generator during a loss of offsite power transient. (01013)

- SP 1103, "11 Turbine-Driven Auxiliary Feedwater Pump Once Every Refueling Outage Test;"
- SP 1101, "12 Motor-Driven Auxiliary Feedwater Pump Once Every Refueling Outage Test;"
- SP 2101, "21 Motor-Driven Auxiliary Feedwater Pump Once Every Refueling Outage Test;"
- SP 2103, "22 Turbine-Driven Auxiliary Feedwater Pump Once Every Refueling Outage Test;"
- SP 1102, "11 Turbine-Driven Auxiliary Feedwater Pump Monthly Test,"
- SP 1100, "12 Motor-Driven Auxiliary Feedwater Pump Monthly Test,"
- SP 2100, "21 Motor-Driven Auxiliary Feedwater Pump Monthly Test,"
- SP 2102, "22 Turbine-Driven Auxiliary Feedwater Pump Monthly Test."

2. 10 CFR 50.71(e), "Maintenance of Records, Making of Reports," requires, in part, that each license periodically update the final safety analysis report (FSAR) [now known as the USAR at Prairie Island] to assure that the information included in the FSAR contains the latest material developed.

10CFR50.71(e)(4) requires, in part, that revisions be filed such that the intervals between successive updates to the USAR do not exceed 24 months. It further states that the revisions must reflect all changes up to a maximum of 6 months prior to the date of filing.

The applicable section of the FSAR, now titled the Updated Safety Analysis Report (USAR), is Section 11.9.3, "Performance Analysis - Condensate, Feedwater, and Auxiliary Feedwater Systems"

Contrary to the above, as of May 16, 1997, the licensee had not assured that the information included in the FSAR contained the latest material developed and had not updated the FSAR periodically, as required in 10 CFR 50.71. Specifically, in October 1992, the licensee identified that the 400 gpm Auxiliary Feedwater Pump (AFW) flow rate specified in USAR Section 11.9.3 under the Main Feedwater Line Rupture accident scenario disagreed with actual Auxiliary Feedwater pump performance capabilities of approximately 200 gpm with only one pump available. Since October 1992, three opportunities to update this section of the USAR were available, yet the revisions of September 1993, June 1994 and December 1995, did not contain the latest material developed or reflect all changes prior to the date of the filing. (01023)

3. 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that conditions adverse to quality are promptly identified and corrected; and in the case of significant conditions adverse to quality, the cause of the condition shall be documented, appropriately reported to levels of management, and corrective action taken to preclude repetition.
 - A. Contrary to the above, as of May 16, 1997, the licensee had not resolved a significant condition adverse to quality that was identified on March 6, 1991, and documented on the assessment of Operating Experience Document NSD-TB-80-11, "High Head Safety Injection". Specifically, the assessment documented that design requirements -- such as flow -- had not been adequately considered when the safety injection pump surveillance procedures acceptance criteria were determined and there was a need to ensure that design requirements were correctly incorporated for other pumps' surveillance test acceptance criteria. Corrective action was not taken for the Auxiliary Feedwater, Residual Heat Removal, and Containment Spray Pumps. This was demonstrated when the NRC inspectors determined that the Auxiliary Feedwater Pump Surveillance tests' acceptance criteria would have allowed an AFW pump to be considered operable even if the pump parameters were below the minimum design requirements. (01033)

- B. Contrary to the above, as of May 16, 1997, the licensee had not resolved a condition adverse to quality that was identified on November 18, 1992, and documented on Configuration Management Follow-On Item FOI 40781, "Basis For AFWP Requirements After Line Break". Specifically, FOI 40781 documented a deviation from the updated final safety analysis (USAR) in that the AFW pumps were not in conformance with the 400 gpm flow rate for a main feedwater pipe rupture accident scenario as specified in section 11.9.3 of the USAR with only one pump available. The licensee failed to promptly correct the deviation by demonstrating that the AFW pump capacity of approximately 200 gpm with only one pump available would be sufficient during a main feedwater pipe rupture. (01043)

This is a Severity Level III problem (Supplement I)
Civil Penalty \$50,000

Pursuant to the provisions of 10 CFR 2.201, Northern States Power Company is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as 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 addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer payable to the Treasurer of the United States in the amount of the civil penalty proposed above, 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 violation(s) 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 civil penalty should not be imposed. In addition to protesting the civil penalty in whole or in part, such answer may request remission or mitigation of the civil penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 response noted above (Reply to 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, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region III and a copy to the NRC Resident Inspector at the Prairie Island Nuclear Generating Plant facility.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Lisle, Illinois
this 16th day of October 1997

UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV

611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

July 30, 1997

EA 97-251

S. K. Gambhir, Division Manager
Production Engineering
Omaha Public Power District
Fort Calhoun Station FC-2-4 Adm.
P.O. Box 399
Hwy. 75 - North of Fort Calhoun
Fort Calhoun, Nebraska 68023-0399

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -
\$55,000 (NRC INSPECTION REPORT 50-285/97-06)

Dear Mr. Gambhir:

This is in reference to the predecisional enforcement conference conducted on July 14, 1997, in the NRC's Arlington, Texas office with representatives of Omaha Public Power District (OPPD). The conference involved a discussion of apparent violations of fire protection requirements identified during an inspection at Fort Calhoun Station that was completed on May 2, 1997. These apparent violations were discussed in NRC Inspection Report 50-285/97-06 issued June 27, 1997.

Based on the information developed during the inspection and our review of the information that you provided during the conference, the NRC has determined that violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty. The circumstances surrounding them were described in detail in the subject inspection report.

At the conference, OPPD admitted all but one of the apparent violations. OPPD contested the apparent violation involving the adequacy of a fire barrier between fire areas 6 and 20, arguing that the NRC had accepted OPPD's resolution of this issue in 1980. OPPD further stated that a calculation shows that the barrier that was installed would meet Appendix R requirements. Documentation provided by OPPD to support its first argument indicates that the adequacy of this fire barrier, which was to consist of a water curtain sprinkler system, was specifically raised by the NRC, including the issue of whether draft stops had been installed around each floor opening protected by a water curtain. OPPD also provided copies of documentation indicating that the NRC issued an SER in November 1980 which accepted OPPD's resolution after this issue had been raised. Although details of the resolution of this issue were lacking from this correspondence, the NRC has decided that further pursuit of this issue is not warranted, particularly since OPPD has brought the water curtain into conformance with the NRC's view of the applicable requirements.

The violations that are cited involve: (1) a failure to protect an emergency diesel generator speed sensing circuit from the effects of a control room or cable spreading room fire, an issue which OPPD identified in response to other NRC findings during this inspection;

(2) a failure to have in place a procedure providing operators sufficient guidance for a cable spreading room fire; (3) a failure to equip reactor coolant pumps with adequate lube oil collection systems; (4) a failure to declare the fire suppression water system inoperable and post firewatch personnel during system flushing operations; and 5) a failure to assure that fire brigade personnel received classroom training in fire brigade equipment every two years.

Although Fort Calhoun Station was not challenged by a fire, these violations collectively indicate a substantial failure to fully understand and implement all requirements of Appendix R and the plant's fire protection program. In addition, at least one of the violations (Violation A) had the potential, in the event of a fire, to damage equipment relied upon to achieve and maintain safe shutdown of the facility. Therefore, these violations have been classified in the aggregate as a Severity Level III problem, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600.

At the conference, OPPD discussed corrective actions it was taking to address these violations, including: (1) actions to correct the individual violations; (2) enhanced audits of the fire protection program; (3) conduct of a fire protection self-assessment (already complete); and (4) conduct of a safety system functional inspection of the fire protection program, currently scheduled for October 1997.

In accordance with the Enforcement Policy, a civil penalty with a base value of \$55,000 is considered for a Severity Level III problem. Because your facility has been the subject of escalated enforcement actions within the last 2 years,¹ the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. In that all but one of these violations were identified by the NRC during its inspection, and that the remaining violation was identified by OPPD in response to NRC's inspection findings and would not likely have been identified otherwise, the NRC has determined that credit for identification is not warranted. However, based on the corrective actions taken and planned by OPPD, the NRC has determined that credit for corrective action is warranted. This assessment results in a civil penalty at the base value of \$55,000.

Therefore, to emphasize the importance of maintaining all fire protection program requirements at Fort Calhoun, I have been authorized, after consultation with the Director, Office of Enforcement, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the base amount of \$55,000.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. The

¹ On July 31, 1996, the NRC issued a Severity Level III violation to OPPD (EA 96-204) for violations which resulted in disabling the automatic operation of the low temperature, over-pressure function of the pressurizer power-operated relief valves.

NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

Ellis W. Merschoff
Regional Administrator

Docket No. 50-285
License No. DPR-40

Enclosure: Notice of Violation and
Proposed Imposition of Civil Penalty

cc w/Enclosure:
James W. Tills, Manager
Nuclear Licensing
Omaha Public Power District
Fort Calhoun Station FC-2-4 Adm.
P.O. Box 399
Hwy. 75 - North of Fort Calhoun
Fort Calhoun, Nebraska 68023-0399

James W. Chase, Manager
Fort Calhoun Station, P.O. Box 399
Fort Calhoun, Nebraska 68023

Perry D. Robinson, Esq.
Winston & Strawn
1400 L. Street, N.W.
Washington, D.C. 20005-3502

Chairman
Washington County Board of Supervisors
Blair, Nebraska 68008

Cheryl Rogers, LLRW Program Manager
Environmental Protection Section
Nebraska Department of Health
301 Centennial Mall, South
P.O. Box 95007
Lincoln, Nebraska 68509-5007

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY

Omaha Public Power District
Fort Calhoun Station

Docket No. 50-285
License No. DPR-40
EA 97-251

During an NRC inspection completed May 2, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, 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 violations and associated civil penalty are set forth below:

- A. 10 CFR 50.48.b requires that all nuclear power plants licensed to operate prior to January 1, 1979, satisfy the requirements of sections III.G, III.J, and III.O of Appendix R to 10 CFR Part 50.

10 CFR Part 50, Appendix R, Section III.G.1.a requires that one train of systems necessary to achieve and maintain hot shutdown conditions from either the control room or emergency control station be free of fire damage.

Contrary to this requirement, as of May 2, 1997, the B diesel generator engine control circuitry was not protected from the effects of a control room fire. A control room or cable spreading room fire could damage the control circuits and render the diesel inoperable. This diesel is required to achieve safe shutdown conditions in the event of a control room or cable spreading room fire requiring alternate shutdown.

- B. 10 CFR 50.48.b requires that all nuclear power plants licensed to operate prior to January 1, 1979, satisfy the requirements of sections III.G, III.J, and III.O of Appendix R to 10 CFR Part 50.

10 CFR Part 50, Appendix R, Section III.G.3 requires alternate shutdown capability be provided where the protection of systems whose function is required for hot shutdown does not satisfy the requirements of G.2.

Section G.2 specifies barrier separation requirements for redundant safe shutdown trains in a fire area. The separation of safe shutdown trains in the cable spreading room requirement of Section G.2 was not provided at Fort Calhoun Station.

Appendix R, Section III.L.3 states that procedures shall be in effect to implement this alternate shutdown capability.

