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# Enforcement Actions: Significant Actions Resolved

Quarterly Progress Report  
January-March 1992

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U.S. Nuclear Regulatory Commission

Office of Enforcement





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Office of Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555



## ABSTRACT

This compilation summarizes significant enforcement actions that have been resolved during one quarterly period (January - March 1992) and includes copies of letters, Notices, and Orders sent by the Nuclear Regulatory Commission to 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

January - March 1992

### INTRODUCTION

This issue of NUREG-0940 is being published to inform NRC licensees about significant enforcement actions and their resolution for the first quarter of 1992. Enforcement actions are issued by the Deputy Executive Director for Nuclear Materials Safety, Safeguards and Operations Support (DEDS), the Deputy Executive Director for Nuclear Reactor Regulation, Regional Operation and Research (DEDR), and the Regional Administrator. The Director, Office of Enforcement, may act for the DEDS in the absence of the DEDS or DEDR or as directed. The actions involved in this NUREG involve NRC's civil penalties as well as significant Notices of Violation.

An objective of the NRC Enforcement Program is to encourage licensees to improve their performance and, by example, the performance of the licensed industry. Therefore, it is anticipated that the information in this publication will be widely disseminated to managers and employees engaged in activities licensed by NRC, so all can learn from the errors of others, thus improving performance in the nuclear industry and promoting the public health and safety as well as the common defense and security.

A brief summary of each significant enforcement action that has been resolved in the first quarter of 1992 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 according to guidance furnished in the U.S. Nuclear Regulatory Commission's "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, 57 Fed. Reg. 5791 (February 18, 1992). Violations are categorized in terms of five levels of severity to show their relative importance within each of the following activity areas:

- |                 |                                       |
|-----------------|---------------------------------------|
| 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              |

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

## SUMMARIES

### I. REACTOR LICENSEES

#### A. Civil Penalties and Orders

Arizona Public Service Company, Phoenix, Arizona  
(Palo Verde Nuclear Generating Station) Supplement 1,  
EA 91-182

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$162,500 was issued February 3, 1992 to emphasize the need for adequate command and control of any activities that may affect safety-related equipment, the need to thoroughly assess industry events and experience, and the need for clear designation of responsibilities and control of activities such as refueling including strict adherence to procedural controls. The action was based on two plant events of which the first involved a partial loss of offsite power that occurred on November 15, 1991 and resulted in Unit 3 operating in natural circulation. The second event involved core alterations on Unit 2 without a senior reactor operator present as required by Technical Specifications. The base civil penalty was escalated a total of 125% for the first event. The licensee responded and paid the civil penalties on March 2, 1992.

Carolina Power and Light Company, Raleigh, North Carolina  
(Brunswick Steam Electric Plant) Supplement 1, EA 91-158

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$125,000 was issued January 3, 1992 to emphasize the importance of ensuring the development and implementation of effective corrective actions to achieve sustained improvement in the work control and independent verification processes. The action was based on the licensee's failure to take adequate corrective actions for previous violations in the area of work control. The first involved inadequate system lineup verifications which resulted in residual heat removal Loop B being improperly returned from the suppression pool cooling to the standby mode of operation. The second example involved inadequate oversight of maintenance on Diesel Generator No. 3. The base penalty was escalated 150% based on escalation for both NRC identification and poor past performance. The licensee responded and paid the civil penalty February 14, 1992.

Carolina Power and Light Company, Raleigh, North Carolina  
(H. B. Robinson Nuclear Plant) Supplement I, EA 91-142

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$37,500 was issued December 16, 1991 to emphasize the importance of ensuring that engineering design control and interfaces are fully functional in all required aspects of design change review. The action was based on four examples of inadequate design review for safety-related equipment. Three of the examples involved the safety injection pumps and the fourth involved the reactor protection system. The base civil penalty was mitigated by 25% for licensee identification. The licensee responded and paid the civil penalty on January 30, 1992.

Commonwealth Edison Company, Downers Grove, Illinois  
(Dresden Station, Unit 3) Supplement IV, EA 91-152

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$25,000 was issued December 17, 1991 to emphasize the need for adequate planning and communications for work performed in high dose rate areas, the need for radiation protection technicians and ALARA coordinators to promptly identify and correct radiologically nonconservative practices, and the need for experienced radiation workers to recognize and question substantial radiological practices. The action was based on violations that resulted in unplanned radiation exposure to workers engaged in inspection activities in the Unit 3 drywell. The base penalty was mitigated by 50% for licensee identification. The licensee responded and paid the civil penalty on January 16, 1992.

Commonwealth Edison Company, Downers Grove, Illinois  
(Dresden Station, Units 2 and 3, Supplement I, EAs 91-164  
and 91-165

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$187,500 was issued January 9, 1992 to emphasize the need for appropriate management control and cognizance in the conduct of operations, and the need for effective use of post-maintenance tests. The action was based on violations involving (1) an inoperable containment isolation valve, and (2) four events resulting from procedure adequacy-adherence problems that are significant in that they are indicative of management's inability, despite past similar events, to effectively deal with personnel performance problems. The licensee responded and paid the civil penalties on February 7, 1992.

Consumers Power Company, Covert, Michigan (Palisades Nuclear Generating Station) Supplement I, EA 91-125

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$100,000 was issued January 15, 1992 to emphasize the need to establish and implement improved controls in the general area of design, and specifically in the piping and pipe support area, as well as the control of the licensee's contractors. The action was based on design control deficiencies associated with piping and pipe supports that occurred during the steam generator replacement outage. The base civil penalty was escalated a total of 100% for NRC identification and past poor performance. The licensee responded and paid the civil penalty on February 14, 1992.

Duke Power Company, Clover, South Carolina  
(Catawba Nuclear Station) Supplement I, EA 91-191

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$15,000 was issued February 14, 1992 to emphasize the importance of ensuring that developed and implemented corrective actions are effective in precluding the occurrence of similar violations. This action was based on repetitive failures involving configuration control and independent verification problems. The licensee responded and paid the civil penalty on March 16, 1992.

Duke Power Company, Seneca, South Carolina  
(Oconee Nuclear Station) Supplement I, EA 91-167

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$125,000 was issued February 3, 1992 to emphasize the importance of maintaining an appropriate safety perspective, continued awareness and control of critical plant operations in the shutdown configuration, and the implementation of adequate corrective action. The action was based on two Severity Level III problems related to a degradation of decay heat removal event and an over-pressurization of low pressure injection system piping event. The first problem involved multiple examples of failure to follow procedures and inadequate procedures and the failure to identify the non-operational status of a nuclear safety-related system. The base civil penalty was escalated by 50% based on the licensee's poor prior performance. The second problem involved multiple examples of failure to follow procedures and the failure to take corrective action. The licensee responded and paid the civil penalty March 3, 1992.

Houston Lighting and Power Company, Houston, Texas  
(South Texas Project Electric Generating Station) Supplement  
VII, EA 91-055

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$50,000 was issued December 12, 1991 to emphasize the importance of ensuring that records kept of the conduct of licensed activities be complete and accurate and that licensed activities are conducted in strict compliance with regulatory requirements. The action was based on two violations involving falsification of preventive maintenance records for safety-related valves. The licensee responded and paid the civil penalty on January 10, 1992.

Philadelphia Electric Company, Wayne, Pennsylvania  
(Peach Bottom Atomic Power Station) Supplement I, EA 92-001

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$285,000 was issued February 21, 1992 to emphasize the importance of ensuring that the reactor is (1) operated safely and in accordance with the Technical Specifications; and (2) conditions adverse to quality, when they exist, are promptly identified and corrected. The action was based on two violations associated with the Automatic Depressurization System (ADS). The first violation involved the incorrect installation of thermal insulation around all of the Unit 3 ADS safety relief valves, which rendered them inoperable for an entire operating cycle. This violation was classified at a Severity Level II because the common mode failure in conjunction with an inoperable HPSI system for over 500 hours, seriously compromised the ability of the Unit to handle certain design basis accidents (small break LOCAs). The civil penalty was escalated 100% for duration. The second violation concerned the licensee's failure to take adequate corrective action for this problem at Unit 2. Specifically, the NRC inspector found the insulation incorrectly installed on one valve after the licensee had inspected it prior to returning the reactor to power about two months earlier. This Severity Level III violation was escalated for NRC identification, poor past performance and duration. The licensee responded and paid the civil penalty on March 20, 1992.

Portland General Electric Company, Portland Oregon  
(Trojan Nuclear Plant) Supplements I and IV, EAs 91-181 and  
91-190

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$100,000 was issued February 14, 1992 to emphasize the importance NRC attaches to effective and timely corrective actions. This action was based on the licensee's failure to implement adequate corrective action in three programmatic areas: valve maintenance, radiation protection, and fire protection. The six individual examples in these areas were classified as a Severity Level III problem due to a significant failure to fully correct conditions adverse to quality and management's failure to effectively utilize QA findings to identify areas needing attention. The civil penalty was escalated 100% for multiple occurrences, and 50% for poor past performance. A 50% mitigation was deemed appropriate based on the licensee's comprehensive corrective actions. The licensee responded and paid the civil penalty on March 16, 1992.

Southern California Edison Company, Irvine, California (San Onofre, Unit 1) Supplements I and VII, EA 91-198

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$50,000 was issued February 21, 1992 to emphasize the importance the NRC attaches to properly maintaining fire protection systems and to providing complete and accurate information to the NRC. This action was based on the licensee's failure to maintain the Halon fire protection system in the 4160 volt switchgear room operable and the failure to provide the NRC complete and accurate information in the Licensee Event Report submitted regarding that situation. The licensee responded and paid the civil penalty on March 16, 1992.

TU Electric, Dallas, Texas  
(Comanche Peak Steam Electric Station) Supplement I,  
EA 91-189

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$25,000 was issued February 18, 1992 to emphasize the importance of positive communications, attention to detail, and awareness during plant evolutions to ensure that all safety systems are properly aligned as required by system operating procedures. The action was based on the licensee's failure to properly align two residual heat removal crosstie valves prior to entering Mode 3 during a Unit 1 startup on December 4, 1991. The condition

went undetected for 51 hours prior to licensee discovery. The base civil penalty was mitigated 50% based on the licensee's comprehensive corrective action. The licensee responded and paid the civil penalty on March 19, 1992.

Washington Public Power Supply System, Richland, Washington  
(Washington Nuclear Project No. 2) Supplement I, EA 91-183

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$25,000 was issued February 6, 1992 to emphasize the importance the NRC attaches to properly maintaining and controlling the operability and configuration of safety-related systems. The action was based on violations of the Technical Specification governing the operability of containment atmospheric control system. In one instance, it was discovered that both trains of the CAC system were inoperable from initial plant startup because of the installation of improper flow control valves. The base civil penalty was reduced by 50% because of the licensee's good corrective actions. The licensee responded and paid the civil penalty on March 6, 1992.

Wisconsin Electric Power Company, Milwaukee, Wisconsin  
(Point Beach Nuclear Power Station) Supplement I, EA 91-149

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$150,000 was issued January 10, 1992 to emphasize the need for timely notification and reporting of events, and the prompt identification and correction of significant deficiencies. The action was based on the licensee's failure to (1) adequately test the main steam isolation valves and report malfunctions encountered during operation, and (2) take adequate corrective action to prevent recurrence of those failures. The base civil penalty for the second violation was escalated 50% for NRC identification and 50% for the licensee's poor performance in that area. The licensee responded and paid the civil penalty on February 5, 1992.

Wolf Creek Nuclear Operating Corporation, Burlington, Kansas  
(Wolf Creek Nuclear Generating Station) Supplement I,  
EA 91-161

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$150,000 was issued February 20, 1992 to emphasize the need for the licensee to appropriately respond to known or suspected MOV deficiencies. The action was based on the licensee's



failure to take prompt corrective action for deficiencies related to safety-related motor operated valves, and the failure to take prompt corrective action in response to weaknesses in the MOV testing program that had been identified by a contractor. The base civil penalty was escalated for NRC identification, the licensee's poor past performance in the corrective action area and the duration that the deficient conditions went uncorrected. The licensee responded and paid the civil penalty March 20, 1992.

B. Severity Level III Violation, No Civil Penalty

Commonwealth Edison Company, De-wen-er's Grove, Illinois  
(Byron Station, Unit 1) Supplement 1, EA 91-173

A Notice of Violation was issued January 7, 1992 based on a violation involving the inoperable containment spray system. The consequence of the violation is that the containment spray system which is designed to mitigate a serious safety event was not able to perform its intended safety function. A civil penalty was not issued because it was determined that full mitigation was appropriate due to the licensee's extensive corrective actions and the good past performance of the Byron Station.

New York Power Authority, White Plains, New York  
(Indian Point 3 Nuclear Power Plant) Supplement I, EA 92-009

A Notice of Violation was issued March 10, 1992 based on the failure of the licensee to assume control of the position of the automatic voltage control rheostat for emergency diesel generator (EDG) 33, a safety related system. A civil penalty was not proposed because the violation was identified by the plant operator, and was reported to the NRC by the licensee's staff and corrective actions, subsequent to the identification of the incorrectly positioned rheostat, were prompt and comprehensive.

Northeast Nuclear Energy Company, Hartford, Connecticut  
(Millstone Nuclear Power Station, Unit 3) Supplement I,  
EA 92-008

A Notice of Violation was issued February 21, 1992 based on an event which occurred at Unit 3 involving the disabling of the supplemental leak collection and release system, following a June 9, 1991 reactor trip. A civil penalty was not proposed because of the prompt and comprehensive corrective actions of the licensee and the licensee's prior good performance.

Omaha Public Power District, Omaha, Nebraska  
(Fort Calhoun Station) Supplement I, EA 91-184

A Notice of Violation was issued January 22, 1992 based on a violation involving the circumvention of plant procedures and primary containment integrity requirements on 20 occasions in a 6-week period while sampling water from the reactor coolant drain tank. A civil penalty was not proposed because the licensee discovered the event and reported it to NRC, the promptness and extensiveness of the licensee's corrective actions, and the licensee's generally good past performance in the two years preceding the event.

Public Service Electric and Gas Company, Hancocks Bridge,  
New Jersey (Salem Nuclear Generating Station) Supplement I,  
EA 92-007

A Notice of Violation was issued March 17, 1992 based on violations associated with the severe damage to the turbine and generator at Unit 2 as a result of a turbine overspeed event. The event was principally caused by the failure of three separate turbine control solenoid valves to function due to mechanical binding of the devices. A civil penalty was not proposed because (1) the violation was identified and reported to the NRC by the licensee, (2) the licensee's corrective actions were prompt and extensive, and (3) the licensee's good past performance in the operations area; specifically, its reduction in personnel errors and overall control room performance.

Vermont Yankee Nuclear Power Corporation, Brattleboro,  
Vermont (Vermont Yankee Nuclear Power Station) Supplement I,  
EA 91-170

A Notice of Violation was issued January 10, 1992 based on violations involving the loss of offsite power at the facility in April 1991, while the reactor was at 100% power. The violations included two examples of the failure to prepare and maintain a written safety evaluation prior to making certain changes at the facility so as to ensure that the changes did not involve unreviewed safety questions. A civil penalty was not proposed because of the licensee's corrective actions and past performance.

## II. MATERIALS LICENSEES

### A. Civil Penalties and Orders

Alt & Witzig Engineering, Inc., Indianapolis, Indiana  
Supplements IV and VI, EAs 91-119 and 91-148

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$3,700 and Demand for Information was issued December 18, 1991 to emphasize the need for continued and lasting effective management control over activities authorized by the license and to ensure adherence to regulatory requirements. The action was based on a Severity Level II violation for deliberately exceeding the authorized possession limit for byproduct material, a violation for use of licensed material by untrained and nonsupervised individuals, and a problem that collectively represents a breakdown in the radiation safety program. The base civil penalty was escalated based on NRC identification of the violations, poor past performance, multiple occurrences and duration. The licensee responded and paid the civil penalty on January 27, 1992.

Curwood, Inc., Oshkosh, Wisconsin Supplement VI, EA 91-177

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$250.00 was issued December 30, 1991 to emphasize the importance of effectively managing the licensee's radiation safety program to assure that licensed materials are properly secured and events involving licensed materials are promptly reported to the NRC. The action was based on the loss of a measuring gauge, containing a 25 millicurie sealed source of americium-241, possessed by the licensee under a general license. The base civil penalty was mitigated by 50% based on the licensee's extensive corrective action. The licensee responded and paid the civil penalty on January 28, 1992.

Department of Veterans Affairs, Dallas, Texas  
Supplements IV and VI, EA 91-117

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$6,250 was issued October 9, 1991 to emphasize the importance of the licensee establishing and maintaining effective management systems to ensure that all radiation safety requirements are met. The action was based on 17 violations of NRC requirements, the most significant being the failure to have performed a full calibration of the teletherapy unit in 19 months (the maximum permissible interval is 12 months) and the failure to have performed complete

monthly spot checks of the unit for 11 months. The licensee responded on November 7, 1991 and paid the civil penalty on December 27, 1991.

Fewell Geotechnical Engineering, Ltd., Pearl City, Hawaii  
EA 90-190

An Order Modifying License (Effective Immediately) was issued November 2, 1990 based on observations by NRC personnel of the licensee's radiographers willfully violating NRC requirements during October 1990. The Order prohibited the use of the individual for a period of three years. The individual also gave false information to the NRC. The individual requested a hearing November 18, 1990. The Hearing Board issued an Order on June 25, 1991 affirming in part the staff's order. In September 1991 the licensee requested termination of its license. The license was terminated on September 27, 1991 and the Commission on March 5, 1992 vacated the Hearing Board Order.

Lone Pine Coal Company, Danville, West Virginia  
Supplement VI, EA 91-192

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$2,375 was issued January 15, 1992 to emphasize the importance of maintaining an effective radiation safety program and complying with regulatory requirements and license conditions. The action was based on violations involving (1) the removal of a licensed device by a licensee employee who was neither qualified nor authorized to remove or service the device and (2) two examples where licensed devices were removed from service and stored unlocked and unsecured in unrestricted areas at licensee coal mines. The licensee responded and paid the civil penalties on February 13, 1992.

Monmouth Medical Center, Long Branch, New Jersey  
Supplements IV and VI, EA 91-174

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$3,125 was issued December 24, 1991 to emphasize the importance of management attention and oversight to ensure that (1) licensed activities are conducted safely and in accordance with requirements and (2) appropriate corrective measures are taken when problems exist at the facility. The action was based on violations involving failure to: (1) amend the license prior to moving the Nuclear Medicine Department, (2) implement the radiation safety program through the

Radiation Safety Officer, (3) failure of the Radiation Safety Committee to hold quarterly meetings, (4) provide required training to radiation workers, (5) calibrate survey instruments, (6) maintain accurate records of patient radiation doses and (7) appropriately perform dose calibrator tests. The base civil penalty was escalated 25% because the NRC identified the violations. The licensee responded and paid the civil penalty on December 27, 1991.

Overlook Hospital, Summit, New Jersey  
Supplement VI, EA 91-163

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$3,125 was issued on December 12, 1991 to emphasize the importance of improvement in the management attention and oversight provided to the radiation safety program. The action was based on a violation wherein an individual administered a radiopharmaceutical without awaiting a written and signed physician order as required. As a result, a patient received an incorrect iodine procedure that involved a dose of 1554 rads to the thyroid. The base civil penalty was increased 25% for past poor performance due to inadequate corrective actions for a similar problem in May 1990. The licensee responded and paid the civil penalty on January 9, 1992.

Photon Field Inspection, Inc., Saginaw, Michigan  
Supplement VI, EA 89-098

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$7,500 was issued June 7, 1989 to emphasize the need for adequate management control over the licensee's radiological safety program. The action was based on the licensee's failure to obtain NRC authorization prior to facility relocation, provide annual retraining to radiographic personnel, perform quarterly management audits, perform quarterly physical inventories, calibrate survey instruments, leak test sealed sources at required frequencies, complete shipping papers for transport of radiographic sources, and maintain records of byproduct material receipt. The licensee responded in two letters dated June 26, 1989 denying several of the violations and requesting mitigation of the civil penalty. An Order Imposing Civil Penalty in the amount of \$5,625 was issued October 30, 1989. The licensee failed to pay the civil penalty and the action was referred to the Department of

Justice. The licensee ceased doing business. A consent judgment was entered and approved in the U. S. District Court. The former owner agreed not to apply to the NRC or an Agreement State for a new license for himself and not to engage in activities licensed by the NRC or an Agreement State for a period of five years. The civil penalty was considered settled without payment unless the agreement is violated.

Shared Medical Technology, Inc., Rice Lake, Wisconsin  
Supplement VI, EA 92-026

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$2,500 was issued February 25, 1992 to emphasize the significance of a violation that could have placed the public at risk and the need to effectively implement the licensee's controls over licensed materials. The action was based on the loss of two packages of technetium-99m while in transit from the licensee's facility in Minnesota to area hospitals. The licensee responded and paid the civil penalty on March 17, 1992.

St. Joseph's Hospital and Medical Center, Paterson,  
New Jersey, EA 91-175

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$6,250 was issued December 26, 1991 to emphasize the importance of long lasting corrective actions and that they result in continued improvement in the management attention and oversight provided to the radiation safety program. The action was based on (1) a violation of NRC requirements which contributed to a therapy procedure misadministration at the facility; and (2) a violation involving the failure to report that therapy misadministration. The penalty was escalated 50% because of the licensee's past performance. The licensee responded and paid the civil penalties on January 20, 1992.

Thomas Jefferson University, Philadelphia, Pennsylvania  
Supplement IV, EA 92-004

A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$8,750 was issued January 27, 1992 to emphasize the importance of ensuring proper security of licensed material and immediate notification of the NRC when required. The action was based on violations of NRC requirements involving the failure to (1) maintain security of radioactive material on

numerous occasions, including one which resulted in the loss of 3 millicuries of sulfur-35 at the facility; and (2) report the loss of radioactive material to the NRC in a timely manner. The base civil penalty for the first violation was escalated 200%, and mitigated 50% for the second violation. The licensee responded and paid the civil penalties February 26, 1992.

Triad Engineering, Inc., Winchester, Virginia  
Supplements IV and VI, EA 91-178

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$500 was issued December 23, 1991 to emphasize the importance of consistently following procedures and complying with regulatory requirements and license conditions. The action was based on a violation which involved the failure to secure a Troxler moisture/density gauge. The gauge was unattended at a construction site and a bulldozer ran over the gauge. The licensee responded and paid the civil penalty on January 17, 1992.

Tulsa Gamma Ray, Inc., Tulsa, Oklahoma  
Supplements IV, V, and VI, EA 89-223

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$7,500 was issued December 29, 1989 to emphasize the importance of strict adherence to radiation safety requirements and the need to have a program that ensures that regulatory requirements are met. The action was based on ten violations in the following programmatic areas: 1) job-site radiation safety practices; 2) personnel radiation exposure evaluation and recordkeeping; 3) radiography device inventories; and 4) transportation of radiography devices. The licensee responded February 22, 1990 and after reviewing the response the NRC staff concluded that all but one of the violations occurred. An Order Imposing Civil Penalty in the amount of \$6,750 was issued June 6, 1990. The licensee requested a hearing on July 3, 1990. The Atomic Safety and Licensing Board assessed a \$4,275 civil penalty in a December 10, 1991 decision. The licensee paid the civil penalty on March 27, 1992.

University of Puerto Rico, San Juan, Puerto Rico  
Supplements IV and VI, EA 91-089

A Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$6,250 was issued August 28, 1991 to emphasize the need for stronger management oversight of licensed activities, more effective control of radiation programs, and effective implementation of

corrective actions. The action was based on 15 violations which include failure to: secure licensed material against unauthorized removal, conduct leak tests of sealed sources at the required intervals, properly evaluate dosimetry data, survey radiopharmaceutical waste storage areas, properly label radioactive material containers, adhere to Radiation Safety Committee meeting requirements, properly maintain sealed source inventory records, and maintain leak test records for sealed sources. The licensee responded September 27, 1991. After considering the licensee's response, an Order Imposing Civil Penalty in the amount of \$5,830 was issued December 30, 1991. The licensee paid the civil penalty on January 15, 1992.

B. Severity Level III Violation, No Civil Penalty

Century Inspection, Inc., Dallas, Texas  
Supplement VI, EA 92-031

A Notice of Violation was issued March 17, 1992 based on the failure of an employee to wear a film badge, direct-reading pocket dosimeter or alarm ratemeter while conducting radiography. A civil penalty was not proposed because the licensee's performance had been good, and the licensee took prompt action to address the violation and actions to preclude a recurrence.

Nuclear Fuel Services, Inc., Erwin, Tennessee  
Supplement VI, EA 91-186

A Notice of Violation was issued January 29, 1992 based on the inadvertent transfer of a raffinate solution containing a higher than normal concentration of uranium from raffinate columns to a storage tank and subsequently to the waste water treatment facility. A civil penalty was not proposed because the licensee identified and reported the violation, and initiated prompt and thorough corrective actions to prevent recurrence.

Raritan Bay Medical Center, Perth Amboy, New Jersey  
Supplement IV, EA 92-022

A Notice of Violation was issued March 5, 1992 based on a violation involving a missing cobalt-60 sealed source of approximately 19.3 microcuries. A civil penalty was not proposed because the licensee identified and reported the violation, and the licensee had a past good enforcement history.



Sequoyah Fuels Corporation, Gore, Oklahoma  
Supplements IV and VI, EA 91-153

A Notice of Violation was issued January 27, 1992 based on the failure to conduct radiation surveys as necessary, to inform and instruct individuals working in restricted areas of the presence of radioactive materials and the precautions to be taken, to exercise adequate radioactive contamination controls over materials being taken from the facility, to report events to NRC in accordance with established requirements, to establish procedures for all activities involving radioactive or hazardous materials, to follow procedures that had been established, and to comply with license conditions and requirements designed to ensure the protection of the environment. A civil penalty was not proposed based on the significant actions the licensee is taking as required by an Order dated October 3, 1991, and the fact that the licensee is prevented from operating the facility until many of the improvements are in place.

I.A. REACTOR LICENSEES, CIVIL PENALTIES AND ORDERS



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION V

1450 MARIA LANE  
WALNUT CREEK, CALIFORNIA 94596-5368

FEB 3 1992

Docket Nos. 50-528, 50-529, and 50-530  
License Nos. NPF-41, NPF-51, and NPF-74  
EA 91-182

Arizona Public Service Company  
ATTN: Mr. William F. Conway  
Executive Vice President, Nuclear  
Post Office Box 53999, Sta. 9012  
Phoenix, Arizona 65072-3999

Dear Sir:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL  
PENALTIES - \$162,500  
(NRC INSPECTION REPORT NOS. 50-528, 529, & 530/91-47  
AND 50-529/91-49)

This refers to inspections conducted between October 27, 1991 and December 2, 1991 at the Palo Verde Nuclear Generating Station. The results of these inspections were documented in NRC Inspection Report Nos. 50-528, 529, & 530/91-47 and 50-529/91-49, each dated December 12, 1991. The reports document our review of the partial loss of offsite power event which occurred on Unit 3 on November 15, 1991, violation of Technical Specifications relating to refueling activities identified by you and reported by Licensee Event Report 91-06, and of three other procedural violations that occurred during refueling activities at Unit 2 on October 27, 1991. All of these issues were discussed with you and your staff during an enforcement conference held in the Region V office on December 18, 1991. Our discussions during the enforcement conference were summarized in Meeting Report No. 50-528, 529, 530/91-51, transmitted to you on January 17, 1992.

The enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice) concerns all of the above issues. With respect to the first event, the partial loss of offsite power due to a crane boom impacting the east 13.8 kV transmission line, numerous failures by your staff to adhere to procedures, properly plan evolutions, communicate using prescribed methods, and properly assess and incorporate industry experience demonstrate a significant loss of command and control both prior to and during the event. Similar procedural and communications problems were apparent in the second event. Your staff's failure to ensure supervision of core alteration activities by a senior reactor operator (SRO), and your staff's failure to ensure direct communication between the control room and the personnel at the refueling station, resulted in the control element assemblies

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Arizona Public Service Co. - 2 -

being lifted approximately one foot out of the reactor core without an SRO present, and without the control room knowing of the evolution.

Within the general areas described above, the first event demonstrated numerous individual weaknesses in the conduct of activities at Palo Verde. Those weaknesses are described in the enclosed Notice and included the failure to adhere to a number of crane operating precautions and procedures, work planners unfamiliar with the work to be conducted, designation of an individual as responsible for the work to be performed without providing him the necessary information relative to his responsibilities, excessive hours of work for a number of the individuals involved, and improper communications with the control room when reporting the event which resulted in the control room operators taking some improper actions. In addition, this event is of particular concern to the NRC because of Arizona Public Service Company's (APS) failure to benefit from the lessons learned at other plants that have had similar power losses, which have been documented in NRC generic correspondence previously provided to APS.

The second event is of concern to the NRC in that it demonstrates a lack of sufficient management involvement in refueling activities. At the enforcement conference, your staff narrowly focused on the refueling contractor's failure to follow the procedure as the primary cause of the event. However, in discussing the involvement of the senior reactor operator (SRO) in the refueling activities leading up to the event, your staff stated that the SRO had not attended the pre-work briefing; did not have a copy of the procedure with her; was not in close proximity to the personnel conducting the work; and was confused as to which part of the procedure was in progress. Collectively, this demonstrates that the actual cause of the event was APS management's failure to clearly define responsibility and accountability for refueling activities, and its failure to ensure that reactor core alterations were clearly and directly supervised by a licensed SRO, as required by the Technical Specifications.

In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), 10 CFR Part 2, Appendix C (1991), the violations associated with the November 15, 1991 partial loss of offsite power event have collectively been categorized as a Severity Level III problem. In addition, the failure to properly supervise core alterations has been separately categorized as a Severity Level III violation.

Three additional violations identified in NRC Inspection Report 50-29/91-49 have each been categorized at Severity Level IV, and are listed in Section II of the enclosed Notice. These violations involved the failure to establish the water level

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required by procedure during core alterations; the failure to perform boron sampling as required by procedure; and the failure of operators to follow procedures when the 120 volt A.C. abnormal condition was announced in the control room. These violations further demonstrate a lack of sensitivity to the need to control refueling activities.

Corrective actions immediately following the partial loss of offsite power event were adequate. However, your corrective actions focused too narrowly on the procedural aspects of the problem rather than the broader deficiencies. With regard to the refueling event, your initial actions corrected procedural inadequacies, and the corrected procedures allowed you to complete the activity. However, these corrective actions while prompt were not aggressive or comprehensive. Additional violations related to the refueling activities, as set forth in Section II of the Notice occurred subsequent to the resumption of the core alterations. Further, as discussed above, at the enforcement conference, you failed to demonstrate that you fully assessed the root cause of the event.

The events discussed above indicated the need for adequate command and control of any activities that may affect safety-related equipment, the need to thoroughly assess industry events and experience, and the need for clear designation of responsibilities and control of activities such as refueling including strict adherence to procedural controls. To emphasize these areas, 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 Penalties (Notice) in the cumulative amount of \$162,500 for the two Severity Level III issues. The base value of a civil penalty for a Severity Level III violation or problem is \$50,000. The escalation and mitigation factors in the Enforcement Policy were considered for each matter as discussed below.

For the Severity Level III problem regarding the loss of offsite power event, the base civil penalty was escalated 25% because your corrective actions were narrowly focused and did not address the underlying deficiencies. The base civil penalty was also escalated an additional 100% for prior notice of similar events. The NRC had issued two Information Notices prior to the event alerting APS management to the need for increased vigilance in the area of activities affecting shut-down plants (in particular loss of AC power as a result of activities similar to those that were involved with this event). Further, the Director of the Office of Nuclear Reactor Regulation wrote personally to senior APS management to reemphasize the message of the Information Notices. The other adjustment factors in the Policy were considered but no further adjustments to the base civil penalty

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were considered appropriate. Therefore, on balance, the base civil penalty has been escalated a total of 125 percent.

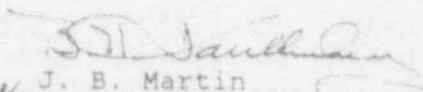
For the refueling violation, the base value of the civil penalty was mitigated 50 percent for your identification and reporting of the violation. The base civil penalty was escalated 50 percent because, although your immediate corrective actions to ensure the presence of an SRO during core alterations were prompt, you did not address the overall issue of lack of clear responsibility and control over the evolution. As discussed above, additional violations related to refueling were then identified following the resumption of core alterations. The other adjustment factors in the Policy were considered, but no further adjustments to the base civil penalty were considered appropriate. Therefore, on balance, no adjustment to the base civil penalty has been deemed appropriate.

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 and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,

  
J. B. Martin  
Regional Administrator

Enclosure: Notice of Violation and  
Proposed Imposition of Civil Penalties

See next page for cc's

cc: w/enclosure: Mr. O. Mark DeMichele, APS  
Mr. James M. Levine, APS  
Mr. Jack N. Bailey, APS  
Mr. E. C. Simpson, APS  
Mr. Stephen Guthrie, APS  
Mr. Thomas R. Bradish, APS  
Mr. Robert W. Page, APS  
Ms. Nancy C. Loftin Esq., APS  
Mr. Al Gutterman, Newman & Holtzinger, P.C.  
Mr. James A. Boeletto, Esq., Assistant Counsel, SCE Company  
Mr. Charles B. Brinkman, Combustion Engineering, Inc.

Mr. William A. Wright, Acting Director, Arizona Radiation  
Regulatory Agency  
Chairman, Maricopa County Board of Supervisors  
Mr. Steve M. Olea, Chief Engineer, Arizona Corporation Commission  
Ignacio R. Troncoso, El Paso Electric Company  
Roy P. Lessy, Jr., Esq., Akin, Gump, Strauss, Hauer and Feld  
Bradley W. Jones, Esq., Akin, Gump, Strauss, Hauer and Feld

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTIES

Arizona Public Service Company  
Palo Verde Nuclear Generating Station  
Wintersburg, Arizona

Docket Nos. 50-528,  
50-529, & 50-530  
License Nos. NPF-41,  
NPF-51, and NPF-74  
EA 91-182

During an NRC inspection conducted between October 27, 1991 through December 2, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), the Nuclear Regulatory Commission proposes to impose two 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. Technical Specification 6.8.1 for Palo Verde Units 1, 2, and 3 states that "Written procedures shall be established, implemented, and maintained covering . . .
- a. The applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978, and those required for implementing the requirements of NUREG-0737."

Regulatory Guide 1.33, Revision 2, Appendix A, Paragraph 9, recommends procedures for performing maintenance that can affect the performance of safety-related equipment.

1. Procedure No. 30DP-9MP01, Revision 4, dated August 29, 1991, "Conduct of Maintenance," Section 3.5.16, states that "necessary precautions shall be taken whenever work is done, such that the activity . . . will not accidentally damage or remove equipment from service, thus compromising essential plant safety functions." Section 3.5.9 directs that rigging activities be accomplished in accordance with Procedure No. 30AC-OMP13, Section 3.9.6.1, which requires that "When working with or around cranes that are within a boom's length of any power line, an electrical checker shall be required. Ensure that a qualified signalman and checker are stationed at all times within view of the operator to warn him when any part of the machine or its load is approaching the minimum safe clearance."



Contrary to the above, on November 15, 1991, while installing a new electrical bushing on the phase A main transformer, an activity that might compromise the electrical power supply to vital electrical busses, an electrical checker and signalman were not stationed at the work site at all times; other necessary precautions were not taken in that licensee personnel made no allowances for out-of-level conditions, as recommended in the crane vendor's manual; the crew using the crane was required to work without adequate rest and had been awake for approximately 18 of the 26 hours prior to the incident; the work planners were not familiar with the details of the work being conducted, including the need for a mobile crane; and Amendment A to Work Order No. 526228, controlling the crane job, which designated the Senior Electrician as an independent observer of the job and responsible for the job, was not provided to that individual nor was he otherwise informed of his added responsibilities.

2. Paragraph 5.0 of Procedure No. 30DP-9MP01 references the Palo Verde Accident Prevention Manual. The Accident Prevention Manual, dated January 4, 1990, requires, in Paragraph 29.9(c), that cranes used for work in the vicinity of bare conductors energized at voltages of 600 volts or greater be grounded. This manual further requires, in Paragraph 29.7, that at least 2 feet clearance be maintained between the uninsulated boom section and the 13.8 kV power line energized conductor.

Contrary to the above, on November 15, 1991, the crane used to replace the electrical bushing on the phase A main transformer was not grounded, and the two foot clearance between the uninsulated boom section and the 13.8 kV power line energized conductor was not maintained.

3. Procedure 40AC-P02, "Conduct of Shift Operations," Step 3.2.5.1 states that "formality in communications will be emphasized to reduce operating errors due to assumptions, ambiguous directions, and misunderstandings between

operations personnel." Step 3.2.5.2.3 states that "all communications directing or reporting completion of an operating activity must include ... identification of the originator and intended recipient if other than face to face communication ... identification of each valve or component ... [and] acknowledgement of receipt and understanding of direction including as a minimum repeating back each valve or component ...."

Contrary to the above, on November 15, 1991, operators failed to identify the originators of calls to the control room, failed to ensure correct identification of the overhead power lines being reported as a problem, and failed to acknowledge receipt and understanding of information passed to the control room via telephone. These communication errors caused incorrect action to be taken by control room operators, resulting in the loss of forced circulation in the Unit 3 reactor coolant system.

- B. Technical Specification 6.8.1 for Palo Verde Units 1, 2, and 3 states in part that "Written procedures shall be established, implemented, and maintained covering ... a. The applicable procedures ... required for implementing the requirements of NUREG-0737."

NUREG-0737, Section I.C.5, states that the licensee "shall prepare procedures to assure that operating information pertinent to plant safety originating both within and outside the utility organization is continually supplied to operators and other personnel and incorporated into training and retraining programs. These procedures shall clearly identify organizational responsibilities for ... the feedback of pertinent information to operators and other personnel, and the incorporation of such information into training and retraining programs; ... provide means to assure that affected personnel become aware of and understand information of sufficient importance that should not wait for emphasis through routine training and retraining programs; ... [and] identify the administrative and technical review steps necessary in translating recommendations by the operating experience assessment group into plant actions (e.g., changes to procedures; operating orders)."

Procedure No. 95PR-ON01, Revision 3 (Industry Operating Experience Review Program), dated June 13, 1991, paragraph 2.4, prescribes that Unit Plant Managers and Directors are responsible for ensuring that lessons

learned from industry events are effectively incorporated in Palo Verde Nuclear Generating Station (PVNGS) operations.

The NRC advised the licensee of the significant hazards attendant with using mobile lifting equipment in proximity to transmission lines by Information Notice (IN) No. 90-25, dated April 16, 1990, and IN 90-25, Supplement I, dated March 11, 1991, each titled "Loss of Vital Power with Subsequent Reactor Coolant System Heatup." In addition, these hazard potentials were reinforced in a letter from Dr. T. Murley (NRC) to Mr. W. F. Conway (APS), dated March 21, 1991, titled "Operational Events While Shutdown."

Contrary to the above, as of November 15, 1991, the lessons learned from the above formal NRC communications were not effectively incorporated into PVNGS operations, training and procedures to prevent the occurrence at Palo Verde of the type of event described in the NRC communications.

This is a Severity Level III problem (Supplement I).  
Civil Penalty - \$112,500

- C: Unit 2 Technical Specification 6.2.2.d provides that "All CORE ALTERATIONS shall be observed and directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation."

Technical Specification 3.9.5, applicable during core alterations, provides that "Direct communication shall be maintained between the control room and personnel at the refueling station."

Contrary to the above, on October 27, 1991, with the reactor in Mode 6 (refueling), at approximately 12:10 PM (MST), a core alteration involving withdrawal of the control element assemblies at least one foot from the core into the upper guide structure was conducted without a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling present and without direct communications established between the control room and personnel at the refueling station.

This is a Severity Level III violation applicable to Unit 2 (Supplement I). Civil Penalty - \$50,000

II. Violations Not Assessed a Civil Penalty

- A. Unit 2 Technical Specification 6.8.1 states in part:  
"Written procedures shall be established, implemented, and maintained covering the activities ... recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February, 1978" ("Reg. Guide").

Appendix A of Regulatory Guide 1.33 Revision 2 recommends procedures for safe operation and shutdown ("Ops. Procedures").

Procedure 40AC-90P02, "Conduct of Shift Operations Step 3.2.1.5, which implements in part the Ops. Procedures recommendation of the Reg. Guide, requires that "Onshift personnel shall be aware of and responsible for plant status ... They shall be attentive to instrumentation and respond to abnormal indications until corrected or verified to be false by other instrumentation."

Contrary to the above, on October 27, 1991, Unit 2 onshift control room personnel were not attentive to plant instrumentation in that they failed to respond to an abnormal alarm indication caused by the transfer of the PNC-D27 bus power supply.

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

- B. Unit 2 Technical Specification 6.8.1 states in part:  
"Written procedures shall be established, implemented, and maintained covering the activities ... recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February, 1978" ("Reg. Guide").

Appendix A of Regulatory Guide 1.33 Revision 2 recommends procedures for preparation for refueling and refueling equipment operation.

Procedure 42OP-2ZZ12, "Mode 6 Operations," Step 5.3.15.2, which implements in part the refueling procedures recommendation of the Reg. Guide, provides that, prior to removing the gate between the fuel canal and the spent fuel pool, the fuel canal and Spent Fuel Pool (SFP) shall be sampled to ensure that adequate boron concentration is maintained.

Contrary to the above, on October 27, 1991, with the reactor in Mode 6, the licensee failed to obtain boron samples of the SFP and the fuel canal prior to opening the gate.

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

- C. Unit 2 Technical Specification 6.8.1 states in part: "Written procedures shall be established, implemented, and maintained covering the activities ... recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February, 1978" ("Reg. Guide").

Appendix A of Regulatory Guide 1.33 Revision recommends procedures for preparation for refueling and refueling equipment operation ("Refueling Procedures").

Procedure 420P-2ZZ12, "Mode 6 Operations," Step 5.3.3, which implements in part the Refueling Procedures recommendation of the Reg. Guide, requires that the Refueling Pool be filled between elevation 127 feet 6 inches and 128 feet 6 inches prior to Step 5.3.4, which directs the lowering of the Upper Guide Structure (UGS) lift rig working platform to its lower stop.

Procedure 40AC-90P02, "Conduct of Shift Operations," Step 3.3.2.1.2, provides that "Procedures shall be completed in the order identified unless deviations are allowed by the procedure or authorized by an approved Special Variance."

Contrary to the above, on October 27, 1991, the Refueling Pool level was less than 127 feet 6 inches when Step 5.3.4 was accomplished to lower the UGS lift rig working platform and a Special Variance had not been authorized.

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

Pursuant to the provisions of 10 CFR 2.201, Arizona Public Service 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. 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, the Commission may issue an order or a demand for information 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 the Treasurer of the United States in the cumulative 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, and 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 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 the 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 penalties, the factors addressed in Section V.B. of 10 CFR Part 2, Appendix C (1991) 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

Notice of Violation

- 8 -

Administrator, U.S. Nuclear Regulatory Commission, Region V, and  
a copy to the NRC Senior Resident Inspector at Palo Verde Nuclear  
Generating Station.

Dated at Walnut Creek, California  
this 300 day of FEBRUARY 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30323

JAN 03 1992

Docket Nos. 50-325 and 50-324  
License Nos. DPR-71 and DPR-62  
EA 91-158

Carolina Power and Light Company  
ATTN: Mr. Lynn W. Eury  
Executive Vice President  
Power Supply Groups  
Post Office Box 1551  
Raleigh, North Carolina 27602

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -  
\$125,000 (NRC INSPECTION REPORT NOS. 50-325/91-26 AND 50-324/91-26)

This refers to the Nuclear Regulatory Commission (NRC) inspection conducted by Mr. R. Prevatte on October 5 - November 8, 1991, at the Brunswick Steam Electric Plant. The inspection included a review of the facts and circumstances related to six incidents of failure to follow procedure, three of which were identified by your staff, two that were self-disclosing, and one that was identified by the NRC Resident Inspection staff. In addition, one incident involving an inadequate work procedure was self-disclosing. The report documenting this inspection was sent to you by letter dated November 22, 1991. An enforcement conference was held on December 3, 1991, in the NRC Region II office to discuss the violation, its cause, and your corrective actions to preclude recurrence. A summary of the conference was sent to you by letter dated December 10, 1991. In addition, we have reviewed your letter of December 11, 1991.

The violation in Part I of the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) involves two examples of inadequate corrective action for previous violations concerning work control and independent verification inadequacies. The first example in the violation involved the improper alignment of a Unit 1 B train Residual Heat Removal (RHR) heat exchanger bypass valve that resulted from a failure by control operators to follow a procedure that required independent verification to assure correct alignment. This event, which occurred while the unit was at 100 percent power, was identified by the NRC Resident Inspection staff during a walkdown of the control board. The second example in the violation involved a maintenance mechanic who performed diesel generator air intake valve adjustments without using a required maintenance instruction critical to the task of valve timing adjustment. The procedure required that the link shaft actuator be centered prior to adjusting the air intake valves. Because the link shaft actuator was not centered, the valves would not open and close at the correct time during engine operation. The work control process associated with this particular maintenance activity did not reveal that documentation for work critical to engine operation was missing prior to running the engine. Additionally the maintenance mechanic worked on this task for approximately nine hours with



virtually no supervision by the three levels of supervisory management assigned to the diesel generator activities and there was no quality control oversight or interface involved in this activity.

This violation with two examples illustrates that your corrective actions to address previous similar violations have been inadequate. On May 31, 1991, you were informed by letter of an enforcement action that included a Notice of Violation and Proposed Imposition of Civil Penalty (EA 91-045) that involved three violations relating to work control and independent verification issues. We noted at the time that "when [the violations were] evaluated collectively and in conjunction with other recent violations of a similar nature, they represent a continuing human performance problem that is of significant concern to the NRC." In your July 1, 1991, response to the above enforcement action, you listed various corrective steps that would be taken to avoid further similar violations. For example, the "Please Listen" training program designed to stress quality communications and self-checking techniques was to be completed by September 27, 1991; supervisors were required to increase their time in the field; Quality Control and Nuclear Assessment Department surveillances were to be increased on work activities; senior management was to meet with supervisors on expectations; performance standards and employee coaching were to be implemented to help avoid further violations; and the Communications, Command and Control Manual (BSP-50), issued in April 1991, set out specific guidelines that required individual work activity to be under the command and control of a designated individual who would ensure that everything occurred in conformity with an adopted plan, with approved instructions, and in accordance with established principles. Notwithstanding those actions, the violations at issue here occurred shortly thereafter.

Other recent enforcement actions also addressed problems associated with your work control process and independent verification activity. EA 91-023 which was sent to you by letter dated March 26, 1991, involved a series of breakdowns in the work control process which allowed a "shutdown" computer point calibration procedure to be performed while Unit 2 was operating thereby causing a reactor trip. EA 90-154 which was sent to you by letter dated November 6, 1990, involved the intentional failure to follow procedures and falsification of documents relating to the completion of procedural requirements associated with a maintenance surveillance test and the intentional disregard for independent verification requirements.

The examples in Part I of the Notice represent continuing work control and independent verification problems that have yet to be adequately addressed by your corrective actions for previous similar violations. This is a significant safety concern. The NRC is concerned with the effectiveness of your continuing efforts to inculcate management, supervisory and line staff with the appropriate level of sensitivity and awareness necessary to provide the high level of quality assurance that those previously developed corrective actions were intended to ensure. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), this violation has been categorized at Severity Level III.

JAN 03 1992

To emphasize the importance of ensuring the development and implementation of effective corrective actions to achieve sustained improvement in the work control and independent verification processes, 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 \$125,000 for the Severity Level III violation. The base value of a civil penalty for a Severity Level III violation is \$50,000.

The escalation and mitigation factors in the Enforcement Policy were considered, and escalation of the base civil penalty by 50 percent was warranted for identification because Example A in the violation in Part I was identified by the NRC Resident Inspector even though there were several opportunities for your staff to identify the deficiency (i.e., at least three control board walkdowns were conducted without identifying the mispositioned valve). Example B of the violation was considered to be self-disclosing in that it was found as a result of troubleshooting abnormal diesel generator operation. Neither escalation nor mitigation was warranted for corrective action to prevent recurrence. The immediate corrective actions that were taken upon identification of the events were appropriate and included extensive investigations to determine the complete facts related to each event. However, mitigation was not warranted for corrective actions to address the long-term resolution of management overview of work control activities because those actions have not adequately reduced errors in the work control area. Essentially, no new action was proposed. Escalation of 100 percent was warranted for past performance because previous corrective actions for similar problems have not been effective. Consideration was also given to your overall poor performance in work control activities and the independent verification process as well as previous enforcement actions that addressed the same problem as discussed above. The other adjustment factors in the Enforcement Policy were considered and no further adjustment to the base civil penalty is considered appropriate. Therefore, based on the above, the base civil penalty has been increased by 150 percent.

The violation in Part II of the Notice includes three examples of failure to follow procedures and an example of an inadequate procedure. Example A in the Notice involved a Unit 2 Reactor Protection System actuation that occurred when a Senior Reactor Operator returned the Scram Discharge Volume high level trip bypass switch from "bypass" to "normal" prior to the high-high level trip switches resetting. Example B involved a deficient procedure, Special Procedure SP-91-042, Reactor Vessel Water Level Control for Chemical Decontamination, that failed to ensure a specific sequence for pulling Emergency Core Cooling System (ECCS) analog trip unit cards, thereby leading to an unnecessary Unit 2 ECCS actuation. Example C involved the discovery of a Reactor Core Isolation Cooling system pump discharge valve in the open position when in-place clearance tags indicated the valve was closed. Example D involved a Service Water valve that was found stuck in the open position subsequent to the hanging of a clearance tag that required the valve to be positioned and double verified as closed. This violation, with four examples, serves to further illustrate the continuing problems regarding strict compliance with procedural requirements.

JAN 03 1992

In addition to the violations discussed above, another violation was identified involving in-service inspection technicians who failed to follow a procedure on two occasions during leak rate testing. This licensee-identified violation is not being cited because criteria specified in Section V.G.1 of the NRC Enforcement Policy were satisfied.

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. Your response should specifically include actions taken to assure that independent verifications and clearances are properly performed.

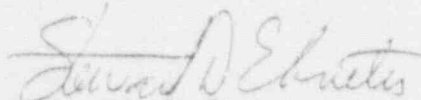
Finally, while it is recognized that it takes time to change performance, you have had substantial time to improve performance. Therefore, after reviewing your response to this Notice, including your proposed corrective actions and the results of future inspections, the NRC will determine whether more stringent 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 and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Should you have any questions concerning this letter, please contact us.

Sincerely,



Stewart D. Ebnetter  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed  
Imposition of Civil Penalty

cc w/encl:  
R. B. Starkey, Jr.  
Vice President  
Brunswick Nuclear Project  
P. O. Box 10429  
Southport, NC 28461

cc w/encl con't: (see next page)

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Carolina Power and Light Company  
Brunswick Steam Electric Plant  
Units 1 and 2

Docket Nos. 50-325 and 50-324  
License Nos. DPR-71 and DPR-62  
FA 91-158

During an NRC inspection conducted on October 5 - November 8, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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. 2202, and 10 CFR 2.205. The particular violation and associated civil penalty is set forth below:

1. Violation Assessed a Civil Penalty

10 CFR Part 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.

Contrary to the above, effective measures were not established to promptly identify and correct deficiencies that resulted in the continuing breakdown of management control over work control activities similar to those previously identified in NRC enforcement action (EA) 91-045 which was issued on May 31, 1991, as evidenced by the following examples:

- A. On October 3, 1991, at approximately 3:30 a.m., a reactor operator failed to correctly reposition Unit 1 B train Residual Heat Removal (RHR) heat exchanger bypass valve from the shut to open position as required by the RHR System Operating Procedure 1-OP-17, Revision 38, step 7.3(B)(5) to return the RHR Loop B from suppression pool cooling to the standby mode of operation. The second operator failed to independently verify that this valve was correctly aligned as required by the procedure. It remained in the incorrect position until identified by the NRC at approximately 6:30 a.m. on the same date.
- B. On October 4, 1991, the mechanic assigned to perform the air inlet valves' lash adjustment on Diesel Generator No. 3 specified in step 7.3.4.2 of Maintenance Surveillance Test Procedure, Emergency Diesel Generators Inspection, OMST-DG500, Revision 2, failed to obtain and use the required instructions contained in Maintenance Instruction, Diesel Engine: Exhaust Tappets and Inlet Hydraulic Lash Adjusters, MI-16-685C, Revision 000, in performing this task. In addition, the mechanic did not fill out nor place in work package

MI-16-685C, the data sheet to document completion of this task. A lack of supervisory review of this task resulted in the diesel generator operating under a condition that could have resulted in equipment damage.