Contrary to this requirement, as of April 16, 1997, a procedure directing the station operators to perform the alternative shutdown procedure for a cable spreading room fire did not direct the operators to implement alternate shutdown for such fires.

- C. 10 CFR 50.48.b requires that all nuclear power plants licensed to operate prior to January 1, 1979, satisfy the requirements of sections III.G, III.J, and III.O of Appendix R to 10 CFR Part 50.

10 CFR Part 50, Appendix R, Section III.O requires reactor coolant pump motors to be equipped with a lube oil collection system capable of collecting lube oil from all potential pressurized and unpressurized leakage sources.

Contrary to this requirement, as of April 21, 1997, an oil collection system was not provided for the upper oil reservoir level transmitter, three resistance temperature detectors on each upper oil reservoir, three drain ports for the shaft air seal, and the lower reservoir resistance temperature detector and level transmitter on reactor coolant pump motors A, C, & D. In addition, reactor coolant pump motor B had no collection system provided for the lower bearing reservoir resistance temperature detector and level instrumentation. Furthermore, on April 29, 1997, the high pressure collection system for pump motors A, C, and D had damaged seals which prevented the collection of all the oil from a high pressure leak.

- D. License Condition 3.F of Facility Operating License DPR-40, for Fort Calhoun Station, Unit 1, states that the Omaha Public Power District shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Safety Analysis Report for the facility and as approved in Safety Evaluation Reports dated February 14, and August 23, 1978, November 17, 1980, April 8 and August 12, 1982, July 3 and November 5, 1985, July 1, 1986, December 20, 1988, November 14, 1990, March 17, 1993, and January 14, 1994.

License Condition 3.F requires that all provisions of the approved fire protection program as described in the Updated Safety Analysis Report for the facility be maintained and implemented.

Table 11.2 of the Updated Safety Analysis Report stated that the fire suppression water system shall be operable, except during system testing, jockey pump maintenance, or training. Table 11.2 also stated that a continuous firewatch be established for the diesel generator rooms, the compressor room and in the corridor between Fire Areas 6 and 20 when the fire suppression water system was inoperable.

Contrary to this requirement, on November 10, 1996, and on February 10, 1997, the licensee performed flushing operations which rendered the fire suppression water system inoperable without declaring the system inoperable or stationing the required firewatch personnel.

- E. License Condition 3.F of Facility Operating License DPR-40, for Fort Calhoun Station, Unit 1, states that the Omaha Public Power District shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Safety Analysis Report for the facility and as approved in Safety Evaluation Reports dated February 14, and August 23, 1978, November 17, 1980,

April 8 and August 12, 1982, July 3 and November 5, 1985, July 1, 1986, December 20, 1988, November 14, 1990, March 17, 1993, and January 14, 1994.

License Condition 3.F requires that all provisions of the approved fire protection program as described in the August 23, 1978, Updated Safety Evaluation Report be implemented.

Section 3.5 of the August 23, 1978, Updated Safety Evaluation Report required that fire brigade classroom training be repeated every two years.

Contrary to this requirement, on April 16, 1997, classroom session 1064-03, "Fire Brigade Equipment," was not provided to qualified fire brigade members since the April through June 1994 training cycle, a period of time greater than two years.

These violations represent a Severity Level III problem (Supplement I).
Civil Penalty - \$55,000

Pursuant to the provisions of 10 CFR 2.201, Omaha Public Power District is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as 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, [delete the first part of the sentence for cases where the 10 CFR 2.201 response has been waived] (T)the Licensee may pay the civil penalty by letter addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer 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 violation(s) 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 in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 response noted above (Reply to Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: James Lieberman, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011, and a copy to the NRC Resident Inspector at the Fort Calhoun Station facility.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Arlington, Texas
this 30th day of July 1997

UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV

611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

October 24, 1997

EA 97-432

S. K. Gambhir, Division Manager
Engineering and Operations Support
Omaha Public Power District
Fort Calhoun Station FC-2-4 Adm.
P.O. Box 399
Hwy. 75 - North of Fort Calhoun
Fort Calhoun, Nebraska 68023-0399

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -
\$110,000 (NRC SPECIAL INSPECTION REPORT 50-285/97-17)

Dear Mr. Gambhir:

This is in reference to the predecisional enforcement conference conducted in the NRC's Arlington, Texas office on October 7, 1997, with representatives of Omaha Public Power District (OPPD). The conference was conducted to discuss four apparent violations of NRC requirements related to an August 21, 1997 incident which resulted in the disabling of the containment spray system at the Fort Calhoun Station (Fort Calhoun) reactor facility. The NRC's inspection of this was completed on August 29, 1997, and an inspection report was issued September 19, 1997. A conference summary document, which included the information OPPD provided to the NRC at the conference, was issued October 4, 1997.

Based on the information developed during the inspection and the information that you provided during the conference, the NRC has determined that violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty; the circumstances surrounding them were described in detail in the subject inspection report. In brief, the violations involve: 1) a licensed operator's mispositioning of containment spray valve control switches during a surveillance test; 2) a failure to shut down the unit as required when both trains of containment spray were disabled by this error; 3) a failure by licensed operators to conduct a proper shift turnover which should have revealed that the containment spray system was inoperable; and 4) a failure by licensed operators to make proper log entries.

The containment spray system was rendered inoperable when an operator erroneously placed the control switches for containment spray header isolation valves in the "override" position during a surveillance test. These switches remained in this position for approximately 12 hours, with the plant operating at 100 percent power. Had a loss-of-coolant accident occurred during this time, the containment spray system would not have operated automatically, as designed, to spray down containment and help minimize pressure buildup in the containment building. The NRC acknowledges that a licensed operator (other than the one who made the error) discovered the mispositioned control switches for the containment spray valves approximately 12 hours after the initial error

was made, and promptly restored containment spray to an operable status. We also acknowledge that OPPD promptly reported this incident to the NRC, and that significant corrective actions were taken as a result.

Although other systems at Fort Calhoun also are designed to minimize containment pressure in the event of an accident, the NRC views the August 21, 1997, event seriously because licensed operating personnel defeated a safety system and then missed several opportunities to detect it. The primary missed opportunities involved: 1) a failure to determine the cause of spray valve "off-normal" alarms which occurred when the valve switches were placed in override; and 2) a failure to recognize or question the presence of this annunciator or abnormal switch positions and indicating lights during a subsequent shift turnover and periodic control board observations. In addition, this is the second time an incident of this type has occurred at Fort Calhoun in 18 months. As OPPD acknowledged at the conference, there were similarities between this incident and a previous incident in March 1996 (EA 96-204)¹. The corrective actions you took for the previous incident included actions (e.g., shift turnover and alarm response enhancements) that should have prevented or resulted in the prompt detection of the August 21, 1997, disabling of containment spray. Both incidents involved a lack of attention to detail and poor questioning attitude, a failure to recognize that safety features were defeated, weaknesses in responding to annunciators in the control room, poor supervisory oversight, and inadequate shift turnover.

The first three violations discussed above have been classified in the aggregate at Severity Level III in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600, because they involve defeating a safety system for 12 hours and violating plant Technical Specifications as a result. Although classification at Severity Level II was considered, in that containment spray would not have functioned if called upon, the NRC determined that classification at Severity Level III was more appropriate based on plant design and the contribution that the containment cooling system would make to maintain containment pressures below design assumptions. Nonetheless, the NRC's concern is focused on the root causes of these violations, in that errors of a similar nature could result in defeating safety systems that could have a greater impact on reactor safety.

In accordance with the Enforcement Policy, a civil penalty at a base value of \$55,000 is considered for a Severity Level III problem. Because your facility has been the subject of escalated enforcement actions within the last 2 years, as previously discussed, the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy.

¹The March 1996 incident involved disabling the low-temperature, over-pressure protection afforded by the pressurizer power operated relief valves. A severity level III violation, with no civil penalty (EA 96-204), was issued to OPPD on July 31, 1996.

The NRC has determined that credit for identification is not warranted because the condition was discovered when an annunciator failed to clear after operators attempted to restore the containment spray system to normal following the completion of the surveillance test. Thus, the inoperable condition of the containment spray system was revealed by the annunciator. At the conference, OPPD suggested that identification credit was warranted because the problem was identified during a surveillance test (NRC Enforcement Manual, 5.5.2.3). Credit would be considered if the problem was pre-existing (not caused by improper performance of the test) and not apparent for the previous 12 hours by virtue of the annunciator being lit. In summary, credit is not warranted because the problem was self-revealing and because there were missed opportunities to have discovered the problem earlier.

Credit for corrective action was found to be warranted based on the numerous corrective actions you have taken or are planning to take, which were described at the conference. These include, but are not limited to: 1) requiring additional oversight of surveillance tests; 2) identifying and marking annunciators that are expected during tests; 3) requiring senior reactor operator concurrence before disabling safety-related equipment; 4) requiring peer review prior to operating key switches; 5) requiring four-hour "standdowns" for crews returning from long breaks; 6) requiring individual control board walkdowns during shift turnover; 7) improving alarm response procedures; and 8) a formal program to assess the effectiveness of corrective actions for significant events.

While the normal civil penalty assessment would have resulted in a base civil penalty being proposed, the NRC determined that discretion as provided for in Section VII.A.1 of the Enforcement Policy should be applied to assess a penalty at twice the base value. The basis for exercising this discretion is the similarity of this incident to the March 1996 incident and the significance of two such events occurring within 18 months. In addition, we considered the fact that your corrective actions for the previous incident should have prevented this error or caught this error soon after it occurred.

Therefore, to emphasize the significance of disabling plant safety features and the failure to assure that corrective actions for a previous escalated enforcement action were effective, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Regulatory Effectiveness, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of \$110,000.

The fourth violation, involving inadequate log entries, was not deemed to be a contributing cause of the disabling of the containment spray system, and was not a missed opportunity to have discovered the incident. Therefore, this violation is not among those assessed a civil penalty and has been separately classified at Severity Level IV.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

Ellis W. Merschoff
Regional Administrator

Docket No.: 50-285
License No.: DPR-40

Enclosure: Notice of Violation and
Proposed Imposition of Civil Penalty

cc w/Enclosure:
James W. Tills, Manager
Nuclear Licensing
Omaha Public Power District
Fort Calhoun Station FC-2-4 Adm.
P.O. Box 399
Hwy. 75 - North of Fort Calhoun
Fort Calhoun, Nebraska 68023-0399

James W. Chase, Manager
Fort Calhoun Station
P.O. Box 399
Fort Calhoun, Nebraska 68023

Perry D. Robinson, Esq.
Winston & Strawn
1400 L. Street, N.W.
Washington, D.C. 20005-3502

Chairman
Washington County Board of Supervisors
Blair, Nebraska 68008

Cheryl Rogers, LLRW Program Manager
Environmental Protection Section
Nebraska Department of Health
301 Centennial Mall, South
P.O. Box 95007
Lincoln, Nebraska 68509-5007

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY

Omaha Public Power District
Fort Calhoun Station

Docket No. 50-285
License No. DPR-40
EA 97-432

During an NRC inspection completed on August 29, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, 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 violations and associated civil penalty are set forth below:

I. Violations Assessed a Civil Penalty

- A. Technical Specification 5.8.1 requires that written procedures and administrative policies be established, implemented and maintained that meet or exceed the minimum requirements of Sections 5.1 and 5.3 of ANSI N18.7-1972 and Appendix A of Regulatory Guide 1.33. Regulatory Guide 1.33, Appendix A, Section 3.f(4) requires procedures for startup, operation, and shutdown of containment cooling systems.