This is a Severity Level III violation (Supplement I).  
Civil Penalty - \$125,000

## II. Violation Not Assessed a Civil Penalty

Technical Specification 6.8.1.a requires that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Quality Assurance Program Requirements (Operation), November 1972. Appendix A requires that procedures be established for Performing Maintenance; Equipment Control (e.g., locking and tagging); and Correcting Abnormal, Offnormal, or Alarm Conditions.

Contrary to the above, procedures were not properly established or implemented as indicated by the following examples:

- A. On September 27, 1991, the Scram Discharge Volume (SDV) high level trip bypass switch was positioned from BYPASS to NORMAL by a Senior Reactor Operator prior to the SDV High-High Level Reactor Protection System (RPS) Trip Annunciator clearing as directed in Annunciator Panel Procedure APP-A-05, Revision 21, for window 1-5, Scram Discharge Volume High-High Water Level Trip Bypass. This caused an unnecessary RPS System actuation.
- B. On October 2, 1991, Special Procedure SP-91-042, Reactor Vessel Water Level Control for Chemical Decontamination, was not properly established in that the necessity for pulling Emergency Core Cooling System (ECCS) analog trip unit cards in a specified sequence was not clearly stated in prerequisite step 5.1. This led to an unnecessary Unit 2 ECCS actuation.
- C. On October 14, 1991, Unit 2 Reactor Core Isolation Cooling Valve 2-E51-F012, Reactor Core Isolation Cooling (RCIC) Pump Discharge Valve, was discovered open instead of being closed as required by Local Clearances 2-91-1090, Master Drain Clearance for B Feed Water Local Leak Rate Test (LLRT), established on October 3 and 4, 1991, and 2-91-0850B, RCIC Master LLRT Clearance Boundary Change, established on October 6, 1991.
- D. On October 29, 1991, Unit 2 Service Water Valve 2-SW-V294, Outboard Isolation to Chlorination, was left open instead of being placed in the closed position as required by Local Clearance 2-91-1587, Secondary Containment Integrity, established on that date.

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

Pursuant to the provisions of 10 CFR 2.201, Carolina 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 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 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 V.8 of 10 CFR Part 2, Appendix C (1991), 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. 2282(c).

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 II, and a copy to the NRC Resident Inspector at the Brunswick Steam Electric Plant.

Dated at Atlanta, Georgia  
this 17<sup>th</sup> day of January 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30323

DEC 16 1991

Docket No. 50-261  
License No. DPR-23  
EA 91-142

Carolina Power and Light Company  
ATTN: Mr. Lynn W. Eury  
Executive Vice President  
Power Supply  
Post Office Box 1551  
Raleigh, North Carolina 27602

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -  
\$37,500 (NRC INSPECTION REPORT NO. 50-261/91-20)

This refers to the Nuclear Regulatory Commission (NRC) inspection conducted by Mr. L. Garner on September 27 - October 11, 1991, at the H. B. Robinson Nuclear Plant. This inspection included an examination of the facts related to several recently identified examples of inadequate engineering design control and interfaces associated with modifications to the Safety Injection System and the Reactor Protection System. The report documenting this inspection was sent to you by letter dated October 25, 1991. As a result of this inspection, a violation of NRC requirements was identified. An enforcement conference was held on November 6, 1991, in the NRC Region II office to discuss the violation, its cause, and your corrective actions to preclude recurrence. A summary of this conference was sent to you by letter dated November 15, 1991.

The violation in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) involved four examples which indicated significant inadequacies in engineering design control, as well as engineering interfaces and coordination with other organizations. Examples 1 through 3 in the enclosed Notice involved the development of revisions to the design basis analysis for the Safety Injection (SI) system. Specifically, your staff failed to properly analyze single SI pump operation during the time interval in which Emergency Core Cooling System (ECCS) is transferred from the injection mode to the recirculation mode following a loss of coolant accident (LOCA). Additionally, on separate occasions your staff failed to consider the effects of entrainment inventory loss during ECCS transfer and failed to evaluate the significance of entrainment inventory loss for a large break LOCA.

These examples reflect inadequate reviews and analyses, as well as inadequate management control and oversight. Such weaknesses resulted in the failure to perform an adequate analysis to support single SI pump operation in June 1988 when an amendment to Technical Specifications was submitted to the NRC to



support this mode of operation; a subsequent inadequate design activity analysis (Nuclear Fuels Section Design Activity 89-0001) performed in January 1989; the use of an improper decay heat model on May 14, 1991, as a basis for power ascension; and a complete small break LOCA analysis not being performed because of an assumption that the large break LOCA analysis was more limiting.

Example 4 of the violation involved a problem with the time delay function in the Resistance Temperature Detector (RTD) system that was caused by capacitors not being removed from the Overtemperature Delta Temperature (OT Delta T) and Overpressure Delta Temperature (OP Delta T) Reactor Protection System (RPS) circuitry during the RTD Bypass Removal Modification (M-959) completed in February 1989. As a result, the OT Delta T protection circuitry response time exceeded that used in transient analyses by up to approximately two seconds. The vendor who prepared the modification failed to specifically include capacitor removal in the related modification guidelines and provide a post modification transient test of the associated circuitry. Your staff's engineering reviews performed on the modification guidelines, as well as subsequent modification development and reviews, failed to identify the fact that the capacitors needed to be removed. Reliance on the vendor work notwithstanding, the problem of inadequate engineering design control and interfaces is also evidenced by this example of the violation.

The above examples of identified inadequacies in engineering design control and interfaces, as well as their potential impact on the safe operation of plant systems are a significant safety concern. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), this violation has been categorized at Severity Level III.

The NRC recognizes that three of these examples were identified by your staff and that prompt and appropriate corrective actions were taken, including unit shutdown for the OT Delta T capacitor issue.

To emphasize the importance of ensuring that engineering design control and interfaces are fully functional in all required aspects of design change review, 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 \$37,500 for the Severity Level III violation. The base value of a civil penalty for a Severity Level III violation is \$50,000.

The escalation and mitigation factors in the Enforcement Policy were considered and mitigation of the base civil penalty by 50 percent was warranted for identification and reporting because three of the examples cited in the violation were identified by your staff. Neither escalation nor mitigation was warranted for corrective action. While appropriate immediate actions, which included in one case bringing the unit to shutdown, were taken, they were offset by the lack of long-term corrective action such as the management control enhancements which you described at the enforcement conference that

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have yet to be fully effective. For example, during the enforcement conference, your staff discussed management efforts that have been ongoing for a couple of years to instill ownership of vendor products, reinforce responsibility for vendor designs, and ensure engineering work was assigned to staff members with appropriate training and expertise. However, despite such efforts, an improper decay heat model was used to justify operation at 95 percent power following the discovery of the improper ECCS analysis in May 1991. Neither escalation nor mitigation was warranted for past performance due to previous escalated enforcement action (EA 89-188) in November 1989 that involved the operation of the auxiliary feedwater system in a degraded condition. This previous enforcement action, which also involved the failure to identify and correct critical engineering issues, offset consideration for mitigation based on your more recent generally improving performance. Escalation of 25 percent was warranted for prior notice of similar events because the 1987 vendor analysis that addressed the entrainment phenomena should have alerted your staff to Example 2 of the Notice. The factor of multiple occurrences was used in categorizing this violation at Severity Level III. The other adjustment factors in the Enforcement Policy were considered and no further adjustment to the base civil penalty was considered appropriate. Therefore, based on the above, the base civil penalty has been decreased by 25 percent.

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. In addition, during the enforcement conference it came to our attention that you may have assumed the availability of non-Technical Specification equipment to mitigate the consequences of accidents addressed in Chapter 15 of the Updated Final Safety Analysis Report. Consequently, as part of your response to this enforcement action, you are also requested to address any such assumptions that may have been made in Chapter 15 analyses. Following receipt of your response, should any additional information on this issue be necessary, it will be addressed separately from the enclosed enforcement action. 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.

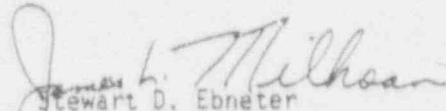
In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96.511.

DEC 16 1991

Should you have any questions concerning this letter, please contact us.

Sincerely,

  
Stewart D. Ebner  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed  
Imposition of Civil Penalty

cc w/encl:  
C. R. Dietz, Manager  
Robinson Nuclear Project Department  
H. B. Robinson Steam Electric Plant  
P. O. Box 790  
Hartsville, SC 29550

Carolina Power and Light Company  
J. J. Sheppard, Plant General Manager  
H. B. Robinson Steam Electric Plant  
P. O. Box 790  
Hartsville, SC 29550

Heyward G. Shealy, Chief  
Bureau of Radiological Health  
Dept. of Health and Environmental  
Control  
2600 Bull Street  
Columbia, SC 29201

Doyne H. Brown, Director  
Division of Radiation Protection  
N. C. Department of Environment,  
Health & Natural Resources  
P. O. Box 27687  
Raleigh, NC 27611-7687

McCuen Morrell, Chairman  
Darlington County Board of Supervisors  
County Courthouse  
Darlington, SC 29535

Richard E. Jones, General Counsel  
Carolina Power and Light Company  
P. O. Box 1551  
Raleigh, NC 27602

cc w/encl cont'd: (see next page)

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Carolina Power and Light Company  
H. B. Robinson Nuclear Plant

Docket No. 50-261  
License No. DPR-23  
EA 91-142

During an NRC inspection conducted on September 27 - October 11, 1991, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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 50, Appendix B, Criterion III, requires, in part, that measures be established for the identification and control of design interfaces and for coordination among participating design organizations. Criterion III also requires that design control measures provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program.

Contrary to the above, inadequate control of design interfaces and coordination among participating design organizations resulted in the failure to adequately verify or check the adequacy of design for the Safety Injection (SI) system and the Reactor Protection System (RPS), as evidenced by the following examples:

1. From June 20, 1988 until January 5, 1989, a design basis analysis was not developed for single SI pump operation during the time interval for Emergency Core Cooling System (ECCS) transfer from the injection phase to the recirculation phase (switchover) during a large break Loss of Coolant Accident (LOCA).
2. From January 5, 1989 until May 16, 1991, a design activity analysis (Nuclear Fuels Section Design Activity 89-0001) to support single SI pump operation during a large break LOCA was inadequate in that losses of Reactor Coolant System inventory due to entrainment were not properly considered.
3. From June 20, 1988 until August 3, 1991, a design basis analysis was not developed for single SI pump operation during the time interval for ECCS switchover during a small break LOCA.
4. The Resistance Temperature Detector Bypass Removal Modification, M-959, was inadequately developed, verified, and performed in that from February 25, 1989 until August 17, 1991, the Overtemperature Delta Temperature reactor trip time response exceeded the time used in the accident analysis.

This is a Severity Level III violation (Supplement I).  
Civil Penalty - \$37,500

Pursuant to the provisions of 10 CFR 2.201, Carolina 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 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 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 V.B of 10 CFR Part 2, Appendix C (1991), 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. 2282(c).

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 II, and a copy to the NRC Resident Inspector at the H. B. Robinson facility.

Dated at Atlanta, Georgia  
this ~~16<sup>th</sup>~~ day of December 1991



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
735 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60131

December 17, 1991

Docket No. 50-249  
License No. DPR-25  
EA 91-132

Commonwealth Edison Company  
ATTN: Mr. Cordell Reed  
Senior Vice President  
Opus West III  
1400 Opus Place  
Downers Grove, IL 60515

Gen'l:rcat

SUBJECT: DRESDEN STATION, UNIT 3 NOTICE OF VIOLATION AND PROPOSED  
IMPOSITION OF CIVIL PENALTY - \$25,000  
(NRC INSPECTION REPORT NO. 50-249/91033)

This refers to the inspection conducted on October 15-25, 1991, of the circumstances surrounding the October 11, 1991, unplanned exposures of two personnel during inservice inspection (ISI) of a recirculation pump discharge valve at the Dresden Unit 3 facility. The report documenting this inspection was sent to you by letter dated November 8, 1991. During this inspection violations of NRC requirements were identified. Although not reportable, you voluntarily reported the unplanned exposures to the NRC Senior Resident Inspector on October 12, 1991. An Enforcement Conference was held on November 21, 1991, to discuss the violations, their causes, and your corrective actions. The report summarizing the conference was sent to you by letter dated December 9, 1991.

The unplanned exposures occurred when two workers, an ISI engineer and a maintenance foreman, inspected the seating surfaces of the "B" recirculation pump discharge valve located in the Unit 3 drywell. The valve discs and stem had been removed to repair the stem. Survey data indicated that dose rates at the plane of the valve body flange were 1 to 2 rem/hour and as high as 10 rem/hour in the valve body; dose rates near the outer disc faces were as high as 5 rem/hour. Contamination levels on the valve components were very high. The survey of the work area and components was not documented until after the work was complete. Based on the erroneous assumption that the workers would stand on the flange to inspect the seating surfaces in the valve bowl, and would stand to inspect the discs, radiation protection personnel prescribed dosimeters to be placed on the workers' lower right legs. During the ISI the workers frequently positioned themselves such that portions of their whole body were exposed to significantly higher dose rates than their legs. Your subsequent dose assessment calculation determined that the workers exceeded their administrative dose limits by a wide margin, although no regulatory limits were exceeded.

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

The NRC has several concerns regarding this event. The first concern is that planning for the ISI was inadequate. The ISI was not considered at two formal meetings, an ALARA Committee meeting and a pre-job ALARA briefing, held to discuss the entire valve repair. The emphasis at those meetings was on the actual removal, repair, and reinstallation of the components, not the ISI. In addition, one of the two radiation protection technicians assigned to monitor the ISI and a representative of the ISI work group did not attend the pre-job ALARA briefing as required by your procedure. Finally, miscommunication during the briefings at the drywell access control point, between the radiation protection technician who prescribed the placement of dosimeters and the two workers, resulted in a failure of the technician to understand how the workers would be positioned during the ISI.

The second concern is that two experienced radiation workers (the ISI engineer and the maintenance foreman) did not follow the guidance of the technician, did not follow good ALARA principles, and did not recognize that their personal dosimeters were inappropriately placed. They frequently positioned unmonitored parts of their bodies in high dose fields and touched and stepped on the highly contaminated discs.

The third concern is that job coverage was inadequate. When the ISI was monitored by radiation protection personnel they did not observe and correct the inappropriate actions of the workers or their inappropriate dosimeter placement. This appears to have resulted from failure to recognize the need for special diligence and attentiveness by the technician when remote video camera observation was substituted for direct coverage. Reliance on an alarming dosimeter to signal any problems may have also contributed to this issue.

Violations were identified regarding the unplanned exposures as described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice). Violations I.A and I.B involve failure to follow procedures in that a representative of the ISI group and a radiation protection technician did not attend the pre-job ALARA briefing, and the survey of the discharge valve and work area was not documented until after the job was complete. Violations II.A through II.D involve inadequate surveys prior to and during the work. Violation III involves failure to supply appropriate monitoring equipment to the two workers.

For this event there was a programmatic breakdown of radiological controls. Although regulatory limits were not exceeded for this case the programmatic deficiencies, if left uncorrected, could result in regulatory limits being exceeded in the future. The events described above involve a significant lack of attention or carelessness toward licensed activities. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), the violations are classified in aggregate as a Severity Level III problem.

We recognize that upon discovery, you immediately stopped further work on the job, informed station upper management and Corporate Radiation Protection of the problem, and initiated a formal investigation involving both station and



corporate personnel. In addition, you briefed all radiation protection personnel on the event including proper placement of dosimeters, issued a Lessons Learned Initial Notification, reviewed similar ongoing jobs for like problems, and met with station supervisors and employees. Your long term corrective actions include a review by the Dresden Situational Review Team, procedure revisions, training enhancements, preparation of a Lessons Learned Report, and communication of senior management's expectations to all personnel regarding their responsibilities for radiological safety, minimization of exposure and performance of work in a radiologically conservative manner.

To emphasize the need for adequate planning and communications for work performed in high dose rate areas, the need for radiation protection technicians and ALARA Coordinators to promptly identify and correct radiologically nonconservative practices, and the need for radiation workers to recognize and question nonconservative radiological practices, 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 (Notice) in the amount of \$25,000 for the Severity Level III problem. The base value of a civil penalty for a Severity Level III problem is \$50,000.

The escalation and mitigation factors in the Enforcement Policy were considered. Full 50% mitigation of the base civil penalty was warranted for identification and reporting in that you identified the problem, took prompt corrective action, and reported the problem to the NRC Senior Resident Inspector. Full 50% mitigation of the base civil penalty was warranted for your extensive corrective actions as discussed above. The base civil penalty was escalated 50% based on past performance. While only one violation issued within the last two years (Inspection Report No. 50-237/90026; 50-249/90025) relates directly to the events under discussion, the corrective actions for that violation as well as the corrective actions for both a December 1990 radioactive contamination event and three exposures in excess of administrative limits (Inspection Report No. 50-237/90012; 50-249/90011) should have prevented many of the errors documented in the enclosed Notice, thereby justifying partial escalation of the base civil penalty for past performance. Therefore, on balance, an overall 50% reduction of the base civil penalty has been deemed appropriate.

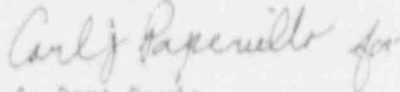
You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to this 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 responses will be placed in the NRC Public Document Room.

December 17, 1991

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,



A. Bert Davis  
Regional Administrator

Enclosure: Notice of Violation  
and Proposed Imposition of Civil  
Penalty

cc w/enclosure:

D. Galle, Vice President - BWR  
Operations  
T. Kovach, Nuclear  
Licensing Manager  
C. Schroeder, Station Manager  
DCD/DCB (RIDS)  
GC/LFDCB  
Resident Inspectors LaSalle,  
Dresden, Quad Cities  
Richard Hubbard  
J. W. McCaffrey, Chief, Public  
Utilities Division  
Robert Newmann, Office of Public  
Counsel, State of Illinois Center  
Licensing Project Manager, LWR  
James Lieberman, Director,  
Office of Enforcement

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Commonwealth Edison Company  
Dresden Station, Unit 3

Docket No. 50-249  
License No. DPR-25  
EA 91-152

During an NRC inspection conducted on October 15-25, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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. Technical Specification 5.2.B requires that radiation control procedures be maintained, made available to all station personnel and adhered to.
  - A. Procedure DAP 12-09, Revision 4, Paragraph F.3, effective August 31, 1990, requires, in part, that pre-job ALARA briefings for jobs which involve more than one work group and meet the following criteria shall include all work groups involved in the job. The criteria include (1) a working dose rate greater than 1 R/hr, (2) general area loose contamination levels greater than 250,000 dpm/100cm<sup>2</sup>, (3) high potential for highly radioactive particles, or (4) high potential for worker's body to come in contact with high dose rate piping or components. The radiation protection technician monitoring the job being briefed must be in attendance during the pre-job briefing.

Contrary to above, on October 11, 1991, the pre-job ALARA briefing for work on the components of the "B" recirculation pump discharge valve did not include a representative of the Inservice Inspection Group and the radiation protection technician monitoring the second phase of the job. The job involved the radiation protection, maintenance, and Inservice Inspection groups and met criteria (1), (2), and (4) above.
  - B. Procedure DRP 1140-04, Revision 0, Paragraph G.3.a(4), effective April 20, 1990, requires that additional copies of the survey be provided with each copy of the radiation work permit (RWP) which is distributed for worker review at access control points. Distributing copies of the survey to accompany the RWP will not be required if radiological status boards are located near the access control area(s) and if the information on that status board reflects conditions applicable to the work.

Contrary to above, on October 11, 1991, a copy of the survey of the "B" recirculation pump discharge valve components and the work area was not distributed with each copy of the RWP distributed for worker review at the drywell access control point, nor did the information on the status board reflect conditions applicable to the work in that the survey was documented after the work was complete.

- II. 10 CFR 20.201(b) requires that each licensee make such surveys as may be necessary to comply with the requirements of Part 20 and which are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As defined in 10 CFR 20.201(a), "survey" means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.
- A. Contrary to above, the licensee did not make surveys to determine that individuals would not receive a total occupational dose in excess of the standards specified in 10 CFR 20.101. Specifically, during the ALARA committee meeting on September 10, 1991, and the pre-job ALARA and bullpen briefings on October 11, 1991, the licensee did not adequately evaluate the potential radiation hazards incident to the two workers would have to assume relative to the potential radiation hazards incident to performing inservice inspection of the components of the "B" recirculation pump discharge valve.
- B. Contrary to above, on October 11, 1991, the licensee did not make surveys to determine that individuals would not receive a total occupational dose in excess of the standards specified in 10 CFR 20.101. Specifically, the licensee did not survey the inner faces of the "B" recirculation pump discharge valve discs prior to work being performed near those faces.
- C. Contrary to above, on October 11, 1991, the licensee did not make surveys to determine that individuals would not receive a total occupational dose in excess of the standards specified in 10 CFR 20.101. Specifically, the licensee did not adequately reevaluate the possible doses to two workers during the inservice inspection of the "B" recirculation pump discharge valve when actual inspection activities differed from those anticipated by radiation protection personnel.
- D. Contrary to above, on October 11, 1991, the licensee did not make surveys to determine that individuals would not be exposed to airborne concentrations exceeding the limits specified in 10 CFR 20.103. Specifically, the licensee did not reevaluate the potential airborne exposure from the close inspection of the "B" recirculation pump discharge valve discs when actual inspection activities differed from those anticipated by radiation protection personnel.

- III. 10 CFR 20.202(a)(3) requires that each licensee supply appropriate personnel monitoring equipment to, and require the use of such equipment by each individual who enters a high radiation area.

Contrary to above, on October 11, 1991, the licensee failed to supply monitoring equipment appropriate to ascertain the doses incurred by two workers who performed inservice inspection of the "B" recirculation pump discharge valve in a high radiation area. Specifically, the dosimeters supplied did not adequately measure dose to the most highly exposed portions of the whole body of each worker.

This is a Severity Level III problem (Supplement IV).  
Civil Penalty - \$25,000 (assessed equally among the seven violations).

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 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 V.B of 10 CFR Part 2, Appendix C (1991), 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 111, 799 Roosevelt Road, Glen Ellyn, Illinois 60137, and a copy to the Senior Resident Inspector at the Dresden Station.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Bert Davis  
Regional Administrator

Dated at Glen Ellyn, Illinois  
this 17th day of December 1991



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
799 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137

January 9, 1992

Docket Nos. 50-237 and 50-249  
License Nos. DPR-19 and DPR-25  
EAs 91-164 and 91-165

Commonwealth Edison Company  
ATTN: Mr. Cordell Reed  
Senior Vice President  
Opus West III  
1400 Opus Place  
Downers Grove, Illinois 60515

Dear Mr. Reed:

SUBJECT: DRESDEN NUCLEAR POWER STATION UNITS 2 AND 3  
NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL  
PENALTIES - \$187,500  
(NRC INSPECTION REPORT NOS. 50-237/91032(DRS);  
50-249/91035(DRS); 50-237/91027(DRP); 50-249.91028(DRP);  
50-249/91032(DRS); AND 50-237/91035(DRP);  
50-249/91038(DRP))

This refers to four special safety inspections conducted during the period of August 29 through November 12, 1991, at the Dresden Nuclear Power Station Units 2 and 3 to review the circumstances surrounding six events. These events included (1) the failure of a local leak rate test (LLRT) associated with the Unit 3 containment drywell vent valve 3-1601-24 (LER 249/91-009), (2) exceeding the Unit 2 torus water high temperature Technical Specification limit on September 1, 1991 (LER 237/91028), (3) a 2800 gallon contaminated water spill from the Unit 3 control rod drive system via hydraulic control unit drain lines on September 23, 1991, (4) the scrambling of a Unit 2 control rod out of sequence during routine surveillance testing on October 6, 1991, (5) damaging the Unit 3 refueling mast and damaging the bails of two spent fuel bundles in the Unit 3 spent fuel pool on October 18, 1991, and (6) the loss of Unit 2 secondary containment integrity on June 24, 1991 (LER 237/91-013). The reports documenting these inspections were sent to you by letters dated November 15, 22, 27, and 29, 1991. Violations of NRC requirements were identified during the inspections, and on December 10, 1991, two enforcement conferences were held to discuss the violations, their causes, and your corrective actions. The reports summarizing the conferences were sent to you by letters dated December 13 and 17, 1991. All of the events were either reported to the NRC via the Emergency Notification System, or to the resident inspection staff, if not reportable.

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

The violation described in Section I of the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice) involves the local leak rate test (LLRT) of Unit 3 penetration X-125 failing on September 9, 1991 because the penetration could not be pressurized. The investigation of the failed test disclosed that the leakage was through outboard isolation valve 3-1601-24, and was caused by the installation of a new piston rod during the previous refueling outage. Maintenance, consisting of replacing the valve operator piston rod, had been performed on February 3, 1990. A post-maintenance LLRT was neither specified nor performed on valve 3-1601-24. The new piston rod increased the stroke of the valve actuator by approximately one-eighth of an inch, resulting in the valve disk rotating past the fully closed position to a position where the valve was partially reopened. This condition was not detected in the control room because the valve position lights indicated the valve was closed. Dresden Unit 3 was returned to power on February 11, 1990, with containment isolation valve 3-1601-24 partially open.

This violation is a significant regulatory concern because the failure to perform a proper post-maintenance test on the containment isolation valve represents a significant lack of attention towards licensed responsibilities. The potential safety consequence of the inoperable primary containment isolation valve is significant for an event requiring the use of inboard valves to prevent the loss of containment (e.g., Emergency Operating Procedures). Should one of the inboard valves fail, an uncontrolled discharge from the containment atmosphere directly to the environment would occur. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), Violation I has been categorized at Severity Level III.

The root causes of Violation I and your subsequent corrective action were discussed during the enforcement conference. The major factors contributing to the violation appear to be an inadequate procedure to control and review work packages, which did not specify post-maintenance testing requirements, and informal communications between maintenance workers and work analysts. The work analysts did not view an LLRT as necessary following maintenance activities if work was not performed on the seating surface of the valve. In this instance, your technical staff believed the maintenance work was limited to the valve operator and not the seating surface. Further, the maintenance staff never informed the technical staff that the piston rod for the valve operator was replaced. The NRC recognizes that corrective actions have been initiated and appear acceptable. Immediate corrective actions included: performing an audit of Unit 2 valves to ensure that post-maintenance LLRTs were performed; requiring work analysts to specify a matrix of post-maintenance test requirements; expanding the distribution of color coded drawings specifying LLRT and ILRT requirements; and having the in-service inspection and in-service testing group review all work requests for containment isolation valves. Long term corrective actions included: performing an audit of Unit 3 valves requiring LLRT prior to restarting Unit 3; proceduralizing a post-maintenance testing requirements matrix; developing a maintenance memorandum for post-maintenance testing



requirements of primary containment valves; improving initial and requalification training of staff and operators concerning LLRT requirements; formalizing post-maintenance test requirements in a procedure; and evaluating the approaches of the other nuclear stations operated by Commonwealth Edison to ensure that appropriate post-maintenance testing requirements are included in work packages.

Section II of the enclosed Notice concerns four operational events. The first event, involving torus high water temperature, resulted from the untimely resolution of a stuck limit switch on a high pressure injection drain pot valve by operations personnel which eventually placed operators in a Technical Specification requiring immediate shutdown. However, the need for the shutdown went unrecognized by operations on-shift management for a significant time period. Specifically, on the midnight shift of September 1, 1991, with a reactor startup in progress, a licensed operator placed the high pressure coolant injection drain pot subsystem into an abnormal lineup in response to a high level annunciator. This abnormal lineup provided a direct heat input into the torus starting a slow increase in torus water temperature. The water temperature within the torus increased from 82 to 95 degrees F (the Technical Specification limit) over 15 hours without initiation of torus cooling. Once the need for torus cooling was recognized, another 11 hours passed before torus cooling was placed into service and the temperature reduced below the Technical Specification limit of 95 degrees F.

The event was characterized by the failure of three operating shifts to maintain cognizance of plant conditions, the failure of operations on-shift management to either provide timely resolution or take timely compensatory measures in response to an equipment problem, the failure of licensed personnel to follow established administrative controls, and the failure of senior licensed operators to be knowledgeable of the torus temperature Technical Specification requirements. Operations on-shift management placed a low priority on resolving the drain pot deficiency allowing the heat input to the torus to exist for 17 hours indicative of operations working around problems. The failure to follow established administrative controls resulted in omissions in the unit log by numerous licensed operators, inadequate verbal communications within shift crews, and inadequate verbal communication between shift crews. Minor contributors to the event were a weak alarm response procedure and inadequate management direction regarding turnovers for short term relief.

The second event occurred on September 23, 1991. With the reactor shutdown for a refueling outage and all the fuel in the spent fuel pool the licensed shift supervisor briefed a non-licensed equipment operator on the actions necessary to depressurize hydraulic control units (HCUs) to support placing the mode switch in shutdown. Without using the procedure, the equipment operator proceeded to depressurize all of the west bank HCUs. Consequently, he failed to close any HCU drain valves upon completion of the depressurizations as required by the procedure. Another equipment operator was dispatched by the shift supervisor to depressurize the east bank HCUs. This equipment operator, after

receiving instructions from the first equipment operator, depressurized the east bank HCU's also without using the procedure and also left the drain valves open. On September 25, 1991, the control air supply to the scram pilot solenoid valves was isolated, opening the scram valves, in accordance with out-of-service instructions to facilitate the rebuilding of the scram pilot valves. The combination of the scram and HCU drain valves being open established a drain path from the control rod drives to the reactor building floor. Approximately 2800 gallons of contaminated water spilled over the course of a few minutes until operators, responding to notification of the spill, could close the drain valves. This event was characterized by inadequate communications within the shift crew, a failure of non-licensed operators to use procedures in the performance of work activities, a lack of direction in the out-of-service instructions as to the scope of equipment boundary valves to be placed in a controlled status, and a lack of operations on-shift management enforcement of the implementation of established administrative controls.

The third event occurred on October 6, 1991. With the reactor at 35% power, operators commenced routine half-core scram testing after conducting heightened level awareness briefing for the testing. After scrambling the fourth control rod in the testing sequence, considerable difficulty was experienced by the licensed operator in returning the control rod to its original position. Before returning the control rod to its original position, the licensed operator directed the non-licensed equipment operator to isolate charging water to the next rod to be scrambled, which was inconsistent with the testing procedure. Upon isolating the charging water the equipment operator informed the licensed control room operator of completion of the task via the intercom and the licensed operator acknowledged. The inexperienced licensed individual who was assigned the task of scrambling control rods overheard the conversation about the isolation of charging water to the next control rod and assumed the control rod was to be scrambled. He proceeded to scram that rod. Upon scrambling the control rod, the control room operator recognized the error and testing activities were terminated. Throughout the testing the shift control room engineer was present in the control room but took a limited role in supervising the activity. The event was characterized by licensed operators failing to follow established procedures, operators working around equipment deficiencies, inadequate communications between shift crew members, in that a licensed individual failed to repeat back a supposed reactivity change command, and distraction of operations on-shift supervision from their primary responsibility of supervising individuals under their direction.

On October 18, 1991, with the reactor defueled, the fourth event occurred when a two-man fuel handling crew was reorganizing spent fuel bundles in the spent fuel pool to support the reloading of the reactor core. When one of the fuel bundles was placed in a new position and unlatched from the grapple, the crew failed to raise the grapple mast sufficiently and verify that the fuel bundle

bail handle had disengaged from the grapple. Upon lateral movement of the refueling bridge, the mast impacted two bail handles bending them. The crew immediately informed the fuel handling supervisor, who was not on the refuel floor at the time, of the damaged bail handles. However, the supervisor did not stop fuel handling activities. Subsequently, the crew moved three more fuel bundles to different positions. Activities only ceased after the crew heard abnormal noises while operating the grapple mast. Upon the fuel handling supervisor's arrival on the bridge, a diagnostic examination of the mast was initiated. During the diagnostic, the telescoping sections separated and collapsed rendering the mast incapable of moving fuel. Operations on-shift management (beyond the fuel handling supervisor) was not informed of the event until approximately eight hours later and the radiation protection organization was not informed until approximately twelve hours later. The event was characterized by inattention to detail by the fuel handling crew causing damage to the fuel bundle bail handles and the mast, inappropriate judgement by the fuel handling crew to continue activities after the damage, lack of appropriate supervisory direction to the fuel handling crew after the damage, and a lack of proper perspective as to the need to communicate problems to operations on-shift management. Contributory to the communication deficiencies were inadequate procedures for responding to abnormal situations and inadequate training on reporting requirements.

The NRC recognizes the actual safety consequences of these four operational events were not significant. Increasing the torus temperature to 97 degrees F caused no structural damage or loss of net positive suction head for the emergency core cooling pumps. Additionally, the temperature was well below the 120 degrees F limit required to maintain acceptable temperatures in the event of a loss of coolant accident. The contaminated water spill caused no challenge to the reactor core since the vessel had been defueled and only minor contamination of one individual occurred during the spill cleanup activities. Scramming the control rod out-of-sequence did not invalidate the shutdown margin or cause any reactivity management problems. Damage to the fuel bundle bails caused minimal changes in the core reload analysis. However, from a fuel bundle drop accident perspective, damage to the mast had significant potential safety consequences when the three additional fuel bundles were moved after damaging the mast. Fortunately, the damage incurred did not affect the load bearing capability of the grapple assembly.

Nevertheless, these events are of significant regulatory concern in that they are indicative of management's inability, despite similar previous events, to effectively deal with personnel performance problems. If not corrected, more significant events may occur. Over the past two years, numerous operational events and NRC violations resulted from operations personnel not adhering to established procedures, instances of inattention to detail and inadequate communications. Your own audit of operations in April 1991 also identified failures of personnel to adhere to established procedures. Corrective actions for these situations did not preclude repetition. Most recently, in response to the torus heatup and HCU drain-down events, the licensee stated that procedures would be followed at all times and commands would be repeated back when communicating. The out-of-sequence control rod scram event reflected a failure of the operating crew to meet these expectations.

In reviewing the four events discussed above, the NRC identified ten procedural adherence violations and one lack of adequate procedures violation. The violations in Section II of the enclosed Notice taken collectively, represent a breakdown in the control of licensed activities involving a number of related and recurring violations that collectively represented a significant lack of attention or carelessness toward licensed responsibilities in the control room and related station activities. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), the violations are classified in aggregate as a Severity Level III problem.

We acknowledge your short term actions and long term approach which you presented at the enforcement conference regarding the four operational events. However, many of the actions were only developed after we expressed our concern that your corrective actions have not been completely effective in preventing recurrence of these problems. Our concerns in this area were more fully discussed during the November 12, 1991 management meeting.

It is apparent that you have been unable to: (1) instill a proper respect for adhering to established procedures, communications and awareness of plant conditions, (2) provide quality procedures, (3) appropriately supervise operations to assure procedure requirements are met, and (4) assure aggressive identification and followup of equipment deficiencies such that operators are addressing the causes and not just the symptoms as in Violation II.A. To emphasize the need for appropriate management control and cognizance in the conduct of operations, and the need for effective use of post-maintenance tests, 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 in the amount of \$187,500 for the violations described in the Notice. The base value of a civil penalty for each Severity Level III violation is \$50,000.

The civil penalty adjustment factors in the Enforcement Policy were considered. The base civil penalty for Violation I was reduced by 50 percent for the extensive corrective actions you initiated, as discussed above. However, the base civil penalty was increased 100 percent for your poor past performance in maintaining containment integrity at the Dresden Station. Your poor past performance was specifically demonstrated by continued failures from 1980 through 1987 to meet the LLRT acceptance criteria for containment purge valves, including valve 3-1601-24, the valve at issue here. Your performance in assuring containment integrity was also demonstrated by two recently issued escalated enforcement actions for containment integrity issues identified after this violation occurred. EA 90-168, dated November 28, 1990, concerned a Severity Level III violation and a \$37,500 civil penalty for operating the plant in a configuration where a sample pump exhausted into the secondary containment with no automatic isolation capability. EA 91-014, dated April 17, 1991, concerned a Severity Level III violation and a \$100,000 civil penalty for failing to maintain primary containment integrity from February 1989 through

September 1990, due to a leaking inboard flange of an isolation valve. Mitigation for the identification and reporting adjustment factor was considered but found inappropriate because the leak was identified during an LLRT required by NRC regulation, the report of the event was also required by regulation, and an opportunity to add the LLRT requirement to the maintenance work package was missed by the shift supervisor performing the close-out review. The remaining factors in the enforcement policy were also considered, and no further adjustment to the base civil penalty was considered appropriate. Therefore, based on the above, the base civil penalty for Violation I has been increased 50 percent.

The base civil penalty for the Severity Level III problem described in Section II was mitigated by 25 percent for identification and reporting. All of the events were self-disclosing and were reported to the NRC, if required. In some cases a report was not necessary, but by promptly notifying the NRC Resident Inspector of all cases, even those that were not required to be reported, you gave the NRC an opportunity to conduct a timely review of the event. However, the full amount allowed under the Policy was not applied because the events were self-disclosing. The base civil penalty was not mitigated for corrective action in that your initial corrective actions were not sufficiently comprehensive as discussed above. The base civil penalty was escalated 100 percent for your poor past performance. There have been numerous cited and non-cited violations associated with operations personnel failure to use or follow established procedures, inadequate communications, and inattention to detail while performing operational tasks over the past two years. The base civil penalty was further escalated 50 percent for prior notice. Your audit of operations (QAA 12-91-01) conducted in April 1991 concluded that "significant problems were identified concerning procedural adherence and reluctance of operations personnel to initiate work requests or procedure changes." The corrective actions in response to the audit were insufficient to prevent some, if not all, of the four events. The other adjustment factors in the Enforcement Policy were considered and no further adjustment to the base civil penalty is considered appropriate. Therefore, based on the above, the base civil penalty for Violation II has been increased 125 percent.

The violations described in Section III of the enclosed Notice concern failure to assure that regulatory requirements and the design basis for the Unit 2 reactor building trackway outer door seal were correctly translated into procedures and instructions, and failure to follow procedures in that the trackway inner door was not continuously attended when the door was open on June 24, 1991. Although these violations were categorized at Severity Level IV, they represent a lapse in attention to detail which, in the long-term, could lead to more serious violations.

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. Because the apparent root cause of

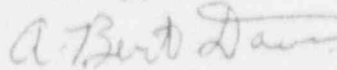
January 9, 1992

those violations is a combination of (1) management's failure to assure procedure adherence and (2) operator's failure to adhere to procedures, your response should specifically address personnel accountability at all levels. 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 responses will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Public Law No. 96-511.

Sincerely,



A. Bert Davis  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed  
Imposition of Civil Penalties

cc w/enclosure:  
DCD/DCB (RIDS)  
D. Galle, Vice President  
BWR Operations  
T. Kovach, Nuclear  
Licensing Manager  
C. Schroeder, Station Manager  
Resident Inspectors LaSalle,  
Dresden, Quad Cities  
Richard Hubbard  
J.W. McCaffrey, Chief  
Public Utilities Division  
Robert Newmann, Office of Public  
Counsel, State of Illinois Center  
Licensing Project Manager, NRR

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALITIES

Commonwealth Edison Company  
Dresden Nuclear Station  
Units 2 and 3

Docket Nos. 50-237  
and 50-249  
License Nos. DPR-19  
and DPR-25  
EAs 91-164 and 91-165

During NRC inspections conducted from August 29 through November 12, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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. Violation Assessed a Civil Penalty Associated with Post-Maintenance Testing

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 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. The test program shall include operational tests of systems and components during nuclear power plant operation, and the test results shall be documented and evaluated to assure that test requirements have been satisfied.

Table 3.7.1 of the Technical Specifications lists Unit 3 Drywell Vent Valve No. 3-1601-24 as a primary containment isolation valve which is normally in the closed position.

Contrary to the above, the Dresden Test Control Program failed to demonstrate that Unit 3 Drywell Vent Valve No. 3-1601-24, a primary containment isolation valve which is normally in the closed position, would perform satisfactorily in service. Specifically, the operator piston rod for Unit 3 Drywell Vent Valve No. 3-1601-24, was replaced on February 3, 1990, leaving the valve partially open, and the licensee failed to test Unit 3 Drywell Vent Valve No. 3-1601-24 to ascertain if the valve was in the closed position.

This is a Severity Level III violation (Supplement 1).  
Civil Penalty - \$75,000.

II. Violations Assessed a Civil Penalty Associated with Procedural Adherence and Adequacy

- A. 10 CFR Part 50, Appendix B, Criterion V requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, and shall be accomplished in accordance with these instructions, procedures, or drawings.
1. Technical Specification Limiting Condition for Operation 3.7.A.1.c. requires the torus maximum bulk water temperature to be 95 degrees F. No action statement is specified in 3.7.A.1.c. for torus maximum bulk water temperature greater than 95 degrees F.

Technical Specification 3.0.A states, in part, in the event a 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 12 hours and in cold shutdown within the following 24 hours unless corrective measures are completed that satisfy the Limiting Conditions for Operation.

Operations Department Technical Specification Interpretation No. 2, "Technical Specification 3.0.A Implementation," approved July 25, 1988 requires, in part, that if no action statement was specified, then Technical Specification 3.0.A action statement governed and a shutdown be initiated immediately with recirculation flow.

Contrary to the above, on September 1, 1991, at approximately 7:59 p.m., when the Technical Specification Limiting Condition for Operation 3.7.A.1.c. for Unit 2 torus maximum bulk water temperature was exceeded and no action statement was specified, licensed operators failed to initiate a shutdown of Unit 2 immediately with recirculation flow.

2. Dresden Administrative Procedure (DAP) 7-05, "Operating Logs and Records," Revision 9, approved August 30, 1990, Step B.2.b(3), requires the Unit Log to contain a list of all alarms and abnormal conditions found upon assuming the shift or occurring during the course of the shift, except those denoting normal conditions, a brief narrative of unusual performance of the plant and any efforts made to determine the cause, and Technical Specification Limiting Conditions for Operation that occur during the shift.



Contrary to the above, from the afternoon of August 30, 1991, through day shift September 1, 1991, the Unit 2 operating log did not document the receipt or presence of the "High Pressure Coolant Injection Turbine Inlet Drain Pot High Level" alarm, an off-normal condition, or provide a brief narrative of the efforts to determine the cause of the alarm (three separate instances of cycling the bypass valve, placement of the drain pot in an abnormal lineup, and two occurrences of checking local equipment) and the afternoon shift log entry of September 1, 1991, did not identify that a Technical Specification Limiting Condition for Operation 3.7.A.1.c was applicable to the 95 degrees F torus temperature.

3. DAP 7-02, "Conduct of Operations," Revision 16, approved August 9, 1991, Step B.2.b(4) requires for the Shift Control Room Engineer (SCRE) shift turnover to include a discussion of unit status.

Contrary to the above, during SCRE shift turnover at approximately 7:00 a.m. on September 1, 1991, the offgoing SCRE did not adequately discuss Unit 2 status with the oncoming SCRE in that the offgoing SCRE did not mention the high pressure coolant injection (HPCI) drain pot abnormal lineup.

4. DAP 7-01, "Operations Department Organization," Revision 15, approved August 19, 1991, Step B.5.d and e, requires the Shift Control Room Engineer (SCRE) to assist the Shift Engineer (SE) in interpreting and applying the requirements of Technical Specifications and to notify the SE of any abnormal operating conditions.

Contrary to the above, during the afternoon shift of September 1, 1991, the SCRE did not assist the SE in interpreting and applying the requirements of Technical Specifications or notifying the SE of an abnormal operating condition in that the SCRE did not inform the SE that the Technical Specification limit/emergency operating procedure entry condition for high torus temperature was reached and, when the SE independently noted the high torus temperature, the SCRE did not inform the SE that 95 degrees F was a Technical Specification limit. Also, on the midnight shift of September 2, 1991, a significant delay (at least two hours) occurred prior to the SCRE interpreting the abnormal operating condition and informing the SE of Technical Specification concerns associated with high torus temperature.

5. DAP 7-01, "Operations Department Organization," Revision 15, approved August 19, 1991, Steps B.4.j and B.5.c(3), require that the SE be responsible for direct observations of each unit by overview of the control boards at least twice a shift in the control room and keeping informed of any off-normal conditions that may exist or occur during the shift and that the SCRE maintain an in-depth knowledge of plant and equipment status.

DAP 7-02, "Conduct of Shift Operations," Revision 16, approved August 9, 1991, Steps B.2.a(5) and B.2.b(4), require that on turnover the SE walk the unit panels and the SCRE walk the unit panels, performing a thorough review of system configurations, alarms, and indications.

Contrary to the above, the SE and SCRE for the day shift of September 1, 1991, did not maintain adequate overview of the control boards, perform adequate panel walkdowns, keep informed of off-normal conditions, perform a thorough review of system configurations and alarms, and maintain an in-depth knowledge of plant equipment and status, in that the SE and the SCRE were not cognizant of the HPCI drain pot alarm or drain pot abnormal system lineup (which occurred on the previous shift).

6. DAP 7-01, "Operations Department Organization," Revision 15, approved August 19, 1991, Step B.6.c(1), requires the Shift Supervisor (Licensed) to ensure that the SE and the SCRE were properly informed of all conditions which could adversely affect plant operations.

Contrary to the above, on the afternoon shift of August 30, 1991, the Shift Supervisor (Licensed) did not notify or inform the SE or SCRE of the HPCI drain pot alarm on Unit 2, a condition which could adversely affect plant operations.

7. DAP 7-01, "Operations Department Organization," Revision 15, approved August 19, 1991, Step B.9.1, requires the Nuclear Station Operator (NSO) to notify the proper authorities regarding unusual conditions.

Contrary to the above, on the day shift of September 1, 1991, upon receipt of a torus high temperature alarm on Unit 2, the NSO did not inform the proper authority, the SE, who had temporarily relieved the SCRE, of the unusual condition of the HPCI drain pot abnormal lineup.

- B. 10 CFR Part 50, Appendix B, Criterion V requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, and shall be accomplished in accordance with these instructions, procedures, or drawings.

DAP 7-02, "Conduct of Shift Operations," Revision 16, approved August 9, 1991, Step B.21.b(3), requires operations personnel to reference and follow the procedure for the entire evolution for complex or infrequently performed evolutions.

DOP 500-4, "Reactor Mode Switch to Shutdown When All Drives are Fully Inserted," Revision 0, approved October 28, 1988, Step F.2, requires, in part, discharge each accumulator as follows: when water stops flowing out the drain and accumulator pressure reads approximately 600 psig, close the drain valve 3-0305-107 on the accumulator being discharged.

Contrary to the above, on September 23, 1991, operations personnel did not reference and follow DOP 500-4, Revision 0, for the entire infrequently performed evolution required to place the mode switch to shutdown for Unit 3, in that all hydraulic control units drain valves were left open.

- C. 10 CFR Part 50, Appendix B, Criterion V requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances.

Contrary to the above, plant administrative procedures were not appropriate to the circumstances in the following cases:

1. DAP 7-02, "Conduct of Shift Operations," Revision 16, approved August 9, 1991, did not give specific guidance regarding performance of interim turnovers, resulting in an inadequate SCRE interim turnover during the day shift of September 1, 1991, in that receipt of a Unit 2 high torus temperature alarm was not mentioned.
  2. DAP 3-05, "Out-Of-Service and Personal Protection Cards," Revision 23, approved September 7, 1991, failed to require valves used for an out-of-service (OOS) boundary to be placed in a controlled status. When OOS III-1306 dated September 25, 1991, was established to isolate the control air to the scram air header, it did not specify the hydraulic control unit drain valves as part of the OOS boundary to be in a controlled status. Failure to control the drain valves (tag them closed) resulted in a contaminated water spill in the Unit 3 reactor building on September 25, 1991.
- D. Technical Specification 6.2.A.7 requires detailed written procedures covering surveillance and testing requirements be adhered to.

DTS 300-02, "Control Rod Drive Scram Testing and Scram Valve Timing Test," Revision 14, approved January 22, 1991, Section F., steps 2 and 3, require the control rod selected for scrambling to be withdrawn to position 48 prior to closing its charging water valve. Steps 9 and 10 require the previously scrambled control rod be withdrawn to its intended position before repeating the scram sequence for the next control rod.

Contrary to the above:

1. At approximately 3:25 a.m., on October 6, 1991, a licensed operator did not adhere to the written surveillance procedure in that the charging water valve for control rod P-10, the control rod selected for scrambling, was closed before withdrawing the control rod to position 48.
  2. At approximately 3:25 a.m., on October 6, 1991, a licensed operator did not adhere to the written surveillance procedure in that the previously scrambled control rod, L-11, was not withdrawn to its intended position before control rod P-10 was scrambled.
- E. Dresden Technical Specification 6.2.A.2 requires, in part, that detailed written procedures covering refueling operations be prepared, approved, and adhered to.

Dresden Fuel Handling Procedure 800-32, "Fuel Movement Within the Spent Fuel Pools," Revision 3, approved July 31, 1990, step F.1.t, states that after unlatching the grapple, raise the grapple approximately 4 inches and attempt to rotate the mast. If the mast rotates, the fuel assembly has disengaged from the grapple.

Contrary to the above, on October 18, 1991, at approximately 10:15 p.m., subsequent to unlatching the grapple from a fuel assembly in location J-9 in the Unit 3 spent fuel pool, fuel handlers did not raise the grapple four inches or rotate the mast to verify that the grapple was disengaged from the fuel assembly.

This is a Severity Level III problem (Supplement 1).  
Civil Penalty - \$112,500 (assessed equally among eleven violations).

### III. Violations Not 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 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.

Contrary to the above, on September 13, 1990, the licensee failed to assure that applicable regulatory requirements and design basis for the Unit 2 Reactor Building trackway outer door seal were correctly translated into procedures and instructions. Specifically, during replacement of the outer door seal, the licensee modified the applicable design basis from a passive seal to an active seal without revising the applicable operating procedures to specify the steps required to activate the seal.

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

- B. Technical Specification Section 6.2, "Plant Operating Procedures," requires adherence to detailed written procedures, including normal operation of systems and components involving nuclear safety of the facility.

Dresden Administrative Procedure 13-3, "Unit 2 Reactor Building Trackway Interlock Door Access Control," Revision 1, dated August 22, 1989, which in part implements Technical Specification Section 6.2, requires the trackway inner door of the Unit 2 Reactor Building be continuously attended at all times when the door is in the open position.

Contrary to the above, from 8:45 a.m. to 2:00 p.m. on June 24, 1991, the trackway inner door of the Unit 2 Reactor Building was not continuously attended at all times when the door was in the open position.

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

Pursuant to the provisions of 10 CFR 2.201, the Commonwealth Edison Company (Licensee) is hereby required to submit a written statement of explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice 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 is 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 actions 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.

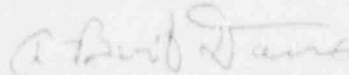
Within the same time as provided for the response required under 10 CFR 2.201, the Licensee may pay the civil penalties by letter addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer payable to the Treasurer of 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 V.B of 10 CFR Part 2, Appendix C (1991), 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. 2282(c).

The responses 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, 799 Roosevelt Road, Glen Ellyn, Illinois 60137, and a copy to the NRC Resident Inspector at the Dresden Nuclear Power Station.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Bert Davis  
Regional Administrator

Dated at Glen Ellyn, Illinois,  
this 7<sup>th</sup> day of January 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
735 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137

January 15, 1992

Docket No. 50-255  
License No. DPR-20  
EA 91-125

Consumers Power Company  
ATTN: Mr. David P. Hoffman  
Vice President - Nuclear  
Operations  
1945 West Parnall Road  
Jackson, MI 4920

Dear Mr. Hoffman:

SUBJECT: PALISADES NUCLEAR GENERATING PLANT  
NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY - \$100,000  
(NRC INSPECTION REPORT NO. 50-255/90025(DRS) AND NO. 50-255/91202(NRR))

This refers to the two inspections conducted on September 19, 1990, through April 18, 1991, and June 10-21, 1991, at the Palisades Nuclear Generating Plant. The inspections focused on design engineering, field implementation, and testing activities associated with the Palisades steam generator replacement project (SGRP) as well as other plant modifications. During the inspections, the NRC identified multiple examples of design control deficiencies in calculations and specifications associated with piping and pipe supports. The deficiencies were documented in the subject inspection reports which were sent to you by letters dated May 24 and August 2, 1991. An enforcement conference was held on October 15, 1991, to discuss the violations, their causes, and your corrective actions. The report summarizing the conference was sent to you by letter dated November 4, 1991.

Problems identified by the NRC included errors in calculations, use of incorrect analytical methods, and misapplication of design basis requirements and specifications. In view of the numerous deficiencies identified, the adequacy of design was judged to have been indeterminate in several important instances, most notably the main steam system piping.

The design control deficiencies are similar to those which were the subject of a previous escalated enforcement action (EA 89-251). While you took steps in your steam generator replacement project to avoid repetition of those design control problems, those steps were insufficient. The NRC is particularly concerned that several in-depth technical audits of your principal design contractor identified deficiencies similar to those found in subsequent NRC inspections. However, you failed to adequately address and correct these deficiencies on a broad scale apparently because of schedule and production

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

pressure. Had the NRC not become involved, it is not likely that your staff would have identified and corrected all of the deficiencies that were eventually identified.

Management made decisions on a number of occasions during the project to proceed with plant modifications despite having information indicating that extensive design control problems existed. You have stated that taking such an approach was justified by the perceived lack of any significant finding (i.e., one requiring hardware modification) and your plans to perform additional technical audits before startup from the outage. We view this approach to be seriously flawed in several significant ways. First, no consideration appeared to be given to the cumulative significance of the deficiencies being identified. With a more complete assessment of the situation, you could and should have determined that the problems being identified were not isolated.

Secondly, dealing with design control problems in parallel with or after installation activities creates a situation where schedule and production constraints may adversely affect the ability to objectively identify and correct design deficiencies. In this case, we believe that such pressures hampered your ability to recognize and take appropriate corrective action to address the programmatic breakdown that occurred. Our underlying concern about such a situation is that, should far-reaching quality control problems occur, there can be little confidence that significant design problems would not, in fact, exist unless extensive post-installation evaluations are performed. Such evaluations would have to go well beyond auditing processes. Attempting to assure quality through inspections and audits performed after the fact when it is recognized that the production process is flawed, is inconsistent with fundamental Quality Assurance principles embodied in Appendix B to 10 CFR Part 50, and is unacceptable.

Twenty-four (24) violations were identified during the inspections as described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice). The violations involved failure to assure the regulatory requirements and design bases are correctly translated into design documents, failure to follow procedures, failure to promptly identify and correct nonconformances, and failure to obtain prior Commission approval for a change to the Final Safety Analysis Report which reduced the margin of safety. While we did not identify any single deficiency that required immediate plant modification, the number and extent of deficiencies indicate that a breakdown in design controls associated with piping and pipe supports occurred for the steam generator replacement project, with the potential for more significant errors. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), the violations are categorized in the aggregate as a Severity Level III problem.

We recognize that specific corrective actions have been taken for each of the violations as documented in Appendices I, II, and III to your enforcement



January 15, 1992

conference presentation. Additionally, as documented in your July 9, 1991, letter to the NRC, you committed to improve your performance in the areas of modification engineering and engineering practices through several broad corrective actions. These actions included Final Safety Analysis Report revisions to clarify piping and pipe support design criteria and reduce ambiguity; specification upgrades; implementation of an umbrella document to tie specification and procedural requirements together; an assessment of pipe and pipe support engineering by a contractor; third party reviews of your Nuclear Engineering and Construction Organization analyses; and a main steam line reanalysis. Several of these actions have been completed as discussed in the August 7, 1991, meeting at NRC headquarters. Other actions, including the reanalysis of the main steam piping system by a third party independent of your first contractor, are still ongoing.

We recognize that prior to restart, the technical issues were reviewed between your staff and the Office of Nuclear Reactor Regulation and safety concerns were not identified that would prohibit startup. Nevertheless, to emphasize the need to establish and implement improved controls in the general area of design, and specifically in the piping and pipe support area, as well as the control of your contractors, 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 cumulative amount of \$100,000 for the Severity Level III problem.

The base value of a Severity Level III problem is \$50,000. The escalation and mitigation factors in the Enforcement Policy were considered. Full 50 percent escalation of the base civil penalty was warranted for identification and reporting in that the NRC identified all of the violations. Full 50 percent mitigation of the base civil penalty was warranted for your extensive corrective actions discussed above. Full 100 percent escalation of the base civil penalty was warranted for your poor past performance. The design control issues are similar to the issues identified in the February 1990 (EA 89-251) Notice as noted above. The other escalation/mitigation factors were considered and no further adjustment was considered appropriate. Therefore, based on the above, the base civil penalty was increased by 100 percent.

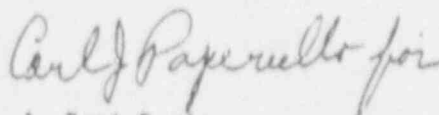
You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to this 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 and its enclosure will be placed in the NRC Public Document Room.

January 15, 1992

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,



A. Bert Davis  
Regional Administrator

Enclosure: Notice of Violation and  
Proposed Imposition of Civil Penalty

cc w/enclosure:

Gerald B. Slade, General Manager, Palisades  
P. M. Donnelly, Safety and Licensing Director  
DCD/DCB (RIDS)  
OC/LFDCB  
Resident Inspector, RIII  
James R. Padgett, Michigan Public Service Commission  
Michigan Department of Public Health  
Palisades LPM, NRR  
SRI, Big Rock Point

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Consumers Power Company  
Palisades Nuclear Generating Plant

Docket No. 50-255  
License No. DPR-20  
EA 91-125

During two NRC inspections conducted on September 19, 1990, through April 18, 1991, and June 10-21, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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. 10 CFR Part 50, Appendix B, Criterion III, required, in part, that measures be established to assure that regulatory requirements and design bases are correctly translated into design documents. Also, design control measures shall provide for verifying or checking the adequacy of design.

- A. The Palisades Nuclear Power Plant Updated Final Safety Analysis Report (UFSAR), Section 5.7.4.1, "Seismic Analysis of CPCo Design Class 1 Piping," states that piping systems were analyzed for each horizontal direction combined simultaneously with the vertical direction (absolute sum method).

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, Palisades Specification M-195, "Requirements for the Design and Analysis of Palisades Plant Safety Related Piping and Instrument Tubing," Revision 1, dated May 9, 1990, Section 5.10.4.1.2, "Combination of Directional Responses," which implements UFSAR Section 5.7.4.1, specified that when the 1/2% damping curves were used, the vertical and horizontal responses were to be combined using the square root sum of the squares (SRSS) methods. The SRSS method is less conservative than the absolute sum method.

- B. The Palisades Nuclear Power Plant, UFSAR, Section 5.7.1.3, "Floor Design Response Spectra," stated that floor response spectra peaks for the containment building natural frequencies were widened  $\pm 10\%$  to account for variations in soil and structural material properties.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design

documents. Specifically, Palisades Specification M-195, "Requirements for the Design and Analysis of Palisades Plant Safety Related Piping and Instrument Tubing," Revision 1, dated May 9, 1990, Attachment 3, "Original Palisades Plant Response Spectra and Building Displacements," documents that the response spectra peaks for the first natural frequencies of the containment were only widened between 6.97% and 7.77% on five of the seven floor elevations. For the second natural frequency of the containment, the response spectra peaks for four of the seven floor elevations were widened less than 10%. For the third natural frequency of the containment internal structure, the peak was not widened for elevation 649 feet.

- C. The Palisades Nuclear Generating Plant, UFSAR, Section 5.7.2.1, "Containment Building," stated that the results of the final seismic dynamic analyses were shown in Figure 5.7-7, "Containment Building Maximum Seismic Response (OBE)," which gave zero period accelerations (ZPA) values for various elevations in containment.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, Palisades Specification M-195, "Requirements for the Design and Analysis of Palisades Plant Safety Related Piping and Instrument Tubing," Revision 1, dated May 9, 1990, Attachment 3, "Original Palisades Plant Response Spectra and Building Displacement," specified ZPA values that were less conservative than values listed in the UFSAR. For example, for elevation 590 feet, the ZPA value in UFSAR Figure 5.7-7 is 0.119, and is 0.100 in M-195, Attachment 3.

- D. The Palisades Nuclear Power Plant, UFSAR, Section 5.7.4.1, "Seismic Analysis of CPCo Design Class 1 Piping," as implemented by Palisades Specification M-195, "Requirements for the Design and Analysis of Palisades Plant Safety Related Piping and Instrument Tubing," Revision 1, dated May 9, 1990, Paragraph 5.10.4.1, "Seismic Inertia," require that for piping systems spanning two or more elevations, the response spectrum curve for the elevation closest to and higher than the center of mass of the piping system be used.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, Calculation No. SGRP-PDS-033, "Pipe Stress Analysis of Steam Generator E50A Main Steam System," Revision 1, dated September 6, 1990, and Revision 2, dated January 21, 1991, Paragraph 3.7, "Applicable Seismic Input," used a response spectrum curve for structural elevation 649 which was 16 feet lower than the center of mass of the piping system.

- E. Palisades Specification M-195, "Requirements for the Design and Analysis of Palisades Plant Safety Related Piping and Instrument Tubing," Revision 1, dated May 9, 1990, Paragraph 5.10.4.2, "Seismic Anchor Movements (SAM)," specified that the total seismic displacement will be used in the analysis of branch piping.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, Calculation SGRP-PDS-033, "Pipe Stress Analysis of Steam Generator E50A Main Steam System," Revision 1, dated September 6, 1990, used SAM displacements from structural elevation 649 feet which neglected the additional SAM displacement from the actual attachment point of the piping system to the steam generator at elevation 677 feet.

- F. Palisades Specification M-195, "Requirements for the Design and Analysis of Palisades Plant Safety Related Piping and Instrument Tubing," Revision 1, dated May 9, 1990, Paragraph 5.10.4.2, "Seismic Anchor Movements (SAM)," specified that individual structure SAM displacements shall be taken from Attachment 4 to M-195 for the Code Case N-411 seismic criteria.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, Bechtel Specification No. 20557-G-001P, "Design Criteria Documents for Palisades Nuclear Plant Steam Generator Replacement," Revision 3, dated October 31, 1990, Paragraph 4.4.2.4.2, "Seismic Anchor Movements," did not include the SAM displacements from Attachment 4 to M-195 for the Code Case N-411 seismic criteria.

- G. The Palisades Nuclear Power Plant, UFSAR, Section 5.10.1.1, "CPCo Design Class 1 Piping," stated that piping was designed to USA Standard B31.1.0-1967, "Power Piping Code (Code)." Paragraph 120.2.4 of the Code requires that for supplementary steel, no modification for allowable stresses for hydrostatic test periods will be permitted.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, Palisades Specification C-173, "Technical Requirements for the Analysis and Design of Safety Related Pipe Supports," Revision 2, dated November 21, 1990, Tables 1.0 and 2.0, specified increased allowables for supplementary steel during hydrostatic test periods.

- H. The Palisades Nuclear Power Plant, UFSAR, Section 5.10.1.1, "CPCo Design Class 1 Piping," stated that piping was designed to USA Standard B31.1.0-1967, "Power Piping Code." Paragraph 121.2.1 of the Code specified that fixed pipe restraints be structurally suitable to withstand the thrust, movements and other loads imposed during the [thermal] expansion and contraction of piping.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, Palisades Specification C-173, "Technical Requirements for the Analysis and Design of Safety Related Pipe

Supports," Section 5.4.2, "Friction Load," Revision 1, specified that the existing pipe restraints be analyzed for friction forces caused by dead loads only and did not include friction forces caused by the loads due to thermal expansion and contraction on the pipe supports.

- I. Palisades Specification C-173, "Technical Requirements for the Analysis and Design of Safety Related Pipe Supports," Paragraph 5.10.3, "Shear Lugs," Revision 1, specifies that when more than half of the lugs were considered effective, the load was to be assigned based on the relative flexibility of the supporting members.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, Calculation MSA-PD-EB1-H3, "Pipe Support Design for Main Steam System," Revision 2, dated January 21, 1991, assumed that the restraining forces were equally distributed between the only two lugs (more than half of the lugs) even though the flexibility of the supporting members was different by a factor of two.

- J. Palisades Specification C-173, "Technical Requirements for the Analysis and Design of Safety Related Pipe Support," Paragraph 5.7.1, "Deflection General Requirements," Revision 1, specifies that the total deflection of the pipe support shall not exceed 1/16 inch.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, Calculation MSA-PD-EB1-H3, "Pipe Support Design for Main Steam System," Revision 2, dated January 21, 1991, failed to recognize that the total deflection of the pipe support exceeded 1/16 inch.

- K. Bechtel Specification No. 20557-G-001P, "Design Criteria Documents for Palisades Nuclear Plant Steam Generator Replacement Project," Revision 3, dated October 31, 1990, Paragraph 5.4.17.1.1, "Baseplate Design-General," specified that analyses must account for expansion anchor bolt flexibilities as applicable in Appendix B of the specification.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, Calculation MSH-PD-EB1-H3, "Pipe Support Design for Main Steam System," Revision 2, dated January 21, 1991, used a flexibility value derived from expansion anchor data which was not applicable to the four through-bolted one inch diameter rods attaching the baseplate to the structure.

- L. Bechtel Specification No. 20557-G-001P, "Design Criteria Documents for Palisades Nuclear Plant Steam Generator Replacement Project,"

Revision 3, Paragraph 4.4.1.4, "Stress Intensification Factors," specified that piping analysis should use the applicable ANSI B31.1 stress intensification factors. The ANSI B31.1 stress intensification factor (SIF) equation, taken from 1973 Edition with Summer of 1973 Addenda, stated that it was applicable only if certain field installation conditions were met.

Contrary to the above, Calculation SGRP-PDS-003, "Pipe Stress Analysis of Steam Generator E50A Blowdown Piping," Revision 5, dated August 21, 1990, utilized the ANSI B31.1 Code equation to calculate SIFs for several branch connections but did not specify nor verify that the Code specified conditions were met.

- M. The Palisades Nuclear Power Plant, UFSAR, Section 5.10.1.2, stated that pipe supports were designed using the criteria of the American Institute of Steel Construction (AISC) Specification, Seventh Edition, 1970. Part 4 of the AISC Specification for prequalified welded joints stated that fillet welds for skewed T-joints were limited to a minimum angle of 60° and that for angles less than 60°, the weld was considered a partial penetration groove weld.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, for Drawing No. M101-6010, "Pipe Support Number SGAB-PD-H9," Revision 3, dated November 10, 1990, Field Change Notice No. 293 resulted in a skewed T-joint weld angle of approximately 49° and the affected portion of the weld was not changed from a fillet weld to a partial penetration groove weld.

- N. The Palisades Nuclear Power Plant UFSAR, Section 5.7.4, "Seismic Analysis of CPCo Design Class 1 Piping," stated that use of the higher damping values, specified in the American Society of Mechanical Engineers (ASME) Section III, Code Case N-411, required adherence to the conditions specified in Regulatory Guide 1.84, Revision 24. Regulatory Guide 1.84, Revision 24, included the condition that analyses using these damping values had to employ current seismic spectra and procedure. The current Standard Review Plan, NUREG-0800, Revision 2, July 1981, stated that seismic analysis of equipment supported at two or more locations required the use of the upper bound envelope of the spectra at all support attachment points.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, Calculation SGRP-PDS-002, "Pipe Stress Analysis of Steam Generator E50B, Recirculation Piping Inside Containment," Revision 8, January 10, 1991, did not use upper bound envelope seismic response spectra values in that it utilized spectra from elevation 649 feet when the highest structural attachment point was on the steam generator at elevation 667 feet.

- O. Bechtel Specification No. 20557-G-001P, "Design Criteria for Palisades Nuclear Plant Steam Generator Replacement Project," Revision 3, dated October 31, 1990, Table B-4, as referenced in Paragraph 5.4.17.1 of the specification for capacity reduction due to shear cone overlap, stated that, if the spacing was smaller than specified, the allowable anchor bolt design capacity shall be reduced in proportion to the ratio for the spacing provided to the spacing required.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, Calculation SGRP-PD-H14, "Pipe Support Design for Steam Generator E50B Blowdown," Revision 2, dated January 31, 1991, failed to evaluate the allowable anchor bolt design capacity when the installed configuration had a spacing smaller than specified.

Also, contrary to the above, Revision 3, dated March 1, 1991, of the above listed calculation, did not reduce the anchor bolt capacity by the ratio of the spacing provided to the spacing required, but instead used a methodology based on "reserved" concrete concept which had no previously established basis.

- P. Palisades Administrative Procedure No. 9.11, "Engineering Analysis," Revision 4, dated December 28, 1989, Paragraph 6.4.2.b, "Detailed Technical Reviews," stated that detailed review shall verify the accuracy, completeness, and adequacy of the engineering analysis.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, the detailed technical review performed for Calculation EA-SC-90-083-01, "Change K-8 Turbine to Class II (675 psig/650°F)," Revision 2, dated November 27, 1990, did not consider the effects of the additional moments caused by the addition of an eccentric reducer nor the effect on the stress intensification factor for the eccentric reducer which was not defined in the piping design Code.

- Q. Palisades Specification C-173, "Technical Requirements for the Analysis and Design of Safety Related Pipe Supports," Revision 1, Paragraph 5.11.5, "Rod Hangers," required that when double rod hangers were used on a vertical riser pipe, the hanger components and supporting structures were to be designed to take the total design load on one side.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, Calculation EA-03340-HC12-H1, "Safeguards Room Containment Sump Drains Support Package," Revision 3, dated May 28, 1990, for a double rod hanger on a vertical riser pipe, evaluated



the hanger components and supporting structures with half of the total design load on each side.

- R. The Palisades Nuclear Power Plant UFSAR, Section 5.10.1.1, "CPCo Design Class 1 Piping," stated that piping was designed to USA Standard B31.1.0-1967, "Power Piping Code." Paragraph 127.4.8(c) of the Code stated that branch connections which abut the outside surface of the run wall shall be attached by means of full penetration welds.

Contrary to the above, adequate measures were not established to assure that design bases were correctly translated into design documents. Specifically, instructions given to the welder on Repair Inspection Checklists for welds No. 1 and No. 10 on Drawing 24804973, dated August 23, 1988, and welds No. 1 and No. 14 on Drawing 24804972, dated August 27, 1988, specified attachment welds for all four branch connection as fillet welds. Fillet welds are not full penetration welds.

- II. 10 CFR Part 50, Appendix B, Criterion V, required, in part, that activities affecting quality shall be accomplished in accordance with prescribed instructions and procedures.

- A. Palisades Administrative Procedure 3.03, "Corrective Action," Revision 4, October 8, 1988, Paragraph 6.5, "Completion of Corrective Actions," stated that if the corrective action taken differs from the proposed action specified by the Plant Review Committee (PRC), the event report shall be returned to the PRC for concurrence.

Contrary to the above, the corrective actions taken on December 27, 1990, for Event Report No. E-PAL-89-030P, in accordance with the licensee's response to the NRC dated December 18, 1989, differed from the actions specified by the PRC and the event report was not returned to the PRC for concurrence. Specifically, the proposed corrective action specified internal visual verification that four welds were full penetration welds, and the actual corrective action consisted of a documentation review and interviews with welding supervisors.

- B. Palisades Administrative Procedure 3.07, "Safety Evaluations," Revision 4, dated January 23, 1990, Paragraph 5.2.4, required that when answering each Safety Review question, the preparer list in the safety evaluation FSAR sections affected by the item under review.

Contrary to the above, in Safety Review, FS&L Log No. 90-0797, "Main Steam System," FC-911, Revision 0, dated September 26, 1990, the preparer did not list UFSAR Section 5.7.4, "Seismic Analysis of CPCo Design Class 1 Piping," and consequently failed to note that UFSAR Section 5.7.4.1 and Figure 5.7-27, were directly affected by this change to the facility.

- III. 10 CFR Part 50, Appendix B, Criterion XVI, required, in part, that measures be established to assure that nonconformances were promptly identified and corrected.
- A. Contrary to the above, the established measures were insufficient to assure that nonconformances were promptly identified and corrected in that the action taken on December 27, 1990, to resolve Event Report E-PAL-89-030P failed to include proper verification of Weld No. 14 on Drawing 24804972 and Weld No. 1 on Drawing 24804973 which were subsequently found to be nonconforming welds. Specifically, the licensee did not verify full weld penetration before closing out the event report.
  - B. Contrary to the above, during a maintenance outage in May 1990, the licensee identified a leaking weld in the containment spray header, which constituted a nonconformance to the American Society of Mechanical Engineers, Section XI, 1983 Edition, IWA 5250, "Corrective Measures," and failed to assure the nonconformance was promptly corrected. Specifically, the licensee returned the reactor to power with the weld in a nonconforming condition, and did not correct the leaking weld until approximately four months later.
  - C. Contrary to the above, corrective action taken in response to Palisades Quality Assurance (QA) Audits SGRP-SV-90-A1 and SGRP-SV-90-A2 conducted in February 1990 and July 1990 respectively, did not correct the identified design control program deficiencies in that the same types of design control deficiencies continued to be identified as documented in the Palisades QA Audit SGRP-SV-91-A1 conducted in January and February 1991. Specifically, QA Audit SGRP-SV-91-A1 documented over 100 comments, questions or concerns as examples of failing to meet ANSI N45.2.11 QA requirements for design of nuclear power plants.
- IV. 10 CFR 50.59, "Changes, Tests and Experiments," stated that licensees may make changes to the facility as described in the safety analysis report without prior Commission approval unless the proposed change involves an unreviewed safety question, including a reduction in the margin of safety defined in the basis for any technical specification.

Contrary to the above, in the change to the Final Safety Analysis Report (FSAR), dated October 24, 1980, the licensee reduced the margin of safety inherent in the original seismic design basis discussed in Palisades Technical Specification Paragraph 4.16 by increasing the allowable stress value for certain piping from 1.1Sy to 2.4Sh without prior NRC approval and has used this increased stress allowable in all piping analyses since that time.

This is a Severity Level III problem (Supplement I).  
Cumulative Civil Penalty - \$100,000 (assessed equally among the 24 violations).

Pursuant to the provisions of 10 CFR 2.201, Consumers 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 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 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.

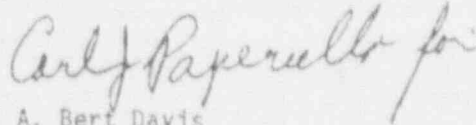
In requesting mitigation of the proposed penalty, the factors addressed in Section V.B of 10 CFR Part 2, Appendix C (1991), should be addressed. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 10 CFR 2.201, but may 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, 799 Roosevelt  
Road, Glen Ellyn, Illinois 60137, and a copy to the NRC Resident Inspector at  
the Palisades Nuclear Generating Plant.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Bert Davis  
Regional Administrator

Dated at Glen Ellyn, Illinois  
this 15th day of January 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30323

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Docket Nos. 50-413 and 50-414  
License Nos. NPF-35 and NPF-52  
EA 91-191

Duke Power Company  
ATTN: Mr. M. S. Tuckman  
Vice President  
Catawba Nuclear Station  
Post Office Box 256  
Clover, South Carolina 29710

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY - \$15,000  
(NRC INSPECTION REPORT NOS. 50-413/91-27 AND 50-414/91-27)

This refers to the Nuclear Regulatory Commission (NRC) inspection conducted by Mr. W. Orders on November 3 - December 10, 1991, at the Catawba Nuclear Station. The inspection included a review of the facts and circumstances related to five examples of failure to follow procedures, which were identified by your staff, associated with the control room ventilation system shared by both units, the Unit 2 safety injection system, and various Unit 2 containment penetrations. The report documenting this inspection was sent to you by letter dated December 31, 1991. As a result of this inspection, a violation of NRC requirements was identified and was considered to be a repeat violation involving configuration control. An enforcement conference was held on January 15, 1992, in the NRC Region II office to discuss the violation, and the adverse trend, the repetitive nature of these problems, the causes, and your corrective actions to preclude recurrence. A summary of this conference was sent to you by letter dated January 21, 1992.

The violation described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) involved five examples of failure to adequately implement plant procedures. The first example involved an incorrect breaker alignment in the Control Room Ventilation (VC) system which resulted in both trains of the VC system being inoperable for approximately 90 minutes on September 13, 1991. The second example involved a valve misalignment during testing of the 2A Safety Injection Pump which resulted in the pump experiencing runout flow on startup for testing on November 17, 1991. The third example involved an inappropriate verification of the 2B steam generator pressure operated relief valve (PORV) drain line isolation valve on November 16, 1991, as being closed when it was actually open. The fourth example involved an inappropriate verification of a 2C steam generator outlet header drain block valve on November 18, 1991, as being closed when it was actually open. The fifth example involved the verification of the "inside" containment isolation lineup on November 18, 1991, when verification of the "outside" containment isolation was required to be verified. During the period these failures occurred, Unit 1 was at full power and Unit 2 was in a refueling outage. This

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violation with five examples has been categorized at Severity Level IV in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991).

This current violation is similar to three previous violations identified since June 1991, involving configuration control and independent verification problems. The letter transmitting NRC Inspection Report Nos. 50-413/91-11 and 50-414/91-13 issued on June 26, 1991, discussed the NRC's concerns regarding continuing configuration control problems at the Catawba Nuclear Station and cautioned that more significant enforcement sanctions could result from your lack of effective corrective actions for configuration control problems. You were advised that an enforcement conference would not be conducted nor would a civil penalty be proposed for those violations. However, a management meeting was conducted in the Region II office on July 29, 1991, with you and your staff to discuss configuration control problems and the actions taken or proposed to correct those problems.

By letter dated July 30, 1991, NRC Inspection Report Nos. 50-413/91-15 and 50-414/91-15 was issued and it addressed a configuration control problem that occurred on June 4, 1991, involving the failure of control room operators to provide an adequate suction to an operating centrifugal charging pump. This was cited as a Severity Level IV violation and was included for discussion at the management meeting conducted on July 29, 1991.

By letter dated October 31, 1991, NRC Inspection Report Nos. 50-413/91-21 and 50-414/91-21 was issued and it addressed the NRC's concern regarding personnel failing to follow station procedures governing independent verification requirements when performing maintenance and surveillance activities. It was pointed out that repetitive examples of inadequate independent verification had been noted, and you were urged to apply additional management attention in that area.

In responding to these earlier violations both in correspondence and in your discussions at the July 29th management meeting, you outlined your proposed short-term and long-term corrective actions. Some short-term corrective actions focused on the individuals involved in the violations, and the long-term corrective actions included procedural and other administrative revisions, personnel training, communication enhancements, equipment improvements, and increased management involvement.

During the January 15, 1992 enforcement conference, you stated your belief that the broader problems with configuration control have been substantially improved, but acknowledged that a problem still exists with operator errors related to component positioning. You provided examples of your long-term corrective actions such as the Total Quality Management concept and The Journey To Excellence Program that are being implemented at the Catawba Nuclear Station. The NRC recognizes that some corrective actions, once implemented, will take considerable time to become fully effective and produce a permanent change. However, the trend of failure to establish adequate measures for plant configuration control is a significant and continuing concern to the NRC because of the number of occurrences of this violation in the recent past. A trend of recurring violations is of particular concern because the NRC expects licensees to learn from past failures and take corrective action to preclude recurrence.

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Although the NRC does not normally consider monetary civil penalties for Severity Level IV violations, the Enforcement Policy does provide for such penalties when it is evident that the licensee has not implemented effective corrective action for previous similar violations. The staff finds that such is the case in this situation and that a civil penalty is warranted.

To emphasize the importance of ensuring that developed and implemented corrective actions are effective in precluding the occurrence of similar violations, 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 (Notice) in the amount of \$15,000 for the Severity Level IV violation. The base value of a civil penalty for a Severity Level IV violation is \$15,000.

The escalation and mitigation factors in the Enforcement Policy were considered. After considering the fact that you identified the violations, the fact that proposed long-term corrective actions are open-ended and have yet to be fully defined or scheduled for implementation, and the fact that you have had poor prior performance in this area, on balance, no adjustment to the base civil penalty has been deemed appropriate.

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. Your response should also address two additional examples of configuration control problems that are documented in NRC Inspection Report Nos. 50-413/91-28 and 50-414/91-28 which was sent to you by letter dated February 5, 1992, and involved the operation of the 2B Containment Spray pump with no suction source and an inadvertent main turbine roll which occurred during post-modification testing. In addition, your response should include a description and schedule for the procedural changes that will implement the improved Duke Power Company (DP) guidance on independent verification that was discussed during the enforcement conference and actions being taken to emphasize to your staff the importance, from a safety perspective, of adhering to procedures, positive communications, and accurate records.

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.

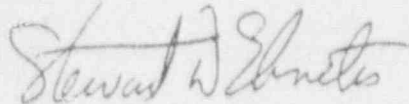
In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

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Should you have any questions concerning this letter, please contact us.

Sincerely,



Stewart D. Ebnetter  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed  
Imposition of Civil Penalty

cc w/encl:  
A. V. Carr, Esq.  
Duke Power Company  
422 South Church Street  
Charlotte, NC 28242-0001

J. Michael McGarry, III, Esq.  
Bishop, Cook, Purcell and Reynolds  
1400 L Street, NW  
Washington, D. C. 20005

North Carolina MPA-1  
Suite 600  
P. O. Box 29513  
Raleigh, NC 27626-0513

Heyward G. Shealy, Chief  
Bureau of Radiological Health  
South Carolina Department of Health  
and Environmental Control  
2600 Bull Street  
Columbia, SC 29201

Richard P. Wilson, Esq.  
Assistant Attorney General  
S. C. Attorney General's Office  
P. O. Box 11549  
Columbia, SC 29211

Michael Hirsch  
Federal Emergency Management Agency  
500 C Street, SW, Room 840  
Washington, D. C. 20472

cc w/encl cont'd: (see next page)



NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Duke Power Company  
Catawba Nuclear Station  
Units 1 and 2

Docket Nos. 50-413 and 40-414  
License Nos. NPF-35 and NPF-52  
EA 91-191

During an NRC inspection conducted on November 3 - December 10, 1991, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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:

Technical Specification 6.8.1 requires that written procedures be established, implemented and maintained covering the operation of the control room area ventilation system, maintaining containment integrity and performing surveillance tests on safety-related equipment:

Contrary to the above, procedures were not adequately implemented as evidenced by the following examples:

1. On September 13, 1991, at approximately 5:00 a.m., operators failed to follow Operations Management Procedure OMP2-18, "Tagout Removal and Restoration (R&R)," when R&R 01-2764 was implemented on breaker 1EKPG-21 as opposed to the intended breaker 1EKPG-22. This resulted in both trains of control room ventilation (VC) system being inoperable for a period of approximately one and a half hours.
2. On November 17, 1991, at approximately 4:00 a.m., an operator failed to follow procedure PT/12/A/4200/13H, "NI/NV Check Valve Movement Test," when he was aligning valves to support system testing and signed-off two valves 2NI 118A and 2NI 150B as being closed when they were actually open. This resulted in the train "A" safety injection (NI) pump experiencing runout flow on startup for the test.
3. On November 16, 1991, a non-licensed operator, when completing performance test PT/2/A/4200/02E, "Verification of Refueling Containment Integrity," verified with a sign-off that valve 2SV-66, a 2B steam generator power operated relief valve (PORV) drain line valve, was closed when it was actually open.
4. On November 18, 1991, a non-licensed operator when completing performance test PT/2/A/4200/02E, "Verification of Refueling Containment Integrity," verified with a sign-off that valve 2SM-103, a 2C steam generator outlet header drain valve, was closed when it was actually opened.

5. On November 18, 1991, operations personnel verified that the "inside" containment isolation lineup was correct instead of the "outside" containment isolation lineup as required by the operations support worksheet.

This is a Severity Level IV violation (Supplement I).  
Civil Penalty - \$15,000

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 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 V.B of 10 CFR Part 2, Appendix C (1991), 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 II, and a copy to the MRC Resident Inspector at the facility that is the subject of this Notice.

Dated at Atlanta, Georgia  
this 14th day of February 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30323

FEB 03 1992

Docket No. 50-269  
License No. DPR-38  
EA 91-167

Duke Power Company  
ATTN: Mr. J. W. Hampton  
Vice President  
Oconee Nuclear Station  
Post Office Box 1439  
Seneca, South Carolina 29679

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTIES -  
\$125,000 (INSPECTION REPORT NO. 50-269/91-32)

This refers to the Nuclear Regulatory Commission (NRC) inspection conducted by Mr. R. Crlenjak on November 5-7, 1991, at the Oconee Nuclear Station. This was a followup inspection to the Augmented Inspection Team (AIT) inspections conducted at the Oconee Nuclear Station during the period September 9-13, 1991, which reviewed the facts and circumstances associated with the degradation of decay heat removal on September 7, 1991, and during the period September 20-25, 1991, which reviewed the facts and circumstances associated with the over-pressurization of the Low Pressure Injection (LPI) System piping on September 19-20, 1991.

The AIT was chartered on September 9, 1991, and subsequently updated on September 20, 1991, to develop and validate the sequence of events associated with both the degradation of decay heat removal and the over-pressurization of LPI system piping. A Confirmation of Action Letter dated September 20, 1991, was forwarded to you which discussed certain actions you agreed to take as a result of the events. In addition, a management meeting with your staff was conducted in the Region II office on September 25, 1991, to discuss the events and on September 27, 1991, you satisfied those portions of the Confirmation of Action letter necessary to restart Unit 1. The report documenting the AIT inspection was sent to you by letter dated October 30, 1991. The followup inspection report was sent to you by letter dated December 6, 1991. As a result of inspection activities associated with these two events, significant failures to comply with NRC regulatory requirements were identified. On December 18, 1991, an enforcement conference was held to discuss the violations, their cause, and your corrective actions to preclude recurrence. A summary of this conference was sent to you by letter dated December 20, 1991.

The first event involves the degradation of decay heat removal that occurred on September 7, 1991, while unit 1 was in a refueling outage. A non-licensed operator reported from the reactor building to the control room that he observed a significant amount of steam coming from the reactor vessel area and that the water in the reactor vessel was churning. The operators in the control room subsequently noted that the LPI pump suction temperature was indicating abnormally high at 187 degrees F. They also noted that the Low Pressure Service Water flow to the decay heat cooler was indicating zero flow. The other LPI system train was immediately aligned and decay heat cooling was restored. Apparently, the "A" flow control valve controller on the Low Pressure Service Water system had been improperly set and this resulted in decay heat not being removed over a period of approximately four hours. Items A and B of the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice) are related to this event.

The second event involves the over-pressurization of LPI system piping that occurred on September 19-20, 1991, while unit 1 was in a refueling outage. Control room personnel failed to follow the start-up procedure which resulted in the over-pressurization of portions of the LPI system and the subsequent loss of approximately 12,400 gallons of reactor coolant to the auxiliary building floor. Items C and D of the enclosed Notice are associated with this event.

Item A involves five violations of failure to follow procedures and inadequate procedures that contributed to the September 7, 1991 loss of decay heat removal event. These violations include: 1) the inadequacy of an operating procedure for the LPI system that did not contain guidance for aligning the LPI system in the decay heat removal mode, 2) the inadequacy of a periodic instrument surveillance procedure that did not prescribe an adequate frequency for the recording of reactor coolant temperature to ensure that reactor coolant temperature was being maintained in accordance with all requirements (the requirement to record reactor coolant temperature every 12 hours contributed to the failure to detect reactor coolant temperature increase (110 degrees F to 187 degrees F) during a four-hour period), 3) the failure to follow temporary test procedure requirements not to exceed 140 degrees F maximum reactor coolant temperature during valve operation test and evaluation system (VOTES) testing which resulted in the temperature requirements being exceeded by 47 degrees F, 4) the failure to follow operational procedures that required control room personnel to ensure continuous safe shutdown conditions and maintenance of critical safety parameters which resulted in reactor coolant temperature increasing 77 degrees F above the expected temperature of 110 degrees F, and 5) the failure to follow procedures that required the utilization of effective communications during normal and abnormal plant operations and resulted in the Train A LPI system being placed in operation without coordination with VOTES testing personnel.

Item B involves the failure to identify the non-operational status of a nuclear safety-related system, specifically Train A of the LPI system. Consequently, when Train A of the LPI system was called into service to respond to an elevated Reactor Coolant System (RCS) temperature during the degradation of decay heat removal event, the system was lost because VOTES testing personnel,

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who had cycled one of the system valves closed interrupting the system flow, had not been informed by control room operators that testing should be stopped and that the system was being placed into service.

Item C involves three violations of failure to follow procedures that contributed to the September 19-20, 1991 LPI system piping over-pressurization event. These violations include: 1) the failure to follow an operational procedure which required the LPI system to be aligned in the "switchover" mode of operation prior to exceeding 125 psig RCS pressure, 2) the failure to follow operational procedures which required control room personnel to ensure continuous safe shutdown conditions and resulted in RCS pressure being increased above 125 psig which over-pressurized the LPI system causing a spill of 12,400 gallons of primary coolant to the auxiliary building floor, and 3) the failure to follow procedures that required the use of effective communications that resulted in a unit supervisor by-passing the control room senior reactor operator and directing a reactor operator to raise RCS pressure.

Item D involves the failure to implement adequate corrective action in that the corrective actions for the September 7, 1991, event were not effectively implemented to ensure that deficiencies in supervisor and operator responsibilities were corrected. Continuing lapses in the effective oversight of shift operations directly resulted in the September 19-20, 1991 event.

As to the first event, the NRC is concerned with the significant implications of Items A and B particularly when they are considered collectively. Considering the root causes of inadequate management oversight of shutdown operations, inappropriate execution of operator responsibilities, failure to follow procedures, and inadequate procedures, the overall implication is that operational discipline and protocol were neglected causing a fundamental lack of attention to shutdown operations. This is a significant safety concern. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), the violations in Items A and B are classified in the aggregate as a Severity Level III problem.

As to the second event, Items C and D are of concern to the NRC because they reflect a continuing failure to establish adequate management oversight of shutdown operations and appropriate execution of operator responsibilities during shutdown operations. The repeated failures to follow procedures and the failure to implement corrective action to prevent recurrence of these failures collectively represent a significant safety concern. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), the violations in Items C and D are classified in the aggregate as a Severity Level III problem.

To emphasize the importance of maintaining an appropriate safety perspective, continued awareness and control of critical plant operations in the shutdown configuration, adequate management oversight of shutdown configuration management activities, and the implementation of adequate corrective action, I have

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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 Penalties in the amount of \$125,000 for the two Severity Level III problems. The base value of a civil penalty for a Severity Level III problem is \$50,000.

The escalation and mitigation factors in the Enforcement Policy were considered for each Severity Level III problem.

With respect to the violations for the first event, neither mitigation nor escalation is considered appropriate for identification because although you eventually identified the event, it was of a self-disclosing nature and more importantly, you missed the opportunity to identify the reactor coolant temperature increase on September 7, 1991, which resulted from the inadequate monitoring of critical plant parameters while in a shutdown configuration. Neither mitigation nor escalation is considered appropriate for corrective action because your immediate corrective action to restore decay heat removal was rendered ineffective by the violations associated with the VOTES testing and mitigation for your corrective action to prevent recurrence is not appropriate because of the event of September 19, 1991, which was similar and therefore evidence of ineffective corrective action. Escalation of 50 percent is appropriate for past performance because of previous problems associated with outage activities. For example, a Notice of Violation (EA 91-049) was issued on June 4, 1991, for an event which occurred on March 8, 1991. Unit 3 was in a refueling outage when the Decay Heat Removal system was lost for approximately 18 minutes due to cavitation of the operating LPI pump caused by a rapid primary system water loss. This resulted because a blank flange had been erroneously installed on an LPI system emergency sump suction line. The other factors in the Enforcement Policy were considered and no further adjustment to the base civil penalty is considered appropriate. Therefore, based on the above, the base civil penalty for this problem has been increased by 50 percent.

With respect to the violations for the second event, neither mitigation nor escalation is considered appropriate for identification based on the self-disclosing nature of the violations. Mitigation of the base civil penalty by 50 percent is appropriate for your corrective actions following this event. Those actions to prevent recurrence included the revision of management directives defining the roles and responsibilities of operations personnel and the supplemental training to licensed operators for procedures used during shutdown, startup, and prolonged operation at cold shutdown. Escalation of the base civil penalty by 50 percent is appropriate for past performance based on the continuing nature of problems in outage activities and for previous problems associated with corrective action. For example, a Notice of Violation and Proposed Civil Penalty (EA 90-119) was issued on August 16, 1990, for failure to correct a deficiency in the Penetration Room Ventilation System. The other factors in the Enforcement Policy were considered and no further adjustment to the base civil penalty is considered appropriate. Therefore, based on the above, a base civil penalty for this problem is being proposed.

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During the enforcement conference there were discussions regarding an apparent violation concerning your Emergency Implementing Procedures. The specific issue was whether an Unusual Event should have been declared when it was discovered that the decay heat removal capability was degraded. After considering all the available information, we have decided that no Notice of Violation will be issued.

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.

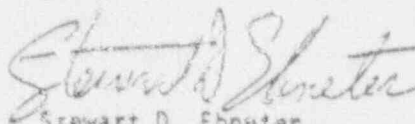
To emphasize the critical importance of licensed operator responsibilities inherent in 10 CFR Part 55 licenses, it is my intent to meet with the licensed operators at the Oconee Nuclear Station. I have directed my staff to make the appropriate arrangements for such a meeting.

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

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Should you have any questions concerning this letter, please contact us.

Sincerely,

  
Stewart D. Ebner  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed  
Imposition of Civil Penalty

cc w/encl:  
A. V. Carr, Esq  
Duke Power Company  
422 South Church Street  
Charlotte, NC 28242-0001

cc w/encl cont'd: (see next page)



NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTIES

Duke Power Company  
Oconee Nuclear Station  
Unit 1

Docket No. 50-269  
License No. DPR-38  
EA 91-167

During an NRC inspection conducted on November 5-7, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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 penalties are set forth below:

- A. Technical Specification 6.4.1 requires that the station be operated and maintained in accordance with approved procedures.

10 CFR Part 50, Appendix B, Criterion V (Instructions, Procedures, and Drawings), and the licensee's accepted Quality Assurance Program (Duke Power Company, Topical Report, Quality Assurance Program, Duke-1-A), Section 17.2.5 (Instructions, Procedures, and Drawings), require that activities affecting quality be prescribed by procedures of a type appropriate to the circumstances and that such activities be accomplished in accordance with these procedures.

The licensee failed to develop adequate procedures and failed to adhere to established procedures, as evidenced by the following violations:

1. TT/1/A/251/11, "VOTES Testing of LPI Header MOVs," step 12.1.2, references OP/1/A/1104/04, "Low Pressure Injection System," for aligning the low pressure injection system in the decay removal mode.

Contrary to the above, OP/1/A/1104/04, as referenced in TT/1/A/251/11, was inadequate in that it did not contain guidance for aligning the low pressure injection system in the decay heat removal mode. Because of this, on September 7, 1991, the low pressure injection system was aligned in the decay heat removal mode without admitting cooling water to the decay heat cooler. This resulted in an unmonitored reactor coolant system heat-up.

2. PT/1/A/600/01, "Periodic Instrument Surveillance," required periodic verification for proper operation of various instruments and systems including reactor coolant system temperature at shift change (every 12 hours).

Contrary to the above, the PT/1/A/500/01 requirement of recording reactor coolant temperature at shift change (every 12 hours) was inadequate in that the time interval was too long to ensure that all applicable requirements were being met. Because of this inadequacy, on September 7, 1991, reactor coolant temperature increased from approximately 110 degrees F to 187 degrees F over approximately a four-hour period without being detected by the control room operators. This resulted in reactor coolant exceeding the 140 degree F maximum temperature specified in TT/1/A/251/11, "VOTES Testing of LPI Header MOVS."

3. TT/1/A/251/11, "VOTES Testing of LPI Header MOVS," specifies in subsection 6.3 of section 6.0, "Limit and Precaution that reactor coolant temperature is not to exceed 140 degrees F during the performance of the VOTES test.

Contrary to the above, on September 7, 1991, activities were not accomplished in accordance with this procedure in that the 140 degrees F maximum reactor coolant temperature was exceeded by 47 degrees F.

4. Operations Management Procedure (OMP) 2-1, "Duties and Responsibilities of Reactor Operators, Non-Licensed Operators, and the Senior Reactor Operator in the Control Room," requires the reactor operator to provide surveillance of operations and instrumentation monitored from the control room to ensure the safe operation of the unit. During shutdown periods, the reactor operator shall ensure that continuous safe shutdown conditions exist. OMP 2-1 also requires that the control room senior reactor operator's primary concern is to ensure the safe operation of the unit from the control room.

Contrary to the above, on September 7, 1991, the control room reactor operators did not ensure that continuous safe shutdown conditions existed in that, over a period of four hours, reactor coolant system temperature increased approximately 77 degrees F when it was expected to be maintained constant at 110 degrees F. Additionally, the control room senior reactor operator's primary responsibility of ensuring the safe operation of the unit was not met in that critical safety parameters were not monitored by subordinate reactor operators.

5. Operations Management Procedure (OMP) 1-18, "Communications and EOP Implementation Standard," requires that all operations personnel are responsible for ensuring that effective communication is used during normal and abnormal plant operations. Additionally, when performing a normal evolution, that is, a process that changes the status of a system in the plant, a brief explanation of the evolution, its purpose, action to be taken, and desired outcome shall be given.

Contrary to the above, on September 7, 1991, communications were ineffective in that, in response to the reactor coolant system heat-up, when the control room operators elected to place the A Train low pressure injection system in operation, the operators did not notify the VOTES test personnel that the train had been placed in service. This resulted in the subsequent loss of decay heat cooling when the test personnel cycled one of the system valves closed, interrupting system flow.

- B. 10 CFR Part 50, Appendix B, Criterion XIV (Inspection Test and Operating Status), and the licensee's accepted Quality Assurance Program (Duke Power Company, Topical Report, Quality Assurance Program, Duke-1-A), Section 17.2.14 (Inspection Test and Operating Status), require that, in order to assure that equipment status be clearly evident and to prevent inadvertent operation, nuclear safety-related structures, systems and components which are in an other than operational status be identified as such.

Contrary to the above, on September 7, 1991, equipment status was not evident for Train A of the low pressure injection system. The system was not in an operational status (the system was being tested) and was not identified as such. The system was lost soon after being called into service for decay heat removal in response to the elevated reactor coolant system temperature. System flow was lost due to continued testing of the train when a valve was cycled shut by test personnel who were not in contact with the control room.

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

Cumulative Civil Penalty - \$75,000 (assessed equally among the six violations under Items A and B.)

- C. Technical Specification 6.4.1 requires that the station be operated and maintained in accordance with approved procedures.

10 CFR Part 50, Appendix B, Criterion V (Instructions, Procedures, and Drawings), and the licensee's accepted Quality Assurance Program (Duke Power Company, Topical Report, Quality Assurance Program, Duke-1-A), Section 17.2.5 (Instructions, Procedures, and Drawings), require that activities affecting quality be prescribed by procedures of a type appropriate to the circumstances and that such activities be accomplished in accordance with these procedures.

The licensee failed to develop adequate procedures and failed to adhere to established procedures, as evidenced by the following violations:

1. OP/1/A/1102/01, "Unit Startup From Cold Shutdown to RCS Temperature and Pressure of 250 degrees F and 350 psig," step 2.5, references OP/1/A/1104/04, "Low Pressure Injection System," which requires that the low pressure injection system be aligned in the "switchover mode" of operation as outlined in enclosure 3.9, "LPI ES to Switchover Mode Valve Checklist," prior to exceeding 125 psig reactor coolant system pressure.

Contrary to the above, on September 19, 1991, activities were not accomplished in accordance with this procedure in that the low pressure injection system was not aligned in the "switchover" mode prior to exceeding 125 psig reactor coolant system pressure. This resulted in the overpressurization of portions of the low pressure injection system and the loss of approximately 12,400 gallons of primary coolant from the system.

2. Operations Management Procedure (OMP) 2-1, "Duties and Responsibilities of Reactor Operators, Non-Licensed Operators, and the Senior Reactor Operator in the Control Room," requires the reactor operator to provide surveillance of operations and instrumentation monitored from the control room to ensure the safe operation of the unit. During shutdown periods, the reactor operator shall ensure that continuous safe shutdown conditions exist. OMP 2-1 also requires that the control room senior reactor operator's primary concern is to ensure the safe operation of the unit from the control room.

Contrary to the above, on September 19-20, 1991, the control room reactor operators did not ensure that continuous safe shutdown conditions existed, and the control room senior reactor operator's primary responsibility of ensuring the safe operation of the unit was not met in that procedures were not followed and reactor system pressure was increased above 125 psig, overpressurizing the low pressure injection system and spilling 12,400 gallons of primary coolant to the auxiliary building floor. Specifically, 1) the control room senior reactor operator was distracted by the outage workload and was not fulfilling his responsibilities pertaining to monitoring overall plant operations and ensuring procedures were followed, 2) the unit supervisor was not sufficiently involved in the control room routine on the day of the event so as to have an understanding of the impact of outage work on operator performance and plant operations, 3) there was inadequate oversight of control room operations by the unit supervisor due to his lack of control room tours during the subject shift, and 4) the reactor operator commenced the reactor coolant system pressurization without first reviewing the procedure.

3. Operations Management Procedure (OMP) 1-18, "Communications and EOP Implementation Standard," requires that all operations personnel are responsible for ensuring that effective communication is used during normal and abnormal plant operations. Additionally, when performing a normal evolution, that is, a process that changes the status of a system in the plant, a brief explanation of the evolution, its purpose, action to be taken, and desired outcome shall be given.

Contrary to the above, on September 19, 1991, communications were ineffective and a brief of the evolution was not conducted in that the unit supervisor by-passed the control room senior reactor operator when communicating by telephone to the reactor operator to raise reactor coolant system pressure. Additionally, the unit supervisor made the communication without reviewing plant status and conducting a briefing with the operating staff. This resulted in the low pressure injection system not being aligned in the "switchover" mode prior to raising reactor coolant system pressure above 125 psig.

- D. 10 CFR Part 50, Appendix B, Criterion XVI (Corrective Action), and the licensee's accepted Quality Assurance Program (Duke Power Company, Topical Report, Quality Assurance Program, Duke-1-A), Section 17.2.16 (Corrective Action), collectively require that conditions adverse to quality be promptly identified and corrected, and that station personnel are responsible for taking appropriate corrective action whenever any deficiency in the implementation of the requirements of the (operational quality assurance) program is determined.

Contrary to the above, corrective action implementation was inadequate in that corrective actions taken by facility management in response to the September 7, 1991 reactor coolant system heat-up event were not effectively implemented to ensure that deficiencies in operator and supervisor responsibilities and watchstanding practices were corrected. Specifically, station management did not succeed in ensuring that all operations personnel understood station management's expectations with respect to the corrective action. This failure led to continued lapses in the overview of shift operations, in particular, the lack of the unit supervisor and control room senior reactor operator overview of plant status, which directly resulted in the September 19-20, 1991, over-pressurization of the low pressure injection system and subsequent spill of 12,400 gallons of primary coolant to the auxiliary building.

This is a Severity Level III problem (Supplement I).  
Cumulative Civil Penalty - \$50,000 (assessed equally among the four violations under Items C and D.)

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 penalties, the factors addressed in Section V.B of 10 CFR Part 2, Appendix C (1991), 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.

Notice of Violation

- 7 -

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. 20535 with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region II, and a copy to the NRC Senior Resident Inspector at the Oconee Nuclear Station.