Procedure OP-ST-SI-3008, "Safety Injection and Containment Spray Pump Inservice Test and Valve Exercise Test," Revision 19, established, in part, written procedures for testing the containment spray system. Step 7.10 required that Containment Spray Valves HCV-344 and HCV-345 be placed in the closed position and that the containment spray valve test switches be placed in the test position.

Contrary to the above, on August 21, 1997, Step 7.10 of Procedure OP-ST-SI-3008 was not properly implemented in that in addition to placing the containment spray valves and the containment spray valve test switches in the required position, the control switches for Containment Spray Valves HCV-344 and HCV-345 were placed in the override position. This step, which was not in the procedure, would have prevented the automatic actuation of either containment spray header, if required. (01013)

- B. Technical Specification 2.4, "Containment Cooling," limiting condition for operation requires, in part, that Containment Spray Pumps SI-3A, SI-3B, and SI-3C and their associated valves, piping and interlocks be operable during power operation. The modification of minimum requirements for the specification allows for two of these pumps to be inoperable at any one time during power operation.

Technical Specification 2.0.1 requires in part that, in the event that the limiting condition for operation cannot be satisfied because of circumstances in excess of those addressed in the specification, the unit shall be placed in

at least hot shutdown within 6 hours, and in at least subcritical and $<300^{\circ}\text{F}$ within the next 6 hours.

Contrary to the above, on August 21, 1997, the unit was not placed in at least hot shutdown within 6 hours and was not in at least subcritical and $<300^{\circ}\text{F}$ within the next 6 hours when the containment spray system was rendered inoperable from approximately 8 a.m. CST to 8:38 p.m. due to the control switches for both containment spray header isolation valves being placed in the override position. (O1023)

- C. Technical Specification 5.8.1, requires that written procedures and administrative policies be established, implemented and maintained that meet or exceed the minimum requirements of Sections 5.1 and 5.3 of ANSI N18.7-1972 and Appendix A of Regulatory Guide 1.33. Regulatory Guide 1.33, Appendix A, Section 1.h requires procedures for shift and relief turnover.

Procedure SO-0-1, "Conduct of Operations," Revision 33, provides procedural requirements for the conduct of shift and relief turnover. These requirements include: (1) the oncoming shift shall familiarize themselves with the conditions in areas for which they are responsible; (2) each person will brief his/her relief on the condition and status of that portion of the plant to which he/she is assigned, including abnormal conditions or alignments and inoperable equipment; and (3) prior to assuming the shift, each operator shall personally verify the status of important system operating parameters, especially those relating to safety systems.

Contrary to the above, on August 21, 1997, the licensee failed to conduct an adequate shift turnover in that the oncoming shift did not identify that the control switches for both containment spray valves were in override, rendering the containment spray system inoperable, and that the off-going crew did not brief the oncoming crew about this condition. (O1033)

These violations represent a Severity Level III problem (Supplement I).
Civil Penalty - \$110,000

II. Violation Not Assessed a Civil Penalty

Technical Specification 5.8.1, requires that written procedures and administrative policies be established, implemented and maintained that meet or exceed the minimum requirements of Sections 5.1 and 5.3 of ANSI N18.7-1972 and Appendix A of Regulatory Guide 1.33. Regulatory Guide 1.33, Appendix A, Section 1.h requires procedures for log entries.

Standing Order SO-0-1, "Conduct of Operations," Revision 33, required that log entries into the official control room log be made when major plant equipment/systems were placed in or out of operation, and to document compliance with the requirements of a Technical Specification Limiting Condition for Operation.

Contrary to the above, on August 21, 1997, operators failed to log that the containment spray header isolation valves had been rendered inoperable by placing the control switches in override. In addition, as of 7 p.m. on August 28, operators had failed to log that Containment Spray Pump SI-3C was operable per Technical Specification 2.4(1)b. The pump had been restored to an operable status on August 21. (02014)

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

Pursuant to the provisions of 10 CFR 2.201, Omaha Public Power District (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as 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 addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer 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 violation(s) 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 in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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.

Notice of Violation

- 4 -

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 response noted above (Reply to Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: James Lieberman, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Arlington, Texas
this 24th day of October 1997

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

August 5, 1997

EAs 97-050; 97-115

Mr. D. M. Smith, President
PECO Nuclear
Nuclear Group Headquarters
Correspondence Control Desk
Post Office Box 195
Wayne, Pennsylvania 19087-0195

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL
PENALTY - \$80,000
(NRC Office of Investigation Reports Nos. 1-96-006 and 1-96-033)

Dear Mr. Smith:

This letter refers to two NRC investigations conducted by the NRC Office of Investigations (OI). The investigations were conducted after you had identified and investigated instances of record falsification at Limerick, and reported your findings to the NRC. The synopses of the OI investigations were forwarded to you with the NRC letter, dated, April 29, 1997. Based on the investigations conducted by your staff and OI, the NRC has concluded that records were, in fact, falsified at the facility. Falsification of records required to be maintained by NRC regulations or license conditions constitutes an apparent violation of 10 CFR 50.9, as also noted in the NRC April 29, 1997 letter. As a result, a predecisional enforcement conference was conducted with Mr. G. Rainey and other members of your staff on June 2, 1997, to discuss the violation, its causes, and your corrective actions.

Based on the information developed during the investigations, and the information provided during the June 2, 1997, conference, violations of NRC requirements are being cited. The violations are described in detail in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice). The violations involve instances of records falsification at Limerick. In one case, a chemistry technician and a former chemist, at the direction of the former Primary Chemistry Manager, deliberately falsified a record of the time a grab sample was taken from the Reactor Enclosure Cooling Water (RECW) system. The Primary Chemistry Manager also pressured the technician and chemist to lie about their actions to your security personnel investigating the matter. In another case, a fire protection technical assistant deliberately failed to perform a fire hose station visual inspection surveillance test, yet falsified the surveillance test document to indicate the test was performed.

With respect to the first violation (OI Report 1-96-006), the technical specifications require that with a radiation monitor inoperable, at least one grab sample needs to be taken at least once every 24 hours. On February 7, 1996, the sample was approximately 1 hour and 15 minutes late, yet the record was changed to indicate that the sample was taken within the 24 hour period. Further, the investigation, in addition to confirming falsification of the sample documentation, also concluded there was a conspiracy and subsequent coercion of the chemistry technician by the Primary Chemistry Manager in an attempt to cover up the late sample.

With respect to the second violation (OI Report 1-96-033), a fire protection technical assistant deliberately failed to properly perform a fire hose station visual inspection surveillance test and falsified the surveillance test document. Your investigation found that: (1) the individual deliberately failed to do the test in question, yet falsified the document; and (2) the individual deliberately failed to perform other such tests, yet falsified the related documentation on five other occasions; and (3) the individual failed to enter a specific area necessary to complete a fire suppression water system spray and sprinkler visual inspection for which he had signed documentation indicating that the visual inspection had been successfully completed.

Not performing required activities, yet documenting on records that the activities were performed, constitutes a significant regulatory concern. The NRC has previously issued documents emphasizing the importance of maintaining complete and accurate records of activities performed, such as in NRC Information Notice 92-30 issued on April 23, 1992, and NRC Generic Letter 93-03 issued on October 20, 1993. Those documents describe similar occurrences at other facilities. While the NRC is clearly concerned with the individuals who engaged in these activities at Limerick, the NRC is also concerned whether the situation involving the Primary Chemistry Manager is evidence that there has been at least pockets at Limerick where staff was fearful of raising problems when they occurred, notwithstanding generally strong corrective action processes at the site.

Even though the RECW sample was not contaminated, and all affected fire protection equipment was operable, the NRC considers record falsification a significant regularity concern. Given the number of record falsifications and given that the RECW record falsification was directed by the former primary Chemistry Manager, a licensee official, who subsequently coerced subordinates to lie to PECO investigators regarding this matter, the violations are categorized in the aggregate as a Severity Level II problem in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600.

In accordance with the Enforcement Policy in effect at the time these violations occurred, a base civil penalty in the amount of \$80,000 is considered for a Severity Level II problem. The NRC recognizes that you identified both violations and your corrective actions were considered prompt and comprehensive. Those corrective actions included: (1) taking disciplinary action against responsible individuals; (2) taking steps to verify that there was not a more widespread integrity issue within the chemistry and fire protection departments; (3) conducting a meeting with chemistry personnel during which integrity expectations were communicated to staff; (4) reenforcing expectations within the Fire Protection group; and (5) issuing a letter from the Vice President to all site personnel with reenforcement of expectations during the group meetings. However, civil penalties are normally proposed for Severity Level II problems and for willful violations to ensure that enforcement actions reflect the significance of the circumstances.

Therefore, notwithstanding your identification and corrective action, to emphasize the importance of performing activities as required, and maintaining accurate records of such activities, and holding staff accountable to these standards, I have been authorized, after consultation with the Director, Office of Enforcement and the Deputy Executive Director for Regulatory Effectiveness, in accordance with Section VII.A.1 of the Enforcement Policy, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of \$80,000 for the Severity Level II problem.

The NRC is treating the failure to take the necessary grab sample in a timely manner as a Non-Cited Violation in accordance with Section VII.B.1 of the Enforcement Policy.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. Your response should describe any additional actions you plan to take to ensure employees recognize the need to self identify and report problems when errors occur. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

A handwritten signature in cursive script, appearing to read "H. Miller", written in dark ink.

Hubert J. Miller
Regional Administrator

Docket Nos. 50-352: 50-353
License Nos. NPF-39; NPF-85

Enclosure: Notice of Violation and Proposed
Imposition of Civil Penalty

ENCLOSURE

NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY

**PECO Energy Company
Limerick Units 1 & 2**

**Docket Nos. 50-352; 50-353
License Nos. NPF-39; NPF-85
EAs 97-050; 97-115**

As a result of investigations conducted by the NRC Office of Investigations, and PECO Energy Company, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, 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 violations and associated civil penalty are set forth below:

10 CFR 50.9 requires, in part, that information required by the Commission's regulations or license conditions to be maintained by the licensee shall be complete and accurate in all material respects.

Technical Specification (TS) 6.10.2.d requires, in part, that records of surveillance activities required by TSs be retained for at least 5 years.