Dated at Atlanta, Georgia  
this 3<sup>rd</sup> day of February 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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

DEC 12 1991

Docket Nos. 50-498  
50-499  
License Nos. NPF-76  
NPF-80  
EA 91-055

Houston Lighting & Power Company  
ATTN: Donald P. Hall, Group  
Vice President, Nuclear  
P.O. Box 1700  
Houston, Texas 77251

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY - \$50,000  
(NRC INSPECTION REPORT NOS. 91-12 & 91-23)

This is in reference to NRC inspections conducted April 4-5, July 23-26, and September 10-12, 1991, and to the enforcement conference conducted at the South Texas Project Electric Generating Station (STP) facility on October 22, 1991, with you and other representatives of Houston Lighting & Power Company.

The inspections, which were documented in reports issued on April 29, 1991, and October 11, 1991, were conducted to review the results of HL&P's investigations into a number of allegations and concerns involving the integrity of individuals and the accuracy of records associated with safety-related activities at STP.

As the inspection reports indicated, HL&P's investigative findings led NRC to conclude that several willful violations of NRC requirements had occurred between October 1990 and January 1991. These include: 1) two cases in which contract employees falsified documents associated with preventive maintenance on safety-related valves; 2) one instance of a false time on an entry in a control room log; 3) one instance of an individual willfully violating the provisions of a radiation work permit; and 4) one instance of an individual falsifying a quality assurance report.

Each of these incidents was identified either as the result of an individual bringing forward concerns about another individual's conduct, or as a result of HL&P's initiation of investigations into integrity issues. In addition, HL&P promptly informed NRC when allegations of improprieties were received, kept NRC informed of the results of its investigations, and took appropriate disciplinary action in each case where improprieties were confirmed.



Considering HL&P's actions on items 2, 3, and 4 above, and the low safety significance of these issues, the NRC has decided to take no enforcement action on those matters. In NRC's view, these were isolated events committed by nonsupervisory employees acting on their own, and were not significant from a safety perspective. Moreover, these matters were thoroughly pursued by HL&P as part of its self-initiated and extensive program to instill in STP employees a higher degree of professionalism and improved performance.

The circumstances surrounding the two instances of falsification of safety-related maintenance records addressed in Item 1 above, however, are of higher concern and cause NRC to attach greater significance to these violations. In both instances, one occurring in October 1990 and the second in January 1991, craft workers were directed by an individual with supervisory authority (foreman) to falsify records to indicate that all packing rings in each of the safety-related valves had been replaced when, in fact, fewer than half of the packing rings had been replaced. The fact that the valves involved in these events, one in the safety injection system and one in the reactor coolant purification system, were not found to leak and were not otherwise compromised is of limited relevance. The issue here is that supervisory personnel showed no regard for whether safety-related hardware was maintained in accordance with written work instructions, were willing to falsify related documents, and would direct other employees to engage in wrongful acts.

NRC also notes that the individual who brought the January 1991 incident to the attention of the Bechtel Energy Corporation's on-site management was first threatened by them with a layoff, ostensibly for his unwillingness to transfer to the night shift, and later fired, apparently for his involvement in the incident. When informed of these matters by this individual, HL&P took prompt action to correct this situation, including finding a position in the contract organization for this individual and removing the responsible Bechtel managers from the site.

In addition, this wrongdoing occurred during an activity that was being carried out by employees of Bechtel under contract to HL&P, and occurred at a time when HL&P had reduced its direct involvement in this activity. In this regard it is noteworthy that HL&P's own investigation identified that prior to the reduction of HL&P's involvement in this activity, HL&P supervisors reported that they served as a buffer between the craft workers and the production pressure of Bechtel management. Without this buffer there apparently was an atmosphere in the Work Backlog Reduction group that productivity was more important than the quality of work performed. Apparently, this was either not made known to HL&P management or, if known, not acted upon until these incidents occurred.

The violations at issue in this case are further examples of the need for licensees to ensure that all activities, whether conducted by licensee employees or contract employees, are carried out in an environment in which safety and quality are emphasized, and to ensure that all activities are completed in accordance with all NRC requirements.

The intentional falsification of records associated with safety-related maintenance is a significant regulatory concern. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), these violations are classified in the aggregate as a Severity Level III problem.

To emphasize the importance of ensuring that records kept of the conduct of licensed activities are complete and accurate and that licensed activities are conducted in strict compliance with regulatory requirements, 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 (Notice) in the amount of \$50,000 for the Severity Level III problem.

The base value of a civil penalty for a Severity Level III problem is \$50,000. The escalation and mitigation factors in the Enforcement Policy were considered. The licensee identified the violations and took prompt and extensive corrective actions, including responding aggressively to the examples of willful violations. Actions taken include not only disciplinary action against the involved individuals and resolution of hardware issues, but also increased emphasis in training to enhance employee appreciation for accuracy of records and integrity in the conduct of safety-related work at STP, as well as initiatives to improve HL&P's oversight of work performed by contractors. As to multiple examples, there were two examples of the same willful violation and the second example gave indications of an attitude that was ingrained in an organization, i.e., the wrongdoing was perpetuated by an individual who learned it from his predecessor and passed it on to his subordinates. On balance, NRC has concluded that the base civil penalty of \$50,000 is warranted.

HL&P is required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing its response. In its response, HL&P should document the specific actions taken and any additional actions it plans to prevent recurrence. After reviewing your response to the 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.

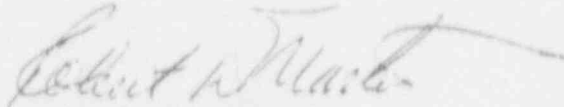
In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

Houston Lighting &  
Power Company

- 4 -

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,



Robert D. Martin  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed Imposition  
of Civil Penalty

cc:  
cc w/encl:  
Houston Lighting & Power Company  
ATTN: William J. Jump, Manager  
Nuclear Licensing  
P.O. Box 289  
Wadsworth, Texas 77483

City of Austin  
Electric Utility Department  
ATTN: J. C. Lanier/M. B. Lee  
P.O. Box 1088  
Austin, Texas 78767

City Public Service Board  
ATTN: R. J. Costello/M. T. Hardt  
P.O. Box 1771  
San Antonio, Texas 78296

Newman & Holtzinger, P. C.  
ATTN: Jack R. Newman, Esq.  
1615 L Street, NW  
Washington, D.C. 20036

Central Power and Light Company  
ATTN: D. E. Ward/T. M. Puckett  
P.O. Box 2121  
Corpus Christi, Texas 78403

INPO  
Records Center  
1100 Circle 75 Parkway  
Atlanta, Georgia 30339-3064

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Houston Lighting & Power Company  
South Texas Project Electric  
Generating Station

Docket Nos. 50-498  
50-499  
License Nos. NPF-76  
NPF-80  
EA 91-055

During NRC inspections conducted April 4-5, July 23-26 and September 10-12, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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(a) states, in part, that information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the licensee shall be complete and accurate in all material respects.

1. Contrary to the above, as of October 1990, records of preventive maintenance on a safety-related valve, which are required by the Commission's regulations to be maintained by the licensee, were not complete and accurate in all material respects. Specifically, records of preventive maintenance on valve 2R172XCV0091A, a valve in the reactor coolant purification system, were falsified to indicate that all 15 packing rings were replaced as required by the work request when in fact only 7 of the valve's packing rings had been replaced.
2. Contrary to the above, as of January 1991, records of preventive maintenance on a safety-related valve, which are required by the Commission's regulations to be maintained by the licensee, were not complete and accurate in all material respects. Specifically, records of preventive maintenance on valve C1SIMOV0039C, a valve in the safety injection system, were falsified to indicate that all 14 packing rings had been replaced as required by the work request when in fact only 5 of the valve's packing rings had been replaced.

This is a Severity Level III problem (Supplement VII).

Cumulative Civil Penalty - \$50,000 (assessed equally between the two violations).

Pursuant to the provisions of 10 CFR 2.201, Houston Lighting & 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 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 step 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 V.B of 10 CFR Part 2, Appendix C (1991), 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 IV, and a copy to the NRC Resident Inspector at South Texas Project.

Dated at Arlington, Texas  
this 12th day of December 1991



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

February 21, 1992

Docket Nos. 50-277 and 50-278  
License Nos. DPR-44 and DPR-56  
EA 92-001

Philadelphia Electric Company  
ATTN: Mr. Dickinson M. Smith  
Senior Vice President-Nuclear  
Nuclear Group Headquarters  
Correspondence Control Desk  
Post Office Box 195  
Wayne, Pennsylvania 19087-0195

Dear Mr. Smith:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTIES - \$285,000  
(NRC Combined Inspection Report Nos. 50-277/91-33; 50-278/91-33)

This letter refers to the NRC inspection conducted on November 5 through December 13, 1991, at the Peach Bottom Atomic Power Station, Delta, Pennsylvania. The inspection report was sent to you on December 24, 1991. During the inspection, the inspectors reviewed the circumstances associated with a violation of a Technical Specification Limiting Condition for Operation (LCO) which occurred at Unit 3 involving, in part, the inoperability of the automatic Depressurization Subsystem (ADS). The violation was identified by a member of your staff and reported to the NRC. During the inspection, one other violation of NRC requirements was identified, involving the failure to identify and correct a similar condition at Unit 2. On January 17, 1992, an enforcement conference was conducted with you and members your staff to discuss the violations, their causes and your corrective actions.

The ADS at Unit 3 was inoperable between December 1989 and September 14, 1991, because the related solenoid operated valves (SOV), electrical cables, and splices, for the five ADS safety relief valves (SRV), had experienced thermal degradation, and the environmental qualification had expired. The thermal insulation surrounding the eleven SRVs, including the five dedicated to ADS, had been improperly installed during the prior refueling outage. As a result, a high temperature environment was created in the area of the SOVs, the electrical cables, and the splices, resulting in the expiration of the component qualification shortly after the startup in December 1989, and causing the thermal degradation.

The NRC is concerned that adequate control was not provided during the installation of the insulation during that refueling outage in 1989. In particular, there appeared to be insufficient licensee planning, oversight, and inspection of the installation activities. Maintenance packages generated

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To complete the replacement and installation of the SRV insulation, did not specify the use of appropriate drawings or instructions regarding how the insulation was to be installed and inspected. The procedure that was employed did not contain adequate guidance. Although this activity required the performance of post-maintenance inspection and a special procedure (SP) to ensure that all piping insulation inside the drywell was repaired, replaced, and properly secured before the plant was restarted, your staff did not identify the problem with SRV insulation. Further, during the Unit 3 mid-cycle outage in October 1990, your staff removed and replaced an SRV. At that time, although the insulation for that valve was improperly installed, and the condition was questioned by a maintenance worker, an adequate investigation was not performed and the insulation was reinstalled to the incorrect as-found condition.

In addition to the above, the NRC is also concerned with your failure, in view of the findings at Unit 3, to adequately evaluate and correct a similar problem at Unit 2 until after the condition was identified by an NRC inspector in December 1991. Although your staff did perform a visual inspection of the Unit 2 SRV thermal insulation during the unplanned outage on October 17, 1991, your staff concluded that the Unit 2 SRV insulation had been installed correctly, and documented this conclusion in Licensee Event Report (LER) 3-91-017. However, on December 12, 1991, an NRC inspector, while performing a tour of the Unit 2 and 3 drywells, found that the insulation on one of the Unit 2 ADS valves was improperly installed, in that the end of the SRV facing the solenoid valve and cabling was not completely covered.

The ADS is designed to serve the important safety function of depressurizing the reactor vessel in the event of the failure of the High Pressure Coolant Injection (HPCI) system, so that in the event of a small to intermediate sized loss of coolant accident (LOCA), the low pressure emergency core cooling systems (ECCS) can operate to inject water into the vessel and mitigate the consequences of the accident. The ADS is required to be operable whenever there is irradiated fuel in the reactor vessel and the reactor steam pressure is greater than 105 psig. The Technical Specification LCD does permit one valve in the ADS to be inoperable, for a period of up to 7 days, provided that the HPCI subsystem is operable. However, when reviewing the availability of the HPCI system during the operating cycle, your staff discovered that the HPCI subsystem was also out of service for a total of 510 hours.

The inoperability of the ADS for an extended period (Violation A), coincident with an inoperable HPCI subsystem for about 5.0 hours during that time, represents a significant safety concern involving the loss of safety functions of these two subsystems. As a result, the ability of the plant to automatically cope with a small to intermediate break LOCA was lost. This condition, as well as your failure to properly identify and correct a similar insulation error at Unit 2 until informed of the condition by the NRC inspector (Violation B), represent significant regulatory concerns. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), Violations A and B have been categorized at a Severity Level II and III, respectively. The violations are described in the enclosed Notice.



The NRC recognizes that corrective actions have been taken or planned to prevent recurrence of these violations. These actions, which were described at the enforcement conference, as well as in a Licensee Event Report, included: (1) the replacement of all the Unit 3 SOVs and cables on each of the SRVs; (2) proper reinstallation of the thermal insulation after the component repairs were completed; (3) revision of the applicable maintenance procedure; (4) planned revision of appropriate training to add guidance concerning insulation; and (5) evaluation of Units 2 and 3 to identify any similar problems. The NRC also recognizes that prior to the discovery of this event, actions had been taken to improve your ability to promptly identify and correct conditions adverse to quality. These actions included the assignment of a senior engineer as event investigation coordinator; an increase in the staff dedicated to that responsibility; strengthening of applicable procedures and training; and reduction in the backlog of outstanding event reports. However, these corrective actions, including those taken prior to the discovery of the ADS inoperability, were not considered prompt and extensive in that they did not result in the immediate identification and correction of the condition that existed at Unit 2.

To emphasize the importance of ensuring that the reactor is (1) operated safely and in accordance with the Technical Specifications; and (2) conditions adverse to quality, when they exist, are promptly identified and corrected, 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 Penalties (Notice) in the cumulative amount of \$285,000 for the violations set forth in the enclosed Notice.

The base value of a civil penalty for a Severity Level II violation is \$80,000. The escalation and mitigation factors set forth in the enforcement policy were considered and the civil penalty for Violation A was escalated by 100 percent. Although the violation was identified and reported to the NRC by your staff, no adjustment was applied for this factor since you had prior opportunities to discover and correct it sooner. No escalation or mitigation was judged warranted for your corrective actions. Though your long term actions appear acceptable, your immediate actions were unacceptable since they did not result in the identification and correction of the similar problem at Unit 2 (which constitutes the second violation). Likewise, no escalation or mitigation was deemed warranted based on your overall past performance. You received a Category 2 rating in the operations area during the last SALP period. A 100 percent escalation of the base civil penalty was applied based on the added significance of the duration of the inoperable ADS system - essentially, an entire operating cycle. The other factors were considered, and no further adjustments were made.

The base civil penalty for a Severity Level III violation is \$50,000. The escalation and mitigation factors set forth in the enforcement policy were considered and the civil penalty for Violation B was escalated by 150 percent. The civil penalty was escalated by 50 percent because an NRC inspector identified the ADS insulation deficiency at Unit 2 about two months after you specifically inspected for that condition. A 50 percent mitigation was applied

for the comprehensive corrective actions undertaken, as discussed above, once you were put on notice of the problem at Unit 2. The base civil penalty was increased 100 percent for your poor past performance in the corrective action area, as exemplified by a Severity Level III violation and civil penalty issued in 1990 (see EA 90-105) and four Severity Level IV violations in the corrective actions area. An additional 50 percent increase was deemed appropriate based on the two month duration that the deficient condition existed after you should have reasonably identified the Unit 2 ADS insulation problem. The other factors were considered and no further adjustments were made.

Finally, we note our concerns that the lack of timely and effective corrective action at issue in Violation B is not an isolated issue. As indicated above, the civil penalty for this item was escalated due to your poor past performance, including EA 90-105 relating to the emergency service water issue. We have now completed our inspection of your corrective action for the emergency service water system. While we do not intend to issue another citation for inadequate corrective action, we are concerned that your actions were not particularly aggressive in the followup and resolution of this potential safety deficiency, which is the heart of Violation B. Thus, we emphasize again the need to implement an effective program for the identification and resolution of deficiencies.

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 and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,



Thomas T. Martin  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed Imposition  
of Civil Penalties

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTIES

Philadelphia Electric Company  
Peach Bottom Units 2 and 3  
Delta, Pennsylvania

Docket Nos. 50-277 and 50-278  
License Nos. DPR-44 and DPR-56  
EA 92-001

During an NRC inspection conducted on November 5 through December 13, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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:

- A. Unit 3 Technical Specification Limiting Condition for Operation (LCO) 3.5.E.1 requires that the Automatic Depressurization Subsystem be operable whenever there is irradiated fuel in the reactor vessel and the reactor pressure is greater than 105 psig and prior to a startup from a Cold Condition, except as specified in 3.5.E.2 below.

Unit 3 Technical Specification LCO 3.5.E.2 requires that from and after the date that one valve in the Automatic Depressurization Subsystem is made or found to be inoperable for any reason, continued reactor operation is permissible only during the succeeding seven days, unless such valve is sooner made operable, provided that during such seven days the HPCI subsystem is operable.

Unit 3 Technical Specification LCO 3.5.E.3 requires that if the requirements of 3.5.E cannot be met, an orderly shutdown shall be initiated and the reactor pressure shall be reduced to at least 105 psig within 24 hours.

Contrary to the above, between December 7, 1989 (shortly after plant startup from a refueling outage) and September 14, 1991 (when the plant was shutdown for another refueling outage), during which time the reactor was operating and reactor pressure was greater than 105 psig, the Automatic Depressurization Subsystem (ADS) was inoperable. During that time, the HPCI subsystem was also inoperable for a total of 510 hours, and the reactor was not shutdown and reactor pressure was not reduced to at least 105 psig. The ADS was inoperable due to incorrectly installed thermal insulation around the ADS safety relief valves, resulting in significant degradation of the associated solenoid operated valves, cables, and splices, and in the ability of the ADS valves to perform their intended safety function.

This is a Severity Level II violation (Supplement I).  
Civil Penalty - \$160,000.

- B. 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 and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the cause of the condition shall be determined and documented, and corrective action shall be documented and taken to preclude repetition.

Contrary to the above, although a significant condition adverse to quality was identified in September 1991, involving the degradation of all five of the Unit 3 ADS valves because of improper insulation, adequate corrective actions were not taken to assure that a similar significant condition adverse to quality did not also exist at Unit 2 and to correct such condition if it existed. Specifically, although the licensee performed a visual inspection of the Unit 2 SRVs on October 17, 1991 to verify correct insulation, this inspection was inadequate in that it did not identify that insulation for the "C" SRV (an ADS valve) was improperly installed. As a result, the unit was returned to power operations without correcting this condition adverse to quality.

This is a Severity Level III Violation (Supplement I).  
Civil Penalty - \$125,000.

Pursuant to the provisions of 10 CFR 2.201, Philadelphia 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 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 V.B of 10 CFR Part 2, Appendix C (1992), 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 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 I, 475 Allendale Road, King of Prussia, Pennsylvania 19406 and a copy to the Senior Resident Inspector, Peach Bottom.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas T. Martin  
Regional Administrator

Dated at King of Prussia, Pennsylvania  
this 21st day of February 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION V

1450 MARIA LANS  
WALNUT CREEK, CALIFORNIA 94596-5368

Docket No. 50-344  
License No. NPF-1  
EA Nos. 91-190 and 91-181

FEB 14 1992

Portland General Electric Company  
ATTN: Mr. James E. Cross  
Vice President and  
Chief Nuclear Officer  
121 SW Salmon Street  
Portland, Oregon 97204

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY - \$100,000  
(NRC INSPECTION REPORT NOS. 50-344/91-38, 50-344/91-34 AND 50-344/91-36)

This refers to NRC Inspection Reports in three areas, including:

- 50-344/91-34, issued on December 17, 1991, documenting an NRC inspection conducted from September 15 through November 25, 1991, concerning valve maintenance;
- 50-344/91-38, issued on December 20, 1991, documenting an inspection conducted from December 2 through 16, 1991, concerning radiation protection; and
- 50-344/91-36, issued on January 22, 1992, documenting an inspection conducted from October 21 through December 5, 1991, concerning fire protection.

The enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) concerns your failure to implement adequate corrective actions in the three program areas addressed by the above referenced inspections, as characterized by six specific examples contained in the Notice. Had the identified issues been evaluated properly and had earlier corrective actions been comprehensive, it is unlikely that these problems would have persisted the length of time they did.

The violations cited in the Notice were identified by the NRC. The valve maintenance and radiation protection issues were discussed with you and your staff during an enforcement conference held in the Region V office on January 7, 1992. The fire protection issue was discussed with you during a management meeting in the Region V office on August 6, 1991. On February 4, 1992 you waived the need for an enforcement conference on the fire protection issue, since the issue had been fully discussed at the August 6 meeting.

The first example cited in the Notice relates to lack of adequate corrective action to ensure proper setting of pressure safety valves. PGE failed to ensure that pressure safety valves were in a test and inspection program, even though this issue was identified in a 1987 NRC Notice of Violation.

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FEB 14 1991

The second example in the Notice involves PGE's failure to implement adequate corrective actions to assure correct pressure safety valve control ring settings, despite several opportunities since 1984 to identify and correct this problem.

The third example in the Notice involves failure to implement adequate corrective actions in response to your July 1990 finding that diaphragm valves had been modified in a manner that might increase their probability of failure. Your corrective actions were inadequate in that you did not check to see if similar valves used in safety-related systems had been modified, and only after NRC prompting did you identify that approximately 32 safety-related valves had also been improperly modified.

The fourth example in the Notice involves an incident that occurred on September 19, 1991, in which a radioactive steam generator honing filter was dropped in the containment building, resulting in dispersal of radioactive material and contamination of two workers. On November 27, 1991, due in part to your inadequate corrective action following the earlier incident, another radioactive steam generator filter was dropped under similar circumstances, resulting in an airborne release of radioactive material and activation of the safety-related containment ventilation system.

The fifth and sixth examples in the Notice involve your failure to implement adequate corrective actions in response to a 1983 Notice of Violation and Proposed Imposition of Civil Penalties for violations of NRC fire protection requirements. It is, therefore, particularly significant that these examples were not corrected.

Collectively, these examples demonstrate a significant failure to fully correct conditions adverse to quality, and management's failure to effectively use QA findings to identify areas needing attention. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), 10 CFR Part 2, Appendix C (1991), the violations in Section I of the Notice have been classified as a Severity Level III problem. Also included in the Notice is one Severity Level IV violation involving four examples of your failure to implement adequate corrective actions for known problems involving health physics.

At the January enforcement conference you described significant actions taken to ensure operability of safety-related valves and other comprehensive actions underway in your corrective action process. Your corrective measures in the fire protection and health physics areas also appear to be good. While your proposed individual corrective actions appear comprehensive, you need to ensure proper follow through of your plans. We recognize that senior PGE management is currently making progress in correcting a number of significant problems at Trojan such as steam generator tube defects. However, you appear to need to better focus all levels of PGE supervision on the need for an effective corrective action program to ensure that known problems are broadly addressed and corrected and to aggressively attempt to identify other problems.

To emphasize the importance the NRC attaches to effective and timely corrective actions, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Reactor

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Regulation, Regional Operations and Research, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) for the amount of \$100,000 for the Severity Level III problem. The base value of a civil penalty for a Severity Level III problem is \$50,000. The escalation and mitigation factors in the Enforcement Policy were considered.

The base civil penalty was mitigated by 50% for corrective actions, based on the aggressive, comprehensive corrective actions presented to us at the enforcement conference on January 7, 1992 and the management meeting on August 6, 1991. The base civil penalty was escalated by 50% for past performance, based on a previous Severity Level III violation in 1990 regarding your failure to correct problems with your licensed operator medical records, and based on a history over the past two years of a number of lesser violations in the corrective action area. Although escalation for this factor could have been 100%, the conservative and thorough actions you have taken to fully recognize and correct technical issues during the 1990 outage, such as the steam generator tube issue, were considered and resulted in the lesser escalation for this factor. Additionally, given the number and nature of the examples in this problem area, escalation of 100% for multiple occurrences was appropriate.

The other factors listed in the Enforcement Policy were also considered, but no further adjustments were deemed appropriate. Therefore, the cumulative base civil penalty of \$50,000 was increased 100% to \$100,000.

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. 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 and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. 96-511.

Sincerely,

  
John B. Martin  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed  
Imposition of Civil Penalty



NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Portland General Electric Company  
Trojan Nuclear Plant

Docket No. 50-344  
License No. NPF-1  
EA's 91-181 and 91-190

During NRC inspections conducted from September 15 through November 25, 1991, October 21 through December 5, 1991, and December 2 through 16, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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 Part 50, Appendix B, Criterion Xv, "Corrective Action," requires 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."

PGE-8010, "Trojan Nuclear Quality Assurance Program," Revision 11, implement: quality assurance program requirements for quality related activities at the Trojan Nuclear Plant pertaining to operation, maintenance, fire protection and radiation protection. The program requires that measures be established to preclude recurrence of significant conditions adverse to quality.

Contrary to the above, the licensee did not establish measures to preclude recurrence of significant conditions adverse to quality, as evidenced by the following examples:

1. On January 26, 1988, the licensee committed to correct an NRC violation cited in Inspection Report 50-344/87-31, involving failure to implement a required surveillance testing and inspection program for eight Emergency Diesel Generator (EDG) air start tank pressure safety valves. However, as of August 4, 1991, the licensee had not implemented actions to preclude recurrence of conditions adverse to quality in that the EDG air start pressure safety valves still had not been included in an inspection or testing program.
2. In March 1990, the licensee identified the need to verify that control ring settings for safety related pressure safety valves were consistent with vendor recommendations. As of August 1991, the licensee had not properly implemented actions to preclude recurrence of conditions adverse to quality, in that the

licensee's ASME Code Section XI inservice testing program, required by Technical Specification 4.0.5.a, did not implement a Code requirement that pressure safety valves control rings be set in accordance with vendor recommendations.

3. In July 1990, the licensee identified that several non-safety related diaphragm valves had been improperly modified in a manner which increased their probability of diaphragm failure. The licensee documented proposed corrective actions in Corrective Action Request C90-3246, dated June 12, 1990, to preclude similar problems in other plant valves. However, in October 1991, additional review revealed that the licensee had not promptly implemented actions to preclude recurrence of conditions adverse to quality in that approximately 32 diaphragm valves in safety related systems had also been improperly modified and no action had been initiated to correct this condition adverse to quality.
  4. Following a September 19, 1991, event in which a radioactively contaminated steam generator honing filter was dropped in the containment building, the licensee identified several corrective actions to preclude recurrence. However, as of November 1991, these actions were inadequate to prevent recurrence of conditions adverse to quality in that another steam generator honing filter was dropped under similar circumstances, resulting in an airborne release of radioactive material and actuation of the safety related containment ventilation system.
- B. 10 CFR Part 50, Appendix 3, Criterion XVI, "Corrective Action," requires 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."

10 CFR 50.48, "Fire Protection," requires each power plant licensed to operate prior to January 1, 1979, to implement a fire protection plan that has been accepted by the NRC staff.

PGE-1012, "Trojan Nuclear Plant Fire Protection Plan," Revision 11, is the NRC staff-accepted fire protection plan for Trojan and, among other things, defines the Quality Assurance program provisions for fire protection that apply to activities performed after August 1, 1978. PGE-1012, Appendix A, "Quality Assurance and Administrative Controls for Fire Protection," paragraph (h), "Nonconforming Activities and Corrective Action," requires that measures be established to assure that conditions adverse to fire protection are promptly identified, reported and corrected. These measures are to assure that in the case of significant or repetitive conditions adverse to fire protection, the cause of the condition is determined and analyzed, and prompt corrective actions are taken to preclude recurrence.

PGE-8010, "Trojan Nuclear Quality Assurance Program," Revision 11, implements quality assurance program requirements for quality related

activities at the Trojan Nuclear Plant pertaining to operation, maintenance, fire protection and radiation protection. The program requires that measures be established to preclude recurrence of significant conditions adverse to quality.

Contrary to the above, the licensee did not establish measures to preclude recurrence of significant conditions adverse to quality, as evidenced by the following examples:

1. On September 29, 1983, the NRC cited Trojan Nuclear Plant for failure to ensure capability to repair equipment needed to achieve cold shutdown within 72 hours of a postulated worst case fire. The licensee paid a civil penalty for the violation, but as of March 1991, the licensee had not implemented actions to preclude recurrence of conditions adverse to quality in that additional analysis demonstrated that the plant could not achieve cold shutdown within 72 hours using procedures and plant components that were analyzed and protected for a postulated worst case fire.
2. On September 29, 1983, the NRC cited Trojan Nuclear Plant for failure to comply with 10 CFR Part 50, Appendix R, Section III.G requirements to protect components important for achieving hot shutdown from postulated worst case fire damage. The licensee paid a civil penalty for the violation, but as of March 1991, the licensee had not implemented actions to preclude recurrence of conditions adverse to quality in that several safety related components were found to be subject to spurious actuations which could have adversely impacted the ability to achieve hot shutdown following a postulated worst case fire.

This is Severity Level III problem (Supplements I and IV). Civil Penalty \$100,000. (Assessed equally between the two violations.)

## II. Violations Not Assessed a Civil Penalty

Technical Specification 6.8.1 states in part that written procedures shall be established, implemented and maintained covering the activities recommended in Appendix "A" of Regulatory Guide 1.33, November, 1972.

Appendix A recommends procedures for: (1) Procedure Adherence and Temporary Change Method, (2) Log Entries and Record Retention, (3) Control of Radioactivity and (4) Chemical and Radiochemical Control, including procedures prescribing the nature and frequency of sampling and analyses.

Contrary to Technical Specification 6.8.1, the applicable procedures referenced above were not established, implemented, or maintained as evidenced by the following examples:

1. From July 1991 to November 21, 1991, a procedure for the control of radioactivity was not properly implemented, in that the surveys required by the licensee's Radiation Protection Manual, dated May 1, 1991, Section II.E.5, "Unconditional Release," were

not performed when releasing potentially radioactively contaminated materials for disposal to unrestricted areas.

2. As of December 5, 1991, no procedure had been established or implemented for retaining records of surveys releasing potentially radioactively contaminated material for disposal to unrestricted areas, and no such records were being maintained.
3. From October 1990 to December 4, 1991, no procedure had been established or implemented to prescribe the nature and frequency of sampling of the reactor coolant drain tank, and the sampling described in the Final Safety Analysis Report, Section 11.2.2.2.1, was not being performed.
4. During preparation of an offsite shipment of radioactive material on December 5, 1991, the licensee's procedure for controlling temporary procedure changes was not implemented, in that the radioactive waste shipment procedure was changed and used without meeting the requirements for prior documentation and plant management approval, as delineated in Trojan Plant Procedure 12-4, "Nuclear Division Procedure Control Program," dated November 29, 1991.

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

Pursuant to the provisions of 10 CFR 2.201, Portland General Electric 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, the Commission may issue an order or a demand for information 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 V.B of 10 CFR Part 2, Appendix C (1991) should be addressed. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in the 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. 2282(c).

The responses noted above (Reply to a Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the Regional Administrator, Region V, and a copy to the NRC Resident Inspector, Trojan Nuclear Plant.

Dated at Walnut Creek, California  
this 14~~th~~ day of February, 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION V

1450 MARIA LANE  
WALNUT CREEK, CALIFORNIA 94596-5368

FEB 21 1992

Docket No. 50-206  
License No. DPR-13  
EA 91-198

Southern California Edison Company  
Irvine Operations Center  
23 Parker Street  
Irvine, California 92718

Attention: Mr. Harold B. Ray  
Senior Vice President, Nuclear

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -  
\$50,000 (NRC INSPECTION REPORT NO. 50-206/91-36)

This refers to the special inspection conducted by Messrs. C. W. Caldwell and P. M. Qualls of this office on November 14 through December 18, 1991 at the San Onofre Unit 1 facility. The results of this inspection were documented in the referenced NRC inspection report, which was transmitted to you on December 31, 1991. This report addressed three apparent violations of NRC requirements concerning the 4160 Volt (4 kv) switchgear room Halon system and licensee event report (LER) No. 50-206/91-13, Revision 0, detailing the event. These issues were discussed with you during an enforcement conference held in the Region V Office on January 7, 1992. Our discussion during the enforcement conference was summarized in Meeting Report No. 50-206/92-05, transmitted to you on February 5, 1992.

Three apparent violations were identified in our inspection report and are the subject of the enclosed Notice. The first of the three violations involves violation of the Technical Specification (TS) requirements for operability of the 4 kv switchgear room Halon system. You recognized this condition after Halon trouble alarms were received, reported it to the NRC, and have taken or are in the process of initiating appropriate corrective actions. The second violation was identified by the NRC and involved inaccurate or incomplete information in the LER to the NRC concerning the ability to shutdown the unit after a design basis fire in the 4 kv switchgear room. With regard to the third violation, the NRC is concerned that you had not incorporated, nor apparently evaluated the need to incorporate, the vendor recommended testing of the Halon system slave bottle actuators into your fire protection program.

Failure to meet regulatory requirements for protecting trains of equipment required for achieving and maintaining safe shutdown following a fire constitutes a serious violation. We acknowledge your evaluation that the overall probability of a fire resulting in the inability to achieve safe shutdown of the Unit is low; however, inoperability of the 4 kv switchgear room Halon system represents loss of a significant fire protection system for more than three years, and there were periods when the TS required compensatory

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measures were not implemented. In addition, for the periods of time that the dedicated safe shutdown system was inoperable concurrent with the Halon system inoperability, both of these significant systems were not available, resulting in a substantial degradation in the defense-in-depth concept of fire protection for ensuring the ability to safely shut down the Unit.

During our enforcement conference on January 7, 1992, you noted that an hourly fire patrol vs. a continuous fire watch in the 4 kv switchgear room would have made little difference in your response to a fire in that room. You also stated that a continuous fire watch provides only limited additional assurance of safety compared to an hourly fire patrol. After assessing your position, we have concluded that you have focused too narrowly on compliance with specific Technical Specification requirements instead of recognizing the broader safety significance of failure to maintain defense-in-depth in a specific area of the fire protection program. As a result of the failure to install the Halon system properly, the unit operated with both safety systems designed to mitigate the consequences of a design basis fire out of service, without implementing full measures to prevent a design basis fire from occurring. We conclude that a dedicated fire watch provides the necessary defense-in-depth to assure that fire hazards will not be present and that conditions which could indicate an incipient fire will be detected as promptly as possible. Therefore, it is our conclusion that the difference between an hourly and a continuous fire watch is more significant than you asserted.

We also note that weakness in your quality assurance and maintenance practices (inadequate procedures and training) caused or contributed to the inoperability of the Halon system and that your failure to perform recommended vendor testing on the system caused you to miss an opportunity to detect the problems earlier. We encourage you to continue your efforts to enhance the quality assurance and maintenance program so that the potential for future errors is minimized.

You stated during the enforcement conference that you had applied the LER statements regarding operability of the dedicated shutdown (DSD) system in a general rather than a literal manner. While your reasoning is understood, we are concerned, however, that complete and accurate information be provided to the NRC so that proper evaluations of conditions at the facility can be made. Your initial LER on the subject stated that a design basis fire in the 4 kv switchgear room would not have prevented the Unit from achieving and maintaining a safe shutdown condition. Such reasoning would not apply during periods when the DSD system was not available.

The inoperable Halon system together with the inaccurate LER have been evaluated in the aggregate as a significant regulatory concern. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), 10 CFR Part 2, Appendix C (1991), the violations have been classified as a Severity Level III problem.

To emphasize the importance the NRC attaches to properly maintaining fire protection systems and to providing complete and accurate information to the NRC, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Reactor Regulation,

FEB 21 1992

Regional Operations and Research, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of \$50,000. The base value of a civil penalty for a Severity Level III problem is \$50,000. The escalation and mitigation factors in the Enforcement Policy were considered.

While you promptly reported the first violation to the NRC, this problem with the Halon system was self-revealing as a result of an inadvertent system actuation. In addition, the LER submitted for this event was not complete and accurate. Therefore, we have not mitigated the penalty for identification and reporting. Your management was also objective and self-critical in assessing weaknesses in the maintenance program that contributed to this event. Short term corrective actions for the Halon system were prompt and thorough. Long term corrective actions for the weaknesses identified have been or are in the process of being implemented, although we have concluded that these were not particularly prompt. While the LER was corrected, it is not clear what further action is planned to be taken to assure that future LERs will be complete and accurate. Therefore, any mitigation that might be appropriate for correcting the Halon issue is offset by escalation that would be appropriate for not comprehensively addressing the LER issue. Thus adjustment of the base civil penalty is not warranted for corrective action. The other adjustment factors in the Enforcement Policy were considered, and no further adjustment to the base civil penalty is considered appropriate. Therefore, based on the above, the base civil penalty has not been adjusted.

Violation C in the enclosed Notice addresses the vendor recommended testing. This violation has been categorized at a 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. 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 and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,

  
John B. Martin  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed Imposition  
of Civil Penalty



NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Southern California Edison Company  
San Onofre Unit 1

Docket No. 50-206  
License No. D PR 13  
EA 91-198

During an NRC inspection conducted on November 14 through December 18, 1991, three violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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. Section 3.14.4 of the San Onofre Unit 1 Technical Specifications requires both (main and reserve) banks of the 4160 volt switchgear room Halon system to be operable whenever the equipment protected by the system is required to be operable (i.e., Modes 1 through 4) and states, in part: "With both banks of the required Halon systems inoperable, establish the following within 1 hour:

1. A continuous fire watch."

Contrary to the above, a continuous fire watch was not established when both banks of the Halon system for the 4160 volt switchgear room were inoperable during the following periods, with Unit 1 operating in Modes 1 through 4:

July 18 - August 13, 1989	August 18 - October 15, 1989
December 1 - December 10, 1989	December 20, 1989 - January 1, 1990
January 3 - January 20, 1990	January 24 - February 3, 1990
February 13 - May 31, 1990	June 12 - June 30, 1990
May 18, 1991 - May 29, 1991	June 7 - June 29, 1991

- B. 10 CFR 50.9(a) states in part: "Information provided to the Commission ... by a licensee ... shall be complete and accurate in all material respects."

10 CFR 50.73(b)(2)(ii)(L)(3) states: "An assessment of the safety consequences and implications of the event. This assessment must include the availability of other systems or components that could have performed the same function as the components and systems that failed during the event."

Contrary to the above, Licensee Event Report (LER) No. 206/91-013, Revision 0, submitted on July 31, 1991, contained incomplete and inaccurate information. The LER stated that:

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"A design basis fire in the 4 kv switchgear room (fire area 1-PB-14-8) would not have prevented the unit from achieving and maintaining a safe shutdown condition."

\* \* \* \*

"Moreover, in the unlikely event that the fire would not be extinguished quickly, dedicated safe shutdown features of SONGS 1 would provide the capability to achieve and maintain safe shutdown post design basis fire."

These statements were not complete and accurate in all material respects, in that the dedicated safe shutdown (DSD) system, a system that could have performed the function of the equipment protected by the Halon system, was inoperable between May 18 and June 3, 1991, because of diesel generator overhaul, and could not have been used to achieve safe shutdown conditions following a design basis fire in the 4160 volt switchgear room.

This is a Severity Level III problem (Supplement I and VI').  
Civil Penalty - \$50,000 (equally divided between the Violations A and B).

- C. Section 6.8.1.j of the Unit 1 Technical Specifications (TS) requires that the licensee establish, implement and maintain procedures for fire protection Quality Assurance.

The licensee's Topical Quality Assurance Manual (TQAM), Chapter 8, implements the TS 6.8.1.j requirement. TQAM Section 8-A.11.1, Revision 12, states that test controls for the fire protection program shall be established and implemented in accordance with chapters 4, 5, and 6. TQAM Section 8-A.11.4 states that:

"Test controls shall assure that the fire protection package is fully operational to meet design requirements at the time of installation. Periodic retests will be provided to assure that the fire protection package remains operable and that it continues to meet design requirements. A test plan shall be established which defines the types, frequency and detailed procedures for periodic retesting of equipment."

TQAM Section 5-C.2, Revision 12, states:

"Maintenance shall be planned and scheduled to assure that the safety of the plant is not compromised nor the Technical Specifications violated."

The vendor manual, "Ansul Halon 1301 Fire Suppression Systems", states, in part: "To provide maximum assurance that the Ansul Halon 1301 System will operate effectively and safely, the following procedures must be performed after installation and semi-annually thereafter." The manual then describes steps to be followed for master/slave systems to check the slave actuation system.

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Contrary to the above, as of December 16, 1991, the licensee's test program did not include testing to demonstrate operability of the slave cylinders in the Halon fire suppression system.

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

Pursuant to the provisions of 10 CFR 2.201, Southern California 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, the Commission may issue an order or a demand for information 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 an answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section V.B of 10 CFR Part 2, Appendix C (1991), 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 penalty.

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Upon failure to pay any civil penalty due, which failure 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. 2282(c).

The response noted above (Reply to a Notice of Violation, Letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region V, and a copy to the NRC Resident Inspector, San Onofre Nuclear Generating Station.

Dated at Walnut Creek, California  
this 21<sup>st</sup> day of February 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV

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

FEB 18 1992

Docket No. 50-445  
License No. NPF-67  
EA 91-189

TU Electric  
ATTN: W. J. Cahill, Jr.  
Executive Vice President, Nuclear  
Skyway Tower  
400 North Olive Street, L.B. 61  
Dallas, Texas 75201

TO:

NOTICE OF VIOLATION & PROPOSED IMPOSITION OF CIVIL PENALTY - \$25,000  
(NRC INSPECTION REPORT NOS. 50-445/91-62 & 50-446/91-62)

In reference to NRC's October 30 - December 19, 1991, inspection at TU's Comanche Peak Steam Electric Station (CPSES), which was documented in Report issued on January 3, 1992. On January 17, 1992, you and other TU representatives attended an enforcement conference in NRC's Arlington, Texas office to discuss matters related to this inspection. The enforcement conference was held to discuss violations of system alignment procedures and Technical Specifications that occurred during a CPSES, Unit 1 startup in early December 1991.

The violations described in NRC's inspection report and discussed at the enforcement conference involved failures to ensure the proper alignment of the residual heat removal (RHR) system and the turbine-driven auxiliary feedwater (AFW) pump prior to placing the plant in hot standby (Mode 3). An additional violation, which was discussed briefly at the enforcement conference, involved a failure to properly document the entry into a Technical Specification action statement when the turbine-driven auxiliary feedwater pump was taken out of service.

In NRC's view, the more significant of the violations is the violation of plant procedures that resulted in the misalignment of valves in the RHR system, a system which is part of the plant's Emergency Core Cooling System and could be called upon to pump water into the reactor cooling system in the event of a plant emergency.

On December 4, 1991, the CPSES plant entered the hot standby mode (Mode 2) with two valves in the RHR system mispositioned. The valves, cross-tie valves between the two trains of the RHR system, are required by system operating procedures to be open in Mode 3 to permit either RHR pump to inject water into all four reactor coolant loops in the event of a loss-of-coolant accident (LOCA). This condition went undetected by numerous licensed and senior licensed operators for some 51 hours (four shifts) until an Instrument & Control engineer who was using a plant computer to review system configurations noticed the discrepancy.

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

With these valves closed, this system could not function as designed under all accident scenarios. The plant's accident analyses assume that the RHR cross-tie valves are open. The safety significance of the valve misalignment was reduced given the condition of the plant (operations at power had not begun). In the NRC's view, the significance of this condition rests on the fact that procedures designed to ensure the proper alignment of a safety system were not followed, rather than just on its effect on plant safety systems. Factors that contributed to making this event significant include: 1) a required surveillance test which would have revealed the misalignment was not performed due to a flaw in the surveillance program; 2) inattention to detail and poor communications during a plant startup played a role in the misalignment of an important safety system; and 3) the misalignment was not recognized by control room personnel responsible for checking system control boards periodically during their shifts. As discussed above, four shift changes occurred between the time the plant entered Mode 3 and the time the misalignment was discovered.

For these reasons, NRC considers the procedural violation and the factors that contributed to this misalignment a matter of significant regulatory concern. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), the violation associated with this event (Violation I) has been classified at Severity Level III.

NRC considers TU Electric's corrective actions for this violation to have been prompt and extensive. Immediate corrective actions included restoring the system to its proper alignment, performing complete alignment checks on RHR and other systems to ensure that no other valves were mispositioned, completing modifications to the RHR system alignment procedures to minimize a recurrence of this event, and covering lessons learned from this event in meetings with plant staff. In addition to these immediate actions, TU Electric said at the enforcement conference that it had developed a supplemental emergency core cooling system control switch alignment checklist to be performed periodically, that it had corrected the surveillance program to ensure Technical Specification-required surveillances are performed prior to mode changes, that it would review and stress management's expectations regarding control board awareness and log entries, and that it would consider establishing a "quiet period" prior to plant mode changes during which plant status and paperwork would be reviewed.

Nonetheless, to emphasize the importance of positive communications, attention to detail, and awareness during plant evolutions to ensure that all safety systems are properly aligned as required by system operating procedures, 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 (Notice) in the amount of \$25,000 for the Severity Level III violation described above and in the Notice.

The base value of a civil penalty for a Severity Level III violation is \$50,000. The escalation and mitigation factors in the Enforcement Policy were considered and resulted in a net decrease of \$25,000. The reduction in the base value was made because, as discussed above, TU Electric took prompt and extensive corrective actions. Although NRC considered a reduction of the penalty based on the misalignment having been discovered by CPSES personnel, no reduction was made because the misalignment went undetected for approximately 51 hours, during which four shift changes occurred. The other adjustment factors in the Enforcement Policy were considered and no further adjustment to the base civil penalty was considered appropriate.

Two additional violations are included in the Notice but are not being assessed a civil penalty. As indicated above, these include the failure to have the turbine-driven AFW pump properly aligned upon entry into Mode 3 and the failure to properly document, for tracking purposes, the entry into a Technical Specification-required action statement when the same pump was taken out of service. These violations are also indicative of inattention to detail during a plant startup and in the case of Violation II.A, a weakness in licensed operator understanding of the AFW Technical Specification, but are not considered as significant from a safety and regulatory perspective as Violation I and are being 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. Specifically, your response should include the actions you are taking to assure positive communications between operators, awareness of equipment status, and awareness of mode change requirements. 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 and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-311.

Sincerely,



Robert D. Martin  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed  
Imposition of Civil Penalty

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

TU Electric  
Comanche Peak Steam Electric Station

Docket No. 50-445  
License No. NPF-87  
EA 91-189

During an NRC inspection conducted October 30 - December 19, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991) 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. Violation Assessed a Civil Penalty

CPSES Technical Specification 6.8.1 states, in part, that written procedures shall be established, implemented and maintained, covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, dated February 1978.

Appendix A of Regulatory Guide 1.33, Revision 2, February 1978, recommends the establishment of general plant operating procedures, including procedures covering "Cold Shutdown to Hot Standby."

CPSES Unit 1 Integrating Plant Operating Procedure IPU-001A, Revision 10, "Plant Heatup From Cold Shutdown to Hot Standby," established by the licensee in accordance with the requirements of Technical Specification 6.8.1., requires in Section 5.3.5 that, prior to exceeding 350 degrees F in the reactor coolant system (RCS) (entry into Mode 3), the residual heat removal (RHR) system be shut down and placed in standby readiness per SOP-102A, "Residual Heat Removal System."

CPSES System Operating Procedure SOP-102A, Revision 6, requires in Section 5.3, "Placing the RHR in Standby Readiness," that CPSES verify that the prerequisites in Section 2.3 are met.

Section 2.3 of SOP-102A, Revision 6, requires, in part, that the control switch lineup per Attachment 2 is complete.

Attachment 2 of SOP-102A, Revision 6, "Control Switch Lineup Sheet - Standby Readiness," requires, in part, that the control switches for RHR Train A and B cross-tie valves 8716-A and 8716-B are verified to be in the open position.

Contrary to the above, on December 4, 1991, the licensee placed CPSES Unit 1 in Mode 3, continued reactor coolant system heatup above 350 degrees F, and did not verify that the control switches for RHR Train A and B cross-tie valves 8716-A and 8716-B were in the open position. On



December 6, 1991, these control switches (and their associated valves) were discovered by licensee personnel to be in the closed position.

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

Civil Penalty - \$25,000

## II. Violations Not Assessed a Civil Penalty

- A. CPSES Technical Specification 3.7.1.2 requires, in part, at least three independent steam generator auxiliary feedwater pumps and associated flow paths to be operable in Modes 1, 2 and 3, with one steam turbine-driven auxiliary feedwater pump capable of being powered from two operable steam supplies. With one auxiliary feedwater pump inoperable, Technical Specification 3.7.1.2 requires, in part, that the required auxiliary feedwater pump be restored to operable within 72 hours or be in at least hot standby within the next 6 hours and in hot shutdown within the following 6 hours.

CPSES Technical Specification 3.0.4 states, in part, that entry into an operational mode or other specified condition shall not be made when the conditions for the Limiting Condition for Operation are not met and the associated action requires a shutdown if they are not met within a specified time interval.

Contrary to the above, on December 4, 1991, CPSES Unit 1 entered Mode 3 with the steam turbine-driven auxiliary feedwater pump in an inoperable condition in that the control room handswitches for the valves in each of the two steam supply lines to the turbine were in the "pull out" position. In this condition, the valves would not have opened in response to automatic signals to initiate auxiliary feedwater flow. This condition existed until discovered by licensee personnel 47 minutes after entry into Mode 3.

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

- B. CPSES Technical Specification 6.8.1 states, in part, that written procedures shall be established, implemented and maintained, covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, dated February 1978.

Appendix A of Regulatory Guide 1.33, Revision 2, February 1978, recommends the establishment of administrative procedures.

CPSES Procedure ODA-308, "LCO Tracking Program," developed in accordance with Technical Specification 6.8.1, prescribes controls and documentation requirements for controlling entries into Technical Specification limiting condition for operation action statements.

Section 6.4.3 of Procedure GDA-308 states, in part, that a LCOAR (Limiting Condition for Operation Action Requirement form) shall be initiated when it is determined that a system configuration impacts the operability of any system which is Technical Specification related. Contrary to the above, on December 5, 1991, with CPSES Unit 1 in Mode 3, the licensee manually isolated the steam supply lines to the steam turbine-driven auxiliary feedwater pump, a configuration which impacted the operability of the steam turbine-driven auxiliary feedwater pump and which placed the unit in a limiting condition for operation action statement, and the licensee did not complete an Active LCOAR Form.

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

Pursuant to the provisions of 10 CFR 2.201, TU Electric (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, the Commission may issue an order or a demand for information 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. 2332, 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 V.B of 10 CFR Part 2, Appendix C (1991) 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 responses 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 IV, and a copy to the NRC Resident Inspector at Comanche Peak.

Dated at Arlington, Texas  
this 18th day of February 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION V

1450 MARIA LANE  
WALNUT CREEK, CALIFORNIA 94596-5368

FEB 6 1992

Docket No. 50-397  
License No. NPF-21  
EA 91-183

Washington Public Power Supply System  
ATTN: Mr. D. W. Mazur  
Managing Director  
Post Office Box 968  
Richland, Washington 99352

Gentlemen:

Subject: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -  
\$25,000 (NRC INSPECTION REPORT NO. 50-397/91-44)

This refers to the special inspection conducted by Messrs. R. C. Sorensen and D. L. Proulx of this office on November 4 - December 8, 1991. The results of this inspection were documented in the referenced NRC inspection report, which was transmitted to you on December 13, 1991. This report addressed four apparent violations of NRC requirements concerning the containment atmospheric control (CAC) system. These issues were discussed with you during an enforcement conference held in the Region V Office on December 20, 1991. Our discussions during the enforcement conference were summarized in Meeting Report No. 50-397/91-48, transmitted to you on January 22, 1992.

The four apparent violations in our inspection report have been addressed as three violations, as shown in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice). The first of these violations involves (1) inoperability of both trains of the CAC system since initial plant startup due to the inability of flow controllers to control recycle flow in the automatic mode and (2) inoperability of Train "A" of the CAC system for more than three months during plant operation because lubricating oil had drained out of the associated blower. You identified these conditions, reported them to the NRC, and have taken or initiated appropriate corrective actions. The other two violations were identified by the NRC and involve (1) improper assembly of seismic supports for the CAC system and (2) the inordinate amount of time (almost three months) you took to evaluate and report the inoperable flow controllers to the NRC.