1. Contrary to the above, a record of a TS surveillance activity required to be maintained by the licensee at Limerick, was not complete and accurate in all material respects. Specifically, on February 7, 1996, while a Reactor Enclosure Cooling Water (RECW) radiation monitor was inoperable, the licensee was required, in accordance with TS 3.3.7.1, ACTION 72, to obtain and analyze at least one grab sample from the RECW system at least once per 24 hours. On that date, the sample needed to be taken by 11:00 a.m. to meet that requirement. Although the sample was not taken until 12:15 p.m. on that date (approximately 1 hour and 15 minutes after the time it was due), the record of the RECW Surveillance Test (ST-5-026-570-1, "Inop Reactor Enclosure Cooling Water Rad Mon Grab Sampling and Analysis"), signed by a chemistry technician and the chemist (as chemistry supervision), was inaccurate because: (1) page one of attachment 1 of the test record indicated that the time of the sample was 11:00 a.m., and (2) the attached computer printout of the Gamma Spectrum Analysis (required by step 4.3.1 of the surveillance test) also indicated that the sample was taken at 11:00 a.m.. This record was material because it provides evidence as to whether the licensee met the grab sample requirement. (01012)
2. Contrary to the above, certain surveillance records required to be maintained by the licensee at Limerick, were not complete and accurate in all material respects. Specifically, on three occasions between April 3, 1995 and June 28, 1995, the records for fire protection surveillance tests required by TS 4.7.6.2.c and TS 4.7.6.5.a were not accurate in that certain fire hose and

sprinkler system inspections were recorded as having been completed, even though plant security data indicates that the technician was not present in the vicinity of the equipment to perform the inspection. These records were material because they provide evidence as to whether the licensee met the fire protection surveillance requirements. (01022)

This is a Severity Level II problem. (Supplement VII)
Civil Penalty - \$80,000.

Pursuant to the provisions of 10 CFR 2.201, PECO Energy Company (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the receipt of this Notice of Violation and Proposed Imposition of Civil Penalty (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued as to 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 addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer payable to the Treasurer of the United States in the amount of the civil penalty proposed above, 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 in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 that 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 response noted above (Reply to Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: James Lieberman, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region I, and a copy to the NRC Senior Resident Inspector at the facility that is the subject of this Notice.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at King of Prussia, Pennsylvania
this 5th day of August 1997

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

June 20, 1997

EA's 96-270; 96-347; & 97-054

Mr. Robert G. Byram
Senior Vice President - Nuclear
Pennsylvania Power & Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTIES
- \$210,000
(NRC Inspection Report Nos. 50-387 & 50-388/96-08; 96-09)

Dear Mr. Byram:

This letter refers to two NRC inspections conducted at Susquehanna Steam Electric Station between June 11, 1996, and September 9, 1996, as well as two investigations conducted by the NRC Office of Investigations (OI) at your Susquehanna nuclear facility. During the first inspection, four apparent violations of NRC requirements were identified, three of which related to a misalignment of an electrical breaker for the 'E' diesel generator. Those three violations involved not having the required number of operable diesel generators, inaccurate electrical distribution surveillances, and failures to implement procedures. The fourth violation related to a non-licensed operator's failure to follow your administrative procedures for controlling the status of equipment associated with the Standby Liquid Control system. During the second inspection, one apparent violation was identified involving a single Core Spray system test line containment isolation valve being opened and deactivated for 24 hours during performance of preventive maintenance, without the required actions being taken in accordance with the Technical Specifications (TSs). The OI investigations were initiated after you had conducted internal investigations of these matters that were identified by your staff. The inspection reports and the synopsis of the first OI investigation were forwarded to you previously. The synopsis of the second OI investigation is enclosed.

Based on the investigations conducted by the NRC and your staff, the NRC has concluded that a number of nuclear plant operators (NPOs), as well as licensed operators, did not perform certain activities, yet documented that the activities had been performed. As a result of these findings, a predecisional enforcement conference (conference) was conducted with you on March 21, 1997, to discuss the violations, their causes, and your corrective actions.

Based on the information developed during the inspections and investigations, the information provided during the March 21, 1997, conference, and the information provided in your supplemental letter, dated April 9, 1997, a number of violations of NRC requirements were identified. The violations are described in detail in the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice).

Most of the violations are described in Section I of the enclosed Notice. Of those violations in Section I, the majority relate to an event in which one of the required four independent diesel generators was inoperable for approximately 20 days because of a circuit breaker alignment error. This inoperability was caused by the failure of a nuclear plant operator (NPO) to align the diesel generator in accordance with procedures. The supply breaker for the diesel's auxiliary equipment was removed inadvertently as a result of the operator's failure to identify the correct component before taking action while performing the alignment. Furthermore, multiple barriers that should have prevented or detected the misalignment failed. The procedure approved for use in aligning the 'E' diesel generator was inadequate in that it did not specifically require that the alignment of the supply breaker for the diesel's auxiliary equipment be independently verified. In addition, although shift supervision was informed that there was a potential breaker alignment problem, no action was taken to investigate or verify the reported condition. Finally, even though the TS surveillance (designed to verify that the safety-related electrical systems were properly aligned) was performed on three separate occasions by three different NPOs, the NPOs failed to properly complete the check of the auxiliary equipment supply breaker and the misalignment went undetected for 20 days.

The NRC is particularly concerned that even though the surveillance procedure requirement to verify the alignment of the 'E' diesel generator auxiliary equipment supply breaker was not performed, records were completed to indicate that the verification was performed. The completion of records without actually having conducted the activity documented in the record takes on greater significance after considering that on approximately 157 occasions between January 1996 and June 1996, more than half of your NPOs failed to perform a required panel alarm test, yet completed a record to indicate that the test was completed. In addition, on multiple occasions between January 1994 and June 1996, Shift Supervisors (SSs), signed a record indicating that they performed the required general station inspection which included an in-plant tour, when in fact, the in-plant tours in some cases were not conducted, in that the SSs did not leave the control room during those periods. In addition to the SSs, two Assistant Unit Supervisors (AUSs) performing Preventive Maintenance Worklist activities, signed off work as completed between January 1996 and June 1996 indicating that they had accompanied NPOs during their rounds, when, in fact, the individuals had not entered the plant areas during those periods necessary to accompany the NPOs.

These numerous examples of both licensed and non-licensed personnel not performing required activities, yet documenting on records that the activities were performed, raise serious questions regarding the adequacy of management and supervisory oversight at the station to ensure that management expectations were clearly communicated, understood and followed. In your April 9, 1997, letter to the NRC subsequent to the conference, you acknowledged that these conditions, that were identified and investigated by your staff, were serious regulatory and management issues. Even though no actual safety consequences resulted, management's failure to effectively communicate the expectation that activities be performed in accordance with procedures and with attention to detail, had the potential for significant safety consequences. Given the number of individuals involved in these activities, including licensed operators, the actual and potential impact on equipment operability, the duration of the problem, and the lack of management and supervisory oversight that resulted in the failure to detect this widespread condition; the violations in Section I are categorized in the aggregate as a Severity Level II problem in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600.

With respect to the violations in Section I, in accordance with the Enforcement Policy in effect at the time these violations occurred, a base civil penalty in the amount of \$80,000 is considered for a Severity Level II problem. Since this issue constitutes a Severity Level II problem, the NRC would normally consider whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. Credit would normally be warranted for both factors because you identified most of these issues during your investigations, and your corrective actions were considered prompt and comprehensive. Those corrective actions included: (1) improvements in supervisory oversight; (2) training on the event, on the 'E' diesel generator design, and on management expectations; and (3) expanded self-assessment in the Operations Department. However, this case represents particularly poor licensee performance, as evidenced by (1) the nature of the violations associated with the Severity Level II problem including the inoperability of the diesel generator for almost three weeks and the number of employees involved, (2) the extensiveness of the problem with inaccurate records; and (3) the management and supervisory failures demonstrated by these violations. Additionally, the NRC previously issued Information Notice 92-30 on April 23, 1992, and Generic Letter 93-03 on October 20, 1993, that described similar occurrences at other facilities. Your actions in response to these communications did not assure that plant personnel were properly performing their assigned duties at Susquehanna. Therefore, notwithstanding the normal civil penalty assessment outcome, I have decided, in light of this performance, to exercise discretion in accordance with Section VII.A.1 of the Enforcement Policy and propose a civil penalty at two times the base amount.

Accordingly, to emphasize the importance of performing activities as required, maintaining accurate records of such activities, and providing appropriate control and oversight of such activities, I have been authorized, after consultation with the Director, Office of Enforcement and the Deputy Executive Director for Regulatory Effectiveness, to exercise enforcement discretion and issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice) in the total amount of \$160,000 for the violations in Section I.

With respect to the violation in Section II of the Notice, a containment isolation valve in a core spray system test line was opened and deactivated for 24 hours, contrary to the TSs, and operators did not initiate action in accordance with the TSs to place the unit in an operational condition in which the TS did not apply. Since the valve in the test line was the only isolation valve in the affected penetration, none of the actions specified by TSs could be taken to isolate the penetration within 4 hours as required. Instead of taking the action required when a limiting condition for operation cannot be met, you considered the closed system boundary to meet the requirement of the operable isolation valve in the system. Even though actions were taken to ensure that this boundary remained intact, none of the additional actions required by TSs to isolate the penetration were taken. This violation of your TSs is of concern because the single isolation valve in the system was open and inoperable and, based on your interpretation, could have remained in this condition with no time constraint. Therefore, this violation is classified individually at Severity Level III in accordance with the Enforcement Policy.

With respect to the violation in Section II, in accordance with the Enforcement Policy in effect at the time this violation occurred, the base civil penalty in the amount of \$50,000 is considered for a Severity Level III violation. Since PP&L has been the subject of escalated enforcement action within the last 2 years¹, the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. Credit for identification is not warranted because the violation was identified by the NRC. Credit for corrective actions is warranted because your corrective actions were considered prompt and comprehensive once the violation was identified. These actions included, but were not limited to: (1) formalizing the processes for interpretation of TSs and altering boundaries of closed systems; (2) providing training on the requirements for TS interpretations and documentation of engineering guidance; and (3) reviews to ensure that no other informal guidance was being utilized to support plant operations.

Therefore, to emphasize the importance of operating the facility in accordance with TSs, I have been authorized, after consultation with the Director, Office of Enforcement, to issue a civil penalty in the amount of \$50,000.

Another violation of NRC requirements is described in Section III of the enclosed Notice and is classified individually at Severity Level IV. That violation involves a nuclear plant operator repositioning a breaker switch in a cabinet that was being controlled by a status control tag, without obtaining the permission of the individual or work group who required the tag and either Operations Shift Supervision or Operations Outage Group Supervision. This action resulted in the de-energization of heat tracing for an operable standby liquid control pump, for a period of 34 hours. At the conference, your staff indicated that the work permit indicated that there were discrepancies between the wiring diagrams and the actual wiring in the field. During a subsequent telephone conversation on April 15, 1997, Mr. J. Kenny of your staff informed Ms. T. Walker of my staff that the note indicating that there were wiring discrepancies was not added to the permit until after the event occurred. This information was considered in our assessment of this problem.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

¹ e.g., A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$100,000 was issued to PP&L on February 9, 1996, for a Severity Level III violation involving the discrimination of an employee who engaged in protected activities. (EA 95-250).

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response will be placed in the NRC Public Document Room (PDR). In addition, a summary of the conference that was conducted on March 21, 1997, including the slides that were used during the conference and a tape recording of the conference, will be placed in the PDR.

Sincerely,

A handwritten signature in black ink, appearing to read "H. Miller", with a stylized flourish at the end.