Collectively, these violations reflect insufficient attention by your management and staff to the CAC system, a system your Technical Specifications require to be operable to mitigate the possible consequences of an accident. The violations also indicate a need for additional commitment by your staff to engineering, technical, and maintenance activities, associated with this safety related system. A more questioning attitude and thorough review on the part of your engineering and maintenance personnel would likely have resulted in your staff's identifying these violations earlier. Had your staff properly followed up on the flow controller deficiency when it was identified prior to

Washington Public Power  
Supply System

- 2 -

initial plant startup the violation for that condition would have been avoided. You are encouraged to consider how the lessons learned from these occurrences relate to your staff's attention to other safety systems.

In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), 10 CFR Part 2, Appendix C (1991), the violation involving inoperability of the CAC system (Violation A in the enclosed Notice) has been classified as a Severity Level III violation. The other two violations have been classified at Severity Level IV. However, in the case of both of those violations the NRC staff had some additional concerns. With regard to the support deficiencies, your staff follow-up was not initially aggressive though eventually they did perform a 100% walkdown of the system. Regarding the reporting violation, given the length of time it took for the report to be made to the NRC, serious consideration was given to assessing the reporting violation at Severity Level III. However, given that a report was ultimately made Severity Level IV was considered the appropriate classification.

To emphasize the importance the NRC attaches to properly maintaining and controlling the operability and configuration of safety-related systems, 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 (Notice) in the amount of \$25,000. The base value of a civil penalty for a Severity Level III problem is \$50,000. The escalation and mitigation factors in the Enforcement Policy were considered as discussed below.

Your response to Violation A was aggressive. Management has been objective and self-critical in investigating the events, and corrective actions were prompt and thorough, including procedure revisions and captivation of oil plugs. In addition, you initiated a Safety System Functional Inspection and a number of other longer-term corrective actions. We have therefore concluded that 50 percent mitigation is appropriate for corrective actions.

As previously noted, you identified and reported the two conditions cited in Violation A. Had both conditions been reported in a timely manner, mitigation of up to 50% for identification and reporting would have been possible. On balance, however, in view of the late reporting of one of those conditions (addressed as Violation B.2) and the fact that the loss of lubricating oil was a self-disclosing event, we have concluded neither escalation nor mitigation is appropriate for identification and reporting. The other adjustment factors in the Enforcement Policy were considered, and no further adjustment to the base civil penalty was considered appropriate. Therefore, based on the above, the base civil penalty has been decreased by 50%.

You also advised us on January 24, 1992 that the Train "B" CAC Blower was found to have been inoperable from December 17, 1991 until the condition was discovered by your staff on January 22, 1992 (6 days beyond the out-of-service time permitted by the associated Action statement in the Technical Specification). This condition occurred on December 17 as a result of an

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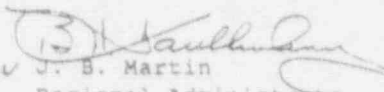
unusual system configuration during special testing conducted as part of your corrective action program. You noted that Train "A" of the CAC system was operable during this period. This matter does not appear to impact our assessment of the previous CAC system problems and will be addressed in a separate inspection report after completion of NRC review.

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 and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the Enclosed Notice are not subject to the clearance procedure of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,

  
for J. B. Martin  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed Imposition  
of Civil Penalty

cc: A. L. Oxsen, Deputy Managing Director  
L. L. Grumme, Acting Director, Licensing and Assurance  
J. W. Baker, WNP-2 Plant Manager  
A. G. Hosler, WNP-2 Licensing Manager  
G. E. Doupe, Esq.  
Winston & Strawn  
State of Washington

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Washington Public Power Supply System  
Washington Nuclear Project No. 2 (WNP-2)

Docket No. 50-397  
License No. NPF-21  
EA 91-183

During an NRC inspection conducted on November 4 through December 8, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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. Violation Assessed a Civil Penalty:

Section 3.6.6.1 of the WNP-2 Technical Specifications states:

"Two independent drywell and suppression chamber hydrogen recombiner systems shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION: With one drywell and suppression chamber hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours."

Section 3.0.3 of the Technical Specifications states, in part: "When a Limiting Condition for Operation is not met, except as provided in the associated ACTION requirements, within one hour action shall be initiated to place the unit in an OPERATIONAL CONDITION in which the Specification does not apply by placing it, as applicable, in:

1. At least STARTUP within the next 6 hours,
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 24 hours."

Contrary to the above:

1. Both hydrogen recombiner systems were inoperable, in that they would not function in automatic, from before initial plant startup in 1984 until August 1991 due to installation of the wrong type of recycle flow controllers, and the requirements of the above action statements were not met.
2. The "A" Train hydrogen recombiner system was inoperable from on or about December 8, 1990 until April 12, 1991 because of an undetected loss of lubricating oil from the Train "A" blower, with the reactor operating in OPERATIONAL CONDITION 1, and the requirements of the applicable action statement were not met.

This is a Severity Level III violation (Supplement I).  
Civil Penalty = \$25,000.

B. Violations Not Assessed a Civil Penalty:

1. 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings", states in part: "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings."

Section 5.2.1 of the WPPSS Operational Quality Assurance Program Description (OQAPD) Manual, Revision 13, states: "Activities that affect safety-related functions of plant items shall be described by and accomplished through implementation of documented procedures, instructions, or drawings, as appropriate."

Contrary to the above, activities affecting quality and prescribed by vendor drawing CVI 4-1371-18.20 were not accomplished in accordance with this drawing, in that seven instances were identified between September 26 and October 10, 1991 wherein containment atmospheric control (CAC) system pipe supports had not been configured as prescribed in this drawing.

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

2. 10 CFR 50.72(b)(2) requires, in part: that if not reportable under paragraph (a) or (b)(1) of Section 50.72, "... 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:

(iii) Any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to... (D) Mitigate the consequences of an accident."

10 CFR 50.73 requires, in part: "The holder of an operating license for a nuclear power plant (licensee) shall submit a Licensee Event Report (LER) for any event of the type described in this paragraph within 30 days after the discovery of the event....

(2) The licensee shall report:

(i) (B) Any operation or condition prohibited by the plant's Technical Specifications.

(v) Any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to... (D) Mitigate the consequences of an accident.



(vii) Any event where a single cause or condition caused ... two independent trains ... to become inoperable in a single system designed to: (D) Mitigate the consequences of an accident."

Contrary to the above, the licensee determined on August 7, 1991 that the wrong type of recycle flow controllers had been installed in the CAC system, a system needed to mitigate the consequences of an accident, before initial plant startup in 1984, a condition which rendered both trains of the CAC system inoperable, but the NRC was not notified until October 31, 1991 and an LER was not submitted until December 2, 1991.

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

Pursuant to the provisions of 10 CFR 2.201, Washington Public Power Supply System (Licensee) is hereby required to submit a written statement of explanation to the Director, Office of Enforcement, U. S. Nuclear Regulatory Commission, within 30 days of the date of this Notice 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, the Commission may issue an order or a demand for information 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 an answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section V.B of 10 CFR Part 2, Appendix C (1991), 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 a Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region V, and a copy to the NRC Resident Inspector, Washington Nuclear Project No. 2.

Dated at Walnut Creek, California  
this 6<sup>TH</sup> day of February, 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
799 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137

January 10, 1992

Docket No. 50-266; 50-301  
License No. DPR-24; DPR-27  
E/ 91-149

Wisconsin Electric Power Company  
ATTN: Mr. James J. Zach, Vice President  
Nuclear Power Department  
231 West Michigan, Room 308  
Milwaukee, Wisconsin 53201

Dear Mr. Zach:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTIES -  
\$150,000 (INSPECTION REPORTS NO. 50-266/91025; 50-301/91025)

This refers to the special inspection conducted on October 1 - November 1, 1991, at the Point Beach Nuclear Power Station. The inspection included a review of the circumstances surrounding the September 29, 1991, failure of the Unit 2 main steam isolation valves (MSIVs) to close upon demand from the control room during a plant shutdown for a scheduled refueling outage. The report documenting this inspection was sent to you by letter dated November 15, 1991. As a result of the inspection, significant violations of NRC requirements were identified. An enforcement conference was held on November 22, 1991, with you and members of your staff to discuss the violations, their causes, and your corrective actions.

The violations described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice) involve (1) the failure to report MSIV malfunctions, (2) failure to properly test MSIVs, and (3) the failure to take adequate corrective action to prevent recurrence of the MSIV malfunctions. Collectively, these violations resulted in the Unit 2 MSIVs being inoperable for an indeterminable period of time during the last operating cycle. Of particular concern to the NRC is that throughout the operational history of the Point Beach Nuclear Power Station, the MSIVs repeatedly failed to function as described in the Safety Analysis Report (SAR) and facility Technical Specifications (TS), i.e., close within five seconds with low steam flow, and station management failed to adequately address the potential significance of this problem, which was generally known to the operations and maintenance staff.

Information developed by the inspection indicated that it was routine for plant personnel to use a sledge hammer to "manually assist" MSIV closure during shutdowns and not document those actions. NRC inspectors found hammer blow marks on each MSIV in both units. Operators interviewed by the NRC stated that

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They did not consider the majority of the MSIV problems to be an operability concern, as most occurred during system shutdown when the valves were not undergoing TS surveillance testing. This practice has occurred in both units since the start of commercial operation. Consequently, a comprehensive record of the MSIV problems was not developed and effective corrective actions were not taken to assure the operability of this safety component.

It appears that station personnel only focused on the "as-left" condition of the valves prior to startup, since testing could only be performed during an outage and there was no Technical Specification limiting condition for operation (LCO). Plant documents indicated that station personnel often rationalized that steam flow would assist in the closure of the MSIVs during operation. This reasoning was flawed because the MSIVs are expected to shut automatically under low steam flow conditions and in some cases, when called upon to operate, the MSIVs remained in their full open position which prevented steam flow from assisting valve closure.

The root causes of the violations and your subsequent corrective actions were discussed during the November 22, 1991, enforcement conference. You indicated that the major factor contributing to the violations appears to have been a mind-set of plant personnel specific to the operability of MSIVs. This led to the failure to properly document component deficiencies so that the root cause could be evaluated. To correct this problem, you indicated at the conference that you planned to: (1) conduct a written survey of operations and maintenance personnel to determine if chronic or repetitive problems exist with other safety-related equipment; (2) perform a systematic review of equipment histories for the past five years to determine if repetitive problems exist with other safety-related equipment; (3) request an INPO Operating Experience Assist Visit to seek advice on root cause analysis; (4) compare assumptions made for accident analyses between the Final Safety Analysis Report, the Limiting Conditions for Operations Section and the Surveillance Section of the Point Beach Technical Specifications; (5) ensure that the equipment addressed in item (4) is adequately covered in the preventive maintenance program; and (6) add a requirement in the Maintenance Work Request tagging process to consider whether a condition is reportable to the NRC.

Violation I.A concerns multiple failures to report the safety function problems encountered with the MSIVs. This was caused in part by the failure of station personnel to document known equipment problems, the failure of management to set adequate reportability thresholds, and the failure to have promptly elevated information concerning the September 29, 1991, event to the appropriate level of management. The NRC is concerned about the narrow view adopted by the station in the past regarding what constituted a reportable event for the MSIVs.

Violation I.B involves inadequate MSIV testing. The testing performed under Procedure No. IT-280/285, "Inservice Testing of Main Steam Stop Valves," did not demonstrate that the MSIVs would perform satisfactorily in service due to preconditioning of the valves by other procedures. Point Beach Procedure OP-13A,

January 10, 1992

"Secondary System Startup," which sequenced IT-280/285, to perform the test of record during startup, was deficient in that it directed the operators to cycle and precondition the valves prior to testing. Additionally, the valves were not timed when initially closed per Point Beach Procedure QP-138, "Secondary System Shutdown." Had this been done, it is not likely that the MSIV performance problems would have gone undetected.

Taken collectively, Violations I.A and I.B represent a potentially significant lack of attention or carelessness towards licensed responsibilities in assuring that the MSIVs would perform satisfactorily. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), Violation I has been classified as a Severity Level III violation.

Violation II involves the failure to evaluate identified MSIV malfunctions and institute effective corrective actions to preclude repetition. This violation is distinct from Violation I in that on several occasions, problems with MSIV No. 2MS-2017 were identified and entered into the station corrective action system. However, the 1987 and 1990 valve problems were not adequately reviewed to determine the root cause and consequently, adequate corrective action was not taken to prevent recurrence. Had this been done, it is not likely that the September 29, 1991, MSIV failures would have occurred. Therefore, in accordance with the NRC Enforcement Policy, Violation II has been categorized at Severity Level III.

The consequence of these violations is that the MSIVs, which are part of a system designed to mitigate a serious safety event, would either not close, or not close on a timely basis, and therefore may not have performed their intended safety function. Therefore, to emphasize the need for timely notification and reporting of events, and the prompt identification and correction of significant deficiencies, 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 Penalties (Notice) in the amount of \$150,000 for the violations described in the enclosed Notice. The base amount of a civil penalty for each Severity III violation or problem is \$50,000. Violation I was assessed a civil penalty of \$50,000, while Violation II was assessed a civil penalty of \$100,000. The escalation and mitigation factors set forth in the Enforcement Policy were considered for each Severity Level III violation as discussed below.

The base civil penalty for Violation I was escalated by 50 percent for NRC identification of the reporting and testing deficiencies. A 50 percent mitigation was applied for your corrective actions, which were discussed above. An additional 100 percent mitigation was applied for your overall good past performance as exemplified by your most recent Systematic Assessment of Licensee Performance (SALP) and good enforcement history in these areas, notwithstanding one reporting violation in the safeguards area. However, a 100 percent escalation was applied for the factor of multiple examples based on the four reporting examples described in the citation and the numerous examples of failure to

January 10, 1992

properly test the MSIVs. The other factors were considered and no further adjustments were deemed warranted.

For Violation 11, the base civil penalty was escalated 50 percent for NRC identification of the deficiencies in your corrective action program. No adjustment was made for your corrective actions, once the problem was identified to you. Though you addressed the equipment trending deficiencies and the mismatch between equipment required by the Technical Specifications versus the Safety Analysis Report, no additional management oversight or audits were proposed at the enforcement conference to ensure that corrective actions were effective in preventing recurrent component failures. We acknowledge that following the conference you proposed additional corrective action. An additional 50 percent escalation was applied for your past poor performance in this area, as evidenced by a civil penalty of \$87,500 issued in April 1990 (see EA 89-254) for your failure to effectively implement a program to correct identified deficiencies in a timely manner. The remaining factors were considered and no further adjustment to the base civil penalty is considered appropriate.

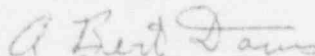
Finally, you committed to a number of actions following the enforcement conference in a letter to us dated December 3, 1991. If you plan to deviate from any of those commitments, please advise us in advance of the deviation.

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 responses will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,



A. Bert Davis  
Regional Administrator

Enclosure: Notice of Violation  
and Proposed Imposition of  
Civil Penalty

See Distribution Next Page

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTIES

Wisconsin Electric Power Company  
Point Beach Nuclear Power Plant  
Units 1 and 2

Docket No. 50-266; 50-301  
License No. DPR-1; DPR-27  
EA 91-149

During an NRC inspection conducted on October 1, 1991, through November 1, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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 MSIV Reporting and Testing

- A. 10 CFR 50.72(b)(2) requires in part, that the licensee notify the NRC as soon as practical and in all cases within four hours of the occurrence of any event or condition that alone could have prevented the fulfillment of the safety function of a system that is needed to mitigate the consequences of an accident.

10 CFR 50.73(a)(2) requires in part, that the licensee submit a Licensee Event Report within 30 days after the discovery of any event or condition that could alone have prevented the fulfillment of the safety function of a system that is needed to mitigate the consequences of an accident.

Section 14.2.5.1 of the Point Beach Safety Analysis Report (SAR) states that the fast acting steam line isolation valves are designed to close in less than five seconds with low steam flow.

Contrary to the above, the licensee failed to adhere to these reporting requirements as evidenced by the following examples:

1. On September 29, 1991, at 9:30 a.m., Unit 2 main steam stop valves/MSIVs No. 2MS-2017 and 2MS-2018 failed to close under low steam flow conditions during reactor shutdown for major fuel reloading, and the licensee did not notify the NRC until the afternoon of September 30, 1991, a period in excess of four hours as required by 10 CFR 50.72 (b)(2). These failures alone could have prevented the fulfillment of a safety function of a system needed to mitigate the consequences of accidents described in the SAR.

2. On August 16, 1987, September 24, 1989, and October 6, 1990, Unit 2 MSIV No. 2MS-2017 failed to fully close under low steam flow conditions during reactor shutdown, and the licensee did not notify the NRC as soon as practical or within four hours as required by 10 CFR 50.72(b)(2), and the licensee did not submit a written report within 30 days after discovery as required by 10 CFR 50.73(a)(2). These MSIV failures alone could have prevented the fulfillment of a safety function needed to mitigate the consequences of accidents described in the SAR.
- B. 10 CFR Part 50, Appendix B, Criterion XI, Test Control, requires, in part, a test program be established to assure that all testing required to demonstrate that 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, that test program shall include operational tests of systems and components during nuclear power plant operation, and the test results shall be documented and evaluated to assure that test requirements have been satisfied.

Technical Specification 15.4.7 requires that the main steam stop valves (alternatively known as the main steam isolation valves, or MSIVs) shall be tested under low steam flow conditions during reactor shutdowns for major fuel reloading. Closure time of five seconds or less shall be verified.

Contrary to the above, as of September 29, 1991, Point Beach Procedure IT-280/285, "Inservice Testing of Main Steam Stop valves" did not demonstrate that the main steam stop valves (MSIVs) would perform satisfactorily in service due to pre-conditioning of the valves by other procedures. Specifically, Point Beach Procedure No. OP-13B, "Secondary System Shutdown," Revision 1, dated March 30, 1989, Paragraph 4.7 directed closure of the MSIVs without measuring the closure time and Point Beach Procedure No. OP-13A, "Secondary System Startup," Revision 40, dated October 3, 1990, Paragraph No. 4.5.5 directed the operator to cycle the MSIV prior to performing the Technical Specification surveillance test that measures valve closure time.

This is a Severity Level III problem (Supplement I).  
Cumulative Civil Penalty - \$50,000 (assessed equally between the violations)

## II. Violation Associated with Corrective Actions

10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, requires, in part, that measures be established to assure that conditions adverse to quality, such as failures and malfunctions, are promptly identified and corrected. In the case of significant conditions adverse to quality, the



measures shall also assure that the cause of the condition is determined, corrective action is taken to preclude repetition, and the cause of the condition and the corrective action are documented and reported to appropriate levels of management.

Section 14.2.5.1 of the Point Beach Safety Analysis Report states that the fast acting steam line isolation valves are designed to close in less than five seconds with low steam flow.

Contrary to the above, on August 16, 1987, September 24, 1989, and October 6, 1990, Unit 2 MSIV No. 2MS-2017 failed to function as described in Section 14.2.5.1 of the Safety Analysis Report, which is a significant condition adverse to quality, and the licensee did not adequately determine the cause of the failure or take adequate corrective action to preclude repetition. Specifically, on each of those occasions the MSIV failed to close with low steam flow and the licensee failed to determine the cause of the failure.

This is a Severity Level III violation (Supplement I).  
Civil Penalty - \$100,000.

Pursuant to the provisions of 10 CFR 2.201, the Wisconsin Electric Power Company (Licensee) is hereby required to submit a written statement of explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice 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 is 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 actions 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 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 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 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 V.B of 10 CFR Part 2, Appendix C (1991), 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 responses noted above (Reply to Notice of Violation, together 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, 799 Roosevelt Road, Glen Ellyn, Illinois 60137, at the Point Beach Nuclear Power Plant.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Bert Davis  
Regional Administrator

Dated at Glen Ellyn, Illinois  
this 10th day of January 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV

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

FEB 20 1992

Docket No. STN 50-482  
License No. NPF-42  
EA 91-161

Wolf Creek Nuclear Operating Corporation  
ATTN: Bart D. Withers  
President and Chief Executive Officer  
P.O. Box 411  
Burlington, Kansas 66839

Gentlemen:

SUBJECT: NOTICE OF VIOLATION & PROPOSED IMPOSITION OF CIVIL PENALTY - \$150,000  
(NRC INSPECTION REPORT 50-482/91-34)

This is in reference to NRC's November 4-8, 1991, inspection at the Wolf Creek Nuclear Generating Station (Wolf Creek). This inspection, which was discussed in exit meetings with Wolf Creek Nuclear Operating Corporation (WCNOC) officials on November 8 and November 15, 1991, disclosed several instances in which WCNOC failed to take either prompt or adequate corrective action for possible deficiencies related to motor-operated valves (MOVs) in safety-related systems at the Wolf Creek facility, and one instance in which WCNOC failed to take prompt corrective action in response to weaknesses in its MOV testing program that had been identified by a contractor.

On November 22, 1991, NRC issued an inspection report which described these apparent failures and other findings related to WCNOC's safety-related MOV testing and surveillance program. These failures, which indicated potentially significant violations of the requirements of 10 CFR Part 50, Appendix B, Criterion XVI, were again discussed at an enforcement conference with you and other WCNOC representatives on December 6, 1991, in NRC's Arlington, Texas office. In accordance with previous commitments, the results of WCNOC's analyses of the safety significance of these issues were provided to the NRC during a telephone conference on February 3, 1992.

Criterion XVI of 10 CFR Part 50, Appendix B, requires, in part, that WCNOC and other power reactor licensees assure that significant conditions adverse to quality are promptly identified and corrected, that the cause of the condition is determined and that corrective action is taken to preclude repetition of the condition. This regulation also requires that the identification of the condition, the cause of the condition and the corrective action be documented and reported to appropriate levels of management.

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NRC has concluded that in four of the five instances described in the inspection report, WCNOG failed to meet the above referenced requirement. In brief, these involved:

- 1) A failure in February 1991 to take prompt corrective action to resolve apparent deficiencies identified by WCNOG personnel with respect to five MOVs. Despite thrust calculations which indicated that the valve motor operators may be undersized, WCNOG did not take prompt action to assess the validity or significance of these calculations. By November 1991, four of the five motor operators were found incapable of producing the necessary thrust to operate their associated valves under design basis conditions and the motor operators were replaced;
- 2) A failure in May 1991 to take any corrective action to resolve a number of deficiencies identified through a contractor-performed audit of WCNOG's safety-related MOV testing and surveillance program. The audit identified 17 "required enhancements," including: the need to establish acceptance criteria for the diagnostic testing being performed on MOVs; the need to establish how deficiencies would be identified, documented, and resolved with a root cause analysis; and the need to establish methods to prove and justify the operability of MOVs. In November 1991, NRC's review of the same program found that the deficiencies had not been addressed;
- 3) A failure in October 1991 to take corrective action to assure that a significant condition adverse to quality did not exist with respect to an MOV that had been subjected to several times its maximum allowable thrust. Until prompted by NRC in November 1991, WCNOG took no action to assure that no damage had occurred; and
- 4) A failure in November 1991 to take corrective action to determine the cause of an apparent failure of an MOV to close completely when remotely operated. Until prompted by NRC later in November 1991, WCNOG took no action to examine the MOV.

In the telephone conference call on February 3, 1992, WCNOG informed NRC of the results of its analyses of the MOVs involved in the first example above. WCNOG's conclusion is that the valves in question would not have functioned as required under certain accident conditions due to incorrect torque switch settings and possible motor degradation. WCNOG also concludes that this condition would have had a minimal effect on the consequences of postulated accidents.

Nonetheless, NRC views WCNOG's corrective action failures as significant violations of regulatory requirements. In the first instance, WCNOG's failure to take adequate corrective action compromised the safety of the plant, in that the plant was operated with valves associated with the coolant charging/safety injection system that would not have functioned under all design basis conditions. In the second instance, WCNOG's failure to take corrective action

in response to the audit findings cast a cloud of uncertainty over WCNOG's previous efforts to determine the adequacy of numerous safety-related MOV's in the plant.

In the remaining two instances, WCNOG's failure to take adequate corrective action in response to possible and known deficiencies created the potential to compromise plant safety, in that the operation of the valves in question in various safety-related systems could have been affected. In regard to the fifth example concerning apparent deficiencies with sizing of spring packs in two MOVs, no violation is being cited as subsequent licensee analysis has shown that the correct spring packs were installed.

Based on its review of the information developed during its inspection, the discussions that took place during the enforcement conference, and the information that WCNOG has since generated relative to the ability of safety-related MOVs to function under design conditions, NRC has concluded, relative to the first and second instances above, that these failures constitute a significant regulatory concern. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), the violations are classified in the aggregate as a Severity Level III problem.

These violations appear to have occurred for a number of reasons. WCNOG stated at the enforcement conference that a lack of management attention to the Wolf Creek MOV program was the fundamental cause, and that attitudes toward the MOV program -- particularly that it was a long-term program with a targeted completion date in 1994 -- contributed to a failure to properly focus on the safety significance of technical issues that were emerging through the implementation of the program.

However, historical weaknesses in WCNOG's corrective action program, which WCNOG had not previously acknowledged as significant, also played a role in causing these violations. NRC's concern about the current failures is heightened by the fact that problems and weaknesses in Wolf Creek's corrective action and self-assessment programs have been documented by NRC on several occasions, were the subject of a management meeting with WCNOG officials in April 1991, were the subject of violations issued to WCNOG in Inspection Reports 90-05, 90-31 and 90-34, and have been discussed in Systematic Assessment of Licensee Performance (SALP) reports issued by NRC. Many of these concerns were discussed in Inspection Report 91-01, issued on April 29, 1991. In the letter transmitting that report, NRC said ". . . our view is that the identified weaknesses and concerns reflect the need for substantially more management involvement and support to ensure a fully effective (corrective action) program . . ."

WCNOG must take steps to improve its response to deficiencies and, most importantly, to instill in the Wolf Creek staff a sense of responsibility and an attitude toward safety that results in initiating prompt and thorough corrective actions when significant deficiencies or potentially significant deficiencies are identified.

NRC recognizes that WCNOG, in accordance with commitments made to NRC, corrected all hardware-related MOV deficiencies prior to resuming plant operations in January 1992. In addition, NRC believes that WCNOG has responded appropriately to the current issues, and believes that the actions it has outlined to resolve problems in its MOV program and its corrective action program are capable of success if aggressively implemented. These actions include specific actions to address all aspects of the violations discussed above, commitments to significant enhancements to management involvement in overseeing safety-related programs and activities, and commitments to significant efforts to improve employee performance in the area of identifying, documenting and correcting safety problems.

To emphasize the need for WCNOG to appropriately respond to known or suspected MOV deficiencies, and the significance that NRC attaches to the violations that are the subject of this correspondence, 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 (Notice) in the amount of \$150,000 for the Severity Level III problem described above and in the Notice.

The base value of a civil penalty for a Severity Level III problem is \$50,000. The escalation and mitigation factors in Section V.B. of the Enforcement Policy were considered and resulted in a net increase of \$100,000. Since the NRC identified these violations, the base civil penalty was escalated 50 percent. Mitigation of 50 percent was warranted for the comprehensive corrective actions discussed above. However, the base civil penalty was escalated 100 percent based on WCNOG's poor past performance with its corrective action program, as previously discussed. An additional 100 percent escalation was applied for the added significance of the duration of Violations I.A and I.B. In the first case, WCNOG failed to take adequate corrective action for eight months after analyses indicated that five safety-related valves may be incapable of performing their safety function. In the second case, WCNOG failed to act on the findings of an internal audit for some five months until alerted by NRC. The remaining factors -- prior notice and multiple occurrences -- were considered but were not applied in determining the penalty amount.

The two remaining violations, which also indicate a failure to meet the requirements of 10 CFR Part 50, Appendix B, Criterion XVI, have been deemed less significant from a safety and regulatory perspective and are not being assessed a civil penalty. These violations appear in Section II of the Notice.

In addition to the violations identified during inspection 91-34, a number of deviations from WCNOG's commitments relative to the conduct of its MOV program also were identified. These deviations, which were discussed in detail in the inspection report, are described in a Notice of Deviation which is also enclosed with this letter.

WCNOG is required to respond to this letter and should follow the instructions specified in the enclosed Notices when preparing its response. In your

response, you should document the specific actions taken and any additional actions you plan to prevent recurrence of these violations and deviations. 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 and its enclosures will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,

  
Robert D. Martin  
Regional Administrator

Enclosures:

1. Notice of Violation and Proposed Imposition of Civil Penalty
2. Notice of Deviation

cc:

Wolf Creek Nuclear Operating Corp.  
ATTN: Gary Boyer, Director  
Plant Operations  
P.O. Box 411  
Burlington, Kansas 66839

Shaw, Pittman, Potts & Trowbridge  
ATTN: Jay Silberg, Esq.  
1800 M Street, NW  
Washington, D.C. 20036

Public Service Commission  
ATTN: Chris R. Rogers, P.E.  
Manager, Electric Department  
P.O. Box 360  
Jefferson City, Missouri 65102

U.S. Nuclear Regulatory Commission  
ATTN: Regional Administrator, Region III  
739 Roosevelt Road  
Glen Ellyn, Illinois 60137

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Wolf Creek Nuclear Operating Corp.  
Wolf Creek Nuclear Generating Station

Docket No. 50-482  
License No. NPF-42  
EA 91-161

During an NRC inspection conducted November 4-8, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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

10 CFR Part 50, Appendix B, Criterion XVI, states, in part, that measures shall be established to assure that conditions adverse to quality 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 significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.

Contrary to the above, in the following instances, the licensee did not take prompt corrective action regarding significant conditions adverse to quality:

- A. In February 1991, the licensee did not take prompt corrective action in response to analyses indicating a significant condition adverse to quality. Specifically, a work review identified five motor-operated valves (MOV's) in safety-related applications that might not be capable of performing their design functions based on minimum voltage assumptions. In November 1991 and January 1992, upon further review of the same deficiencies, the licensee determined that the motor operators for four of these five valves, EMHV-8807A, EMHV-8807B, EMHV-8923A and EMHV-8923B, valves associated with the safety injection system, were incapable of operating their associated valves under design basis conditions.
- B. In May 1991, the licensee did not take prompt corrective action in response to a contractor-performed audit that identified a number of significant deficiencies in WCNO's safety-related MOV testing and surveillance program. These deficiencies included: the need to establish acceptance criteria for the diagnostic testing being performed on MOV's; the need to establish how deficiencies would be identified, documented, and resolved with a root cause analysis; and the need to establish methods to prove and justify the operability of MOV's. In November 1991, NRC's review of the same program found that the deficiencies had not been corrected.



Collectively, this is a Severity Level III problem (Supplement I).  
Cumulative Civil Penalty - \$150,000 (assessed equally between Violations I.A and I.B)

## II. Violations Not Assessed a Civil Penalty

10 CFR Part 50, Appendix B, Criterion XVI, states, in part, that measures shall be established to assure that conditions adverse to quality 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 significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.

Contrary to the above, in the following examples, the licensee did not promptly correct conditions adverse to quality:

- A. In October 1991, the licensee did not take corrective action to assure that a significant condition adverse to quality did not exist with respect to a safety-related MOV (BBHV-8000B) that had been subjected to several times its maximum calculated thrust. Until prompted by NRC in November 1991, WCNOG took no action to assure that no damage had occurred.

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

- B. In November 1991, the licensee did not take corrective action to determine the cause of an apparent failure of a safety-related MOV (EGHV-61) to close completely when remotely operated. Until prompted by NRC later in November 1991, WCNOG took no action to examine the MOV.

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

Pursuant to the provisions of 10 CFR 2.201, WCNOG (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 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 V.B of 10 CFR Part 2, Appendix C (1991), 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, 30 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 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.

Dated at Arlington, Texas  
this 20th day of February 1992

NOTICE OF DEVIATION

Wolf Creek Nuclear Operating Corp.  
Wolf Creek Nuclear Generating Station

Docket No. 50-482  
License No. NPF-42  
EA 91-161

During an NRC inspection conducted November 4-8, 1991, deviations of your commitment to adopt the guidance of NRC Generic Letter 89-10 were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions", 10 CFR Part 2, Appendix C, (1991), the deviations are listed below:

By letter dated December 26, 1989, the licensee committed to meet the provisions of Generic Letter (GL) 89-10. Paragraph "i" of GL 89-10 established a schedule for the development of the licensee's program description. Supplement 2 to GL 89-10 granted an extension to January 1, 1991, for the development of the program description.

GL 89-10 and Supplement 1 to the GL provided the guidelines for the development of plans and procedures for: performing design basis reviews; performing calculations for motor operated valve (MOV) sizing and switch settings; demonstrating the capabilities of the MOVs; analyzing each MOV failure, justifying corrective actions, and trending MOV failures and corrective actions.

Contrary to the above, as of November 8, 1991:

1. The licensee's GL 89-10 program failed to consider any design basis parameters other than differential pressure in its design basis reviews.
2. The licensee's GL 89-10 program failed to establish a method to properly size MOVs and select switch settings by not considering margins for rate of loading effects or torque switch repeatability; nameplate ratings vice stall ratings of the motors; diagnostic equipment inaccuracies; the performance of diagnostic tests at greater than 100 percent voltage; and, the performance of weak link analyses.
3. The licensee's GL 89-10 program failed to develop procedures for the performance of design basis testing (including design differential pressures and flows), acceptance criteria for the test, and feedback mechanisms.
4. The licensee's GL 89-10 program did not have provisions for periodic verification of MOV operability or post-maintenance testing.
5. The licensee's GL 89-10 program did not have adequate provisions for analyzing MOV failures, for justifying corrective action, and for trending those failures and corrective actions.

Please provide to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the Regional Administrator, Region IV, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, in writing within 30 days of the date of this Notice, the reason(s) for the deviation, the corrective steps which have been taken and the results achieved, the corrective steps which will be taken to avoid further deviations, and the date when your corrective action will be completed. Where good cause is shown, consideration will be given to extending the response time.

Dated at Arlington, Texas  
this 20th day of February 1992

I.B. REACTOR LICENSEES, SEVERITY LEVEL III VIOLATION,  
NO CIVIL PENALTY



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
799 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137

January 7, 1992

Docket No. 50-454  
License No. NPF-37  
EA 91-173

Commonwealth Edison Company  
ATTN: Mr. Cordell Reed  
Senior Vice President  
Opus West III  
1400 Opus Place  
Downers Grove, Illinois 60515

Dear Mr. Reed:

SUBJECT: NOTICE OF VIOLATION  
(NRC INSPECTION REPORT NO. 50-454/91027)

This refers to the special safety inspection conducted October 28 through December 3, 1991 at the Byron Station Unit 1 to review the events surrounding the failure on October 27, 1991, to have the containment spray system operable, as required when bringing the unit from cold shutdown to hot shutdown. The report documenting this inspection was mailed to you by letter, dated December 10, 1991. A significant violation of NRC requirements was identified during the inspection, and on December 19, 1991, an enforcement conference was held in the Region III office. Attending the enforcement conference were Mr. Michael J. Wallace, Vice President of Pressurized Water Reactor Operations; Mr. William Forney, Deputy Director, Division of Reactor Projects; and other members of our respective staffs.

At approximately 4:45 p.m. on October 27, 1991, the Byron plant staff transitioned the Unit 1 reactor from Operational Mode 5 to Mode 4, while returning the unit to power from a refueling outage. At approximately 11:30 p.m. on October 27, 1991, the plant staff discovered that the containment spray pumps were administratively tagged "out-of-service" and the switches were in the "pull-to lock" position. The plant staff then entered Technical Specification Limiting Condition for Operations (LCO) 3.0.3, and was able to return the containment spray system to an operable status. The LCO was exited at 12:14 a.m. on October 28, 1991.

The violation, which is described in the enclosed Notice of Violation, concerns the inoperable containment spray systems. Technical Specification 3.6.2.1 requires that system to be operable when the reactor is in Mode 4. The consequence of this violation is that the containment spray system, which

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

is designed to mitigate a serious safety event, was not able to perform its intended safety function. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), this violation has been categorized at Severity Level III.

The NRC recognizes that the plant was placed in the Technical Specification 3.0.3 Limiting Condition of Operation immediately upon discovery of the violation and corrective actions were promptly taken when the violation was identified. Corrective actions include: (a) revising the procedure for the out-of-service board review to require the documentation of discrepancies, regardless of the status; (b) revising the plant heatup procedure, 1BGP100-1, and checklist to improve coordination between the two documents; (c) upgrading licensed operator training to cover mode change activities; and (d) evaluating and improving the work prioritization and resource allocation process to clarify responsibilities and reduce the stress associated with mode changes.

Notwithstanding the corrective actions you implemented or plan to implement, the NRC is quite concerned that the control room staff did not discover that the switches for the containment spray pumps were in the pull-to-lock position at the time the authorization was given to change Unit 1 to Operational Mode 4. Moreover, the position of the switches was not recognized for a period of almost seven hours, which included separate shift turnovers between Nuclear Station Operators, between Shift Control Room Engineers, and between Shift Engineers. For licensed, experienced, reactor operators and senior reactor operators to have not observed the out-of-service tags on the containment spray pump controls and to not have recognized that the controls were in the pull-to-lock position is quite disturbing. Further, two independent reviewers failed to ensure that shift managers were aware that the Master Out-of-Service Board showed that the containment spray system was unavailable. These are all indicative of a significant lack of attention to responsibilities by on-shift control room personnel and shift managers.

Two factors appeared to contribute to the violations. The first was a human factors problem related to the structure of the procedures in use during plant start-up. Procedure 1BGP100-1, "Plant Heatup," and Flowchart 1BGP100-1T1, were the documents being used for the start-up. However, a separate document, 1BGP100-1T2, "Mode 5 to 4 Checklist," required the signature of the shift engineer to authorize the change of operational mode. The three documents were not coordinated as a step was not included on Checklist 1BGP100-1T2 to require the shift engineer to verify that items on Procedure 1BGP-100-1 and Flowchart 1BGP100-1T1 were completed prior to authorizing the mode change.

The second factor was the distraction of the plant staff caused by the Unusual Event declared on Unit 2 due to an unidentified leak in the reactor coolant system. The Unit 2 Unusual Event was in progress at the same time that the staff changed Unit 1 from Operational Mode 5 to Mode 4.

January 7 1992

In accordance with the Enforcement Policy a civil penalty is usually assessed with a Severity Level III violation in order to emphasize the need to verify that systems designed to prevent or mitigate a serious safety event are available to perform their intended safety function. However, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Reactor Regulation, Regional Operations and Research, I have decided that a civil penalty will not be proposed in this case. In reaching this decision, the staff considered the adjustment factors in the NRC Enforcement Policy.

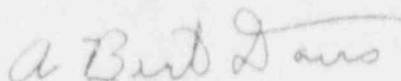
It was determined that full mitigation of this penalty was appropriate due to your extensive corrective actions and the good past performance of the Byron Station. While you identified and reported the violation to the NRC, an adjustment was not made for the identification and reporting factor since you had at least three earlier opportunities to recognize that the switches for the containment spray pumps were in the pull-to-lock position. The remaining factors in the enforcement policy were also considered and no further adjustment to the base civil penalty is considered appropriate.

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 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.

The response directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Public Law No. 96-511.

Sincerely,



A. Bert Davis Regional  
Administrator

Enclosure: Notice of Violation

cc: See Next Page



NOTICE OF VIOLATION

Commonwealth Edison Company  
Byron Station Unit 1

Docket No. 50-454  
License No. NPF-37  
EA 91-173

During an NRC inspection conducted October 28 through December 2, 1991, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), the violation is listed below:

Technical Specification 3.6.2.1 requires, in part, that two independent containment spray systems be operable in Operational Modes 1, 2, 3, and 4, with each spray system capable of taking suction from the refueling water storage tank (RWST) and transferring suction to the containment sump.

Technical Specification 3.0.4 states, in part, that entry into an operational mode or other specified condition shall not be made unless the conditions for the Limiting Condition for Operation are met without reliance on provisions contained in the action requirements.

Contrary to the above, at 4:55 p.m., on October 27, 1991, the Byron Station Unit 1 entered Operational Mode 4 and two independent containment spray systems were not operable. Specifically, both trains of the containment spray system were inoperable and not capable of taking suction from the RWST and transferring suction to the containment sump because the control switch for each of the pumps of the containment spray systems was in the pull-to-lock position when Mode 4 was entered.

This is a Severity Level III violation (Supplement 1).

Pursuant to the provisions of 10 CFR 2.201 the Commonwealth Edison Company (Licensee) is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region III, 799 Roosevelt Road, Glen Ellyn, Illinois 60137, and a copy to the NRC Resident Inspector at the Byron Station, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) 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. Where good cause is shown, consideration will be given to extending the response time. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Bert Davis  
Regional Administrator

Dated at Glen Ellyn, Illinois  
the 7<sup>th</sup> day of January 1992



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

March 10, 1992

Docket No. 50-286  
License No. DPR-64  
EA 92-009

New York Power Authority  
ATTN: Ralph Beedle  
Executive Vice President -  
Nuclear Generation  
123 Main Street  
White Plains, New York 10601

Gentlemen:

Subject: NOTICE OF VIOLATION  
(NRC Inspection Report No. 50-286/91-26)

This letter refers to the NRC inspection conducted between November 24, 1991 and January 4, 1992, at the Indian Point 3 Nuclear Power Plant, Buchanan, New York. The inspection report, dated January 22, 1992, was sent to Mr. P. Kokolakis of your staff, via facsimile transmission on January 23, 1992. The inspection was conducted to review the circumstances associated with a loss of configuration control of one of the emergency diesel generators (EDGs) for an indeterminate period between December 9-16, 1991. Specifically, an automatic voltage control rheostat was incorrectly positioned on that one EDG at some indeterminate time during that period, rendering that EDG inoperable. The event, and the associated violation of NRC requirements, were identified by your staff and reported to the NRC. On February 5, 1992, an enforcement conference was conducted with Mr. J. Russell and other members of your staff to discuss the event, its related violations, their causes and your corrective actions.

The event, which occurred while the reactor was at 100 percent of rated thermal power, involved the inoperability of EDG 33, which failed an operability test on December 16, 1991, due to the incorrect positioning of the automatic voltage control rheostat located on the local EDG control panel. The incorrectly positioned rheostat prevented the EDG from achieving the proper output voltage during automatic initiation, rendering the EDG inoperable. At the enforcement conference you indicated that it would take 14 minutes for recovery once the EDG failed. A review of the event determined that the diesel was last shown to be operable on December 9, 1991, when it was tested, along with EDG 32, prior to the removal of EDG 31 from service for maintenance.

Therefore, EDG 33 may have been inoperable for the entire seven day period. In addition, during the December 9-16 time period, EDG 31 was also inoperable for nine hours on December 9, 1991. Depending on when the rheostat was incorrectly positioned, the potential existed for one EDG being inoperable for greater than 72 hours, and two EDGs being inoperable at the same time, which would constitute a violation of the technical specifications. The failure to provide

control over activities affecting the quality of systems and components, namely the control of the position of the rheostat, constitutes a violation of the NRC requirements set forth in 10 CFR Part 50, Appendix B, Criterion II.

The NRC recognizes that your investigation could not determine the exact timing and cause of the incorrect positioning of the rheostat; however, the potential existed for the plant to be operating outside the design basis if two of the three EDGs were inoperable at the same time. The NRC also recognizes that the condition was not easily identified, because there was no setpoint indication on the rheostat. The NRC commends the actions of the plant operator who recognized, during a surveillance test of the EDG, that the rheostat was not in the proper position and so informed the operations staff. However, the NRC is concerned that there was no design feature, e.g. indication on the backplate behind the rheostat dial, which would have provided a means to determine the automatic voltage control setpoint. As a result, the actual setpoint could be determined only while the diesel generator was running. In addition, there was no protective device, e.g. cover or warning label, on the rheostat, which may have prevented the incorrect positioning of the rheostat.

Sufficient control of plant components was not maintained to ensure that certain safety related equipment was maintained operable, and as a result, a degradation of your engineered safety features occurred. The violation has been classified at Severity Level III in accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, (Enforcement Policy) (1991). The violation is described in the enclosed Notice.

The NRC recognizes that subsequent to the identification of the incorrectly positioned control rheostat on emergency diesel generator 33 on December 16, 1991, a thorough investigation was conducted and comprehensive actions were promptly initiated to prevent recurrence. These corrective actions, which were described either during the inspection, in LER 92-001, or at the enforcement conference, included: (1) adding reference marks to all three EDG panels to clearly identify the operable band on the automatic voltage control rheostats; (2) requiring the nuclear plant operator to verify that the automatic voltage control rheostats on all EDG panels are within the operable band every shift; (3) initiating a surveillance procedure specifying EDG operability acceptance criteria and required signoffs to be used when performing an operability test; (4) revising the EDG monthly functional test (JPT-V16) to include a restoration checkoff list; (5) implementing the surveillance test process for all TS equipment, to ensure all TS required operability checks are performed with a surveillance procedure; (6) performing system walkdowns to identify additional plant systems susceptible to incorrect positioning of controllers (none were identified); (7) evaluating the feasibility of a protective cover for the EDG rheostat dial, or possibly recessing the dial on the control panel; and (8) reviewing the IP3 General Employee Training lesson plans to ensure that personnel manipulation of plant components is addressed.

Although a civil penalty is normally issued for a Severity Level III violation, 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 mitigate the penalty in its entirety and issue the enclosed Notice of Violation (Notice) for the violation. In deciding to mitigate the penalty, the escalation and mitigation factors set forth in the enforcement policy were considered in the manner described below. Since the violation was identified as a result of the attentive and diligent actions by your plant operator, and was reported to the NRC by your staff, 50 percent mitigation of the base civil penalty on this factor is warranted. Your corrective actions, subsequent to the identification of the incorrectly positioned rheostat, were prompt and comprehensive, and therefore, 50 percent mitigation of the base civil penalty on this factor is warranted. With respect to your past performance, you received a Category 2 rating in the plant operations and maintenance/surveillance areas during the last SALP period, and your performance in the past two years involved an example of a configuration control problem (Ref: Notice of Violation dated August 9, 1991); therefore, no adjustment of the base civil penalty on this factor is warranted. The other factors in the Policy were considered and no further adjustment of the civil penalty based on those factors is warranted.

In addition to this violation, two other violations are enclosed in the Notice and classified at Severity Level IV. These violations relate to your surveillance program, where further attention may be needed. Further, the inspection report addresses an apparent violation concerning the inoperability of three containment ventilation recirculation fan cooler units for 34 minutes. The NRC staff has reviewed the information presented at the enforcement conference. Although these fan cooler units are required to be operable while the plant is operating in other than a cold shutdown condition, two of the three fan cooler units were inoperable as a direct result of the EDG No. 33 inoperability. Therefore, we have decided not to cite this violation, since the cause of the violation is the EDG operability, which is the subject of the Notice.

You are required to respond to the enclosed Notice and, in preparing your response, you should follow the instructions specified therein. 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 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," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosure will be placed in the NRC's Public Document Room.

The responses directed by this letter and the enclosure are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. 96-511.

Sincerely,



Thomas T. Martin  
Regional Administrator

Enclosure:  
Notice of Violation

cc:

J. Brons, President  
J. Russell, Resident Manager  
G. Goldstein, Assistant General Counsel  
P. Kokolakis, Director Nuclear Licensing - PWR  
G. Begany, Mayor, Village of Buchanan  
C. Jackson, Nuclear Safety and Licensing Manager (Con Ed)  
C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law  
Director, Power Division, Department of Public Service, State of New York  
Public Document Room (PDR)  
Local Public Document Room (LPDR)  
Nuclear Safety Information Center (NSIC)  
NRC Resident Inspector  
State of New York, SLO Designee

NOTICE OF VIOLATION

New York Power Authority  
Indian Point Unit 3  
Buchanan, New York

Docket No. 5D-286  
License No. DPR-64  
EA 92-009

During an NRC inspection conducted on November 24, 1991 through January 4, 1992, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), the particular violations are set forth below:

- A. 10 CFR Part 50 Appendix B, Criterion II, Quality Assurance Program, requires, in part, that the quality assurance program shall provide control over activities affecting the quality of systems and components, to an extent consistent with their importance to safety.

Contrary to the above, as of December 16, 1991, the licensee did not provide control over activities affecting the quality of systems and components, to an extent consistent with their importance to safety. Specifically, the licensee failed to assure control of the position of the automatic voltage control rheostat for emergency diesel generator (EDG) 33, a safety related system. On December 16, 1991, it was found to be incorrectly positioned in that it was set at 430 volts rather than the required setting of 480 volts.

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

- B. Technical Specification 6.8.1 requires that written procedures be established, implemented and maintained covering the applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, November 1972 (Safety Guide 33). Regulatory Guide 1.33, November 1972, Appendix A, Section H, Procedure for Control of Measuring and Test Equipment, requires, in part, that specific procedures for surveillance tests, should be written (implementing procedures are required for each surveillance test listed in a technical specification) for Emergency Power Tests.

Technical Specification 3.7.8.1 requires that one diesel or any diesel fuel oil system or a diesel and its associated fuel oil system may be inoperable for up to 72 hours provided the 138 KV and the 13.8 KV sources of offsite power are available and the remaining diesel generators are tested daily to ensure operability and the engineered safety features associated with these diesel generator buses are operable.

Contrary to the above, as of December 16, 1991, the licensee did not have a written test procedure in order to conduct the surveillance tests on the emergency diesel generators required by Technical Specification 3.7.8.1.

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

- C. 10 CFR Part 50, Appendix B, Criterion XI, Test Control, requires, in part, that test results be documented and evaluated to assure that test requirements have been satisfied.

Contrary to the above, on November 13, 1991, the test results for PT-V16, Diesel Generator Monthly Functional Test, were not adequately evaluated to assure that the test requirements associated with the differential pressure between the essential service water header and service water inlet pressure to diesel generator 31 heat exchanger were met. Specifically, PT-V16 specified an acceptance criteria of at least 10 psid, and a test result of only 9 psid was obtained. This discrepancy was not noted by the operations manager or the performance and reliability supervisor during their review of the completed surveillance test data.

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

Pursuant to the provision of 10 CFR 2.201, New York Power Authority is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region I, and a copy to the NRC Resident Inspector, Indian Point 3, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) 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. Where good cause is shown, consideration will be given to extending the response time. Under the authority of Section 182 of the Atomic Energy Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Dated at King of Prussia, Pennsylvania  
this 10th day of March 1992.





UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406-1416

February 21, 1992

Docket No. 50-423  
License No. NPF-49  
EA 92-008

Northeast Nuclear Energy Company  
ATTN: J. Opeka  
Senior Vice President - Nuclear  
Engineering and Operations  
Post Office Box 270  
Hartford, Connecticut 06141-0270

Dear Mr. Opeka:

Subject: NOTICE OF VIOLATION  
(NRC Inspection Report No. 50-423/91-15)

This letter refers to the NRC inspection conducted between November 27 and December 20, 1991, at the Millstone Nuclear Power Station, Unit 3, Waterford, Connecticut. The inspection report was sent to you on January 10, 1992. The inspection was conducted to review the circumstances associated with an event which occurred at Unit 3 involving the disabling of the Supplemental Leak Collection and Release System (SLCRS), following a June 9, 1991 reactor trip, in violation of a technical specification limiting condition for operation, as well as the failure to promptly identify and correct this condition adverse to quality. The event, and the associated violations of NRC requirements, were identified by your staff and reported to the NRC on August 7, 1991. On January 22, 1992, an enforcement conference was conducted with Mr. W. Romberg and other members of your staff to discuss the event, its related violations, their causes and your corrective actions.

The event, which occurred while the reactor was at 100 percent power involved a trip of both the reactor and turbine when the plant experienced a full load reject upon the opening of two switchyard breakers because of a pilot wire relay failure. This resulted in the partial loss of electrical power to systems supplied by non-vital 4160 AC, including a number of secondary plant loads. It has been postulated, by your staff, that following the trip, steam from the main condenser entered the common SLCRS discharge duct, via the main air ejectors, and melted the fusible links for the Train "A" and Train "B" fire dampers which caused the fire dampers to close. This resulted in the disabling of both trains of the SLCRS, which is required to be operable by Technical Specifications while the plant is operated in other than a cold shutdown condition.