Hubert J. Miller
Regional Administrator

Docket Nos. 50-387; 50-388
License Nos. NPF-14; NPF-22

Enclosures:

1. Notice of Violation and Proposed Imposition of Civil Penalties
2. Synopsis of OI Investigation Report No. 1-96-046

ENCLOSURE 1

NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTIES

Pennsylvania Power and Light Company
Susquehanna Units 1 & 2

Docket Nos. 50-387; 50-388
License Nos. NPF-14; NPF-22
EA Nos. 96-270; 96-347; 97-054

During NRC inspections conducted between June 11, 1996 and September 9, 1996, as well as during two OI investigations, for which one OI synopsis was forwarded to you on February 19, 1997, and for which the other OI synopsis is enclosed, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the Nuclear Regulatory Commission proposes to impose civil penalties 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 violations and associated civil penalties are set forth below:

I. VIOLATIONS CLASSIFIED IN THE AGGREGATE AS A SEVERITY LEVEL II PROBLEM

- A. Technical Specification 3.8.1.1 for Units 1 and 2 require four of the five independent diesel generators (DGs) to be operable in Operational Condition 1, 2, and 3. With one of the required diesel generators inoperable, it must be restored to an operable status within 72 hours or the units must be placed in Hot Shutdown within the next 12 hours.

Contrary to the above, between June 14, 1996, and July 4, 1996, less than four independent diesel generators were operable, and during that time, neither unit was placed in Hot Shutdown. Specifically, DG 'E' was substituted for DG 'D' on June 14, 1996, that made DG 'D' inoperable. However, DG 'E' was also inoperable because of a circuit breaker alignment error made during the substitution, that resulted in removal of the circuit breaker that supplied power to the auxiliary equipment for DG 'E'.

- B. Technical Specification 6.8.1 for Units 1 and 2 requires, in part, that the applicable procedures recommended in Appendix 'A' of Regulatory Guide 1.33, Revision 2, February 1978, shall be established, implemented and maintained.
1. Regulatory Guide 1.33, Revision 2, February 1978, Appendix 'A', Section 4.w, recommends instructions for energizing and changing modes of operation for electrical systems, including emergency power sources such as diesel generators. Operations Procedure OP-024-004, "Transfer and Test Mode Operations of Diesel Generator E," Revision 14 (a procedure established to implement Regulatory Guide 1.33), provides the instruction for the alignment of DG 'E' in substitution for another diesel generator. Step 3.1.26 of OP-024-004 requires that transfer breaker OA51006 be removed and placed in the breaker cubicle for the diesel generator that will be substituted.

Contrary to the above, on June 14, 1996, a nuclear plant operator failed to align DG 'E' in accordance with OP-024-004, in that breaker OA51005, the supply breaker for the diesel's auxiliary equipment, was removed, instead of transfer breaker OA51006. As a result, DG 'E' was inoperable for 20 days.

2. Regulatory Guide 1.33, Revision 2, February 1978, Appendix 'A', Section 1, recommends administrative procedures for equipment control, shift and relief turnover, log entries, and responsibilities for safe operation.

- a. Administrative Procedure NDAP-QA-0022, "Self Checking," Revision 1 (a procedure established to implement Regulatory Guide 1.33), requires self-checking including, a step to identify the correct component, train, unit, etc, before taking action.

Contrary to the above, on June 14, 1996, a nuclear plant operator (NPO) failed to identify the correct component before taking action while aligning DG 'E' in accordance with OP-024-004, in that the operator manipulated the incorrect breaker, as described in Item I.B.1, and caused DG 'E' to be inoperable for 20 days.

- b. Operations Instruction OI-AD-080, "Investigation of Status Control Occurrences," (a procedure established to implement Regulatory Guide 1.33), requires immediate investigation and documentation of the occurrence and that Shift Supervision will complete the investigation prior to leaving the site on the day of the occurrence. OI-AD-080 defines a category 1 status control occurrence as a plant component (valve, breaker, switch, fuse, lead, etc.) out of required position.

Contrary to the above, on June 14, 1996, Shift Supervision did not immediately initiate an investigation for a status control occurrence and did not adequately complete the investigation prior to leaving the site. Specifically, when Shift Supervision was notified by a nuclear plant operator that breaker OA51006, the DG 'E' transfer breaker, was out of its required position, no action was taken to independently investigate the occurrence or locally verify the reported condition. Additionally, the investigation was not completed before Shift Supervision left the site on June 14, 1996.

- c. Administrative Procedure NDAP-QA-300, "Conduct of Operations," Revision 6, (a procedure established to implement Regulatory Guide 1.33), step 4.13.2, requires NPOs to keep the Plant Control Operator (PCO) informed of potential problems.

Contrary to the above, during the evening shift of July 3, 1996, an NPO identified potential problems on DG 'E' and failed to report the problem to a PCO until the following evening shift of July 4, 1996.

- d. Operations Department Administrative Procedure OP-AD-003, "Shift Routine," Revision 6, section 6.5.2 c.(3) (a procedure established to implement Regulatory Guide 1.33), requires NPOs to perform rounds in accordance with OI-AD-016, "Operator Rounds." OI-AD-016, step 4.5.1, requires NPOs to perform all checks and preventive maintenance activities identified on Plant Logs. NPO Plant Log OI-PL-0171, "Diesel Generator and ESS XFMRs," requires NPOs to perform an alarm test on panel OC577E twice per shift.

Contrary to the above, between January 1996 and June 1996, Nuclear Plant Operators failed to perform approximately 157 of the required alarm tests on panel OC577E.

- e. Administrative Procedure NDAP-QA-0300, step 6.2.3, Shift Turnover, provides general requirements for this activity and references additional requirements in OP-AD-003, "Shift Routine." OP-AD-003, Revision 6, step 6.5.2, states "Shift Supervisor rounds shall consist of an in-plant tour. Shift Supervisors assigned to the night shift (1900-0700) are responsible to conduct a general station inspection nightly".

Contrary to the above, on at least 22 occasions between January 1994 and June 1996, Shift Supervisors did not complete the required general station inspection (GSI). Specifically, an in-plant tour was not completed in that the SSs did not leave the control room during their assigned shift on those occasions and; therefore, did not conduct the in-plant portion of the GSI.

- 3. Regulatory Guide 1.33, Revision 2, February 1978, Appendix 'A', Section 8.b, recommends implementing procedures for each surveillance test, inspection, or calibration listed in the Technical Specifications. Technical Specification surveillance requirement 4.8.3.1.1 for Units 1 and 2 requires, in part, that MCC OB565 shall be determined to be energized at least once per 7 days by verifying correct breaker alignment. Procedure SO-100-005, "Weekly Electrical Distribution Verification", Revision 12, implements the requirements of TS 4.8.3.1.1. SO-100-005, Check Sheet 2, step B.25, requires that breaker OA51005, 1E Supply to OB565, be confirmed open and racked in.

Contrary to the above, on June 20, June 27, and July 3, 1996, NPOs failed to confirm that breaker OA51005 was open and racked in. Specifically, breaker OA51005 was removed from its assigned cubicle

on June 14, 1996, and was not returned to its assigned location until July 4, 1996, and the NPOs failed to identify that the breaker was not in the required position.

- C. 10 CFR Part 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, requires that activities affecting quality be prescribed by procedures of a type appropriate to the circumstances. Implementing this requirement is the SSES Operational Quality Assurance Manual, Policy OPS-12, item 6.5.4, which requires that procedures shall require independent verifications where appropriate to ensure that procedures for control of equipment have been implemented correctly. SSES Policy Letter 89-003, Revision 3, "Verification of Component Status," requires that alignment of safety related systems for operation requires independent verification, or as an alternative, verification by system test.

Operations Procedure OP-024-004, "Transfer and Test Mode Operations of Diesel Generator E," for Units 1 and 2 provides direction for the alignment of DG 'E'. Procedure SO-024-001, "Monthly Diesel Generator Operability Test," provides direction for performing a system test on the diesel generators.

Contrary to the above, on September 28, 1995, Operations Procedure OP-024-004, Revision 14, was approved for use in alignment of DG 'E', and the procedure was not appropriate to the circumstances in that the procedure did not require independent verification for proper alignment of the supply breaker for the diesel's auxiliary equipment. No verification of the breaker's proper alignment is made during performance of the system test in accordance with procedure SO-024-001.

- D. 10 CFR 50.9 requires, in part, that information required by the Commission's regulations to be maintained by the licensee shall be complete and accurate in all material respects.

Technical Specification 6.8.1 for Units 1 and 2 requires, in part, that the applicable procedures recommended in Appendix 'A' of Regulatory Guide 1.33, Revision 2, February 1978, shall be established, implemented and maintained.

1. Regulatory Guide 1.33, Revision 2, February 1978, Appendix 'A', Section 8.b, recommends implementing procedures for each surveillance test, inspection, or calibration listed in the Technical Specifications. Technical Specification surveillance requirement 4.8.3.1.1 for Units 1 and 2 requires, in part, that MCC OB565 shall be determined to be energized at least once per 7 days by verifying correct breaker alignment. Procedure SO-100-005, "Weekly Electrical Distribution Verification," Revision 12, implements the requirements of TS 4.8.3.1.1. SO-100-005, Check Sheet 2, step B.25 requires that breaker OA51005, 1E Supply to OB565, be confirmed open and racked in. Step 7.2 of SO-100-005 requires that a completed record be maintained.

Contrary to the above, information required to be maintained by the licensee was not complete and accurate in all material respects. Specifically, on June 20, June 27, and July 3, 1996, NPOs assigned to verifying the correct breaker alignment of OA51005, the safety related supply breaker to MCC 0B565, created records to indicate that they verified that the breaker was in the correct position, and those records were inaccurate in that the individuals did not verify that the breaker was in the correct position as described in Item I.B.3. These records were material in that they provided indication that certain safety activities had been completed when in fact they had not been completed.

2. Regulatory Guide 1.33, Revision 2, February 1978, Appendix 'A', Section 1, recommends administrative procedures for equipment control, shift and relief turnover, log entries, and responsibilities for safe operation. Operations Department Administrative Procedure OP-AD-003, "Shift Routine," Revision 6, Section 6.5.2 c.(3), requires NPOs to perform rounds in accordance with OI-AD-016, "Operator Rounds." OI-AD-016, step 4.5.1, requires NPOs to perform all checks and preventive maintenance activities identified on Plant Logs and step 5.0 requires that completed Plant Logs be maintained. NPO Plant Log OI-PL-0171, "Diesel Generator and ESS XFMRs," requires NPOs to perform an alarm test on panel OC577E twice per shift.

Contrary to the above, information required to be maintained by the licensee was not complete and accurate in all material respects. Specifically, on approximately 157 occasions between January 1996 and June 1996, Nuclear Plant Operators created records to indicate that they had performed a panel OC577E alarm test, and the records were inaccurate in that the tests had not been performed as described in Item I.B.2.d. These records were material in that they provided indication that certain safety activities had been completed when in fact they had not been completed.