Although the post-trip review, following the load reject event on June 9, 1991, did not identify this condition, a problem with system air flow on the "B" train of the SLCRS was discovered during a routine surveillance test eight days later. Your subsequent investigation revealed that a fire damper in the discharge duct was closed, stopping the flow of air, as a result of the failed fusible link.

At that time, your staff believed that the failure mode for the fusible link was mechanical in nature, and they replaced the link, returning the "B" train to an operable status. The NRC is concerned in this case because, given the unknown cause of what you thought was a mechanical failure, you did not check to see if you had a similar problem on the "A" train. If you had checked the "A" train, you would have identified that a similar common cause/common mode failure had also rendered the "A" train inoperable. As a result, "A" train remained inoperable until July 2, 1991 when a surveillance was performed on that train. The failure to promptly identify and correct a condition adverse to quality constitutes a violation of the NRC requirements set forth in 10 CFR Part 50, Appendix B, Criterion XVI.

With respect to the load reject event, the NRC is concerned that the loss of power to the non-vital 4160 AC loads was a result of deletion of the offsite fast transfer scheme during the February-March 1991 refuel outage. The safety evaluation for this modification indicated that the deletion of the fast transfer scheme would result in the loss of the non-vital loads; however, the evaluation did not fully explore how the loss of these non-vital loads would affect plant operations. In addition, the modification did not undergo a mechanical system design review, since the modification was thought to be primarily electrical in nature, even though it affected a number of interrelated systems. It is our understanding that in the future, your evaluation will appropriately consider both the electrical and mechanical impacts of modifications.

The SLCRS is designed to filter radioactive particulates which leak into structures surrounding the primary containment following a design basis event and thereby prevent their release into the environment. The NRC recognizes that although the SLCRS was inoperable, the safety significance was minimized by the fact that the auxiliary building ventilation system (a system required by Technical Specifications) remained available to mitigate the consequences of a design basis event. That system would provide a filtered discharge path for buildings within the SLCRS boundary, via common ductwork and building interconnections, and would limit a radiological release to amounts within the 10 CFR Part 100 limits. Nonetheless, the violations resulting from this event indicate weaknesses in your programs for prompt identification and correction of safety significant deficiencies. Therefore, the violations have been categorized in the aggregate as a Severity Level III problem in accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, (Enforcement Policy) (1991). The violations demonstrate the importance of (1) meticulous attention to detail during the investigation and review of system failures at the facility, to ensure that appropriate corrective actions are initiated, and (2) proper control of equipment at the facility to assure the reactor is operated and maintained safely and in accordance with the Technical Specifications.

The NRC also recognizes that subsequent to your identification of the common cause/common mode failure of the SLCRS on July 8, 1991, a thorough investigation was conducted and comprehensive actions were promptly initiated to prevent recurrence. These corrective actions, which were described either during the inspection or at the enforcement conference, included: (1) replacing the original fusible links with links rated for higher temperatures; (2) revising the plant

incident report (PIR) procedure to require an initial investigation for adverse trends within a few days of an incident, including for failures of surveillance tests; (3) plans for incorporating the lessons learned from this event into a special training session for appropriate personnel; (4) revising the plant design change record (PDCR) process to ensure that a mechanical systems design review is performed; (5) revising the station procedure on post-trip reviews to include a multi-discipline team review of a trip, and a critique from all individuals involved in a trip; and (6) revising the Millstone Unit 3 post-trip procedure to include additional data to be collected, and to address important control and secondary systems. In addition, a loss of power task force continues to study the efficacy of the fast transfer modification with the potential for additional procedural or hardware changes.

Although a civil penalty is normally issued for a Severity Level III problem, 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 mitigate the penalty in its entirety and issue the enclosed Notice of Violation (Notice) for the violations. In deciding to mitigate the penalty, the escalation and mitigation factors set forth in the Enforcement Policy were considered in the manner described below. Notwithstanding the fact that the event and the associated violations were identified and reported to the NRC, by your staff, adjustment of the base civil penalty on this factor is not warranted, since there was an earlier opportunity to discover these violations that were missed by your staff. Your corrective actions, subsequent to the identification of the common cause/common mode failure, on July 8, 1991, were prompt and comprehensive, and therefore, 50% mitigation of the base civil penalty on this factor is warranted. While we recognize that you have been subject to escalated action for inadequate corrective action since this event, your performance prior to the event was good, as evidenced by no violations being issued for similar problems in the two years prior to this event, and therefore, 50% mitigation of the base civil penalty on this factor is warranted. Full 100% mitigation is not warranted for this factor in light of your Category II ratings in the engineering/technical support, and safety assessment/quality verification areas during the last SALP period. Since this case did not involve prior notice, or multiple examples, no adjustment of the civil penalty on these factors is warranted. Although the condition adverse to quality did exist for at least 21 days, with one or both trains of SLCRS being inoperable, no escalation based on the duration factor is warranted because this fact was a consideration in the decision to categorize the violations as a Severity Level III problem.

In addition to the violations set forth in the Notice, another issue was raised in the inspection report which was not identified as an apparent violation. This issue involved the failure of the control room operators to run both diesel generators within one hour of a loss of an offsite power source, while restoring plant equipment during the plant recovery from the load reject event. Although this failure constitutes a violation of TS 3.8.1.1.a, the violation is not being cited because the criteria specified in Section V.G of the Enforcement Policy were satisfied; i.e., it was of minor safety significance, the violation was identified, reported and corrected by your staff; and would normally be classified at a Severity Level IV violation.

You are required to respond to the enclosed Notice and, in preparing your response, you should follow the instructions specified therein. 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 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," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosure will be placed in the NRC's Public Document Room.

The responses directed by this letter and the enclosure are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. 96-511.

Sincerely,



Thomas T. Martin  
Regional Administrator

Enclosure: Notice of Violation

cc:

W. D. Romberg, Vice President, Nuclear Operations  
S. E. Scace, Nuclear Station Director  
C. H. Clement, Nuclear Unit Director  
R. M. Kacich, Manager, Nuclear Licensing  
D. O. Nordquist, Director of Quality Services  
Gerald Garfield, Esquire  
Nicholas Reynolds, Esquire  
Public Document Room (PDR)  
Local Public Document Room (LPDR)  
Nuclear Safety Information Center (NSIC)  
NRC Senior Resident Inspector  
State of Connecticut SLO Designee

## NOTICE OF VIOLATION

Northeast Nuclear Energy Company  
Waterford, Connecticut  
Millstone, Unit 3

Docket No. 50-423  
License No. NPF-49  
EA 92-008

During an NRC inspection conducted between November 27 and December 20, 1991 violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), the violations are listed below:

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

Contrary to the above, between June 9, 1991 and July 2, 1991, a condition adverse to quality existed at the Millstone Unit 3 facility, and the condition was not promptly identified and corrected. Specifically, a common mode failure occurred, which rendered both trains of the Supplemental Leak Collection and Release System (SLCPS) inoperable, when the fusible links for the Train "A" and Train "B" melted closing the fire dampers. During that time period, the licensee identified, on June 17, 1991, that the SLCRS Train "B" was inoperable because of a failed surveillance test. The licensee did not properly diagnose the root cause of the test failure as a part of their corrective actions in that the licensee attributed the failure of the fusible link to a mechanical failure, rather than the melting of the link. In addition, the licensee failed to check whether a similar problem existed on the "A" Train, and therefore, that condition adverse to quality, namely, the inoperability of the "A" train of SLCRS, existed for an additional 15 days (June 17, 1991 to July 2, 1991).

- B. Technical Specification Limiting Condition for Operation (LCO) 3.6.6.1 requires that whenever the plant is in Modes 1, 2, 3, or 4, two independent Supplemental Leak Collection and Release Systems (SLCRS) shall be operable. The Technical Specification (LCO) Action Statement requires that with one Supplemental Leak Collection and Release System inoperable, restore the inoperable system to operable status within 7 days or be in at least hot standby within the next 6 hours and in cold shutdown within the following 30 hours.

Technical Specification LCO 3.0.3 requires, in part, that when a LCO is not met, except as provided in the associated action requirements, within 1 hour action shall be initiated to place the unit in cold shutdown within the subsequent 24 hours.

Contrary to the above, between June 9, 1991 and June 17, 1991, while the plant was in either Modes 1, 2, or 3, both the "A" and "B" trains of SLCRS were inoperable in that the fire dampers in each of the trains were closed, thereby stopping the flow of air in the system, and action was not taken to place the plant in cold shutdown condition. In addition, the "A" train of SLCRS remained inoperable from June 17, 1991 to July 2, 1991, exceeding the 7 day action station by 8 days, and action was not taken to place the plant in the cold shutdown condition.

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

Pursuant to the provision of 10 CFR 2.201, Northeast Nuclear Energy Company is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region I, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) 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. Where good cause is shown, consideration will be given to extending the response time. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Dated at King of Prussia, Pennsylvania  
this 21st day of February 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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

JAN 22 1992

Docket No. 50-285  
License No. DPR-40  
EA 91-184

Omaha Public Power District  
ATTN: W.G. Gates, Division Manager  
Nuclear Operations  
444 South 16th Street Mall  
Mail Stop 8E/EP4  
Omaha, Nebraska 68102-2247

Gentlemen:

SUBJECT: NOTICE OF VIOLATION (NRC INSPECTION REPORT NO. 50-285/91-26)

This is in reference to NRC's November 18-December 3, 1991, inspection at Omaha Public Power District's Fort Calhoun Station facility in Blair, Nebraska, the results of which were documented in a report issued on December 10, 1991, and to an enforcement conference which was held in NRC's Arlington, Texas office on December 19, 1991.

NRC's inspection reviewed the safety and regulatory implications of OPPD's November 18 discovery that Fort Calhoun Station personnel had circumvented plant procedures and primary containment integrity requirements on 20 occasions in the preceding six weeks when sampling water from the reactor coolant drain tank.

OPPD's investigation of this event revealed that on each of the 20 occasions, plant personnel, including the system engineer responsible for Radwaste Systems, opened valve WD-1060 for approximately 45 seconds. This was done without a Plant Review Committee approved procedure for valve operation, without the approval of the shift supervisor, without documenting the activity in the Locked Component Deviation Log, and without independently verifying that the valve had been returned to its normal closed and locked position, all violations of plant procedures. The individuals involved in this activity disregarded the obvious prohibitions to repositioning WD-1060, as indicated by a seal wire on the valve, and failed to recognize the effect of opening this valve on the integrity of the primary containment as it is defined in plant Technical Specifications.

Admittedly, this sampling activity had no effect on the safe operation of the plant and a minimal effect on the containment integrity. The significance of this event rests not on the details of the sampling activity. The serious safety implications arise from the fact that a number of trainee and experienced plant personnel operated a valve without following an approved procedure, when that valve was identified by the presence of a seal wire as a valve which should not be repositioned without exercising special controls.

Opening this valve in this manner was a clear violation of the Fort Calhoun Station Quality Assurance Plan and plant Standing Order O-44, "Administrative Controls for Locks of Components," which permits the repositioning of such valves only with the approval of the shift supervisor or by utilizing a procedure approved by the Plant Review Committee. Neither occurred in this case.

NRC recognizes fully the positive actions taken by OPPD upon discovery of this event and views OPPD's corrective actions as prompt and extensive. These include immediate action to halt the activity, the initiation of a thorough root cause analysis, the bringing of the event to the attention of plant staff in writing and in meetings, the conduct of a review of all other non-routine sampling activities for nearly a two-year period, and, as of the date of the enforcement conference, commitments to evaluate a series of recommendations resulting from the root cause analysis. The recommendations include, among other things, developing labels for locking devices, enhancing training on standing orders in general and additional training on Standing Order O-44, and enhancing the formality of and communications associated with non-routine activities.

Nonetheless, the lack of formality demonstrated by the system engineer during the troubleshooting process, the lack of training, and the lack of inquisitiveness indicated by this event -- all factors which OPPD's root cause analysis attributed this event to -- are significant regulatory concerns to NRC because they represent a disregard for safety that could, under other circumstances, result in more serious consequences. Therefore, the violations associated with this event are classified at Severity Level III.

In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), a civil penalty is considered for a Severity Level III violation. However, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Reactor Regulation, Regional Operations and Research, I have decided that a civil penalty will not be proposed in this case. This decision is based on NRC's consideration of the civil penalty adjustment factors in Section V.8. of the Enforcement Policy.

In particular, the fact that OPPD discovered this event and promptly brought it to NRC's attention, the promptness and extensiveness of OPPD's corrective actions, and OPPD's generally good past performance in the two years preceding this event were significant factors in this determination. Had NRC observed recent examples of violations with similar root causes -- lack of formality, lack of training, and lack of questioning attitudes -- a civil penalty would have been assessed. From NRC's perspective, this event is inconsistent with the improvements that have occurred in OPPD's overall regulatory performance.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice of Violation (Notice) when preparing your response. In your response, you should document the specific actions taken and



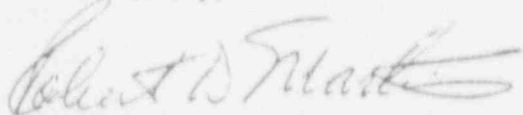
any additional actions you plan to prevent recurrence. You should also specifically address any actions taken to ensure that troubleshooting activities are properly controlled. After reviewing your response to this Notice, including your proposed corrective actions and the results of future inspections, the NRC will determine whether further NRC enforcement action is necessary to ensure compliance with NRC regulatory requirements.

Although the December 10, 1991 inspection report indicated that containment integrity Technical Specifications were violated by this event, we have not included a violation of Technical Specifications in the enclosed Notice because we have elected to focus in the Notice on those violations that, from NRC's perspective, are central to our regulatory concerns.

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

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,



Robert D. Martin  
Regional Administrator

Enclosure:  
Notice of Violation

cc:  
LeBoeuf, Lamb, Leiby & MacRae  
ATTN: Harry H. Voigt, Esq.  
1333 New Hampshire Avenue, NW  
Washington, D.C. 20036

Washington County Board  
of Supervisors  
ATTN: Jack Jensen, Chairman  
Blair, Nebraska 68008

Combustion Engineering, Inc.  
ATTN: Charles B. Brinkman, Manager  
Washington Nuclear Operations  
12300 Twinbrook Parkway, Suite 330  
Rockville, Maryland 20852

NOTICE OF VIOLATION

Omaha Public Power District  
Fort Calhoun Station

Docket No. 50-285  
License No. DPR-40  
EA 91-184

During an NRC inspection conducted on November 18 - December 3, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), the violations are listed below:

10 CFR Part 50, Appendix U, Criterion XIV requires, in part, that measures be established for indicating the operating status of structures, systems, and components of the nuclear power plant, such as by tagging valves to prevent inadvertent operation.

Fort Calhoun Station Quality Assurance Plan, Revision 1, Section 7.1, paragraph 4.2 requires, in part, that procedures for control of equipment be established to maintain plant safety and to avoid unauthorized operation of equipment. These procedures shall require control measures such as locking or tagging to secure and identify equipment in a controlled status. Instructions which implement these requirements shall be contained in the Standing Orders.

Fort Calhoun Station Standing Order SO-0-44, Revision 11, Section 9.0, requires, in part, that when a locked valve is taken out of its normal locked position, such deviations shall be logged in the Locked Component Deviation Log; that the person acquire the approval of the Shift Supervisor; and that an independent verification that the component has been returned to its normal locked position shall be completed.

Contrary to the above, from October 16 through November 18, 1991, on approximately 20 occasions, normally locked containment isolation valve WD-1060 was taken out of its normal locked position without being logged in the Locked Component Deviation Log, without the approval of the Shift Supervisor, and without an independent verification that it had been returned to its normal locked position being completed.

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

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 U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region IV, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the

corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) 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. Where good cause is shown, consideration will be given to extending the response time. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Dated at Arlington, Texas  
this 22nd day of January 1992



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

March 17, 1992

Docket Nos. 50-311  
License Nos. DPR-75  
EA 92-007

Public Service Electric and Gas Company  
ATTN: Steven Miltenberger  
Vice President and Chief Nuclear Officer  
Post Office Box 236  
Hancocks Bridge, New Jersey 08038

Dear Mr. Miltenberger:

Subject: NOTICE OF VIOLATION  
(NRC Inspection Report No. 50-311/91-81)

This letter refers to the NRC Augmented Inspection Team (AIT) inspection conducted between November 10 through December 3, 1991, at the Salem Nuclear Generating Station, Hancocks Bridge, New Jersey. The inspection report was sent to you on January 7, 1992. The inspection was conducted to review the circumstances associated with the severe damage to the turbine and generator at Unit 2 as a result of a turbine overspeed event. During the followup of this event, you identified that the turbine Overspeed Protection Control (OPC) system test in October 1991 was not properly performed in that problems encountered during the attempted performance of the test were not resolved prior to completing a startup of the reactor and turbine. As a result of the review of the circumstances surrounding the performance of that test, violations of NRC requirements were identified. The apparent violations were described in the enclosure to the letter sent to you by the NRC on January 23, 1992. On February 4, 1992, an enforcement conference was conducted with you and members of your staff to discuss the violations, the causes, and your corrective actions.

The violations, along with several other factors, contributed to the catastrophic failure of the turbine-generator on November 9, 1991, due, in part, to failure of the OPC system to control a turbine overspeed condition. The event was principally caused by the failure of three separate turbine control solenoid valves (i.e., Overspeed Protection Control valves OPC-20-1, OPC-20-2, and Emergency Trip valve ET-20) to function due to mechanical binding of the devices.

As a result, upon a reactor trip, the turbine steam admission valves were not maintained closed and steam was readmitted to the turbine. Since the main generator output breakers opened as a result of the reactor trip, turbine speed was no longer restrained. Consequently, upon steam readmission, the turbine experienced an overspeed condition that was not arrested, since the OPC solenoids did not effect the momentary closure of the governor or interceptor valves. The resulting turbine overspeed caused severe damage to the turbine, destruction of the generator, and the initiation of a hydrogen

and oil fire involving the generator system. The overspeed condition also resulted in missiles (parts of turbine blades) being ejected from one of the low pressure turbine assemblies.

A test of the turbine Overspeed Protection Control (OPC) system was conducted on October 20, 1991 as part of a reactor and turbine startup. A successful test of the OPC system required verifying that the interceptor valves closed upon receipt of a test signal. Upon testing, the valves did not close. However, five licensed operations staff personnel, including two reactor operators, a shift supervisor, a senior shift supervisor, and a senior operations engineer, did not demonstrate a sufficiently questioning and inquisitive attitude regarding the test result. In addition, the senior shift supervisor and the senior operating engineer apparently did not understand that an actual test failure had occurred. These five individuals did not adequately communicate among themselves concerning the issue, and proceeded with the turbine startup without first resolving the test discrepancy. Furthermore, they did not obtain a procedural change to support the deviation from the established operational procedure. These failures constitute violations of NRC requirements set forth in the Notice of Violation (Notice).

The NRC recognizes that the turbine, generator, and turbine control systems and devices are not considered safety related equipment at the facility and the AIT identified several root causes not all of which involved violation of NRC requirements. However, this event is of regulatory concern to the NRC since failure of these components could result in reactor transients, as well as the generation of turbine missile/projectiles, which have the potential to adversely affect safety-related equipment. Additionally, as discussed above, several layers of licensed operating personnel were involved in the decision of continuing reactor and turbine startup contrary to the expected conduct of operations. If your operations staff had properly resolved the test problem, the November 9, 1991 event would have likely been prevented because proper resolution of the test failure should have led to the discovery of the faulty solenoid valves. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), the violations have been categorized at Severity Level III in the aggregate. The problem is described in the enclosed Notice.

The NRC recognizes that corrective actions have been taken or planned to prevent recurrence of such violations. These actions, which were described at the enforcement conference, as well as in a Licensee Event Report, included, but were not limited to: (1) development of a personal corrective action plan by each of the five involved licensed individuals; (2) enhanced training of operators relative to the expected conduct of operations; (3) issuance of a letter to all operations personnel regarding procedural compliance; (4) conduct of shift meetings by management with all staff regarding their roles and responsibilities; and (5) upgrade of procedures.

Normally, a civil penalty is issued for a Severity Level III problem in such cases to emphasize the importance of strict adherence to procedures at the facility, as well as prompt and proper resolution of problems encountered during procedural implementation, to assure that the reactor is operated and maintained in a safe condition. However, 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 without a civil penalty, after considering the mitigating factors in this case.

In making this determination to mitigate the civil penalty, the NRC decided that: (1) since the violation was identified and reported to the NRC by your staff, 25% mitigation of the base civil penalty for this factor is warranted; however, full mitigation is not warranted because this was a self-disclosing event; (2) your corrective actions, as described herein, were considered prompt and extensive, and therefore, 50% mitigation of the base civil penalty on this factor is warranted; (3) your past performance in the operations area specifically, reduction in personnel errors and overall control room performance, warrants 50% mitigation of the civil penalty; and (4) although you had prior notice of potential problems with the mechanical binding of solenoid valves because of a similar problem at Unit 1 in September 1990, no adjustment of the civil penalty on this factor is warranted because the primary issue involved in this case is the performance of the operators, rather than the maintenance of the equipment (solenoids). The other escalation and mitigation factors were considered, and no adjustment based on these factors was warranted since the violation did not involve multiple examples nor exist for an extended duration.

The NRC is also concerned with your failure to adhere to the commitment documented in Licensee Event Report No. 90-030, dated October 9, 1990, to replace the solenoid valves at Unit 2 during the next outage of sufficient duration due to the problem identified at Unit 1 in September 1990. These valves were not replaced during the planned outage in May 1991, which was of sufficient duration to accomplish the replacement. Weaknesses in your commitment tracking process contributed to the valves not being replaced during the May 1991 outage. While the NRC has decided not to take enforcement action for this issue, you should document the actions taken and planned, that were described at the enforcement conference, to assure that commitments made to the NRC are properly and promptly implemented.

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. In your response, you may reference, as appropriate, your letter dated February 10, 1992, which responded to the AIT inspection report. 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 1u CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,



Thomas T. Martin  
Regional Administrator

Enclosure: Notice of Violation

cc:

S. LaBruna, Vice President, Nuclear Operations  
C. Schaefer, External Operations - Nuclear, Delmarva Power & Light Co.  
C. Vondra, General Manager - Salem Operations  
F. Thomson, Manager, Licensing and Regulation  
L. Reiter, General Manager - Nuclear Safety Review  
J. Robb, Director, Joint Owner Affairs  
A. Tapert, Program Administrator  
R. Fryling, Jr., Esquire  
M. Wetterhahn, Esquire  
J. Isabella, Director, Generation Projects Department,  
Atlantic Electric Company  
D. Wersa, Assistant Consumer Advocate, Office of Consumer Advocate  
Lower Alloways Creek Township  
Public Document Room (PDR)  
Local Public Document Room (LPDR)  
Nuclear Safety Information Center (NSIC)  
NRC Resident Inspector  
State of New Jersey

NOTICE OF VIOLATION

Public Service Electric and Gas Company  
Salem, Unit 2  
Hancocks Bridge, New Jersey

Docket No. 50-311  
License No. DPR-75  
EA 92-007

During an NRC Augmented Inspection Team (AIT) inspection conducted on November 10 through December 3, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), the violations are set forth below:

Technical Specification 6.8.1 requires that written procedures be established, implemented, and maintained covering the activities referenced in the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978.

- A. Regulatory Guide 1.33, Appendix A, Section 2, specifies General Plant Operating Procedures for operations activities, including, Hot Standby to Minimum Load (nuclear plant startup) and Turbine Startup and Synchronization of the Generator. Regulatory Guide 1.33, Appendix A, Section 1, specifies Administrative Procedures describing requirements for Procedure Adherence.

Step 5.33 of Integrated Operating Procedure IOP-3, Revision 8, "Hot Standby to Minimum Load," written to satisfy the requirements of Regulatory Guide 1.33, Appendix A, directed operators to "...PLACE turbine on the line IAW [in accordance with] OP III-1.3.1, Turbine Generator Operation" relative to startup of the turbine-generator system. Step 5.1.13 of OP III-1.3.1 directed operators to test the turbine Overspeed Protection Control (OPC) circuit by observing that the Interceptor Valves close rapidly when the OPC key switch is turned to the TEST position; and that the valves reopen when the OPC key test switch is returned to the IN SERVICE position.

Nuclear Administrative Procedure NC.NA-AP.ZZ-0005(Q), "Station Operating Practices," Section 5.7.4, written to satisfy the requirements of Regulatory Guide 1.33, Appendix A, requires written procedures to be followed exactly as written, in the order specified, without deviation except as described in NC.NA-AP.ZZ-0001(Q), "Nuclear Department Procedure System."

Contrary to the above, during a Unit 2 reactor plant and turbine-generator startup on October 20, 1991, IOP-3 and OP III-1.3.1 were not completely implemented (followed) as written relative to the startup activities. Specifically, two licensed Nuclear Plant Operators each conducted the OPC test as described by Step 5.1.13 of OP III-1.3.1, but observed that the Interceptor Valves did not close as expected. Although this matter was further discussed with three



other senior licensed individuals (i.e., the Unit 2 Shift Supervisor, the Senior Shift Supervisor, and the Operations Engineer), none of these licensed individuals effected, directed, or caused the procedure to be followed exactly as written in that reactor plant and turbine-generator startup operations were continued without the test discrepancy being resolved.

- B. Regulatory Guide 1.33, Appendix A, specifies Administrative Procedures for administrative activities involving Temporary Change Methods and Procedure Review and Approval.

Nuclear Administrative Procedure NC.NA-AP.ZZ-0005(Q), Section 5.7.4, indicates that if a procedure cannot be performed as written, the activity should be stopped and supervisory personnel consulted. Further, NC.NA-AP.ZZ-0005(Q) directs that changes to a written procedure be performed in accordance with NC.NA-AP.ZZ-0032(Q), "Preparation, Review and Approval of Procedures." NC.NA-AP.ZZ-0032(Q), Section 5.1.1, requires, in part, that a user organization request revision of an existing procedure when problems are encountered in using that procedure.

Contrary to the above, during a Unit 2 reactor plant and turbine-generator startup on October 20, 1991, licensed operators failed to establish and implement changes to IOP-3, "Hot Standby to Minimum Load," and the procedure it referenced, OP III-1.3.1, "Turbine Generator Operation," to effect completion of the turbine-generator startup activities as originally written and approved. Specifically, although licensed operations personnel did not complete Step 5.1.13 of OP II 1.3.1 as written, the individuals did not request an approved revision to the procedure in accordance with the requirements of NC.NA-AP.ZZ-0032(Q).

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

Pursuant to the provisions of 10 CFR 2.201, Public Service Electric and Gas Company (Licensee) is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555 with a copy to the Regional Administrator, Region I, and a copy to the Salem NRC Resident Inspector, within 30 days of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation; or if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) 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. Where good cause is shown, consideration will be given to extending the response time. Under the authority of Section 182 of the Atomic Energy Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Dated at King of Prussia, Pennsylvania  
this 17 day of March 1992



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

January 10, 1992

Docket No. 50-271  
License No. DPR-28  
EA 91-170

Vermont Yankee Nuclear Power Corporation  
ATTN: Mr. Warren Murphy  
Senior Vice President, Operations  
RD 5, Box 169  
Brattleboro, Vermont 05301

Dear Mr. Murphy:

Subject: NOTICE OF VIOLATION  
(NRC Inspection Report Nos. 50-271/91-13; 50-271/91-21)

This letter refers to the NRC Augmented Inspection Team (AIT) inspection conducted between April 25-29, 1991, as well as the subsequent followup inspection conducted on August 6-22, 1991, at the Vermont Yankee Nuclear Power Station, Brattleboro, Vermont. The inspection reports were sent to you on June 6, 1991, and December 3, 1991, respectively. The inspections were conducted to review the circumstances associated with an event involving the loss of offsite power at the facility in April 1991, while the reactor was at 100% power. The inspections also included a review of the deficiencies identified by your staff during the initial followup of this event, as well as other factors that contributed to its occurrence. On December 16, 1991, an enforcement conference was conducted with you and members of your staff to discuss the violation, its causes and your corrective actions.

The associated violation of NRC requirements was identified by your staff and reported to the NRC resident inspector shortly after its occurrence, as well as in a Licensee Event Report (LER) sent to the NRC on July 11, 1991, and in a supplemental LER issued on November 7, 1991. The violation, which is described in the enclosed Notice, involved two examples of the failure to prepare and maintain a written safety evaluation prior to making certain changes at the facility so as to ensure that the changes did not involve unreviewed safety questions. The changes involved: (1) redirecting, in 1987, the service water flow discharge from the normal discharge path at the circulating water discharge structure, as described in the Final Safety Analysis Report (FSAR), to the cooling tower basin; and, (2) implementing revised guidelines, on April 23, 1991, to replace one of the switchyard batteries.

The guideline used in the replacement of the switchyard battery on April 23, 1991, directly contributed to the loss of offsite power when the dc bus was separated from the battery as part of the replacement activity. However, the earlier change, in April 1987, involving the redirection of the service water flow discharge from the circulating water discharge to the cooling tower basin, is viewed as more significant since it resulted, in part, in significant

reduction of flow of service water to the diesel generators. Moreover, there was a missed opportunity to identify this problem when the acceptance criterion for service water flow to the diesel generators was revised without a full understanding of the cause of the reduced flow. While the FSAR briefly discussed the use of the service water system in the winter to deice the cooling tower basin and prevent it from freezing, the FSAR did not explicitly address the continued or prolonged bypass of service water discharge to the basin. While subsequent analysis by your staff, after this event, has indicated that the reduced flow to the emergency diesel generators was sufficient to provide the necessary cooling of the emergency diesel generators, and would have been sufficient under the postulated design conditions, the NRC is nonetheless concerned that this fact was not known by your staff at the time the change was made.

One common result of both failures to properly evaluate changes made to important plant systems was that the plant was operated in unanalyzed conditions, which, in the case of the service water system, lasted from the time of the change in 1987 until these findings were identified following the April 1991 event. Further, these events as well as some other less significant 10 CFR 50.59 violations identified by the NRC in the last two years indicate that your staff may not be sufficiently sensitive to the need to perform proper analyses in order to avoid operating the plant in unanalyzed system configurations.

The NRC recognizes that the actual safety consequences of these problems were minimized, as evidenced by the subsequent analysis. Nonetheless, the failure to perform appropriate written safety reviews prior to making these changes represents a significant regulatory concern because of the potential for more significant consequences. Therefore, the violation has been classified at Severity Level III in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy), 10 CFR Part 2, Appendix C (1991).

The NRC recognizes that prompt and comprehensive actions were initiated to correct these violations, once identified, and prevent recurrence. These corrective actions, which were described at the enforcement conference, included: cancellation of the guideline used in the replacement of the switchyard batteries; refurbishment of the battery chargers; return of the service water discharge flow to the circulating water structure until alternate solutions to the discharge concern were evaluated; tests and analyses for required service water flow under various abnormal and accident conditions; review of procedures and guidelines to ensure that adequate instructions are provided for the performance of safety evaluations when plant configurations are changed; and sensitization of plant personnel to the need for safety evaluations by appropriate training.

Although a civil penalty is normally issued for a Severity Level III violation to emphasize the importance of appropriate safety reviews, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Reactor Regulation, Regional

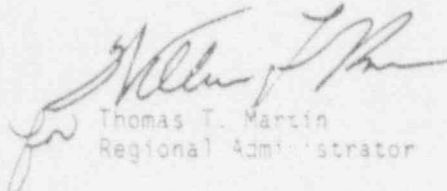
Operations and Research, to mitigate the penalty in its entirety and issue the enclosed Notice of Violation (Notice) for this violation. In deciding to mitigate the penalty, the escalation and mitigation factors set forth in the enforcement policy were considered in the manner described below.

The base civil penalty was mitigated in its entirety based on a combination of mitigation for corrective actions and past performance. The other factors set forth in the Enforcement Policy were considered and no adjustment to the base civil penalty based on them was warranted.

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 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 and its enclosure will be placed in the NRC Public Document Room. The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. 96-511.

Sincerely,



Thomas T. Martin  
Regional Administrator

Enclosure: Notice of Violation

cc w/encl:

J. Weigand, President and Chief Executive Officer  
J. Pelletier, Vice President, Engineering  
D. Reid, Plant Manager  
J. DeVincentis, Vice President, Yankee Atomic Electric Company  
L. Tremblay, Senior Licensing Engineer, Yankee Atomic Electric Company  
J. Gilroy, Director, Vermont Public Interest Research Group, Inc.  
G. Iverson, New Hampshire Office of Emergency Management  
Vermont Yankee Service List  
Public Document Room (PDR)  
Local Public Document Room (LPDR)  
Nuclear Safety Information Center (NSIC)  
NRC Resident Inspector  
State of New Hampshire, SLO Designee  
State of Vermont, SLO Designee  
Commonwealth of Massachusetts, SLO Designee

NOTICE OF VIOLATION

Vermont Yankee Nuclear Power Corporation  
Brattleboro, Vermont

Docket No. 50-271  
License No. DPR-28  
EA 91-170

During an NRC Augmented Inspection Team (AIT) inspection conducted between April 25-29, 1991, as well as a followup NRC inspection conducted on August 6-29, 1991, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, (1991), the violation is set forth below:

10 CFR 50.59 (a) allows the holder of a license to make changes in the facility as described in the safety analysis report (SAR) without prior Commission approval unless it involves an unreviewed safety question. A proposed change shall be deemed to involve an unreviewed safety question if the (i) probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report may be increased; or (ii) possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report may be created; or (iii) margin of safety as defined in the basis for any technical specification is reduced. 10 CFR 50.59 (b) requires, in part, that the records of a change to the facility be maintained by the licensee and must include a written safety evaluation which provides the basis for the determination that the change does not involve an unreviewed safety question.

- a. Section 10.6.5 of the Vermont Yankee Final Safety Analysis Report (FSAR) states that service water discharge from the systems and equipment is piped to the circulating water discharge where it is released to the river.

Contrary to the above, in 1987, a change was made to the facility as described in the FSAR in that the discharge flow of the service water system was diverted from the circulating water discharge structure to the cooling tower basin, without a safety evaluation to ensure that the valve realignment did not constitute an unreviewed safety question.

- b. Section 8.3.4 of the Vermont Yankee Final Safety Analysis Report (FSAR) states that each of the 345 kV lines is protected against temporary or permanent fault by two complete, separate protective relay systems. Separate dc control circuits and dc power sources are provided for each relay scheme and tripping signals are sent to separate trip coils to trip the required power circuit breakers.

Contrary to the above, on April 23, 1991, a change was made to the facility as described in the FSAR in that revised guidelines (instructions) were implemented to replace switchyard battery 4A, without a safety evaluation to ensure that separation of a dc bus from the battery (and the resultant dampening effects of the systems battery) did not constitute an unreviewed safety question.

This is a Severity Level III violation (Supplement I)

Pursuant to the provisions of 10 CFR 2.201, Vermont Yankee Nuclear Power Corporation is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555 with a copy to the Regional Administrator, Region I and a copy to the NRC Resident Inspector within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, if admitted, or if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) 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. Where good cause is shown, consideration will be given to extending the response time. Under the authority of Section 182 of the Atomic Energy Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Dated at King of Prussia, Pennsylvania  
this 10th day of January 1992

II.A. MATERIALS LICENSEES, CIVIL PENALTIES AND ORDERS





UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

1001

Docket No. 030-14041  
License No. 13-18685-01  
EAs 91-119 and 91-148

Alt & Witzig Engineering, Inc.  
ATTN: Mr. William Witzig  
President  
3405 West 96th Street  
Indianapolis, IN 46286

Dear Mr. Witzig:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL  
PENALTY - \$3,700 AND DEMAND FOR INFORMATION (NRC  
INSPECTION REPORT NO. 030-14041/90001(DRSS))  
(INVESTIGATION REPORT NO. 3-90-014)

This refers to the inspection conducted on July 24-26 and August 8, 1990, at your facility in Indianapolis, Indiana and at 11 field sites in the vicinity of Indianapolis and Columbus, Indiana, and the subsequent investigation conducted by the NRC Office of Investigations (OI). Fourteen violations of NRC requirements were identified during the inspection. The report documenting the inspection was sent to you by letter dated August 23, 1990. On August 29, 1990, an enforcement conference was conducted in the Region III Office to discuss the violations, their causes, and your corrective actions. The report summarizing the conference was sent to you by letter dated October 2, 1990. A Confirmatory Action Letter (CAL) was issued to you on September 4, 1990, and your response to the CAL was documented in a letter dated September 27, 1990.

Four of the fourteen violations were cited in the Notice of Violation and Proposed Imposition of Civil Penalties - \$2,500 dated October 16, 1990 (EA 90-141). As noted in our October 16, 1990 letter, one apparent violation of 10 CFR 30.9(a) was not cited. OI completed an investigation of some of the remaining violations in August 1991 and the Synopsis of the OI investigation is enclosed for your review.

The remaining nine violations have been identified, as described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice), including: (1) exceeding your authorized possession limit for licensed material (moisture/density gauges); (2) use of licensed material by untrained or nonsupervised individuals; (3) failure to provide personnel monitoring devices to individuals who work with licensed material; (4) failure to

review and evaluate whether a radiation hazard existed for an individual whose personnel monitoring device exceeded 10 CFR Part 20 whole body dose limits; (5) failure to provide a written report of an exposure in excess of 10 CFR Part 20 limits; (6) failure to conduct physical inventories of licensed material; (7) failure to maintain exposure records; (8) failure to post 10 CFR Parts 19 and 20, the license and documents incorporated by reference, and Form NRC-3; and (9) failure to leak test sealed sources at required intervals.

These violations have been grouped in the Notice into three areas of concern. Violation I of the Notice addresses your exceeding your possession limit. Violation II of the Notice addresses your use of licensed material by untrained and nonsupervised individuals. Violations III A. - G. of the Notice describe the remaining violations that further demonstrate a failure to provide sufficient attention to the control of licensed activities.

In respect to Violation I on March 8, 1990, as part of a routine license renewal, an NRC license reviewer called the former Radiation Protection Officer (RPO) to discuss the Decommissioning Rule (10 CFR 30.35). At that time, it was agreed that you would limit your possession of Campbell Pacific Nuclear (CPN) moisture/density gauges to 10, and you would have to amend your license if an increase in the number of gauges was anticipated. On March 20, 1990, Amendment No. 6 was issued renewing your license in its entirety and limiting your possession of licensed material to 10 CPN gauges. Additionally, the letter forwarding Amendment No. 6 clearly delineated that your possession limit for CPN gauges was 10; however, you possessed 16 at the time of our July 1990 inspection. The former RPO acknowledged that he had received Amendment No. 6. The NRC has concluded that the former RPO deliberately violated the license with regard to the possession limit of CPN gauges.

The NRC considers a deliberate violation of NRC requirements a very serious matter. The NRC relies on the integrity of licensee employees to perform licensed activities in accordance with NRC requirements. Violation I involves your exceeding the authorized possession limit for licensed material and would normally be categorized at Severity Level IV. However, due to the deliberate nature of the violation by an individual involved in the Licensee's management, it is considered to be very significant. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1990), Violation I is categorized as Severity Level II violation.

In regard to Violation II, Alt & Witzig management routinely permitted individuals who had not successfully completed the manufacturer's training program to operate moisture/density

gauges. A violation similar to Violation II had also been cited during the last inspection on April 1, 1986. Additionally, at various times, these individuals were not under the supervision and in the physical presence of a named individual on the license or individuals who had successfully completed training, and were not designated by the RPO. The NRC considers the issue of using untrained individuals as a serious violation of NRC requirements. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1990), Violation II is categorized as a Severity Level III violation.

The remaining violations (Violations III A. - G.) are considered in the aggregate to be a breakdown in the control of licensed activities as a result of Alt & Witzig management's failure to follow regulatory requirements. A violation similar to Violation III D. had also been cited during the last inspection on April 1, 1986. During the Enforcement Conference, the former RPO freely admitted that he poorly administered the radiation protection program. He attributed this poor administration to Alt & Witzig's growth, his lack of available time, and other company duties. The former RPO was the individual within Alt & Witzig's organization responsible for activities requiring NRC compliance. His inaction to ensure compliance when confronted with additional responsibilities demonstrates a significant lack of attention towards licensed responsibilities. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy) 10 CFR Part 2, Appendix C (1990), Violations III A. - G., are categorized in the aggregate as a Severity Level III problem.

The NRC acknowledges that after these violations were identified by the NRC, you took immediate corrective actions to resolve the short term problems. Long term corrective actions, which have been completed, included hiring a new qualified RPO, with the position in the administrative department rather than the testing division. The RPO now reports directly to you on a regular basis. An audit and evaluation of the RPO position is being performed by you on a biannual basis. You have also implemented a new audit system and procedures to ensure that possession limits are not exceeded and users of licensed material are adequately qualified. Licensee users and managers are now well informed of applicable regulations. Your corrective actions were incorporated in Amendment No. 7 to your license.

To emphasize the need for continued and lasting effective management control over activities authorized by your license, and to ensure adherence to regulatory requirements, I am issuing the enclosed Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$3,700.

The civil penalty adjustment factors in the Enforcement Policy were considered for each severity level problem. The adjustment factors for each severity level problem are discussed below.

For Violation I, the base value of a civil penalty for a Severity Level II problem is \$800. Escalation of the base civil penalty by 50 percent is warranted for the identification and reporting factor because the violation was identified by the NRC. The other adjustment factors in the Policy were considered and no further adjustment to the base civil penalty was considered appropriate. Therefore, the base civil penalty for this violation has been escalated 50 percent.

For Violation II, the base value of a civil penalty for a Severity Level III problem is \$500. Full 50 percent escalation of the base civil penalty was warranted for the identification and reporting factor because the violation was identified by the NRC, and should have been identified and corrected by the former RPO as part of his responsibilities. Full 50 percent mitigation of the base civil penalty was warranted for corrective actions as discussed above. An escalation of 100 percent of the base civil penalty was warranted for the past performance factor. The use of licensed material by untrained and nonsupervised individuals is similar to a violation identified during the NRC inspection on April 1, 1986. An escalation of 100 percent of the base civil penalty was also warranted for the multiple occurrences factor based on the number of individuals (at least 15) that were not qualified or authorized to use licensed material. The other adjustment factors in the Policy were considered and no further adjustment to the base civil penalty was considered appropriate. The base civil penalty for this Severity Level II problem has been increased by 200 percent.

The base value of a civil penalty for the Severity Level III problem comprised of Violations III A. - G. is \$500. Full 50 percent escalation of the base civil penalty was warranted for the identification and reporting factor. All of the violations were identified by the NRC and should have been identified and corrected through internal reviews by the RPO as part of his responsibilities outlined in the licensee's March 23, 1979, application. Full 50 percent mitigation of the base civil penalty was warranted for corrective actions as discussed above. Full 100 percent escalation of the base civil penalty was warranted for the duration factor. One of the violations existed continuously from the April 1, 1986, inspection (Violation III D.). Additionally, two of the violations continued from 1988 until the 1990 inspection (Violations III C. and G.). Violations III A. and E. may also have lasted for a lengthy period of time. The other adjustment factors in the Policy were considered and no further adjustment to the base civil penalty was considered appropriate. The base civil penalty for this Severity Level III problem has been increased by 100 percent.

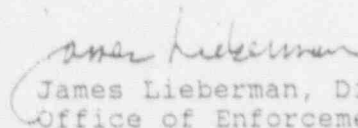
You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to this 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.

Further, it is our understanding that the former RPO is still employed by you and, therefore, may be involved with licensed activities. In view of his past performance, you are required to respond to the enclosed Demand for Information in accordance with the instructions provided therein. This information is necessary for the NRC to determine whether to further modify your NRC license. A copy of this letter and enclosures are being sent to the former RPO. He may respond within the same time limit.

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

The responses directed by this letter and the enclosed Notice and Demand for Information are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,

  
James Lieberman, Director  
Office of Enforcement

Enclosures:

1. Notice of Violation and Proposed Imposition of Civil Penalty
2. Demand for Information
3. Synopsis of OI Report No. 3-90-014

cc w/enclosures:

State of Indiana

Mr. Daniel Dilk - Alt & Witzig Engineering, Inc.

NOTICE OF VIOLATION  
AND

PROPOSED IMPOSITION OF CIVIL PENALTIES

Alt & Witzig Engineering, Inc.  
Indianapolis, Indiana

Docket No. 030-14041  
License No. 13-18685-01  
EA 91-119

During NRC inspections conducted on July 24-26 and August 8, 1990, and a subsequent investigation by the NRC Office of Investigations, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1990), 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 penalties are set forth below:

- I. License Item No. 8.C, effective March 20, 1990, limits the maximum amount of cesium-137 that the licensee may possess at any one time under this license to 10 sealed sources, not to exceed 10 millicuries each.

License Item No. 8.D, effective March 20, 1990 limits the maximum amount of americium-241 that the licensee may possess at any one time under this license to 10 sealed sources, not to exceed 50 millicuries each. [Each moisture/density gauge contains a cesium-137 sealed source and an americium-241 sealed source.]

Contrary to the above, on July 24, 1990, the licensee possessed 16 Campbell Pacific Nuclear moisture/density gauges, each containing a nominal 10 millicurie cesium-137 sealed source and a nominal 50 millicurie americium-241 sealed source.

This is a Severity Level II violation (Supplement VI).

Civil Penalty - \$1,200.

- II. License Condition No. 11.A, effective March 20, 1990, requires that licensed material be used by, or under the supervision and in the physical presence of, individuals who have successfully completed the device manufacturer's training program for gauge users and have been designated by the licensee's Radiation Protection Officer.

License condition No. 13, which was in effect from July 29, 1986, until superseded by License Condition No. 11.A on March 20, 1990, requires that licensed material shall be

used by, or under the supervision and in the physical presence of, individuals who have completed the manufacturer's training course and have been designated by the licensee's Radiation Protection Officer.

Contrary to the above, as of July 24, 1990, the licensee had routinely permitted at least 15 individuals who had not attended the manufacturer's training program to operate moisture/density gauges containing licensed material. Additionally, these individuals were not under the supervision and in the physical presence of individuals who had successfully completed training, and were not designated by the Radiation Protection Officer.

This is a Severity Level III violation (Supplement VI) and a repeat violation.

Civil Penalty - \$1,500.

- III. A. License Condition No. 24, effective March 20, 1990, requires that the licensee conduct its program in accordance with statements, representations, and procedures contained in the application dated March 23, 1979.

License Condition No. 19, which was in effect from July 29, 1986, until superseded by License Condition No. 24 on March 20, 1990, requires the licensee to conduct its program in accordance with the statements, representations, and procedures contained in the application dated March 23, 1979.

Item 12 of the application dated March 23, 1979, requires that the licensee provide personnel monitoring devices (thermoluminescence dosimeters).

Contrary to the above, as of July 24, 1990, 18 individuals who work with licensed material were provided no personnel monitoring devices of any kind.

- B. License Condition No. 24, effective March 20, 1990, requires that the licensee conduct its program in accordance with statements, representations, and procedures contained in the application dated March 23, 1979.

Item 15(f) of the application, dated March 23, 1979, requires the Radiation Protection Officer to assure that personnel exposure records are periodically

reviewed for compliance with Nuclear Regulatory Commission regulations.

10 CFR 20.101(a) requires that the licensee limit the whole body radiation dose of an individual in a restricted area to one and one quarter rems per calendar quarter.

10 CFR 20.201(b) requires that each licensee make such surveys as may be necessary to comply with the requirements of Part 20 and which are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As defined in 10 CFR 20.201(a), "survey" means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.

Contrary to above, as of August 8, 1990, the Radiation Protection Officer (RPO) did not assure that a personnel exposure record, which indicated that an individual received a whole body dose of 2.3 rems during the fourth quarter of 1988, was reviewed for compliance with 10 CFR 20.101(a). Nor did the RPO evaluate whether a radiation hazard existed, to ensure compliance with 10 CFR 20.201(b), that could have resulted in a 2.3 rem dose from the use of moisture/density gauges.

- C. 10 CFR 20.405(a) requires, in part, that within 30 days, each licensee make a written report to the Commission concerning each exposure to radiation in excess of any applicable limits in Part 20 or in the NRC License.

10 CFR 19.13(d) requires that the licensee make a written report of such exposures to the individuals exposed.

Contrary to the above, as of August 8, 1990, the licensee had not made a report to the Commission, or to the individual exposed, of an exposure which exceeded the applicable limit in 10 CFR 20.101(a). Specifically, the individual had received a whole body radiation dose of 2.3 rems, in excess of the 1.25 rem quarterly limit, during the fourth quarter of 1988 and the exposure was not reported to the NRC or the individual.



- D. License Condition No. 14, effective March 20, 1990, requires the licensee to conduct a physical inventory every 6 months to account for all sealed and foil sources received and possessed under the license.

License Condition No. 17, which was in effect from April 1, 1986, until superseded by License Condition No. 14 on March 20, 1990, requires the licensee to conduct a physical inventory every six (6) months to account for all gauges received and possessed under the license.

Contrary to the above, from April 1, 1986, to July 24, 1990, no physical inventories had been conducted to account for all sealed sources.

This is a repeat violation.

- E. 10 CFR 20.401(b) requires, in part, that each licensee maintain records showing the results of surveys required by 10 CFR 20.201(b).

Contrary to the above, as of July 24, 1990, the licensee did not maintain records of those surveys (evaluations of the exposures for at least 14 gauge users) made to assure compliance with 10 CFR 20.101(a), which requires that the licensee limit the whole body radiation dose of an individual in a restricted area to one and quarter rems per calendar quarter.

- F. 10 CFR 19.11(a) and (b) require, in part, that the licensee post current copies of Part 19, Part 20, the license, license conditions, documents incorporated into the license, license amendments and operating procedures; or that the licensee post a notice describing these documents and where they may be examined. 10 CFR 19.11(c) requires that a licensee post Form NRC-3, "Notice to Employees."

Contrary to the above, as of July 24, 1990, the licensee did not post the required documents or notices, with the exception of copies of Parts 19 and 20.

- G. License Condition No. 12.A.(1), effective March 20, 1990, requires that source(s) specified in Item(s) 7.A, 7.B, 7.C, and 7.D be tested for leakage and/or contamination at intervals not to exceed 6 months.

License Condition No. 14 A., which was in effect from November 1, 1984, until superseded by License Condition No. 12.A.(1) on March 20, 1990, requires that each sealed source containing licensed material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and for contamination at intervals not to exceed six months.

Contrary to the above, from July 24, 1988, to July 24, 1990, 11 sealed sources containing cesium-137 and 11 sealed sources containing americium-241 had been tested for leakage and/or contamination at various intervals of time ranging between 9 and 24 months.

These violations have been categorized in the aggregate as a Severity Level III problem (Supplements IV and VI).

Cumulative Civil Penalty - \$1,000 (assessed equally between the seven violations).

Pursuant to the provisions of 10 CFR 2.201, Alt and Witzig Engineering, Inc. (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 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 V.B of 10 CFR Part 2, Appendix C (1991), 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.

Dated at Rockville, Maryland  
this *15th* day of December 1991

UNITED STATES  
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	Docket No. 030-14041
Alt & Witzig Engineering, Inc.	)	License No. 13-18685-01
	)	EA 91-148
	)	

DEMAND FOR INFORMATION

I

Alt & Witzig Engineering, Inc. (Licensee) holds byproduct materials license No. 13-18685-01, issued by the Nuclear Regulatory Commission (NRC or Commission) pursuant to 10 CFR Part 30. The license authorizes possession and use of cesium-137 and americium-241 in millicurie quantities for moisture/density gauges, and tritium in millicurie quantities for a chromatograph. The license was initially issued on April 20, 1979, was most recently renewed in its entirety on March 20, 1990, was amended in its entirety on February 12, 1991, and is due to expire on April 30, 1995.

II

During NRC inspections conducted July 24 through 26, and August 8, 1990, fourteen violations of NRC requirements were identified.