3. Regulatory Guide 1.33, Revision 2, February 1978, Appendix 'A', Section 1, recommends administrative procedures for equipment control, shift and relief turnover, log entries, and responsibilities for safe operation. Administrative Procedure NDAP-QA-0300, step 6.2.3, Shift Turnover, provides general requirements for this activity and references additional requirements in OP-AD-003, "Shift Routine." OP-AD-003, Revision 6, step 6.5.2, states "Shift Supervisor rounds shall consist of an in-plant tour. Shift Supervisors assigned to night shift (1900-0700) are responsible to conduct a general station inspection nightly". Step 6.10.9 requires personnel to indicate all items of their shift turnover sheet "offgoing" section are complete by marking applicable boxes and signing the form. Attachment F, Shift Supervisor Turnover Sheet, Offgoing Shift Supervisor Checklist, item 1, documents performance of the general station inspection. Step 7.1.1 requires that Shift Supervisor Logs and Shift Supervisor Turnover Sheets be maintained.

Contrary to the above, information required to be maintained by the licensee was not complete and accurate in all material respects. Specifically, on at least 22 occasions between January 1994 and June 1996, Shift Supervisors signed Attachment F of procedure OP-AD-003 indicating that they performed the required general station inspection, and these records were inaccurate in that the in-plant tours had not been conducted by the shift supervisors in that they did not leave the control room during those periods as described in Item I.B.2.e. These records were material in that they provided indication that certain safety activities had been completed when in fact they had not been completed.

4. Regulatory Guide 1.33, Revision 2, February 1978, Appendix 'A', Section 9.b, recommends the development of procedures for preventative maintenance schedules. NDAP-00-0540, Preventive Maintenance Scheduling System, Revision 2, is a program for uniform scheduling and tracking of preventive maintenance (PM) activities. NDAP-00-0540, section 6.4.2, PM Worklists, states that upon completion of a PM Worklist activity, the worker shall enter his employee number and date performed in the work completed block. Weekly PM worklist activities S0603, and S5603, require the Assistant Unit Supervisor to monitor one complete set of rounds by accompanying the reactor building nuclear plant operators on Saturday night and Monday night shifts. Step 7.1 of NDAP-00-0540 requires that a completed PM Worklist activity be maintained as a plant document.

Contrary to the above, information required to be maintained by the licensee was not complete and accurate in all material respects. Specifically, between January 1996 and June 1996, five PM Worklist activities were signed off as completed by two Assistant Unit Supervisors, and those records were inaccurate in that the individuals had not entered the plant areas during those periods necessary to perform the activity. These records were material in that they provided indication that certain safety activities had been completed when in fact they had not been completed.

These violations are classified in the aggregate as a Severity Level II problem (Supplements I and VII)
Civil Penalty - \$160,000.

II. VIOLATION INVOLVING AN INOPERABLE CONTAINMENT ISOLATION VALVE

Unit 1 Technical Specification (TS) 3.6.3, requires primary containment isolation valves, including the core spray valve F015B, to be operable in Operational Condition 1, 2, and 3. TS Action statement 3.6.3.a requires that with one of the primary containment isolation valves inoperable, at least one isolation valve shall be maintained operable in each penetration that is open and that action must be taken within 4 hours

to restore the inoperable valve to operable status or to isolate the affected penetration. When a Limiting Condition for Operation can not be met, TS 3.0.3 requires, in part, that actions be taken to place the unit be in at least STARTUP within 7 hours.

Contrary to the above, on July 30, 1997, with Unit 1 in Operational Condition 1, containment isolation valve F015B was opened and deactivated for 24 hours, rendering the valve inoperable and action could not be taken to meet the requirements specified to isolate the affected penetration because F015B was the only isolation valve in the penetration. As a result, TS 3.6.3 could not be met; therefore, the actions of TS 3.0.3 were required. However, contrary to the requirements of TS 3.0.3, the licensee failed to take actions to place the unit in at least STARTUP within 7 hours.

This is a Severity Level III violation (Supplement I).
Civil Penalty - \$50,000.

III. VIOLATION NOT ASSESSED A CIVIL PENALTY

Technical Specification 6.8.1 requires, in part, that the applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, Revision 2, February 1978, shall be established, implemented and maintained. Appendix "A" of Regulatory Guide 1.33, Revision 2, February 1978, Section 1 recommends administrative procedures for equipment control. Administrative Procedure NDAP-QA-302, Revision 6 (a procedure established to implement Regulatory Guide 1.33), states that repositioning/operating components controlled by status control tags may be performed with the permission of the individual or work group who required the tag and either Operations Shift Supervision or Operations Outage Group Supervision.

Contrary to the above, on June 12, 1996, a NPO repositioned a breaker switch in a cabinet which was being controlled by a status control tag, and the NPO failed to obtain the permission of the individual or work group who required the tag and either Operations Shift Supervision or Operations Outage Group Supervision. This action resulted in the de-energization of heat tracing for an operable standby liquid control pump for a period of 34 hours.

This is a Severity Level IV Violation (Supplement I)

Pursuant to the provisions of 10 CFR 2.201, Pennsylvania Power and Light Company (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the receipt of this Notice of Violation and Proposed Imposition of Civil Penalties (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued as to 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 penalties by letter addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer payable to the Treasurer of the United States in the amount of the civil penalties proposed above, or may protest imposition of the civil penalties, 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 penalties will be issued. Should the Licensee elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalties, 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 penalties should not be imposed. In addition to protesting the civil penalties in whole or in part, such answer may request remission or mitigation of the penalties.

In requesting mitigation of the proposed penalties, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 civil penalties.

Upon failure to pay any civil penalty due that 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 response noted above (Reply to Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: James Lieberman, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region I, and a copy to the NRC Senior Resident Inspector at the facility that is the subject of this Notice.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at King of Prussia, Pennsylvania
this 20th day of June 1997

SYNOPSIS

On December 13, 1996, an investigation was initiated by the Office of Investigations (OI) to determine whether Pennsylvania Power and Light Company (PP&L) licensed operators at the Susquehanna Steam Electric Station (SSES) falsified activity records, also known as "tour turnover sheets," concerning the conduct of general station inspections.

Based upon the evidence developed during this investigation and a review of the evidence contained in the investigation report prepared by the licensee, it was determined that there was insufficient evidence to conclude that licensed operators intentionally falsified activity records with regard to the conduct of general station inspections.

**NOT FOR PUBLIC DISCLOSURE WITHOUT APPROVAL OF
FIELD OFFICE DIRECTOR, OFFICE OF INVESTIGATIONS, REGION I**

Case No. 1-96-046

1

NUREG-0940, PART II

A-201

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

August 15, 1997

EA 97-339

Dr. Robert C. Mecredy
Vice President, Ginna Nuclear Production
Rochester Gas and Electric Corporation
89 East Avenue
Rochester, New York 14649

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL
PENALTY - \$55,000
(NRC Inspection Report No. 50-244/97-08)

Dear Dr. Mecredy:

This letter refers to the NRC inspection conducted on May 27-30, 1997, at the Ginna Nuclear Power Station, for which an exit meeting was conducted on May 30, 1997. The purpose of this inspection was to review your security program, including your installation of a vehicle barrier system (VBS) in February 1996. The VBS was installed in response to an NRC August 1994 amendment to 10 CFR Part 73 which modified the design basis threat for a radiological sabotage. The inspection report was sent to you on July 16, 1997. As described in the inspection report, apparent violations of NRC requirements were identified. On August 5, 1997, a predecisional enforcement conference was conducted with you and members of your staff to discuss the apparent violations identified during the inspection, their causes, and your corrective actions.

Based on our review of the inspection findings, and information provided during the conference, two violations are being cited and are described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice). Each violation involves inadequacies in the vehicle barriers deployed outside the outer isolation zone to prevent the malicious use of a vehicle to gain entry to the protected and vital areas. The first violation was based on the discovery of three openings in the barrier large enough for a vehicle to get through. Regarding the second violation, approximately 1200 feet of the barrier cables were secured to the barrier posts by nylon ties. These nylon ties could be easily removed with hand held tools, thereby defeating the ability of the fence to withstand a vehicular attempt to penetrate the barrier.

The VBS is designed to prevent intrusion of a vehicle into an area by stopping the forward motion of the vehicle. This design is intended to prevent adversaries from transporting personnel and their hand-carried equipment by vehicle to the proximity of vital areas. The design is also intended to preclude the use of a land vehicle bomb. NUREG/CR-6190 specifically indicates that the vehicle barrier must be capable of resisting vehicle impact and providing continuous protection in all areas where approach by a land vehicle is possible. At Ginna, your vehicle barrier did not meet these requirements at the time of the inspection.

The NRC is particularly concerned that these conditions were not identified by your staff when the barrier was designed and installed, nor were they identified by your security staff during routine tours of the facility. While a member of your engineering staff did identify problems with one of the openings (near the guardhouse) in August 1996, actions were not taken to correct this condition, and to determine whether any additional degradations existed. Given that vehicles could enter through openings in the VBS, that the nylon ties could be easily removed, thus defeating the purpose of the barrier cables, and that an employee had identified problems with one of the openings and those problems were not adequately responded to, the NRC has concluded that the violations represent a breakdown in control of this licensed activity that indicates a significant lack of attention to a licensed responsibility. Therefore, the violations have been categorized in the aggregate as a Severity Level III problem in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy), NUREG-1600.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$55,000 is considered for a Severity Level III violation. Your facility has been the subject of escalated enforcement action within the last two years¹. Therefore, the NRC considered whether credit was warranted for *Identification and Corrective Action* in accordance with the civil penalty assessment process in Section V1.B.2 of the Enforcement Policy. Credit is not warranted for *Identification* because the violations were identified by the NRC. Credit is warranted for *Corrective Actions* because your corrective actions, once the violations were identified by the NRC, were considered prompt and comprehensive. These actions, which were discussed during your presentation at the conference, include, but are not limited to, (1) installation of additional barriers in the areas where the openings existed; (2) temporary replacement of the nylon ties with metal clamps, and subsequent installation of welded steel plates at every other post; (3) implementation of a weekly vehicle barrier system inspection by the security force, as well as a quarterly inspection checklist; and (4) training of engineering and security personnel regarding the vehicle barrier system and this event. In addition, during further discussion at the conference, you stated that you were revising your process and expectations to include security problems in your corrective action program.

Therefore, to emphasize the importance of appropriate attention to the security program at your facility, as well as aggressive assessment and correction of degradations at the facility, I have been authorized, after consultation with the Director, Office of Enforcement, to issue a base civil penalty in the amount of \$55,000 for the violations set forth in the Notice.

¹ A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$100,000 was issued to Rochester Gas & Electric Company on December 13, 1996 for violations involving the failure to adequately validate design inputs for the Residual Heat Removal (RHR) system core deluge valves, as well as the failure to adequately correct this condition following identification (Reference: EA 96-282).

One other apparent violation identified during the inspection is being withdrawn based on information you provided during the conference. That violation involved the inspection finding that the VBS might not provide adequate stand-off distance from exposed vital equipment and structures housing vital equipment. At the conference, you indicated that reanalysis of the stand-off distances has confirmed their validity and that you would resubmit to the NRC the summary description of the Design Basis Explosion Evaluations to specify the actual stand-off distances used in the calculations.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to this Notice, including your proposed corrective actions and the results of future inspections, the NRC will determine whether further NRC enforcement action is necessary to ensure compliance with NRC regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room (PDR).