Four of the fourteen violations were cited in the Notice of Violation and Proposed Imposition of Civil Penalties - \$2,500 dated October 16, 1990 (EA 90-141). As noted, one apparent violation of 10 CFR 30.9(a) was not cited in the NRC's October 16, 1990, letter to the licensee.

The nine remaining violations are described in the Notice of Violation and Proposed Imposition of Civil Penalty (Notice) issued this date. The violations include (1) exceeding your authorized possession limit for licensed material (moisture/density gauges); (2) use of licensed material by untrained or nonsupervised individuals; (3) failure to provide personnel monitoring devices to individuals who work with licensed material; (4) failure to review and evaluate whether a radiation hazard existed for an individual whose personnel monitoring device exceeded 10 CFR Part 20 whole body limits; (5) failure to provide a written report of an exposure in excess of 10 CFR Part 20 limits; (6) failure to conduct physical inventories of licensed material; (7) failure to maintain exposure records; (8) failure to post 10 CFR Parts 19 and 20, the license and documents incorporated by reference, and Form NRC-3; and (9) failure to leak test sealed sources at required intervals.

The failure of Alt & Witzig Engineering, Inc. to adhere to authorized possession limits for byproduct material is described

in Violation I of the Notice. The facts supporting Violation I are discussed below.

On March 8, 1990, as part of a routine license renewal, an NRC License Reviewer called Mr. Daniel Dilk, the former Radiation Protection Officer (RPO), to discuss the Decommissioning Rule (10 CFR 30.35). At that time Mr. Dilk agreed that Alt & Witzig would limit its possession of Campbell Pacific Nuclear (CPN) gauges to 10, and that Alt & Witzig would have to amend its license if an increase in the number of gauges was anticipated. On March 20, 1990, Amendment No. 6 was issued renewing License No. 13-18685-01 in its entirety and limiting your possession of licensed material to 10 CPN gauges. The letter forwarding Amendment No. 6 documented that in order to relieve the Licensee of the decommissioning funding plan responsibility, the NRC limited the possession of radioactive material as stated in Item 8. of the license. This limit would be changed should the Licensee ever choose to amend its license to specify different possession limits. The letter further documented that the Licensee must possess radioactive material only in the quantity and form indicated in the license. Mr. Dilk acknowledged receiving this correspondence and provided a copy of it to an NRC investigator on December 6, 1990. During the NRC inspection conducted July 24 through 26, and August 8, 1990, it was determined that the Licensee possessed 16 CPN gauges. The NRC has concluded that Mr. Dilk deliberately violated the license with regard to the

possession limit of CPN gauges. The NRC considers a deliberate violation of NRC requirements a very serious matter.

The deliberate actions of Mr. Dilk that resulted in the unauthorized possession of licensed material, as described in Violation I of the Notice, cannot be tolerated. Additionally, Mr. Dilk's failure to ensure compliance with important aspects of the Licensee's radiation safety program, as described in Violations II and III A. - G. of the Notice, raises questions regarding Mr. Dilk's ability or willingness to comply with NRC requirements. Mr. Dilk freely admitted in a sworn statement that he poorly administered the radiation protection program due to Alt & Witzig's growth and his other responsibilities. Therefore, further information is needed to determine whether the Commission can have reasonable assurance that, if Mr. Dilk is participating in licensed activities, the Licensee will conduct its future activities in accordance with the Commission's requirements.

### III

Accordingly, pursuant to sections 161c, 161e, 182 and 186 of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR 2.204 and 10 CFR 30.33(b), in order for the Commission to determine whether the license should be modified to prohibit Mr. Dilk from being involved in licensed activities, the Licensee is required to submit to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C.

20555, within 30 days of the date of this Demand for Information the following information, in writing, and under oath or affirmation:

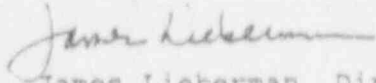
- A. What is the current position of Mr. Daniel A. Dilk within the Licensee's organization and does that position involve  
a. NRC licensed activities?
- B. What actions have been taken or are planned to ensure that Mr. Dilk understands his responsibilities under the NRC license and the importance of complying with Commission regulations?
- C. Why should the Commission have reasonable assurance that, if participating in licensed activities, Mr. Dilk will comply with Commission regulations?

Copies also shall be sent to the Assistant General Counsel for Hearings and Enforcement at the same address, and to the Regional Administrator, NRC Region III, 799 Roosevelt Road, Glen Ellyn, Illinois 60137.



After reviewing your response, the NRC will determine whether further action is necessary to ensure compliance with regulatory requirements.

FOR THE NUCLEAR REGULATORY COMMISSION



James Lieberman, Director  
Office of Enforcement

Dated at Rockville, Maryland  
this *8th* day of December 1991

## SYNOPSIS

This investigation was initiated based upon a request received from the Regional Administrator, U.S. Nuclear Regulatory Commission, Region III (RIII). The request was made on the basis of an unannounced safety inspection conducted by the NRC at the Alt & Witzig Engineering Company, Inc. (Alt & Witzig), Indianapolis, Indiana, facility and various temporary job sites. During that inspection a number of apparent violations were discovered with regard to the licensee's possession of byproduct material exceeding the limits of their NRC Material License. As were several deficiencies noted in their Radiation Protection Officer (RPO) Program. Additionally, during a subsequent Enforcement Conference held in RIII, the RPO made certain statements indicating that he had pulled two employees out of a manufacturer's nuclear gauge training program in order to satisfy business considerations.

During the course of the NRC inspection and review, it was determined that Alt & Witzig's license had recently been renewed (amended) through the Company's RPO and that the RPO had voluntarily agreed, during a teleconference with a Region III license examiner, to a possession level of 10 Campbell Pacific Nuclear (CPN) sealed sources. Since the licensee was found with 16 CPN gauges in their possession, the Office of Investigations (OI) was requested to determine whether any Alt & Witzig personnel had deliberately violated certain terms and conditions of the license. The OI investigation has concluded there appeared to be no intentional, deliberate, or willful violation of the terms and conditions of the license regarding the management of the RPO program (i.e., general housekeeping and record-keeping functions). The former RPO freely admitted that the RPO program was poorly administered by him. The former RPO attributed this poor administration to the company's sudden and dramatic growth and his lack of available time and other company duties. As for the RPO's statement that he pulled two unidentified employees out of scheduled nuclear gauge training program, he has maintained that the statement was made in error. Further, additional investigation (i.e., records review and interviews) could not establish that any employees were pulled from training. It, however, was determined that the former RPO did deliberately violate the byproduct materials level portion of the license with regard to CPN gauges.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
799 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137

December 30, 1991

General License  
EA 91-177

Curwood, Inc.  
A Bemis Company  
ATTN: Wayne Livingston  
Plant Engineer Manager  
2200 Badger Avenue  
Oshkosh, Wisconsin 59404

Dear Mr. Livingston:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL  
PENALTY - \$250 (NRC INSPECTION REPORT NO. 91019)

This refers to the special safety inspection conducted on November 19, 1991 to review the circumstances surrounding the loss of an NDC Systems nuclear gauge which you possessed under an NRC General License. The report documenting this inspection was mailed to you by letter, dated December 10, 1991. Significant violations of NRC requirements were identified during the inspection, and on December 18, 1991, an enforcement conference was held in the Region III office. Attending the enforcement conference were Mr. Ernest LaBrake, Curwood's Vice President of Engineering; Mr. John A. Grobe, Chief, Nuclear Materials Safety Branch, Region III; and other members of our respective staffs.

By letter, dated May 13, 1991, you reported to the NRC that Curwood, Inc., could not locate an NDC Systems material thickness measuring gauge, Model No. 103, Serial No. 818, containing a nominal 25 millicurie source of americium-241. The review of this event showed that during May 1989 the gauge with its shutter closed was placed in storage. The gauge was stored in an unlabeled cardboard box in an unlocked store room. The gauge was last accounted for on July 21, 1989, but during October 1989 the gauge could not be located. Subsequent searches of your facilities did not locate the gauge. In May 1991, your newly appointed Radiation Safety Officer (RSO) determined that the former RSO had not notified the NRC of the loss of the gauge, and on May 13, 1991, you made the report to the NRC Region III office.

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

December 30, 1991

The loss of the nuclear gauge involves a potentially significant hazard to the health and safety of the general public and represents a serious lack of control over licensed material. To have stored this gauge in an unsecured equipment area and in a box that was not labeled to indicate the presence of radioactive material, demonstrates a serious lack of management control over licensed material. Furthermore, the RSO did not immediately notify the NRC after the loss became known. It is imperative that the NRC be immediately notified of such events to afford the Commission an opportunity to investigate the circumstances surrounding the event and to assure that all possible steps are being taken to recover the lost radioactive material. The NRC recognizes the fact that persons involved in the current radiation safety program were not involved in the program at the time the loss of the gauge occurred.

The violations, which are described in Section I of the enclosed Notice of Violation, include: (A) the failure to control access to radioactive material resulting in an unauthorized transfer of that material; and (B) the failure to immediately report to the NRC after it became known that licensed material had been lost. These violations taken collectively represent a significant breakdown in the control of licensed activities. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), the violations are classified in the aggregate as a Severity Level III problem.

The root causes of the violations and the subsequent corrective actions were discussed during the December 18, 1991, enforcement conference. The major factor contributing to the violations appeared to be a lack of oversight of the radiation safety program, as indicated by storing radioactive material in an unmarked container in an unsecured area. The NRC recognizes that immediate corrective actions were taken when the violations were identified and appear acceptable. Your corrective actions consisted of: assigning an RSO and a back-up RSO at each of your facilities; holding a weekly corporate meeting to discuss the status of your nuclear gauge program; expanding corporate control over licensed activities by assigning a corporate manager to oversee those activities; having the gauge manufacturer provide training to your radiation safety staff; and performing a monthly inventory of all licensed devices.

The general license under which Curwood, Inc. possesses nuclear material requires that the radiation safety program be managed effectively. Incumbent on Curwood, Inc. is the responsibility to protect the health and safety of employees and the public by assuring that all requirements of the NRC General License are met and that potential violations of NRC requirements are not only identified on a timely basis, but are also immediately corrected. Reporting the loss of licensed material approximately 19 months

late demonstrates the lack of management involvement in and control over the radiation safety program.

The NRC staff recognizes that your staff is now sensitive to the issue of timely reporting of such events to the Commission. However, to emphasize the importance of effectively managing your radiation safety program to assure that licensed materials are properly secured and events involving licensed materials are promptly reported to the NRC, I have decided to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of \$250 for the Severity Level III problem.

The base value of a civil penalty for a Severity Level III problem is \$500. The civil penalty adjustment factors in the Enforcement Policy were considered and the amount of the civil penalty was reduced by 50 percent due to your prompt and extensive corrective actions. While the NRC recognizes that you identified the loss of the nuclear gauge and reported the loss to the NRC, your report was made some 19 months after discovering the gauge was missing. Therefore on balance, an adjustment to the amount of the civil penalty was not made for the identification and reporting factor due to your untimely report. The remaining factors in the enforcement policy were also considered, and no further adjustment to the base civil penalty is considered appropriate.

The inspection report also identified as an apparent violation the relocation/reinstallation of a generally licensed nuclear gauge by an individual not authorized by the NRC or an Agreement State. 10 CFR 31.5(c)(1) requires the licensee to comply with all instructions on the label affixed to the device. The current label used by the device manufacturer specifies that the installation, relocation, maintenance and repair of the device shall only be performed by a person holding a radioactive material license which specifically authorizes these services. Upon further consideration, this apparent violation has been withdrawn because the label on the particular gauge, which was purchased in 1985, does not prohibit relocation of the gauge by a non-licensed person. The labeling was not changed by the manufacturer until 1987 to prohibit relocation of gauges by persons not specifically licensed.

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.

Curwood, Inc.

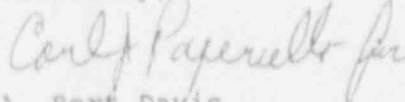
- 4 -

December 30, 1991

In accordance with 30 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.

The response directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Public Law No. 96-511.

Sincerely,



A. Bert Davis  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed  
Imposition of Civil Penalty

cc w/enclosure:  
DCD/DCB (RIDS)

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Curwood, Inc.  
Oshkosh, Wisconsin

General License  
EA 91-177

During an NRC inspection conducted on November 19, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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 31.5(c)(8) requires, in part, that any person who acquires, receives, possesses, uses or transfers byproduct material in a device pursuant to a general license shall, except as provided in 10 CFR 31.5(c)(9) transfer or dispose of the device containing byproduct material only by transfer to persons holding a specific license pursuant to 10 CFR Parts 30 and 32 or from an Agreement State to receive the device.

Contrary to the above, between July 1989 and February 1990, the licensee transferred or otherwise disposed of an NDC Systems Model 103 gauge, Serial No. 818, containing a nominal 25 millicurie source of americium-241, and this transfer or disposal was not made to a person holding a specific license pursuant to 10 CFR Parts 30 and 32 or from an Agreement State to receive the device, and the exceptions in 10 CFR 31.5(c)(9) did not apply. Specifically, on July 21, 1989 the licensee placed the NDC Systems Model 103 gauge, containing an americium-241 source, in storage, and during October 1989, the licensee attempted to retrieve the gauge from storage, could not locate the gauge, and had not transferred the gauge to a person holding a specific license pursuant to 10 CFR Parts 30 and 32 or from an Agreement State to receive the device, and the exceptions in 10 CFR 31.5(c)(9) did not apply.

- B. 10 CFR 31.5(c)(10) requires, in part, that any person who acquires, receives, possesses, uses or transfers byproduct material in a device pursuant to a general license shall comply with the provisions of 10 CFR 20.402(a) requiring each licensee to report to the Commission, by telephone, immediately after it determines that a loss or theft of licensed material has occurred in such quantities and under such circumstances that it appears to the licensee that a substantial hazard may result to persons in unrestricted areas.

Contrary to the above, licensed material could not be located and the licensee did not report to the Commission, by telephone, immediately after it determined that a loss or theft of licensed material had occurred in such quantities and under such circumstances that it appears to the licensee that a substantial hazard may result to persons in unrestricted areas. Specifically, during October 1989 the licensee could not locate an NDC Systems Model 103 gauge, Serial No. 818, containing a nominal 25 millicurie source of americium-241 and a report of the loss was not made to the Commission until May 13, 1991.

This is a Severity Level III problem (Supplement VI).  
Cumulative Civil Penalty - \$250 (assessed equally among the two violations).

Pursuant to the provisions of 10 CFR 2.201, Curwood, Inc. (Licensee) is hereby required to submit a written statement of explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice 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 is 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 actions 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 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



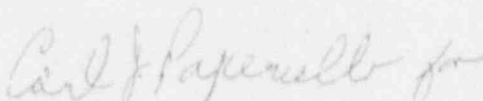
a Notice of Violation" and may: (1) deny the violations listed in this Notice in whole or in part, (2) demonstrate extenuating circumstances, (3) show error in this Notice, or (4) show other reasons why the penalty should not be imposed. In addition to protesting the civil penalty in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section V.B of 10 CFR Part 2, Appendix C (1991), should be addressed. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 10 CFR 2.201, but may incorporate parts of the 10 CFR 2.201 reply by specific reference (e.g., citing page and paragraph numbers) to avoid repetition. The attention of the Licensee is directed to the other provisions of 10 CFR 2.205, regarding the procedure for imposing a civil penalty.

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

The responses 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, 799 Roosevelt Road, Glen Ellyn, Illinois 60137.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Bert Davis  
Regional Administrator

Dated at Glen Ellyn, Illinois  
this 26 day of December 1991



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV  
511 RYAN PLAZA DRIVE, SUITE 1071  
ARLINGTON, TEXAS 76011

OCT -9 1991

Docket Nos. 30-03256  
30-00503  
License Nos. 42-00220-06  
42-00220-08  
EA 91-117

Department of Veterans Affairs  
Veterans Administration Medical Center  
ATTN: Alan G. Harper  
Medical Center Director  
4500 South Lancaster Road  
Dallas, Texas 75216

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY - \$6,250  
(NRC INSPECTION REPORT NOS. 30-03256/91-01 & 30-00503/91-01)

This is in reference to the inspection conducted May 24, July 29-31, August 23 and August 28, 1991, of activities carried out under NRC licenses authorizing a broad-scope nuclear medicine and research program and a radiation teletherapy program at the Veterans Administration Medical Center (VAMC), Dallas, Texas. The report of this inspection was issued on September 18, 1991. Based on the results of this inspection, which disclosed a number of violations of NRC requirements, an enforcement conference was conducted with you and other VAMC representatives on September 30, 1991, in NRC's Arlington, Texas office.

NRC has determined that 12 violations of requirements occurred under the broad-scope nuclear medicine and research license. These involved violations of requirements to monitor and control personnel exposure to radiation, to perform radiation and contamination surveys where required and at the required intervals, to ensure that radiation survey instruments were properly calibrated and checked prior to use, and to ensure that radioactive waste was held in storage as required prior to disposal. One of the violations, a failure to ensure that people working with relatively large quantities of radiiodine were monitored for possible thyroid uptake, is a repetitive violation in that similar violations were found during the two inspections that preceded this one.

NRC has determined that five violations of requirements occurred under the teletherapy license. These involved violations of requirements to perform a full calibration of the teletherapy unit, to perform monthly spot checks of the teletherapy unit, and to equip a radiation monitor with a backup power supply. An apparent violation involving semiannual maintenance inspections of the unit was described in the inspection report. However, based on the

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records of semiannual maintenance that you delivered to us at the enforcement conference, NRC has concluded that the VAMC was in compliance with that requirement.

Collectively, these violations indicate a failure on the part of VAMC management as the license holder and a failure on the part of those responsible for monitoring licensed activities, such as the Radiation Safety Officer and the Radiation Safety Committee, to establish sufficient controls to ensure that all requirements associated with the NRC license are met. NRC expects its license holders to establish and maintain such controls to ensure compliance and safety in the conduct of all licensed activities.

NRC considers it significant that the VAMC had not performed a full calibration of the teletherapy unit for 19 months as of the time of our inspection (the maximum permissible interval between such calibrations is 12 months) and had failed to perform complete monthly spot checks of the unit for the 11 months preceding the inspection. As discussed during the enforcement conference, NRC considers these checks essential to ensuring that such devices are operated safely. The fact that the VAMC failed to conduct such checks over an extended period of time while the teletherapy unit remained in use heightens the significance that NRC attaches to these violations. NRC expects its licensees to have controls in place to ensure that requirements as important as these are met.

Although we do attach more significance to the VAMC's failure to ensure, through an annual calibration and monthly spot checks, the proper functioning of the teletherapy unit, none of the violations under either of the licenses appears to have resulted in significant consequences from a radiation safety perspective. However, noncompliance of this type creates a potential for significant consequences. Collectively, we consider these violations indicative of a potentially significant lack of attention to licensed responsibilities. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), the violations under both licenses are classified in the aggregate as a Severity Level III problem.

NRC recognizes that the VAMC has taken steps to correct the violations found during this inspection and is committed to developing a system of management controls to ensure that all activities are conducted in compliance. NRC encourages the VAMC to move promptly to develop effective management controls to preclude a recurrence of the noncompliance and lack of effective controls evidenced by this inspection.

To emphasize the importance of the VAMC establishing and maintaining effective management systems to ensure that all radiation safety requirements are met, I have been authorized to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice, in the amount of \$6,250 for the Severity Level III problem described in the enclosed Notice.


The base value of a civil penalty for a Severity Level III problem is \$2,500. The escalation and mitigation factors in the Enforcement Policy were considered and resulted in a net increase of \$3,750. Specifically, the fact that these violations were found during NRC's inspection as opposed to their having been found by the VAMC through its own audit programs resulted in a 50-percent (\$1,250) increase. NRC's concerns about the duration of the violations involving the teletherapy unit resulted in a 100-percent (\$2,500) increase. Although on the whole, the VAMC's past regulatory performance has been relatively good, NRC declined to reduce the penalty in this case because these violations indicated a significant decline in that performance over an extended period of time and because one of the violations has been found in three consecutive inspections. NRC considers the VAMC's corrective actions to date acceptable but declined to mitigate the penalty under that factor because the VAMC has not yet established a system of management controls sufficient to ensure compliance in the future. The other adjustment factors in the Policy were considered and no further adjustment to the base civil penalty was considered appropriate.

The VAMC is required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing its response. In its response, VAMC should document the specific actions taken and any additional actions it plans to prevent recurrence of the specific violations in the Notice. In addition, the VAMC should document the actions it is taking to improve management controls to assure compliance with all requirements. 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 and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,

  
Robert D. Martin  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed Imposition  
of Civil Penalty

cc:  
State of Texas Radiation Control Program Director

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

VA Medical Center  
Dallas, Texas

Docket Nos. 30-03256  
30-00503  
License Nos. 42-00220-06  
42-00220-08  
EA 91-117

During an NRC inspection conducted on May 24, July 29-31, August 23 and August 28, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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. NRC License No. 42-00220-08 (Teletherapy):

- A. 10 CFR 35.632(a)(3) requires that full calibration measurements on each teletherapy unit must be performed at intervals not to exceed 1 year.

Contrary to the above, the licensee did not perform a full calibration of its AECL Theratron 780 teletherapy unit (Serial No. 17) from December 1989, to July 31, 1991, a period exceeding 1 year.

- B. 10 CFR 35.634(a) requires, in part, that a licensee authorized to use teletherapy units for medical use perform monthly output spot-checks on each teletherapy unit that include determination of: (1) timer constancy, and timer linearity over the range of use; (2) the coincidence of the radiation field and the field indicated by the light beam localizing device; (3) the accuracy of all distance measuring and localization devices used for medical use; and (4) the difference between the measured output and the anticipated output, expressed as a percentage of the anticipated output.

Contrary to the above:

- (1) the licensee failed to perform output spot-checks on its teletherapy unit during the months of October and December 1990, and January 1991;
- (2) timer constancy and linearity over the range of clinical use for its teletherapy unit was not determined from September 1990 to June 1991. Additionally, the output spot-check performed in July 1991 on its unit did not include determination of timer linearity over the full range of clinical use;

- (3) coincidence of the light beam localizing device with the radiation field was not determined for its unit from October 1990 to February 1991, or during July 1991;
- (4) the accuracy of all distance measuring and localization devices was not determined for its unit from October 1990 to February 1991, or during July 1991; and
- (5) the difference between the measured output and the anticipated output, expressed as a percentage of the anticipated output, was not determined for output spot-checks performed on its unit in November 1990 and February to July 1991.

- C. 10 CFR 35.634(b) and (c) require, in part, that a licensee perform measurements required by 10 CFR 35.634(a) in accordance with procedures established by the teletherapy physicist and have the teletherapy physicist review the results of each spot-check within 15 days. The teletherapy physicist shall promptly notify the licensee in writing of the results of each spot-check.

Contrary to the above, from October 1990 to July 1991, the licensee failed to perform the measurements required by 10 CFR 35.634(a) in accordance with procedures established by the teletherapy physicist. Additionally, the teletherapy physicist failed to review and notify the licensee in writing of the results of each spot-check performed during this interval.

- D. 10 CFR 35.634(f) requires, in part, that a licensee retain a record of each spot-check required by 10 CFR 35.634(d) for 3 years. 10 CFR 35.634(d) requires, in part, that a licensee perform safety spot-checks of each teletherapy facility once each calendar month that assure, among other things, proper operation of treatment room doors from inside and outside the treatment room, and, for electrically assisted treatment room doors, proper operation with the teletherapy unit electrical power turned off.

Contrary to the above, from October 1990 to July 1991, the licensee did not retain records of spot-checks performed to assure proper operation of the electrically assisted treatment room doors from inside and outside the treatment room and with the teletherapy unit power turned off.

- E. 10 CFR 35.615(d) requires, in part, that a licensee install in each teletherapy room a permanent radiation monitor capable of continuously monitoring beam status and that the radiation monitor be equipped with a backup power supply separate from the power supply to the teletherapy unit.

Contrary to the above, from September 1990 to July 1991, the licensee's teletherapy room radiation monitor, an Eberline Model SP12, was not equipped with a backup power supply.

II. NRC License No. 42-00220-06 (Broad-Scope Medical):

- A. License Condition 24 requires, in part, that the licensee conduct its program in accordance with statements, representations, and procedures contained in an application dated April 17, 1985.

Item 23.a of the application dated April 17, 1985, describes the conditions to be satisfied in order to receive approval for the use of certain (research and clinical) radioactive materials. Item 23.a.(4) states, in part, that after receiving approval by the Radioisotope Safety Committee, that procedures are to be carried out in strict compliance with all safety rules as directed in the licensee's Radiation Safety Manual.

1. Items 5.4.5.2 and 5.4.5.3 of the Radiation Safety Manual state, in part, that waste storage areas and laboratories using 200 microcuries (uCi) or more at a time must be surveyed weekly, and that laboratories using less than 200 uCi at a time must be surveyed monthly. These surveys are to include survey meter (exposure rate) readings and wipe tests (for removable contamination) taken at designated locations.

Contrary to the above, from January to July 1991, the licensee did not survey weekly with a survey meter and take wipe tests in two laboratories (Rooms 222 and 016) where phosphorus-32, iodine-125, and iodine-131 were used in quantities of 200 uCi or more. Additionally, from September 1990 to June 21, 1991, the licensee did not survey monthly with a survey meter and take wipe tests in certain research laboratories where radioactive materials were used in quantities below 200 uCi.

2. Item 5.4.5.1 of the Radiation Safety Manual states, in part, that after finishing a procedure involving radioactive materials that work areas, clothes, and hands will be checked with a survey meter before leaving the laboratory.

Contrary to the above, from January to July 1991, after finishing procedures involving phosphorus-32, in quantities of approximately 100-200 uCi per day, individuals working in Room 222 did not check work areas and their clothing with a survey meter prior to leaving the laboratory.

3. Item 5.4.2 of the Radiation Safety Manual states, in part, that at the time of survey instrument calibration, the meter reading of a designated check source must be recorded, and that each time the instrument is used the designated check source is to be remeasured to assure the constancy of the instrument calibration.

Contrary to the above, from September 1990 to July 1991, the meter reading of a designated check source was not recorded at the time of certain survey instrument calibrations. These included the calibration of five Ludlum Model 3 survey instruments (Serial Nos. 38653, 40473, 18507, 55785, and 62927), a Victoreen Model 493 survey meter (Serial No. 2761), and a Nuclear Associates survey meter (Serial No. 24633). The survey meters were not equipped with designated check sources and had been used within research laboratories during this period without having conducted the required check source measurements to assure the constancy of the instrument calibration.

4. Item 4 of the Radiation Safety Manual states, in part, that personal radiation monitoring devices (film badges) are processed on a monthly basis.

Contrary to the above, from March 1 to April 30, 1991, film badges were not processed on a monthly basis. Specifically, film badges issued to all radiation workers on March 1 were used until April 30, 1991, a period in excess of 1 month.

- B. License Condition 24 requires, in part, that the licensee conduct its program in accordance with statements, representations, and procedures contained in a letter dated April 30, 1990.

1. Item 3 of the letter dated April 30, 1990, states that personnel who work with a total of 1 millicurie or more of radioactive iodine in unsealed form in a 3-month period are required to obtain quarterly thyroid bioassays.

Contrary to the above, from September 1990 to May 24, 1991, the licensee failed to ensure that three individuals working in a research lab performing procedures involving the use of radioactive iodine in an unsealed form obtained quarterly thyroid bioassays. The individuals had handled quantities in excess of 1 millicurie during any 3-month period occurring between these dates.

2. Item 4 of the letter dated April 30, 1990, states that personnel who work with 10 millicuries or more of radioactive iodine in an



unsealed form at one time are required to obtain thyroid bioassays within 24 to 72 hours after the work is completed.

Contrary to the above, the licensee failed to ensure that two individuals obtained thyroid bioassays within 24 to 72 hours of handling iodine-131, in unsealed liquid form, in quantities in excess of 10 millicuries on May 9, 10, and 13, 1991. The individuals participated in radiopharmaceutical therapy procedures involving dosages of 10.6, 28.6, and 16.1 millicuries respectively.

This is a repeat violation.

- C. 10 CFR 20.201(b) requires that each licensee make such surveys as may be necessary to comply with the requirements of Part 20 and which are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As defined in 10 CFR 20.201(a), "survey" means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.

10 CFR 20.202(a)(1) requires, in part, that each licensee supply appropriate personnel monitoring equipment to, and require the use of such equipment by, each individual who enters a restricted area under such circumstances that he receives, or is likely to receive, a dose in any calendar quarter in excess of 25 percent of the applicable value specified in 10 CFR 20.101(a).

Contrary to the above, as of July 31, 1991, the licensee did not make surveys to assure compliance with that part of 10 CFR 20.101 that limits the radiation exposure to the whole body and extremities and did not provide personnel monitoring equipment to each individual who entered a restricted area under circumstances such that they were likely to receive a dose in any calendar quarter in excess of 25 percent of the applicable value specified in 10 CFR 20.101(a). Specifically, the licensee failed to evaluate exposures for, or issue monitoring equipment to: (1) a researcher who performed iodinations using millicurie quantities of radioiodine during the fourth quarter 1990 and first quarter 1991; (2) a physician who participated in nuclear medicine procedures during September 1990 to June 1991; and (3) a researcher who performed procedures using microcurie and millicurie quantities of phosphorus-32 during the first quarter 1991. The latter individual was working in a laboratory where other individuals participating in the same activities had reported exposures approaching regulatory limits.

- D. 10 CFR 35.60(c) requires, in part, that a licensee require each individual who prepares a radiopharmaceutical kit to use a syringe radiation shield when preparing the kit.

Contrary to the above, from September 1990 to July 31, 1991, the licensee did not require each individual who prepared radiopharmaceutical kits to use a syringe radiation shield when preparing kits.

- E. 10 CFR 35.70(a), (e), and (h) require, in part, that a licensee: (1) survey with a radiation detection survey instrument at the end of each day of use all areas where radiopharmaceuticals are routinely prepared for use or administered; (2) survey for removable contamination once each week all areas where radiopharmaceuticals are routinely prepared for use, administered, or stored; and (3) retain a record of each survey which includes the trigger level established for each area and the instrument used to make the survey.

Contrary to the above, the licensee failed to: (1) survey with a radiation detection survey instrument at the end of each day of use areas where radiopharmaceuticals were prepared for use and administered on January 7, February 1, April 7, and July 12, 1991; (2) survey for removable contamination once each week areas where radiopharmaceuticals were prepared for use, administered, and stored during the weeks of January 14 and 21, 1991; and (3) include in all survey records the trigger levels established for each area surveyed and the instrument used to perform daily and weekly surveys in the nuclear medicine department between August 1990 and July 1991.

10 CFR 35.51(b) states, in part, that when calibrating a survey instrument, the licensee shall consider a point as calibrated if the indicated exposure rate differs from the calculated exposure rate by not more than 20 percent.

Contrary to the above, on May 4, 1990, and May 10, 1991, the licensee considered two survey instruments calibrated although the indicated exposure rates for each differed from the calculated exposure rates by as much as 60 percent. The survey instruments, a Ludlum Model 3 and Victoreen Model 491 (Serial Nos. 48154 and 2509 respectively), were routinely used in the nuclear medicine department after these calibrations.

- G. 10 CFR 35.92(a)(1) permits a licensee to hold byproduct material with a physical half-life of less than 65 days for decay-in-storage before disposal in ordinary trash provided that it holds byproduct material for decay a minimum of 10 half-lives.

Contrary to the above, on April 18, 1991, the licensee disposed as ordinary trash a package containing iodine-125 which was not held for decay a minimum of 10 half-lives. The package was held for decay from May 16, 1990 to April 18, 1991, a period of less than 10 half-lives. (The physical half-life of iodine-125 is approximately 60 days.)

- H. 10 CFR 35.92(b) requires, in part, that a licensee retain for three years a record of each disposal of byproduct material permitted under 10 CFR 35.92(a) and that the record include the background dose rate.

Contrary to the above, as of July 31, 1991, the licensee's records of disposal of byproduct material permitted under 10 CFR 35.92(a) from August 17, 1990, to July 31, 1991, did not include the background dose rate.

Collectively, this is a Severity Level III problem (Supplements IV and VI). Cumulative Civil Penalty - \$6,250 (assessed equally among the 17 violations occurring under both License No. 42-00220-07 and License No. 42-00220-06).

Pursuant to the provisions of 10 CFR 2.201, the Veterans Administration Medical Center, Dallas, Texas (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 may be issued to show cause why the license should not be modified, suspended, or revoked or why such other action as may be proper should not be taken. Consideration may be given to extending the response time for good cause shown. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Within the same time as provided for the response required above under 10 CFR 2.201, the Licensee may pay the civil penalty by letter 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 V.8 of 10 CFR Part 2, Appendix C (1991), 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 IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011.

Dated at Arlington, Texas  
this 9th day of October 1991



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

NOV 02 1990

Docket No. 030-30870  
License No. 53-23288-01  
EA 90-190

Fewell Geotechnical Engineering, Ltd.  
ATTN: Mr. Richard B. Fewell  
President  
96-1416 Waihona Place  
Pearl City, Hawaii 96782

Dear Sir:

SUBJECT: ORDER MODIFYING LICENSE (EFFECTIVE IMMEDIATELY)

The enclosed Order is being issued based on observations by NRC personnel of one of your radiographers willfully violating NRC requirements during radiographic operations on October 23 and 25, 1990. The Order prohibits your utilization of this individual in NRC licensed activities for a period of three years from the date of the Order.

The NRC investigation into this matter is continuing. Any further enforcement action will be the subject of separate correspondence.

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

Sincerely,

A handwritten signature in cursive script, reading "Hugh L. Thompson, Jr.".

Hugh L. Thompson, Jr.  
Deputy Executive Director for  
Nuclear Materials Safety, Safeguards,  
and Operations Support

Enclosure: As stated



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

NOV 02 1990

Docket No. 030-30870  
License No. 53-23288-01  
EA 90-190

Thomas E. Murray  
802 Prospect St., # 601  
Honolulu, Hawaii 96813

Dear Sir:

SUBJECT: ORDER MODIFYING LICENSE (EFFECTIVE IMMEDIATELY)

The enclosed Order is being issued based on observations by NRC personnel of your conduct of radiographic operations in willful violation of NRC requirements on October 23 and 25, 1990. The Order prohibits Fewell Geotechnical Engineering, Ltd, from utilizing you in NRC licensed activities for a period of three years from the date of the Order.

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

Sincerely,

A handwritten signature in cursive script, appearing to read "Hugh L. Thompson, Jr.".

Hugh L. Thompson, Jr.  
Deputy Executive Director for  
Nuclear Materials Safety, Safeguards,  
and Operations Support

Enclosure: As stated

UNITED STATES  
NUCLEAR REGULATORY COMMISSION

In the Matter of  
Fewell Geotechnical Engineering, Ltd. }  
Pearl City, Hawaii }

Docket No. 030-30870  
License No. 53-23288-01  
EA 90-190

ORDER MODIFYING LICENSE  
(EFFECTIVE IMMEDIATELY)

1

Fewell Geotechnical Engineering, Ltd. (FGE or Licensee) is the holder of Byproduct Material License No. 53-23288-01 issued by the Nuclear Regulatory Commission (NRC or Commission) pursuant to 10 CFR Part 34. The license authorizes the Licensee to receive, possess, and utilize sealed sources of Iridium 192 in industrial radiographic exposure devices. The license was issued on January 26, 1989, was most recently amended on September 29, 1989, and is due to expire on January 31, 1994.

11

Under 10 CFR 20.105 and 20.201 and under FGE License Condition 15 on page 3 of the license and FGE Operating and Emergency Procedures ("OEP"), personnel performing licensed activities under FGE's license are required to conduct radiation surveys to establish the boundaries of restricted areas (OEP Section IV, Paragraph 2.5). In addition, during radiographic operations, personnel are required to determine that the sealed source is returned to the fully shielded position after each source exposure (10 CFR 34.43(b); OEP Section IV, Paragraph 2.6), to secure the sealed source assembly in the shielded position after each source exposure (10 CFR 34.22(a); OEP Section IV,

Paragraph 2.6), to post and rope off the 2mR/hr boundary (OEP Section IV, Paragraphs 2.2 and 2.5), and to prevent entry into the restricted area of individuals other than radiographers and radiographers' assistants (OEP Section I, Paragraph 5; OEP Section IV, Paragraph 2.5). Finally, information provided to the NRC by licensee personnel must be complete and accurate in all material respects (10 CFR 30.9).

Thomas E. Murray, a radiographer for the Licensee, has been a radiographer since December 1987, having satisfied the experience, training, and examination requirements of at least two NRC licensees (the U.S. Navy and FGE). In accord with 10 CFR 34.31, examinations by NRC licensees must include demonstrations by radiographer candidates evidencing their understanding of NRC requirements, including licensee operating and emergency procedures. During an NRC inspection conducted on October 4, 1990, Mr. Murray demonstrated a thorough understanding of proper procedures for surveys, source securing, and control of access into restricted areas.

An NRC investigator and an NRC inspector observed Mr. Murray, conduct radiographic operations on October 23 and 25, 1990 at Campbell Industrial Park, Oahu, Hawaii, contrary to the above-referenced NRC requirements as follows:

- (1) on October 25, 1990, Mr. Murray conducted radiographic operations without performing surveys to establish the radiation boundary;



- (2) on October 23 and 25, 1990 Mr. Murray failed to rope off any portion of the radiation boundary, and failed to post signs for most of that boundary;
- (3) on October 23, 1990, on at least 12 occasions and on October 25, 1990, on at least 5 occasions, Mr. Murray failed to perform surveys of the exposure device to determine that the sealed source had been returned to its shielded position after radiographic exposures;
- (4) on October 25, 1990, Mr. Murray failed to secure the radiographic source in the fully shielded position after each of several source exposures;
- (5) on October 23, 1990, Mr. Murray failed to prevent entry into the restricted area of individuals other than radiographers and radiographers' assistants.

On October 25, 1990, Mr. Murray was asked by NRC personnel whether, during the NRC-observed operations of October 23 and 25, he had complied with the above-referenced NRC requirements for the conduct of surveys to assure that the source had been retracted to its fully shielded position, for the securing of the source in the shielded position after each exposure, and for preventing the entry of unauthorized personnel into the restricted area. He stated that he

had complied and also demonstrated to the NRC personnel the survey procedures he stated that he had used on those occasions, i.e., conducting a survey with a survey meter as he approached the radiographic exposure device, and circumferentially surveying the device with a survey meter. This demonstration again showed that he had a thorough understanding of Commission requirements.

III

It appears that Mr. Murray's actions were willful because he was experienced, trained, and knowledgeable concerning NRC and Licensee requirements pertaining to surveys, securing the source in the fully shielded position after each source exposure, and to preventing unauthorized entry into a restricted area, and because he repeatedly failed to comply with these requirements on at least two days in one week. In addition, Mr. Murray gave the NRC false information concerning his actions, contrary to the observations of two NRC employees. Therefore, the NRC has concluded that this false information was also provided willfully. As a result of these willful violations, the NRC does not have reasonable assurance that Mr. Murray will comply with regulatory requirements. Moreover, Mr. Murray's willful violations of Commission requirements cannot be tolerated.

Consequently, I lack the requisite reasonable assurance that, with Mr. Murray's involvement, the Licensee's current operations under License No. 53-23288-01 can be conducted in compliance with the Commission's requirements and that the

The Licensee, Mr. Thomas E. Murray, or any other person adversely affected by this Order may submit an answer to this Order or request a hearing on this Order within twenty days of the date of this Order. The answer shall set forth the facts of fact and law on which the Licensee, Mr. Thomas E. Murray, or any other person adversely affected relies and the reasons as to why the Order should not have been issued. Any answer filed within twenty days of the date of this Order may include a request for a hearing. Any answer or request for a hearing shall be submitted to the Secretary, U.S. Nuclear Regulatory Commission, ATTN: Chief, Docketing and Service Section, Washington, D.C. 20555. Copies also shall be sent to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, to the Assistant General Counsel for Hearings and Enforcement at the same address, to the Regional Administrator, NRC Region V, 1450 Maria Lane, Suite 210, Walnut Creek, California 94596, and to the Licensee if the answer or hearing request is by a person other than the Licensee. If a person other than the Licensee or Mr. Thomas E. Murray requests a hearing, that person shall set forth with particularity the manner in which his or her interest is adversely affected by this Order and shall address the criteria set forth in 10 CFR 2.714(d).

If a hearing is requested by the licensee, Mr. Thomas E. Murray, or any other person whose interest is adversely affected, the Commission will issue an

health and safety of the public, including the Licensee's employees, will be protected. Therefore, the public health, safety, and interest require that License No. 53-23288-01 be modified to prohibit the utilization of Mr. Thomas E. Murray in licensed activities. Furthermore, pursuant to 10 CFR 2.204, I find that the public health, safety, and interest require that this Order be immediately effective.

IV

Accordingly, pursuant to Sections 81, 161b, 161c, 161d, 161e, 182 and 186 of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR 2.204 and 10 CFR Part 34, IT IS HEREBY ORDERED, EFFECTIVE IMMEDIATELY, THAT LICENSE NO. 53-23288-01 IS MODIFIED AS FOLLOWS:

Fewell Geotechnical Engineering, Ltd., shall not utilize Mr. Thomas E. Murray in any licensed activities, including, but not limited to, activities performed by radiographers, radiographers' assistants, and helpers, for a period of three years.

The Regional Administrator, Region V, may relax or rescind, in writing, any of the above conditions upon a showing of good cause by the Licensee.

Order designating the time and place of any hearing. If a hearing is held, the issue to be considered at the hearing shall be whether this Order should be sustained.

Upon the Licensee's and Mr. Murray's consent to the provisions set forth in Section IV of this Order, or upon failure of the Licensee and Mr. Murray to file an answer within the specified time, and in the absence of any request for hearing, the provisions specified in Section IV above shall be final without further Order or proceedings. AN ANSWER OR A REQUEST FOR HEARING SHALL NOT STAY THE IMMEDIATE EFFECTIVENESS OF THIS ORDER.

FOR THE NUCLEAR REGULATORY COMMISSION



Hugh L. Thompson, Jr.  
Deputy Executive Director for  
Nuclear Materials Safety, Safeguards,  
and Operations Support

Dated at Rockville, Maryland  
this 2<sup>nd</sup> day of November 1990



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30323

JAN 15 1992

Docket No. 030-29171  
License No. 47-24838-01  
EA 91-192

Lone Pine Coal Company  
ATTN: Mr. Gregory D. Patterson  
Vice President  
and General Manager  
Post Office Box 725  
Danville, West Virginia 25053

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTIES -  
\$2375 (NRC INSPECTION REPORT NO. 47-24838-01/91-01)

This refers to the Nuclear Regulatory Commission (NRC) inspection conducted by Mr. J. Henson on December 11-12, 1991, at Lone Pine Coal Company located in Danville, West Virginia. The inspection included a review of activities conducted under your license with respect to radiation safety and compliance with NRC regulations and license conditions. The report documenting this inspection was sent to you by letter dated December 24, 1991. As a result of this inspection, violations of NRC requirements were identified. An enforcement conference was held on January 7, 1992, in the NRC Region II office to discuss the violations, their cause, and your corrective actions to preclude recurrence. The letter summarizing this conference was sent to you by letter dated January 10, 1992.

The violations are described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice). Violation A in Part I of the Notice involved the removal from service of a licensed device (Texas Nuclear gauging device, Model 5036, Serial Number B-98, containing a 200 millicurie cesium 137 sealed source) from the conveyor belt located at the Long Branch No. 12 mine by an employee who was neither qualified nor authorized to remove or service the licensed device. During the inspection conducted in December 1991 at Long Branch No. 12 mine, the inspector observed that the licensed device had been removed from the conveyor belt and stored outside the site maintenance building with other mining equipment. The inspector subsequently established that the licensed device had been removed in August 1991. This violation is of concern to the NRC because of the potential radiation safety implications involved in this unauthorized activity. Individuals designated to service or move a licensed device are required to have training in the use of the licensed device as well as radiation safety principles.

Violation B in Part I of the enclosed Notice involves two examples where licensed devices were removed from service and stored in an unrestricted area. The devices were not locked nor were they secured against unauthorized removal. The first example involves a licensed device (Texas Nuclear gauging device, Model 5036, Serial Number B-96, containing a 200 millicurie cesium 137 sealed source) that was found improperly stored inside the garage area of the office

and maintenance building ("guard shack") at the Long Branch No. 10 mine during the NRC inspection conducted there in December 1991. This licensed device was removed from service and placed in storage on January 5, 1991. The second example involves the licensed device that was removed from service at the Long Branch No. 12 mine in August 1991 and stored in an unrestricted area adjacent to the office and maintenance building ("guard shack"). The concern inherent in this violation is the failure to properly secure both licensed devices against any unauthorized removal from the place of storage. Adding to the significance of the violation was the fact that although the shutters on both devices were found to be closed, they were not locked in the closed position because the locks were not functional due to their deteriorated condition.

The violations in Part II of the enclosed Notice involve the failure to 1) lock shutters in the closed position on licensed devices that were taken out of service, 2) post proper caution signs for licensed devices, 3) perform a radiation survey when relocating a licensed device, 4) conduct a physical inventory of licensed devices every six months on at least eight occasions, 5) ensure that radiation levels were not created in unrestricted areas such that an individual, continuously present in those areas, could have received a dose in excess of two millirems in any one hour or 100 millirems in any seven consecutive days, and 6) post required documents at several mines.

The root cause of the violations in both Part I and Part II of the enclosed Notice is clearly a programmatic breakdown of your radiation safety program. Factors that contributed to the breakdown of the program include the Radiation Safety Officer's lack of fundamental knowledge concerning NRC license requirements, his less than adequate understanding of regulatory requirements, his inability to devote sufficient time to the management of the program because of other commitments, and an over-reliance on the manufacturer to fulfill some license conditions. These factors are exemplified by the action of the Radiation Safety Officer in placing defective locks on the shutters while knowing that the shutters should be securely closed and locked. Other factors, no less significant, include the lack of management oversight, control, and involvement in the radiation safety program; the lack of adequate training for personnel; and the apparent lack of sensitivity to the potential for problems related to radiation hazards.

To emphasize the importance of maintaining an effective radiation safety program and complying with regulatory requirements and license conditions, I have been authorized to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$2375 for the violations set forth in Part I of the Notice. The violations have each been categorized at Severity Level III in accordance with the "General Statement of Policy and Procedure for Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991). The base value of a civil penalty for a Severity Level III violation is \$500. The escalation and mitigation factors in the Enforcement Policy were considered for each violation in Part I of the Notice as described below.

For Violation I.A, escalation of 50 percent was applied for the factor of identification and reporting because the Violation was identified by the NRC. Mitigation of 25 percent was applied for the factor of corrective action to prevent recurrence based on the letter prepared by the Radiation Safety Officer on December 15, 1991, informing the staff of requirements related to the movement of licensed devices that were to take effect immediately, as well as the installation of caution signs in the vicinity of licensed devices. Additional mitigation was not warranted because effective long term corrective action that would preclude recurrence of similar violations had not been developed. Neither mitigation nor escalation was applied for the factor of past performance because the sole NRC inspection was your initial inspection conducted in December 1986, and there is insufficient history related to program performance to support an evaluation for the applicability of this factor. The other adjustment factors in the Policy were considered and no further adjustment to the base civil penalty was considered appropriate. Therefore, based on the above, the base civil penalty for Violation A has been increased by 25 percent.

For Violation I.B, escalation of 50 percent was applied for the factor of identification and reporting because the violation was identified by the NRC. Neither escalation nor mitigation was applied for the factor of corrective action to prevent recurrence because, although you took the required immediate action to secure the licensed devices, you had not developed effective long term corrective action to preclude recurrence of similar violations. Neither mitigation nor escalation was applied for the factor of past performance based on the rationale provided for this factor in Violation A above. Escalation of 100 percent was applied for the factor of multiple occurrences because there were two examples of licensed devices being improperly stored in an unrestricted area. Escalation of 100 percent was applied for the factor of duration based on the fact that, in the first example, the licensed device was stored in an unrestricted area for a period of 11 months and, in the second example, the licensed device was stored in an unrestricted area for a period of four months. The length of time the violation existed is considered significant because of the potential for losing control of the licensed devices as well as the potential for accidental radiation exposure to personnel, particularly in view of the added significance of the unlocked shutters. The other adjustment factor in the Policy was considered and no further adjustment to the base civil penalty was considered appropriate. Therefore, based on the above, the base civil penalty for Violation B has been increased by 250 percent.

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 and its enclosures will be placed in the NRC Public Document Room.

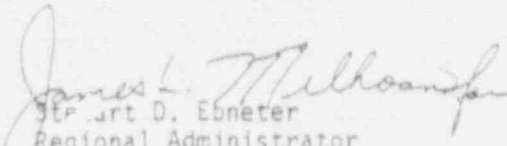


JAN 15 1992

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Should you have any questions concerning this letter, please contact us.

Sincerely,

  
Stuart D. Ebnetter  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed  
Imposition of Civil Penalties

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTIES

Lone Pine Coal Company  
Danville, West Virginia

Docket No. 030-29171  
License No. 47-24838-01  
EA 91-192

During an NRC inspection conducted on December 11 - 12, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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 Assessed a Civil Penalty

- A. Condition 13 to License No. 47-24838-01 requires, in part, that installation, initial radiation survey, relocation, or removal from service of devices containing sealed sources be performed by a specifically designated licensee employee or by persons specifically licensed by the Commission or an Agreement State to perform such services.

Contrary to the above, in August 1991, a licensee employee, other than the individual specifically designated in the license, removed a licensed device, serial number (S/N) 899, from the conveyor belt at the Long Branch No. 12 mine.

This is a Severity Level III violation (Supplement VI).  
Civil Penalty - \$625

- B. 10 CFR 20.207(a) requires that licensed materials stored in an unrestricted area be secured against unauthorized removal from the place of storage. As defined in 10 CFR 20.3(a)(17), an unrestricted area is any area access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials.

Contrary to the above, on December 11 and 12, 1991, respectively, licensed material consisting of measuring devices, each containing 200 millicuries of cesium 137, located in the maintenance garage area at Long Branch No. 10 mine (device S/N 896) and outside of the office/maintenance building at Long Branch No. 12 mine (device S/N 898), both unrestricted areas, were not secured against unauthorized removal from the place of storage.

This is a Severity Level III violation (Supplement VI).  
Civil Penalty - \$1750

## II. Violations Not Assessed a Civil Penalty

- A. Condition 17 to License No. 47-24838-01 requires, in part, that the licensee conduct its program in accordance with the statements contained in its license application dated April 15, 1986 and letter dated October 15, 1990.

1. Section 15 (a) (iii) of the application states, in part, that if the conveyor belt is to be shut down for any extended period of time, the device shutter is to be locked in the closed position and will remain locked while the conveyor belt is shut down.

Contrary to the above, on December 12, 1991, the device shutters were in the closed position, but not locked, on the device (S/N B131) located on the conveyor belt at the Long Branch No. 10A mine which had been shut down since December 1, 1991, and on the device (S/N B98) which was removed from the conveyor belt at Long Branch No. 12 mine which had been shut down since August 15, 1991.

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

2. Section 15 (a) (iv) of the application states, in part, that signs displaying "Caution Radiation" and the standard radiation symbol and stating that the shutter must be closed and the radiation safety officer notified prior to entering the area when working near the gauge will be posted.

Contrary to the above, on December 11-12, 1991, signs displaying "Caution Radiation" and the standard radiation symbol stating that the shutter must be closed and the radiation safety officer notified prior to entering the area when working near the gauge were not posted at Long Branch mine numbers 5, 10, 10A, 13, and 15.

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

3. The licensee's letter dated October 15, 1990 states, in part, that installation and relocation of the licensed devices shall be conducted in accordance with an enclosed procedure entitled "Industrial Device Installation".

The procedure requires, in part, that the installer must be equipped with an appropriate survey meter for the type of source utilized and that radiation surveys be performed at designated stages during the installation/relocation process.

Contrary to the above, in August 1991, a licensee employee removed a licensed device (S/N B98) from the conveyor belt at Long Branch No. 12 mine and did not perform a radiation survey when the device was relocated.

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

- B. Condition 14 to License No. 47-24838-01 requires, in part, that the licensee conduct a physical inventory every six months to account for all sources and/or other devices received and possessed under this license.