Sincerely,

Hubert J. Miller
Regional Administrator

Docket No. 50-244
License No. DPR-18

Enclosure: Notice of Violation and Proposed Imposition of Civil Penalty

ENCLOSURE

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY

Rochester Gas and Electric Corporation
Ginna Nuclear Power Station
Rochester, New York

Docket No. 50-244
License No. DPR-18
EA 97-339

During an NRC inspection conducted from May 27-30, 1997, for which an exit meeting was conducted on May 30, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, 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 violations and associated civil penalty are set forth below:

License Condition 2.E(1) of License Number DPR-18 for the Ginna facility, requires that the Licensee maintain in effect and fully implement all provisions of the security plan.

The R. E. Ginna Nuclear Power Plant Physical Security Plan, Revision L, dated March 13, 1996, Section 3.2.5, "Vehicle Denial," states, in part, "Vehicle Barriers have been deployed in strategic areas outside the outer isolation zone to prevent the malicious use of a vehicle to gain entry to the protected and vital areas."

Contrary to the above, on May 27, 1997, the NRC observed that the vehicle barriers deployed outside the outer isolation zone would not prevent the malicious use of a vehicle to gain entry to the protected and vital areas, as evidenced by the following examples, each of which constitutes a separate violation.

1. Three openings existed in the vehicle barrier which were large enough for a vehicle to pass through. Specifically, there was a 14-foot opening between the end of the barrier and the cliff on the northwest corner of the barrier; there was an 8-foot opening between the barrier and the cliff on the northeast corner of the barrier; and there was an 8-foot opening in the barrier on the west side of the security building. (01013)
2. Approximately 1200 feet of the vehicle was bollards and cable. The cable was secured to bollards that were approximately 300 feet apart. Between the bollards, the cable was supported by support posts. The cable was secured to the posts with nylon ties. The nylon ties could be easily removed with hand held tools such as pliers, which would result in the cables being laid on the ground, thereby negating any benefit of the cable as a barrier, and allowing vehicles to get through. (01023)

These two violations are categorized in the aggregate as a Severity Level III problem (Supplement III).

Civil Penalty - \$55,000.

Pursuant to the provisions of 10 CFR 2.201, Rochester Gas & Electric Company (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued as to 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 addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer 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 violation 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, in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 234(c) of the Act, 42 U.S.C. 2282c.

The response noted above (Reply to 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, D.C. 20555 with a copy to the Director, Special Projects Office, NRR, U.S. Nuclear Regulatory Commission, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at King of Prussia, Pennsylvania
this 15th day of August 1997

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W., SUITE 2900
ATLANTA, GEORGIA 30323-0199

February 14, 1996

EA 95-220

Tennessee Valley Authority
ATTN: Mr. Oliver D. Kingsley, Jr.
President, TVA Nuclear and
Chief Nuclear Officer
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -
\$80,000 (Department of Labor Case No. 93-ERA-044)

Dear Mr. Kingsley:

On August 22, 1995, the Secretary of Labor issued a Decision and Order, in Department of Labor (DOL) Case 93-ERA-044, which found that Stone & Webster Engineering Corporation (SWEC) discriminated against Mr. Douglas Harrison, a former ironworker general foreman at Tennessee Valley Authority's (TVA) Browns Ferry Nuclear Plant, when Mr. Harrison was demoted because he raised concerns related to firewatch requirements. In addition, the Secretary of Labor found that the removal of Mr. Harrison to an outside work crew was also discriminatory and that Mr. Harrison's discussion with other ironworkers regarding management's lack of response to the fire protection concerns constituted protected activity. This Decision and Order overturned the DOL Administrative Law Judge's Recommended Decision and Order issued on November 8, 1994. The apparent violation and a copy of the Secretary of Labor's Decision and Order were transmitted to you by letter dated October 18, 1995. The information reviewed in this case included the record developed by the NRC Office of Investigations. A closed transcribed predecisional enforcement conference was conducted in the Region II office on October 30, 1995, to discuss the apparent violation, the root causes, and your corrective actions to preclude recurrence. The predecisional enforcement conference was a joint conference with TVA, SWEC, and the individual supervisor involved in this case. The report summarizing the conference was sent to you by letter dated November 8, 1995.

Based on the Secretary of Labor's decision, the NRC has concluded that a violation of NRC requirements occurred in this case; specifically, a violation of 10 CFR 50.7, which prohibits discrimination against an employee for engaging in activities protected by Section 211 of the Energy Reorganization Act (ERA). The activities which are protected include, but are not limited to, reporting of safety concerns by an employee to his employer. The violation is cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice).

While discrimination against any person for engaging in protected activities is cause for concern to the NRC, this violation is considered to be a

significant regulatory concern because it involved discrimination against an employee by a contract manager substantially above a first line supervisor. Licensees have a primary responsibility for ensuring that all employees engaged in or affiliated with licensed activities, including contract employees, can raise safety concerns in a work environment conducive to such protected activity and free of fear from retaliation. During the conference, your staff denied the violation. Despite that denial, it is our view, based on the Secretary of Labor decision, that the facts support the conclusion that SWEC's Chief Construction Supervisor violated the regulations applicable to employee protection in the wrongful demotion and transfer of Mr. Harrison. Therefore, this violation has been categorized in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy, NUREG-1600), at Severity Level II.

In accordance with the Enforcement Policy, a base civil penalty is considered for a Severity Level II violation and the *Identification and Corrective Actions* factors were considered. In this case, the NRC has concluded that it would not be appropriate to give credit for identification because the licensee did not identify the violation. Your corrective actions in response to this matter were also considered, which included an investigation of the complaint by TVA's Office of Inspector General (TVA/OIG) at the time the DOL complaint was filed and a September 19, 1995 letter issued to SWEC requesting a written response regarding SWEC's actions to ensure no chilling effect resulted from this case. In addition, the NRC conducted surveys of SWEC employees in late 1993 and the TVA/OIG conducted surveys in July 1994 and September 1995 and it appeared, in both sets of surveys, that employees generally felt free to raise safety concerns. SWEC also conducted additional periodic surveys, issued memoranda to its staff, and included information on the employee concerns programs in meetings with its staff with the most recent meeting occurring after the Secretary of Labor's Decision and Order. Finally, and importantly, SWEC has indicated that it has undertaken to compensate Mr. Harrison in compliance with the Secretary of Labor's Decision and Order. In view of these responses, we believe credit is warranted for corrective action.

Therefore, to emphasize the importance of maintaining an environment where licensee and contractor employees feel free to raise safety concerns without fear of retaliation, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Reactor Regulation, Regional Operations and Research, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$80,000 for this Severity Level II violation.

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence and the date when full compliance will be achieved has already been adequately addressed during the predecisional enforcement conference and in your letter of January 4, 1996. Therefore, you are not required to respond to this letter on these issues, unless the information you have provided does not accurately reflect your corrective actions or your position. You are required to respond to the proposed imposition of civil penalty and should do so in accordance with the instructions in the Notice of Violation.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room (PDR). To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. However, if you find it necessary to include such information, you should clearly indicate the specific information that you desire not to be placed in the PDR, and provide the legal basis to support your request for withholding the information from the public.

We acknowledge that SWEC has stated that they will appeal the Secretary of Labor's Decision and Order in this case. In the event the Secretary of Labor's Decision and Order is reversed, reconsideration of this enforcement action would be appropriate.

Sincerely,

For Stewart D. Ebner
Regional Administrator

Docket Nos. 50-259, -260, and -296
License Nos. DPR-33, -52, and -68

Enclosure: Notice of Violation and Proposed Imposition
of Civil Penalty

cc w/encl:
Mr. O. J. Zeringue, Senior Vice President
Nuclear Operations
Tennessee Valley Authority
3B Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Dr. Mark O. Medford, Vice President
Engineering and Technical Services
Tennessee Valley Authority
3B Lookout Place
1101 Market Street
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Mr. D. E. Nunn, Vice President
New Plant Completion
Tennessee Valley Authority
3B Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

cc w/encl (cont'd on Page 4)

TVA

- 4 -

cc w/encl: (cont'd)
Mr. P. P. Carier, Manager
Corporate Licensing
Tennessee Valley Authority
4G Blue Ridge
1101 Market Street
Chattanooga, TN 37402-2801

Mr. T. D. Shriver, Manager
Nuclear Assurance and Licensing
Browns Ferry Nuclear Plant
Tennessee Valley Authority
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Mr. Pedro Salas
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Mr. R. D. Machon, Site Vice President
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TVA Representative
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General Counsel
Tennessee Valley Authority
ET 11H
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Knoxville, TN 37902

Chairman
Limestone County Commission
310 West Washington Street
Athens, AL 35611

State Health Officer
Alabama Department of Public Health
434 Monroe Street
Montgomery, AL 36130-1701

NOTICE OF VIOLATION
AND PROPOSED IMPOSITION OF CIVIL PENALTY

Tennessee Valley Authority
Browns Ferry Nuclear Plant
Units 1, 2 and 3

Docket Nos. 50-259, -260 and -425
License Nos. DPR-33, 58, and 68
EA 95-220

As a result of review of a Secretary of Labor Decision and Order dated August 22, 1995 (93-ERA-044), a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violation is listed below:

10 CFR 50.7 prohibits discrimination by a Commission licensee or a contractor or subcontractor of a Commission licensee against an employee for engaging in certain protected activities. Discrimination includes discharge or other actions relating to the compensation, terms, conditions, and privileges of employment. The activities which are protected include, but are not limited to, reporting of safety concerns by an employee to his employer.

Contrary to the above, on February 2 and 4, 1993, the licensee failed to ensure that the provisions of 10 CFR 50.7 were implemented in that Stone & Webster Engineering Corporation, a contractor to the Tennessee Valley Authority at the Browns Ferry Nuclear Plant, discriminated against Mr. Douglas Harrison for engaging in protected activities. Specifically, as determined by the Secretary of Labor, Stone & Webster Engineering Corporation demoted Mr. Harrison and transferred him to a different position because he raised concerns related to firewatch requirements. (01012)

This is a Severity Level II violation (Supplement VII).
Civil Penalty - \$80,000.

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence and the date when full compliance will be achieved has already been adequately addressed. However, Tennessee Valley Authority (Licensee) is required to submit a written statement or explanation pursuant to 10 CFR 2.201 within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty if the statements made during the predecisional enforcement conference concerning these matters do not accurately reflect its corrective actions or its position. Within the same time as provided for the response noted above, the Licensee may pay the civil penalty by letter addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer 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

violation(s) 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 in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 response noted above (Reply to Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: James Lieberman, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region II, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice.

Because the response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. However, if the Licensee finds it necessary to include such information, it should clearly indicate the specific information that it desires not to be placed in the PDR, and provide the legal basis to support the request for withholding the information from the public.

Under the authority of Section 182 of the Act, 42 U.S.C. 2232, a response to this Notice shall be submitted under oath or affirmation.

Dated at Atlanta, Georgia
this 14th day of February 1996

**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
801 WARRENVILLE ROAD
LISLE, ILLINOIS 60532-4351

September 23, 1997

EA 97-201

Mr. D. R. Gipson
Senior Vice President
Nuclear Generation
The Detroit Edison Company
6400 North Dixie Highway
Newport, MI 48166

**SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL
PENALTY - \$50,000 (NRC Inspection Reports 50-341/97002 and
50-341/97003)**

Dear Mr. Gipson:

The NRC conducted two inspections at the Enrico Fermi 2 Nuclear Power Plant from February 1, 1997 through June 26, 1997. These inspections reviewed several matters, including 480 volt motor control centers fused disconnect switch maintenance, corrective actions associated with motor operated valve shaft set screws, and primary containment oxygen monitor calibrations. Exit meetings for these inspections were conducted on March 19, March 27, May 9, and June 26, 1997. The reports of these inspections were sent to you by letters dated June 2 and July 1, 1997. A predecisional enforcement conference was held in the Region III office on August 6, 1997. Subsequent to the predecisional enforcement conference, the NRC elected to address the issues relating to the primary containment oxygen monitor calibration by subsequent correspondence.

Based on the information developed during the inspections and the information your staff provided during the predecisional enforcement conference, the NRC has determined that significant violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) and the circumstances surrounding the violations are described in the subject inspection report.

The violation in Section I of the Notice involves inadequate lubrication of motor control center (MCC) switches. The site engineering and maintenance staffs did not specify the preventive maintenance lubrication frequency or address the vendor's recommendation for twice-a-year visual inspection and operation of MCC components. This led to unexpected operation (opening) of four safety related fused disconnect switches and seven non-safety related fused disconnect switches since 1993. These failures are related to previous NRC violations cited in NRC Inspection Reports 50-341/94012 and 50-341/95003 for use of unapproved lubricants on these switches by Fermi maintenance personnel. Maintenance personnel immediately discontinued the use of unapproved lubricants. However, since there

was no approved lubricant, no lubrication was being performed on these switches for about 18 months. Several additional MCC switch lubrication problems concerning drying of the lubricant and lack of periodic switch movement occurred in early 1997. The potential safety consequence and the regulatory significance of the MCC switch issue are high because of a potential common mode failure under seismic event conditions. Both industry information and previous NRC violations should have triggered broad corrective actions to identify, correct, and prevent potential MCC switch failures. The failure of your staff to implement corrective actions for these longstanding equipment problems resulted in a violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions." This violation is classified in accordance with NUREG-1600 as a Severity Level III violation.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$50,000 is considered for Severity Level III violations occurring before November 12, 1996. Since most of the noncompliance period occurred before November 12, 1996, a base civil penalty of \$50,000 was considered for this case. Because Fermi has been the subject of escalated enforcement actions within the last two years¹, the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.B.2 of the Enforcement Policy. *Identification* credit was not warranted. Although a specific failure was identified during a surveillance activity, the subsequent analysis did not identify the root cause and missed the opportunity to identify the potential for common mode failures. In addition, extensive NRC involvement was required to ensure that your staff understood the safety significance of this issue and the need to implement effective corrective action. *Corrective Action* credit was warranted based on the corrective actions (implemented and proposed) that were discussed at the enforcement conference. The corrective actions included (1) a substantial effort in cleaning, lubricating, and cycling of approximately 1000 fused disconnect switches connected to safety-related and balance of plant loads prior to start-up from the forced outage; (2) documenting MCC fused disconnect problems; (3) training personnel on proper latching indications prior to start-up from the forced outage; (4) evaluating replacement of MCC equipment; (5) evaluating the mixing of lubricants found compatible with each other and MCC components; and (6) enhancing the preventive maintenance program.

Therefore, to emphasize the need to identify the root cause of safety significant problems, I have been authorized, after consultation with the Director, Office of Enforcement, to issue the enclosed Notice of Violation and proposed Imposition of Civil Penalty (Notice) in the base amount of \$50,000 for the Severity Level III violation.

¹ EA 96-095 was issued on May 21, 1996, for inadequate corrective actions for issues related to Diesel Generator Service Water Pump icing.

The violation described in Section II of the Notice discussed one Severity Level IV violation that was not assessed a civil penalty. This violation addresses a High Pressure Coolant Injection valve motor pinion gear set screw failure that occurred during a routine surveillance. Similar to the disconnect switch failures described above, this failure occurred due to the lack of a systematic program for correcting known generic deficiencies. Although Fermi had implemented some corrective actions on this valve, these corrective actions were not effective in preventing the set screw failure. This violation is classified in accordance with the Enforcement Policy as a Severity Level IV violation.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be placed in the NRC Public Document Room.

Sincerely,

A. Bill Beach
Regional Administrator

Docket No. 50-341
License No. NPF-43

Enclosure: Notice of Violation and Proposed
Imposition of Civil Penalty

cc w/encl: N. Peterson,
Supervisor of Compliance
P. A. Marquardt, Corporate
Legal Department
James R. Padgett, Michigan Public
Service Commission
Michigan Department of
Environmental Quality
Monroe County, Emergency
Management Division

Notice of Violation
and
Proposed Imposition of Civil Penalty

Detroit Edison Company
Fermi 2

Docket Number 50-341
License Number NPF- 43
EA 97-201

During two NRC inspections conducted from February 1 through June 26, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the NRC 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 violations and associated civil penalty are set forth below:

A. Violation Assessed a Civil Penalty

10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," requires, in part, that measures be established to assure that conditions adverse to quality are promptly corrected, and in the case of significant conditions adverse to quality, that measures be established to assure that the cause of the condition is determined and corrective actions taken to preclude recurrence.

Contrary to the above, on October 26, 1995, a Motor Control Center (MCC) fuse disconnect switch installed in a safety system failed to remain closed, a significant condition adverse to quality. The licensee failed to promptly determine the cause of the condition and take corrective actions to preclude recurrence. As a result, several MCC fused disconnect switches failed to remain closed in March and April 1997. (01013)

This is a Severity Level III violation (Supplement I) - \$50,000

B. Violation Not Assessed a Civil Penalty

10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," requires, in part, that measures be established to assure that conditions adverse to quality are promptly corrected, and in the case of significant conditions adverse to quality, that measures be established to assure that the cause of the condition is determined and corrective actions taken to preclude recurrence.

Contrary to the above, as of February 18, 1997, corrective actions for a significant condition adverse to quality, a motor pinion gear malfunction on High Pressure Coolant Injection Valve E4150-F006 were not adequate to preclude recurrence. Specifically, in 1989, Limitorque issued Maintenance Update 89-01 informing the licensee that motor pinion gears could rotate on the valve shaft and cause valve failure if not properly secured and recommending corrective actions for Limitorque motor operated valve operators. One of the recommended corrective actions was to drill the shaft and seating the setscrew into the hole. The licensee's corrective

actions were inadequate in that the setscrew for valve E4150-F006 was not seated into a drilled hole, and valve E4150-F006 failed to perform during the conduct of a surveillance test on February 16, 1997, due to its motor pinion gear rotating on the shaft. (02013)

This is a Severity Level IV Violation (Supplement I)

Pursuant to the provisions of 10 CFR 2.201, Detroit Edison Company (the Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty (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, and if denied, the reasons why, (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 will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to 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 addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer 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 violation(s) 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, in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy 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 response noted above (Reply to 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, D.C. 20555 with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region III and a copy to the NRC Resident Inspector at the Fermi facility.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Lisle, Illinois
this 23rd day of September 1997

August 29, 1997

EA 97-055

Virginia Electric and Power Company
ATTN: Mr. J. P. O'Hanlon
Senior Vice President-Nuclear
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, Virginia 23060

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -
\$55,000
(NRC Inspection Report 50-280/97-01 and 50-281/97-01)

Dear Mr. O'Hanlon:

This refers to the inspection conducted between January 13 and 17, 1997, at Virginia Electric and Power Company's (Virginia Power) Surry facility. The inspection included a review of your implementation of the requirements of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants" [the Maintenance Rule]. The results of the inspection were formally transmitted to you by letter dated February 20, 1997. An open predecisional enforcement conference was conducted in the Region II office on March 11, 1997, with you and members of your staff to discuss the apparent violations, the root causes, and corrective actions to preclude recurrence. A summary of the conference was sent to you by letter dated March 17, 1997.

Based on the information developed during the inspection and, after evaluation of the information that you provided during the conference, the NRC has determined that violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) and the circumstances surrounding them are described in detail in the subject inspection report.

The violations set forth in the Notice include a serious failure to implement key aspects of the Maintenance Rule. These violations, collectively, represent a programmatic breakdown in the development and implementation of Virginia Power's program to ensure compliance with the regulatory requirements of the Maintenance Rule. Escalated enforcement is warranted due to the significant regulatory concern with the common underlying root causes of the violations. The root causes included: (1) poor management oversight and control of the Maintenance Rule program development and implementation; (2) ineffective turnover of plans developed in the Virginia Power corporate offices; and (3) the failure to correct deficiencies, found as a result of Virginia Power audits and self-assessments during program development and implementation.

The violations in the Notice are directly related to the failure to meet the requirements of the Maintenance Rule. Violation A involved the failure to include the emergency switch gear heating ventilation and air conditioning system in a program to monitor its performance against established goals, as required by 10 CFR 50.65(a)(1). Violation B included seven examples of failures to demonstrate that the performance or condition of structures, systems, and components (SSC) within the scope of 10 CFR 50.65 had been effectively controlled through the performance of appropriate preventive maintenance, such that the SSC would remain capable of performing its intended function. Three procedural violations, Violations C.(1), C.(2) and C.(3), were identified that indicated a significant failure to procedurally establish and implement maintenance rule procedures.

The Commission determined that the Maintenance Rule was necessary to ensure that licensees evaluate the effectiveness of maintenance to minimize the likelihood of failure of safety-significant equipment that could initiate or adversely affect a transient or accident. Even though the final rule was issued in July 1991, it did not become effective until July 1996. Within this five year period, the NRC staff and industry were provided the first two years to develop implementation and inspection guidance. The following three years were to permit licensees to implement the requirements such that by July 10, 1996, all requirements would be satisfied. Full compliance with the maintenance rule by this date is a requirement set forth in 10 CFR 50.65(c).

During the five years of guidance development and implementation, the staff and the industry worked towards a common goal of assuring that licensees had good implementation guidance and clearly understood the manner in which NRC would inspect implementation, once the rule became effective. This was accomplished through multiple public workshops and a pilot inspection program. Results from these activities were documented and shared with the industry so that licensees would have sufficient time prior to the July 10, 1996, effective date of the rule to develop and implement their programs and processes.

In general, Surry has a good performance record in the maintenance area and significant upgrades in the material condition of the plant were noted in the last systematic assessment of licensee performance report, issued on November 8, 1996, and during the inspection that was the subject of this enforcement action. The NRC also acknowledges that Virginia Power had taken significant steps to replace plant equipment found to be unreliable, such as the emergency service water pumps. Nevertheless, the NRC concludes that your actions taken to implement the Maintenance Rule had a number of significant weaknesses, and measures to meet all Rule requirements had not been fully integrated into the appropriate programs at Surry. Thus, the failure to implement the requirements of the Maintenance Rule is considered to be a significant regulatory concern. It is important to note that the maintenance rule sets forth requirements for monitoring the effectiveness of maintenance and not for performing maintenance. Surry did not have adequate measures in place to monitor the results of maintenance to assure plant SSCs remain capable of performing their intended functions. Appropriate performance