Contrary to the above, on at least eight occasions between November 9, 1989 and December 11, 1991, the licensee did not conduct a physical inventory at the required six-month intervals to account for all sources and/or devices received and possessed under this license.

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

- C. 10 CFR 20.105(b) requires that, except as authorized by the Commission in 10 CFR 20.105(a), no licensee allow the creation of radiation levels in unrestricted areas which, if an individual was continuously present in the area, could result in his receiving a dose in excess of two millirems in any one hour or 100 millirems in any seven consecutive days.

Contrary to the above, on December 11-12, 1991, the licensee allowed the creation of radiation levels at the conveyor belt at Long Branch No. 10 mine (device S/N B97), the maintenance garage area at Long Branch No. 10 mine (device S/N B96), the storage area outside of the maintenance/office building at Long Branch No. 12 mine (device S/N B98), and the conveyor at Long Branch No. 13 mine (device S/N B138), unrestricted areas, such that if an individual was continuously present in these areas, he could have received a dose in excess of two millirems in any one hour or 100 millirems in any seven consecutive days.

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

- D. 10 CFR 19.11(a) and (b) require, in part, that the licensee post current copies of Part 19, Part 20, the license, license conditions, documents incorporated into the license, license amendments and operating procedures; or that the licensee post a notice describing these documents and where they may be examined. 10 CFR 19.11(c) requires that a licensee post form NRC-3, "Notice to Employees."

Contrary to the above, on December 11-12, 1991, the licensee did not post any of the required documents at Long Branch No. 5 mine, and did not post current copies of Part 19, Part 20, the license, license conditions, documents incorporated into the license, license amendments, or notices at Long Branch No. 12 and 15 mines.

This is a Severity Level V violation (Supplement VI).

Pursuant to the provisions of 10 CFR 2.201, Lone Pine Coal 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 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 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 V.8 of 10 CFR Part 2, Appendix C (1991), 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 II.

Dated at Atlanta, Georgia  
this 15th day of January 1992



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

December 24, 1991

Docket Nos. 030-17015; 070-01442  
License Nos. 29-08113-03; SNM-1392  
EA No. 91-174

Monmouth Medical Center  
ATTN: J. Richard Stanko  
Chief Operating Officer  
300 Second Street  
Long Branch, New Jersey 07401

Dear Mr. Stanko:

Subject: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL  
PENALTY - \$3,125  
(Combined Inspection Report Nos. 030-17015/91-01  
and 070-01442/91-01)

This letter refers to the NRC inspection conducted on November 8 and 13, 1991, at Monmouth Medical Center, Long Branch, New Jersey, of activities authorized by NRC License Nos. 29-08113-03 and SNM-1392. The inspection report was sent to you on December 10, 1991. During the inspection, sixteen apparent violations of NRC requirements were identified. On December 12, 1991, an enforcement conference was conducted with Mrs. Cynthia Sparer and other members of your staff to discuss the apparent violations, their causes and your corrective actions. A copy of the Enforcement Conference Report is enclosed.

The violations, which are described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty, include, but are not limited to: (1) failure to amend your NRC license prior to moving the Nuclear Medicine Department; (2) failure to implement the radiation safety program through the Radiation Safety Officer (RSO); (3) failure of the Radiation Safety Committee (RSC) to meet quarterly, review ALARA Exposures, and perform an annual program review (a repetitive violation); (4) failure to provide required training to radiation workers; (5) failure to calibrate survey instruments; (6) failure to perform appropriate testing of generators; (7) failure to maintain accurate records of patient radiation doses; (8) failure to maintain complete and legible patient dose records; (9) failure to appropriately perform dose calibrator tests; (10) failure to perform various surveys, as

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

required; (11) failure to perform adequate bioassays; (12) failure to provide or wear dosimetry (a repetitive violation); (13) failure of the RSO to investigate exposures in excess of A<sup>1</sup> RA levels; and (14) improper disposal of radioactive waste.

These violations appeared to have been caused by the lack of adequate management oversight and control of the radiation safety program at your facility. Of particular concern was the fact that the Radiation Safety Organization had not been fully staffed since the resignation of the assistant RSO in June 1991. The RSO, who is also a Radiation Oncology Physicist at your facility, appeared to have placed the ultimate responsibility for day-to-day oversight of the radiation safety program on the former assistant RSO. It was evident that the RSO did not clearly understand nor implement his responsibilities under the terms of your license. The RSO was apparently principally focused on implementing his responsibilities regarding radiation oncology patient treatment, without providing sufficient attention to his radiation safety oversight responsibilities. In addition, management did not provide sufficient oversight to assure that the RSO, who was also the Chairman of the Radiation Safety Committee at the time, was actively involved in carrying out his routine responsibilities. Furthermore, the NRC is also concerned that your system of records, upon which the NRC relies, in part, to ascertain your safe use of licensed material and your compliance with regulatory requirements, was inadequate as evidenced by incomplete and illegible patient dose records. As a result of these concerns, a Confirmatory Action Letter (CAL 1-91-017) was issued to you on November 18, 1991 confirming your commitment to immediately initiate corrective actions regarding certain elements of your radiation safety program.

These violations, if considered individually, would normally be classified at Severity Level IV or V. However, given the number of violations, multiple examples, and the duration of these violations, the violations collectively indicate a lack of adequate management attention to, and oversight of, your radiation safety program. Therefore, the violations 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," 10 CFR Part 2, Appendix C (Enforcement Policy) (1991). If adequate attention and oversight of licensed activities had been provided, these violations would not have gone undetected until the NRC inspection, and may not have occurred. These violations demonstrate the need for Medical Center management, the Radiation Safety Committee, and the Radiation Safety Officer to aggressively monitor and evaluate licensed activities to assure that these activities are conducted safely and in accordance with the terms of your license.

The NRC recognizes that subsequent to the inspection, prompt actions were initiated to correct the violations and effect improvements in the control and implementation of the radiation safety program. These actions, which were described at the enforcement conference, included: (1) restructuring the Radiation Safety Committee (RSC) which included the appointment of a new chairman, and providing instructions to each of the



committee members as to the duties and responsibilities of the RSC; (2) hiring a new assistant RSO on December 2, 1991, to assume the responsibility for radiation safety activities, as well as teaching in the Radiology Technologist Training Program at the hospital; (3) retention of a consultant to assess the radiation safety program and develop an improvement plan by January 1992; (4) providing a letter to the staff informing them of the results of the NRC inspection to prevent recurrence; and (5) the upgrading and development of new program administrative procedures for bioassays and surveys.

Nonetheless, to emphasize the importance of assuring that the corrective actions are long lasting, particularly with respect to the management attention and oversight provided to the radiation safety program, including oversight by the Radiation Safety Officer, so as to ensure that (1) licensed activities are conducted safely and in accordance with requirements, and (2) appropriate corrective measures are taken when problems exist at the facility, I have been authorized to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of \$3,125 for the violations set forth in the enclosed Notice.

The base civil penalty amount for a Severity Level III problem is \$2,500. The escalation and mitigation factors set forth in the enforcement policy were considered, and on balance, a 25 percent escalation of the base civil penalty was deemed appropriate because: (1) the violations were identified by the NRC, and should have been identified by your staff if adequate management attention to the program had been provided, and therefore, 50% escalation of the base civil penalty on this factor is warranted; (2) your immediate corrective actions, as described herein, were considered prompt, and therefore, 25% mitigation of the base civil penalty on this factor is warranted; full mitigation of 50% on this factor is not warranted since your long term corrective actions are still being developed, and it appears that the RSO needs to evaluate the additional amount of the time necessary for him to perform his duties; (3) although your past performance includes a total of only four violations during the prior two NRC inspections conducted in 1985 and 1988, it is clear that the facility's performance has significantly declined since the prior inspections such that your degraded performance constitutes an extensive rather than isolated issue, and therefore, no adjustment of the civil penalty on this factor is warranted; and (4) this case did not involve prior notice, and therefore, no adjustment of the civil penalty on this factor is warranted. The NRC also considered that some of the violations involved multiple examples or existed for an extended duration. However, since these factors were considered in determining the severity level of the violation, the NRC has decided that further escalation based on these factors is not warranted.

The NRC notes that one of the apparent violations (regarding instrument sensitivity) stated in the inspection report is not being cited, for reasons set forth in the enclosed Enforcement Conference Report.

You are required to respond to the enclosed Notice and, in preparing your response, you should follow the instructions specified therein. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. In addition, your response should state how you plan to determine and document that any instrument used to measure wipes for removable contamination (well counter), is sufficiently sensitive to detect 2000 disintegrations per minute (dpm), as required by 10 CFR 35.70(f). After reviewing your response to this Notice, including your proposed corrective actions and the results of future inspections, the NRC will determine whether further 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 and the enclosures will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. 96-511.

Sincerely,



Thomas T. Martin  
Regional Administrator

Enclosures:

1. Notice of Violation and Proposed Imposition of Civil Penalty
2. Enforcement Conference Report

cc:

Public Document Room (PDR)  
Nuclear Safety Information Center (NSIC)  
State of New Jersey

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Monmouth Medical Center  
Long Branch, New Jersey

Docket Nos. 030-17015;  
070-01442  
License Nos. 29-08113-03;  
SNM-1392  
EA 91-174

During an NRC inspection conducted on November 8 and 13, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), the Nuclear Regulatory Commission proposes to impose 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 35.21(a) requires, in part, that a licensee, through the Radiation Safety Officer, ensure that radiation safety activities are being performed in accordance with approved procedures and regulatory requirements in the daily operation of the licensee's byproduct material program.

The licensee's procedures for safe use of radioactive materials are described in the application dated September 27, 1989 and approved by License Condition No. 14.

The application dated September 27, 1989 requires, in Attachment 10.4, Item No. B.3.a., that film badges on the wrist, finger and whole body be worn at all times when working with radioactivity.

Contrary to the above, as of November 13, 1991, the licensee, through the Radiation Safety Officer, did not ensure that radiation safety activities were being performed in accordance with approved procedures and regulatory requirements in the daily operation of the licensed materials program, as evidenced by the following examples:

1. The RSO did not provide daily oversight to assure that established procedures and regulatory requirements were followed in many areas including: personnel training in the requirements of the license; authorized waste disposal; survey requirements; and survey meter calibration and operation; and
2. A technologist working in the Nuclear Medicine Hot Lab on November 8, 1991, did not wear a ring badge while working with radioactive materials.

- B. 10 CFR 35.13(e) requires that a licensee apply for and must receive a license amendment before it adds to or changes the areas of use or address or addresses of use identified in the application or on the license.

Contrary to the above, in July 1991, the licensee changed the area where byproduct material is used for Nuclear Medicine from the basement to the 4th Floor, and as of November 13, 1991, a license amendment had not been received authorizing the change.

- C. 10 CFR 35.22 (a)(2), (b)(4) and (6) respectively require, in part, that the Radiation Safety Committee meet at least quarterly; review quarterly, with the assistance of the Radiation Safety Officer a summary of the occupational radiation dose records of all personnel working with byproduct material; and review annually, with the assistance of the Radiation Safety Officer, the radiation safety program.

Contrary to the above, the licensee's Radiation Safety Committee did not meet during the second quarter of 1991 (namely, between April and June 1991); did not review occupational radiation doses for the third quarter in 1989 in that doses to two nurses, whose occupational doses exceeded doses for ALARA investigation levels, were not reviewed; and did not perform an annual review of the radiation safety program for 1990.

- D. 10 CFR 19.12 requires, in part, that all individuals working in a restricted area be instructed in the precautions and procedures to minimize exposure to radioactive materials, in the purpose and functions of protective devices employed, and in the applicable provisions of the Commission's regulations and licenses.

Contrary to the above, as of November 13, 1991, individuals who were working in the Nuclear Medicine Department, a restricted area, had not been instructed in the applicable provisions of the regulations and the conditions of the license. Specifically, Nuclear Medicine personnel were not instructed in the appropriate procedures for waste disposal; survey requirements; requirements of the license; and survey meter calibration and operation.

- E. 10 CFR 35.53(c) requires that a licensee retain records of the measurement of radiopharmaceutical dosages for three years, and that the record contain the:
- (1) Generic name, trade name, or abbreviation of the radiopharmaceutical, its lot number, and expiration dates and the radionuclide;
  - (2) Patient's name, and identification number if one has been assigned;
  - (3) Prescribed dosage and activity of the dosage at the time of measurement, or a notation that the total activity is less than 10 microcuries;

- (4) Date and time of the measurement; and
- (5) Initials of the individual who made the record.

10 CFR 35.5 requires, in part, that records required by 10 CFR Part 35 must be legible throughout the required retention period.

Contrary to the above, as of November 13, 1991, numerous radiopharmaceutical dosage records were incomplete in that they did not contain the required information including such notations as, the activity of the dose, time of administration, and initials of the individual who made the record. In addition, in many cases, the dose records were illegible, unclear and required interpretation by the technologist.

- F. 10 CFR 35.51(a) requires, in part, that for survey instruments used to show compliance with 10 CFR Part 35, a licensee must calibrate two separate readings with a radiation source on all scales with readings up to 1000 millirem per hour, and conspicuously note on the instrument the apparent exposure rate from a dedicated check source as determined at the time of calibration and the date of calibration. 10 CFR 35.51(c) requires, in part, that a licensee check each survey instrument for proper operation with the dedicated check source each day of use.

Contrary to the above, as of November 13, 1991, the calibration of the licensee's Victoreen 493 survey instrument, calibrated on May 4, 1991, was not performed at two separate readings on each scale with readings up to 1000 millirem per hour. In addition, as of November 13, 1991, the licensee also did not note on the survey instrument the apparent exposure rate from a dedicated check source determined at the time of calibration, and did not check the survey instrument for proper operation with the dedicated check source each day of use.

- G. 10 CFR 35.200(b) requires that a licensee shall elute generators and prepare reagent kits in accordance with the manufacturer's instructions.

Contrary to the above, as of November 13, 1991, the licensee did not perform generator elutions in accordance with the manufacturer's instructions. Specifically, aluminum breakthrough tests were not performed on the elutions as required by the manufacturer's instructions.

- H. 10 CFR 35.50(b)(3) requires, in part, that a licensee test each dose calibrator for linearity over the range of its use between the highest dosage that will be administered to a patient and 10 microcuries.

Contrary to the above, the licensee's dose calibrator linearity tests performed during April 1991 and September 1991 covered only the range between 67.0 microcuries and

8.4 microcuries and 81.3 millicuries and 10 microcuries, respectively. The highest dosage that the licensee administered to a patient was 102 millicuries.

- I. 10 CFR 35.59(h) requires, in part, that a licensee in possession of a sealed source or brachytherapy source measure the ambient dose rates quarterly in all areas where such sources are stored.

Contrary to the above, as of November 13, 1991, the licensee did not measure the ambient dose rates quarterly in the brachytherapy storage area, where the licensee's brachytherapy sources were stored. Specifically, dose rates were measured biannually rather than quarterly.

- J. 10 CFR 35.70(e) requires that a licensee survey for removable contamination once each week all areas where radiopharmaceuticals are routinely prepared for use, administered, or stored. 35.70(g) requires, in part, that a licensee establish removable contamination trigger levels for all such areas.

Contrary to the above, from November 1990 thru November 13, 1991, weekly contamination surveys were not performed for at least 5 different weeks in the Nuclear Medicine department and between September 21, 1991 and November 8 1991, for at least 18 different weeks in the Pathology RIA Laboratory. In addition, trigger levels for removable contamination for weekly surveys were not established in either area.

- K. 10 CFR 35.313(a)(4) and 35.415(a)(4) respectively require, in part, that for each patient receiving radiopharmaceutical therapy and hospitalized for compliance with 10 CFR 35.75, or each patient receiving brachytherapy source implants, a licensee shall promptly after administration of the dosage, or implanting of the brachytherapy sources, measure the dose rates in contiguous restricted and unrestricted areas with a radiation measurement survey instrument to demonstrate compliance with the requirements of 10 CFR Part 20.

Contrary to the above, as of November 13, 1991, the licensee, routinely after administering therapeutic dosages of iodine-131 (which requires hospitalization for compliance with 10 CFR 35.75) or implanting brachytherapy sources, did not measure or survey the dose rates in restricted and unrestricted areas contiguous to the room of the therapy patient to demonstrate compliance with the requirements of 10 CFR Part 20.

- L. 10 CFR 35.315(a)(8) requires, in part, that a licensee measure the thyroid burden of each individual who helped prepare or administer dosages of iodine-131 in amounts that required the patient to be hospitalized for compliance with 10 CFR 35.75, and

that the measurements be performed within three days after the administration of the dosage.

Contrary to the above, between November 1990 and November 13, 1991, the licensee administered to patients greater than 30 mCi of iodine-131, a dosage which requires hospitalization for compliance with 10 CFR 35.75, and the licensee, on at least two occasions during that time, did not measure the thyroid burden of the individuals who prepared the dose.

- M. 10 CFR 20.201(b) requires that each licensee make such surveys as may be necessary to comply with the requirements of 10 CFR Part 20 and which are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As defined in 10 CFR 20.201(a), "survey" means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.

10 CFR 20.102 requires, in part, that the licensee determine prior dose history of the individual prior to first entry of the individual into the licensee's restricted area.

Contrary to the above, as of November 13, 1991, the licensee did not make surveys to assure compliance with 10 CFR 20.101. Specifically, the necessary personnel monitoring was not provided by the licensee to evaluate the dose to the extremities and whole body of a nuclear medicine technologist working in a restricted area and who is employed by the hospital through a contract service. In addition, a prior dose determination was not made prior to the individual's first entry into the licensee's restricted area.

- N. 10 CFR 35.315(a)(7) requires that, for each patient receiving radiopharmaceutical therapy and hospitalized for compliance with 10 CFR 35.75, a licensee must survey the patient's room and private sanitary facility for removable contamination with a radiation detection survey instrument before assigning another patient to the room. The room must not be reassigned until removable contamination is less than 200 disintegrations per minute per 100 square centimeters (dpm/cm<sup>2</sup>).

Contrary to the above, as of November 13, 1991, the licensee did not assure that surveys for removable contamination were less than 200 dpm per 100 cm<sup>2</sup> before assigning another patient to the room of a patient who had received radiopharmaceutical therapy and had been hospitalized for compliance with 10 CFR 35.75.

- O. 10 CFR 35.21(b)(5) requires that the Radiation Safety Officer establish personnel exposure investigational levels that, when exceeded, will initiate a prompt

investigation by the Radiation Safety Officer of the cause of the exposure and a consideration of actions that might be taken to reduce the probability of recurrence.

Contrary to the above, the licensee's established personnel exposure investigational level of 125 millirem to the whole body was exceeded, as evidenced by a report of exposures of 130 millirem for the period January 1, 1989 to January 31, 1989 and 170 millirem for the period June 1, 1989 to June 30, 1989, and as of November 13, 1991, the licensee's Radiation Safety Officer had not investigated the cause of the exposures.

- P. 10 CFR 35.92(a) permits a licensee to dispose of byproduct material with a physical half-life of less than 65 days in ordinary trash, provided that the licensee first holds such byproduct material for decay a minimum of ten half-lives, and monitors the material to assure that its radioactivity can not be distinguished from the background radiation levels prior to disposal.

Contrary to the above, as of November 13, 1991, the licensee routinely disposed of wastes consisting of linens, paper and food contaminated with iodine-131 from patients undergoing iodine-131 therapy which were not held for decay for the required minimum ten half-lives. In addition, between October 7, 1991 and November 13, 1991, the licensee disposed of wastes consisting of linens, paper and food contaminated with iodine-131 from a patient treated with a therapy dose of 101.2 millicuries of iodine-131 on October 7, 1991, which were neither held for decay for the required minimum ten half-lives, nor monitored to assure that its radioactivity could not be distinguished from background radiation levels.

These violations are classified in the aggregate as a Severity Level III problem (Supplements IV and VI).

Cumulative Civil Penalty - \$3,125 (assessed equally among the sixteen violations)

Pursuant to the provisions of 10 CFR 2.201, Monmouth Medical Center Hospital (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 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 V.B of 10 CFR Part 2, Appendix C (1991), 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 I, 475 Allendale Road, King of Prussia, Pennsylvania 19406.

Dated at King of Prussia, Pennsylvania  
this 24<sup>th</sup> day of December 1991



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

December 12, 1991

Docket No. 030-02471  
License No. 29-03308-01  
EA 91-163

Overlook Hospital  
ATTN: Gary Ost  
Senior Vice President  
99 Beauvoir Avenue  
P.O. Box 220  
Summit, New Jersey 07902-0220

Dear Mr. Ost:

Subject: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL  
PENALTY - \$3,125  
(NRC Inspection Report No. 030-02471/91-002)

This letter refers to the NRC inspection conducted on November 6, 1991, at Overlook Hospital, Summit, New Jersey, of activities authorized by NRC License No. 29-03308-01. The inspection report was sent to you on November 21, 1991. During the inspection, an apparent violation of NRC requirements was identified, involving the performance of an iodine procedure at your facility by an individual technologist without the technologist first obtaining from the patient a signed and written order from the referring physician, as required. As a result, a patient was improperly given a significant dose of radiation to the thyroid. The violation was identified and reported to the NRC by your staff. On November 26, 1991, an enforcement conference was conducted with Mr. J. Palmaro and other members of your staff to discuss the apparent violation, the causes, and your corrective actions. A copy of the Enforcement Conference Report was sent to you on December 4, 1991.

The violation is described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty. Although the Nuclear Medicine Technologist (NMT) had not obtained from the patient the signed and written order of the referring physician, the NMT did not postpone the test and contact the referring physician, as required by the licensee's procedures, before proceeding with the test. As a result, even though the referring physician, who requested the test, indicated on the order that a thyroid scan was to be administered, the patient was

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

administered a whole body scan utilizing the iodine-131 isotope and received a significant dose of approximately 1554 rads to the thyroid. The referring physician, in the patient's order, had requested a thyroid scan, but mistakenly indicated iodine-131 as the radioisotope to be used instead of the normally used iodine-123. Iodine-131 is normally used with whole body scans. In any case, notwithstanding that mistake in the order prepared by the referring physician, the incident could have been precluded if the NMT had first obtained and reviewed the order from the patient, which could have alerted the NMT to the discrepancy. Furthermore, the technician who scheduled the test assumed that the referring physician was requesting a whole body scan rather than a thyroid scan, and that technician scheduled the whole body scan using iodine-131 after only questioning the referring physician's secretary instead of directly contacting the referring physician and authorized user.

The failure to properly identify and resolve the discrepancy in the referring physician's order is a significant regulatory concern since three opportunities existed to do so, namely, by (1) the technician who scheduled the test, (2) by a review by the licensee authorized user, and (3) the Nuclear Medicine Technologist performing the test. Given the significant effect that resulted from this failure, the violation is classified at Severity Level III in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (Enforcement Policy) (1991).

The NRC license issued to Overlook Hospital entrusts responsibility for radiation safety to the management of the hospital; therefore, the NRC expects effective management and oversight of its licensed programs. Incumbent upon each NRC licensee is the responsibility to protect the public health and safety by ensuring that all requirements of the NRC license are met and any potential violation of NRC requirements is identified and expeditiously corrected. Although a similar incident had occurred at your facility in 1990, the corrective actions taken to preclude recurrence were not effective, as evidenced by this recent incident and its associated violation, which demonstrate a significant deficiency in the review process for the administration of iodine procedures at your facility.

The NRC recognizes that subsequent to the NRC inspection on November 6, 1991, prompt and comprehensive actions were initiated to correct the violation and effect improvements in the control and implementation of the radiation safety program. These actions, which were described at the enforcement conference, included: (1) revising the procedures for the administration of radioactive iodine to require that all requests for iodine administrations be accompanied by a written directive from an authorized user; (2) taking disciplinary action to relieve the Team Leader of Nuclear Medicine of all supervisory responsibilities; (3) contacting the supervisor of the referring physician to discuss the incident and possible development of an ongoing educational program to prevent this incident in the future; and (4) contacting other medical institutions to inquire about additional protocols concerning diagnostic procedures that may be beneficial to Overlook Hospital.

Notwithstanding the corrective actions, to emphasize the importance of ensuring that these actions are long-lasting, and result in continued improvement in the management attention and oversight provided to the radiation safety program so as to prevent such occurrences in the future, I have been authorized to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of \$3,125 for the violation set forth in the enclosed Notice.

The base civil penalty amount for a Severity Level III violation is \$2,500. The escalation and mitigation factors set forth in the enforcement policy were considered, and on balance, 25 percent escalation of the base civil penalty was deemed appropriate because: (1) although the violation is considered to be self-disclosing based on the clear patient thyroid uptake identified during the whole body scan, it was nonetheless promptly reported by your staff to the NRC, and therefore, 25 percent mitigation of the base civil penalty on this factor is warranted; (2) your corrective actions, as described herein, are considered prompt and comprehensive, and therefore, 50 percent mitigation of the civil penalty on this factor is warranted; and (3) your past performance in this area included a similar incident for which corrective action was not effective to prevent a similar problem, and therefore, 100 percent escalation of the civil penalty on this factor is warranted. The similar incident occurred on May 14, 1990, when a referring physician ordered the wrong scan to be performed, and the patient was administered 1.4 millicuries of iodine-131 instead of 300 microcuries of iodine-123. The other escalation and mitigation factors were considered, and no adjustment on these factors was warranted since the violation did not involve prior notice nor multiple examples, nor did the violation exist for an extended duration.

You are required to respond to the enclosed Notice and, in preparing your response, you should follow the instructions specified therein. 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 enforcement action is necessary to ensure compliance with NRC regulatory requirements.

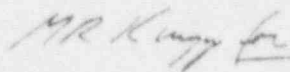
In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosure will be placed in the NRC's Public Document Room.

Overlook Hospital

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The response directed by this letter and the enclosure are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. 96-511.

Sincerely,



Thomas T. Martin  
Regional Administrator

Enclosures:  
Notice of Violation and Proposed Imposition  
of Civil Penalty

cc:  
Public Document Room (PDR)  
Nuclear Safety Information Center (NSIC)  
State of New Jersey

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Overlook Hospital  
Summit, New Jersey 07902

Docket No. 030-02471  
License No. 29-03308-01  
EA 91-163

During an NRC inspection conducted on November 6, 1991, a violation of an NRC requirement was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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 35.25(a)(2) requires, in part, that a licensee that permits the use of byproduct material by an individual under the supervision of an authorized user shall require the supervised individual to follow the instructions of the supervising authorized user, and follow the procedures established by the Radiation Safety Officer with respect to the use of byproduct material.

The licensee's procedures for implementing all iodine procedures are described, in part, in the licensee's letter, dated October 11, 1990, to the NRC and these procedures were approved by the Radiation Safety Officer.

Item 1 of the letter, dated October 11, 1990, states that all iodine procedures shall be accompanied by a written and signed order to perform the procedure.

Item 4 of the letter, dated October 11, 1990, states that in the event a written and signed order to perform the procedure is not available, the procedure shall be postponed and the physician contacted.

Contrary to the above, on October 30, 1991, a Nuclear Medicine Technologist working under the supervision of an authorized user, did not postpone an iodine procedure, but rather performed it without first contacting the referring physician, even though a written and signed order did not accompany the procedure. Specifically, the Nuclear Medicine Technologist administered to a patient a dose of 2.0 millicuries of iodine-131 for a whole body scan instead of a thyroid scan (as requested on the Referring Physician's Order), and did not obtain from the patient the written and signed order prior to administering the dose, nor contact the physician.

This is a Severity Level III Violation (Supplement VI).

Civil Penalty - \$3,125

Pursuant to the provisions of 10 CFR 2.201, Overlook Hospital (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 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 V.B of 10 CFR Part 2, Appendix C (1991), 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 I, 475 Allendale Road, King of Prussia, Pennsylvania 19406.

Dated at King of Prussia, Pennsylvania  
this 12<sup>th</sup> day of December 1991





UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
799 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137

June 7, 1989

Docket No. 030-19660  
License No. 21-21010-01  
EA 89-098

Photon Field Inspection, Inc.  
ATTN: Mr. Charles Garinger  
President and Radiation  
Safety Officer  
1705 Boxwood  
Saginaw, MI 48601

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY - \$7,500  
(NRC INSPECTION REPORT NO. 030-19660/89001(DRSS))

This refers to the routine inspection conducted on April 6, 1989, at your facility in Saginaw, Michigan. The inspection included a review of activities conducted with respect to radiation safety. As a result, numerous failures to comply with NRC requirements, including the conditions of your license, were identified. NRC concerns relative to the inspection findings were discussed in a May 5, 1989 Enforcement Conference conducted by telephone between you and Mr. J. Hickey and others of the NRC Region III staff. The report documenting this inspection and the Enforcement Conference was sent to you by letter dated May 11, 1989.

The violations described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty involve failures to: (1) obtain NRC authorization prior to facility relocation; (2) provide annual retraining to radiographic personnel; (3) perform quarterly management audits; (4) perform quarterly physical inventories; (5) calibrate survey instruments; (6) leak test sealed sources at required frequencies; (7) complete shipping papers for transport of radiographic sources; and (8) maintain records of byproduct material receipt. These violations collectively demonstrate the need for improvements in the administration and control of your radiological safety program to ensure the safe performance of licensed activities and adherence to NRC requirements.

To emphasize the need for adequate management control over your radiological safety program, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Materials Safety, Safeguards, and Operations Support, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty in the amount of Seven Thousand Five Hundred Dollars (\$7,500) for the violations described in the enclosed Notice. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, 53 Fed. Reg. 40019 (October 13, 1988) (Enforcement Policy), the violations described in the enclosed Notice have been categorized as a Severity Level III problem.

June 7, 1989

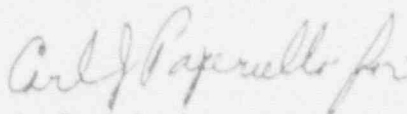
The base value of a civil penalty for a Severity Level III violation or problem is \$5,000. The escalation and mitigation factors in the Enforcement Policy were considered. The base civil penalty amount has been increased by 50 percent: 25 percent because of your poor past performance and 25 percent because of prior notice of similar events. Previous inspections have shown that violations continue to occur at your facility and two violations identified during this inspection and identified as Violations B.2 and C in the enclosed Notice are repetitive violations from the 1986 inspection. Information Notices were issued in 1988 to you by NRC which highlighted concerns related to many of the areas which were identified as violations during this inspection. These notices should have been reason for you to assess your program for any possible weaknesses or deficiencies.

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 Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget, as required by the Paperwork Reduction Act of 1980, Pub. L., No. 96-511.

Sincerely,



A. Bert Davis  
Regional Administrator

Enclosure: Notice of Violation and  
Proposed Imposition of Civil Penalty

See Attached Distribution

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Photon Field Inspection, Inc.  
Saginaw, Michigan

Docket No. 030-19660  
License No. 21 21010-01  
EA 89-098

During an NRC inspection conducted on April 6, 1989, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, 53 Fed. Reg. 40019 (October 13, 1988) (Enforcement Policy), 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. License Condition No. 10 limits, storage of licensed material to a facility located at 300 Ames Street, Saginaw, Michigan.

Contrary to the above, as of April 6, 1989, the licensee has stored licensed material at a location other than that authorized by the license. Specifically, the licensee relocated its radiographic facility from 300 Ames Street, Saginaw, Michigan to 1705 Boxwood, Saginaw, Michigan in January 1989, has stored licensed material at that site since January 1989, and failed to inform the NRC and obtain approval prior to the move.

- B. License Condition No. 16 requires, in part, that the licensee conduct its program in accordance with the statements, representations, and procedures contained in the referenced application and certain listed documents, and any enclosures thereto.

The licensee's referenced application which was amended July 1, 1982, transmitted to NRC as an enclosure a revised Administrative Manual.

1. Section 8.D of this manual requires, in part, that periodic training be given by the Radiation Safety Officer to update radiographic personnel at least every 12 months and that the training be followed by a written and oral quiz.

Contrary to the above, as of April 6, 1989, the sole radiographer employed by the licensee had not been provided any periodic training and had not been given a written and oral quiz during the last twelve months.

2. Section 9.B of this manual requires, in part, that a quarterly management audit be conducted in accordance with Form 6 of Appendix 1, which includes audits of various records such as inventory, instrument calibration, and receipt and disposal records.

Contrary to the above, since October 5, 1988, the licensee has not conducted any management audits of records such as inventory, instrument calibration, and receipt and disposal records.

This is a repeat violation.

- C. 10 CFR 34.26 requires, in part, that the licensee conduct a quarterly physical inventory to account for all sealed sources received and possessed under the license. The records of the inventories shall also include the quantities of byproduct material.

Contrary to the above, between October 5, 1988 and April 6, 1989, the licensee failed to conduct a quarterly inventory of all sealed sources as required. In addition, the quantities of iridium-192 and cobalt-60 listed in 1988 quarterly inventory records are incorrect in that they did not correspond to source manufacturer decay information or NRC calculated values.

This is a repeat violation.

- D. 10 CFR 34.24 requires, in part, that each survey instrument used to conduct physical radiation surveys be calibrated at intervals not to exceed three months.

Contrary to the above, on July 5, 1988, more than three months after calibration, the licensee conducted physical radiation surveys with two survey instruments which were last calibrated on March 16, 1988.

- E. 10 CFR 34.25(b) requires, in part, that sealed sources be tested for leakage at intervals not to exceed six months.

License Condition No. 12.B exempts the licensee from the requirements of 10 CFR 34.25(b) as to radiography sources which are in storage and not being used. Such sources must be tested for leakage prior to any use or transfer unless they have been leak tested within six months prior to the date of use or transfer.

Contrary to the above, an iridium-192 sealed radiographic source, last leak tested on October 9, 1987, was removed from storage and used for radiography on ten occasions between April 14 and June 23, 1988 and transferred to the source manufacturer in July 1988. Prior to such use and transfer, the sources had not been leak tested within the previous six months.

- F. 10 CFR 71.5(a) prohibits transport of licensed material outside the confines of a plant or other place of use, or delivery of licensed material to a carrier for transport unless the licensee complies with applicable requirements of the regulations appropriate to the mode of

transport of the Department of Transportation (DOT) in 49 CFR Parts 170 through 189.

49 CFR 172.200-202 requires each person who transports hazardous material to describe the material on a shipping paper. 49 CFR 172.203(d) describes the required additional shipping paper entries for radioactive materials.

Contrary to the above, in January 1989, the licensee transported curie quantities of radioactive material from its Ames Street facility to its Boxwood Street facility and failed to complete any shipping papers.

- G. 10 CFR 30.51(a) and (c)(1) require, in part, that persons who receive byproduct material pursuant to a license issued pursuant to Part 34 to keep records showing the receipt of such byproduct material as long as the material is in their possession.

Contrary to the above, a record of receipt for byproduct material (cobalt-60 sealed source) received in approximately 1983 and currently in the possession of the licensee was not maintained.

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

Cumulative Civil Penalty - \$7,500 (equally assessed among the violations).

Pursuant to the provisions of 10 CFR 2.201, Photon Field Inspection (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. This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each alleged violation: (1) admission or denial of the alleged violation; (2) the reasons for the violation if admitted; (3) the corrective actions that have been taken and the results achieved; (4) the corrective actions 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 may be issued to show cause why the license should not be modified, suspended, or revoked or why such other action as may be proper should not be taken. Consideration may be given to extending the response time for good cause shown. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Within the same time as provided for the response required under 10 CFR 2.201, the Licensee may pay the civil penalty by letter to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, or money order payable to the Treasurer of the United States in the amount of the civil penalty proposed above, or may protest imposition of the civil penalty in whole or in part by a written answer addressed to the Director, Office of Enforcement,

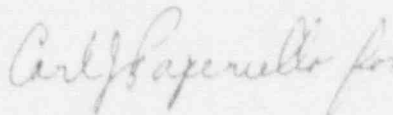
U.S. Nuclear Regulatory Commission. Should the Licensee fail to answer within the time specified, an Order imposing the civil penalty will be issued. Should the Licensee elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalty, in whole or in part, such answer should be clearly 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 V.B of 10 CFR Part 2, Appendix C, 53 Fed. Reg. 40019 (October 13, 1988) (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 provision of 10 CFR 2.205, this matter may be referred to the Attorney General, and the penalty, unless compromised, remitted, or mitigated, may be collected by civil action pursuant to Section 234c of the Act, 42 U.S.C. 2282c.

The responses to the Director, Office of Enforcement, noted above (Reply to a Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the Regional Administrator, Region III, U.S. Nuclear Regulatory Commission, 799 Roosevelt Road, Glen Ellyn, Illinois 60137.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Bert Davis  
Regional Administrator

Dated at Glen Ellyn, Illinois  
this 7 day of June 1989



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

OCT 30 1989

Docket No. 030-19660  
License No. 21-21010-01  
EA 89-98

Photon Field Inspection, Inc.  
ATTN: Mr. Charles Garinger  
President and Radiation  
Safety Officer  
1705 Boxwood  
Saginaw, MI 48601

Gentlemen:

SUBJECT: ORDER IMPOSING A CIVIL MONETARY PENALTY

This refers to your two letters dated July 26, 1989, received by the NRC Region III office on July 27 and August 11, 1989, in response to the Notice of Violation and Proposed Imposition of Civil Penalty (Notice) sent to you by our letter dated June 7, 1989. Our letter and Notice describe eight violations identified during a routine NRC inspection conducted on April 6, 1989. To emphasize the need for improvements in the administration and control of your radiological safety program to ensure the safe performance of licensed activities and adherence to NRC requirements, a civil penalty of \$7,500 was proposed.

In your responses, you deny Violations B.2 and C and do not deny the other violations. In addition, you request reduction of the Severity Level and the amount of the civil penalty for several stated reasons. After consideration of your responses, we have concluded, for the reasons given in the Appendix attached to the enclosed Order Imposing Civil Penalty, that Violations B.2 and C will require further review and consideration by the NRC staff. For that reason, Violations B.2 and C are being withheld from this escalated enforcement action at this time. You will be notified of our decision concerning these two violations at a later date. We have concluded that the remaining violations did occur as set forth in the Notice. We have given careful consideration to your request for reducing the Severity Level as well as the amount of the civil penalty and find no basis for changing the Severity Level. However, we have modified the amount of the civil penalty as noted below.


Since Violations B.2 and C constitute 25 percent of the 8 cited violations, we have determined that the \$7,500 civil penalty should be reduced by \$1,875 to \$5,625. Accordingly, we hereby serve the enclosed Order on Photon Field Inspection, Inc. imposing a civil monetary penalty in the amount of \$5,625. We will review the effectiveness of your corrective actions during a subsequent inspection.

Photon Field Inspection, Inc.

- 2 -

In accordance with Section 2.790 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosure will be placed in the NRC's Public Document Room.

Sincerely,

  
Hugh L. Thompson, Jr.  
Deputy Executive Director for  
Nuclear Materials Safety, Safeguards,  
and Operations Support

Enclosure: As stated





NRC Region III office on July 27 and August 11, 1989. In its response, the licensee denied Violations B.2 and C and did not deny the remaining six violations. In addition, the licensee requested a reduction in the Severity Level and a reduction in the proposed civil penalty.

III

After consideration of the licensee's response and the statements of fact, explanation, and argument for mitigation contained therein, the NRC staff has determined, as set forth in the Appendix to this Order, that Violations B.2 and C require further evaluation by the NRC staff and therefore are being withheld from this escalated enforcement action at this time. The staff has also determined that the remaining six violations occurred as stated. After considering that: (1) the civil penalty was assessed equally among the eight violations, and (2) Violations B.2 and C constitute 25 percent of the violations, the amount of the civil penalty has been reduced by \$1,875 and a \$5,625 civil penalty should be imposed.

IV

In view of the foregoing and pursuant to Section 234 of the Atomic Energy Act of 1954, as amended (Act), 42 U.S.C. 2282, and 10 CFR 2.205, IT IS HEREBY ORDERED THAT:

The licensee pay a civil penalty in the amount of \$5,625 within 30 days of the date of this Order, by check, draft, or money order, payable to the Treasurer of the United States and mailed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555.

V


The licensee may request a hearing within 30 days of the date of this Order. A request for a hearing shall be clearly marked as a "Request for an Enforcement Hearing" and shall be addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Copies shall also be sent to the Assistant General Counsel for Hearings and Enforcement, Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 and to the Regional Administrator, Region III, 799 Roosevelt Road, Glen Ellyn, IL 60137.

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

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

- (a) whether the licensee was in violation of the Commission's requirements as set forth in the Notice of Violation and Proposed Imposition of Civil Penalty referenced in Section II above, with the exception of Violations B.2 and C.; and
- (b) whether, on the basis of the violations, this Order should be sustained.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Hugh L. Thompson, Jr.  
Deputy Executive Director for  
Nuclear Materials Safety, Safeguards,  
and Operations Support

Dated at Rockville, Maryland  
this 30<sup>th</sup> day of October 1989

## APPENDIX

### EVALUATIONS AND CONCLUSIONS

On June 7, 1989, a Notice of Violation and Proposed Imposition of Civil Penalty (Notice) was issued to Photon Field Inspection, Inc. (licensee) for violations identified during a routine NRC inspection. The licensee responded to the Notice in two documents received by the Region III office on July 27 and August 11, 1989. In its response, the licensee denies Violations B.2 and C, and offers reasons why the Severity Level of all the violations should be reduced and why the civil penalty should not be imposed. The NRC's evaluation and conclusion regarding the licensee's arguments are as follows:

#### I. Restatements of Violations, Summary of Licensee's Response and NRC Evaluation of Licensee's Response

##### Restatement of Violation A

License Condition No. 10 limits storage of licensed material to a facility located at 300 Ames Street, Saginaw, Michigan.

Contrary to the above, as of April 6, 1989, the licensee has stored licensed material at a location other than that authorized by the license. Specifically, the licensee relocated its radiographic facility from 300 Ames Street, Saginaw, Michigan to 1705 Boxwood, Saginaw, Michigan in January 1989, has stored licensed material at that site since January 1989, and failed to inform the NRC and obtain approval prior to the move.

##### Summary of Licensee's Response

The licensee does not deny the violation.

##### NRC Evaluation of Licensee's Response

Since the licensee does not deny the violation, the violation remains as stated.

##### Restatement of Violation B

License Condition No. 16 requires, in part, that the licensee conduct its program in accordance with the statements, representations, and procedures contained in the referenced application and certain listed documents, and any enclosures thereto.

The licensee's referenced application, which was amended July 1, 1982, transmitted to NRC as an enclosure a revised Administrative Manual.

##### Subitem B.1

Section 8.D of this manual requires, in part, that periodic training be given by the Radiation Safety Officer to update radiographic personnel at least every 12 months and that the training be followed by a written and oral quiz.

Contrary to the above, as of April 6, 1989, the sole radiographer employed by the licensee had not been provided any periodic training and had not been given a written and oral quiz during the last twelve months.

#### Summary of Licensee's Response

The licensee does not deny the violation.

#### NRC Evaluation of Licensee's Response

Since the licensee does not deny the violation, the violation remains as stated.

#### Subitem B.2

Section 9.B of this manual requires, in part, that a quarterly management audit be conducted in accordance with Form 6 of Appendix 1, which includes audits of various records such as inventory, instrument calibration, and receipt and disposal records.

Contrary to the above, since October 5, 1988, the licensee has not conducted any management audits of records such as inventory, instrument calibration, and receipt and disposal records.

This is a repeat violation.

#### Summary of Licensee's Response

The licensee denied this part of the violation and stated that management audits have been conducted since October 5, 1988. The licensee stated that after review of all files related to radiography, a record of a quarterly management audit accomplished on January 3, 1989 was located. The licensee stated further that this record was not available during the inspection due to the unavoidable absence of the Radiation Safety Officer and the lack of knowledge as to the whereabouts of all records on the part of the technician who represented the licensee during the inspection.

#### NRC Evaluation of Licensee's Response

The NRC is continuing to evaluate the licensee's response to this violation. The licensee will be notified by separate correspondence of the NRC's conclusion regarding this violation and the licensee's response.

#### Restatement of Violation C

10 CFR 34.26 requires, in part, that the licensee conduct a quarterly physical inventory to account for all sealed sources received and possessed under the license. The records of the inventories shall also include the quantities of byproduct material.

Contrary to the above, between October 5, 1988 and April 6, 1989, the licensee failed to conduct a quarterly inventory of all sealed sources required. In addition, the quantities of iridium-192 and cobalt-60 listed on 1988 quarterly

inventory records are incorrect in that they did not correspond to source manufacturer decay information or NRC calculated values.

This is a repeat violation.

#### Summary of Licensee's Response

The licensee denied the part of the violation that stated no quarterly inventories were conducted between October 5, 1988 and April 6, 1989. The licensee stated that after reviewing all files related to radiography, a record of a quarterly physical inventory accomplished on January 3, 1989 was located. The licensee stated further that this record was not available during the inspection due to the unavoidable absence of the Radiation Safety Officer and the lack of knowledge as to the whereabouts of all records on the part of the technician who represented the licensee during the inspection.

The licensee further stated that the source activity is not a requirement for quarterly inventory as per 10 CFR 34.26. The licensee claims that the quantity of material possessed is the requirement and, therefore, has instructed licensee staff when conducting inventories to record the quantity of material (i.e., number of sources) possessed rather than activity.

#### NRC Evaluation of Licensee's Response

The NRC is continuing to evaluate that part of the licensee's response to this violation which asserts that inventories were conducted. The licensee will be notified by separate correspondence of the NRC's conclusion regarding this part of the violation.

NRC disagrees with the licensee's interpretation that the word "quantities" in the phrase in 10 CFR 34.26 "quantities and kinds of byproduct material" refers only to the number of sources. An inventory record must be complete and accurate as to the description of the sealed sources being accounted for in the inventory. This is especially true of inventory records required by 10 CFR 34.26 because the radionuclide of choice in the majority of these sealed sources is iridium-192. Iridium-192 has a physical half-life of approximately 74 days, which necessitates exchanging a decayed source for a source of higher activity at a frequency of 2-5 times per year. Without a record of the activity of each source the "quantity" of iridium-192 cannot be determined. Therefore, the word "quantities" in the phrase "quantities and kinds of byproduct material" as stated in 10 CFR 34.26 should be interpreted to include the number of sources, the activity of each source at the time of inventory or on a specified assay date, and the serial number of each source. In addition, the licensee's example quarterly inventory form, submitted as attachment #4 in its response dated July 26, 1989, clearly indicates that the activity of the source in curies, is part of the information required to be recorded.

#### Restatement of Violation D

10 CFR 34.24 requires, in part, that each survey instrument used to conduct physical radiation surveys be calibrated at intervals not to exceed three months.

Contrary to the above, on July 5, 1988, more than three months after calibration, the licensee conducted physical radiation surveys with two survey instruments which were last calibrated on March 16, 1988.

Summary of Licensee's Response

The licensee does not deny the violation.

NRC Evaluation of Licensee's Response

Since the licensee does not deny the violation, the violation remains as stated.

Restatement of Violation E

10 CFR 34.25(b) requires, in part, that sealed sources be tested for leakage at intervals not to exceed six months.

License Condition No. 12.B exempts the licensee from the requirements of 10 CFR 34.25(b) as to radiography sources which are in storage and not being used. Such sources must be tested for leakage prior to any use or transfer unless they have been leak tested within six months prior to the date of use or transfer.

Contrary to the above, an iridium-192 sealed radiographic source, last leak tested on October 9, 1987, was removed from storage and used for radiography on ten occasions between April 14 and June 23, 1988, and transferred to the source manufacturer in July 1988. Prior to such use and transfer, the sources had not been leak tested within the previous six months.

Summary of Licensee's Response

The licensee does not deny the violation.

NRC Evaluation of Licensee's Response

Since the licensee does not deny the violation, the violation remains as stated.

Restatement of Violation F

10 CFR 71.5(a) prohibits transport of licensed material outside the confines of a plant or other place of use, or delivery of licensed material to a carrier for transport unless the licensee complies with applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation (DOT) in 49 CFR Parts 170 through 189. 49 CFR 172.200-202 requires each person who transports hazardous material to describe the material on a shipping paper. 49 CFR 172.203(d) describes the required additional shipping paper entries for radioactive materials.

Contrary to the above, in January 1989, the licensee transported curie



quantities of radioactive material from its Ames Street facility to its Boxwood Street facility and failed to complete any shipping papers.

#### Summary of Licensee's Response

The licensee does not deny the violation.

#### NRC Evaluation of Licensee's Response

Since the licensee does not deny the violation, the violation remains as stated.

#### Restatement of Violation G

10 CFR 30.51(a) and (c)(1) require, in part, that persons who receive byproduct material pursuant to a license issued pursuant to Part 34 keep records showing the receipt of such byproduct material as long as the material is in their possession.

Contrary to the above, a record of receipt for byproduct material (cobalt-60 sealed source) received in approximately 1983 and currently in the possession of the licensee was not maintained.

#### Summary of Licensee's Response

The licensee does not deny the violation.

#### NRC Evaluation of Licensee's Response

Since the licensee does not deny the violation, the violation remains as stated.

### II. Licensee's Request for Reduction in Severity Level and Reduction of Proposed Civil Penalty

#### Licensee's Request

The licensee protests the classification of Items D, E, and F as Severity Level III violations. It states that Severity Level III is unwarranted since no personnel were injured or overexposed due to radiation and that Items D, E, and F are violations of a "paperwork nature" only.

#### NRC Evaluation

The licensee is correct insofar as no personnel were injured or overexposed due to radiation, but is incorrect in assuming Items D, E, and F are each a Severity Level III violation. The Notice of Violation and Proposed Imposition of Civil Penalty clearly states that "these violations have been categorized in the aggregate as a Severity Level III problem (Supplement VI)." Separate severity levels have not been assigned to the individual violations in this case. The NRC enforcement policy, as delineated in 10 CFR Part 2, Appendix C, Section II.B.III, provides that violations may be evaluated in the aggregate

and a single severity level assigned for a group of violations. 10 CFR Part 2, Appendix C, Supplement VI(c)(8), states that Severity Level III can apply if there is:

"Breakdown in the control of licensed activities involving a number of violations that are related or, if isolated, that are recurring violations that collectively represent a potentially significant lack of attention or carelessness toward licensed responsibilities."

The licensee is also incorrect in asserting that Items D, E, and F are violations of a "paperwork nature" only. Item D is a violation concerning the use of a survey instrument which had not been tested for calibration at the proper frequency and Item E is a violation concerning the use of a sealed source overdue for leak testing. These items address the licensee's failure to perform certain required tasks within a specified time interval and are not "paperwork" violations. Item F is a violation concerning the lack of proper shipping papers during the transport of sealed sources of radioactive material. This violation could be viewed as a "paperwork" violation; nevertheless, the requirement to have shipping papers during the transportation of radioactive materials is one of significance. Shipping papers are essential for regulatory agencies and for emergency response personnel who may be responding to an accident involving a vehicle carrying radioactive material to ensure that hazards are correctly identified and controlled.

### III. NRC Conclusion

After reviewing the licensee's response to the Notice, the NRC has concluded that the violations were properly categorized in the aggregate at Severity Level III. The licensee has not provided a basis for mitigation of the proposed civil penalty. The NRC is continuing its evaluation of Violations B.2 and C, which the licensee has denied, and both of these violations have been withheld from this enforcement action pending completion of this review. The licensee will be notified by separate correspondence of the NRC's conclusion regarding Violations B.2 and C.

Since Violations B.2 and C constitute 25 percent of the 8 cited violations, we have determined that the \$7,500 civil penalty should be reduced by \$1,875 to \$5,625.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
199 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137  
February 25, 1992

Docket No. 030-12948  
License No. 48-17543-01  
EA 92-026

Shared Medical Technology, Inc.  
ATTN: Gary Johnson, M.D.  
Radiation Safety Officer  
1846 Moon Lake Lane  
Rice Lake, Wisconsin 54868

Dear Dr. Johnson:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL  
PENALTY - \$2,500  
(NRC INSPECTION REPORT NO. 030-12948/92001)

This refers to the special safety inspection conducted from January 28 through February 5, 1992, at the Forest Lake, Minnesota, facility of Shared Medical Technology, Inc., to review the circumstances surrounding your temporary loss of licensed materials. The report documenting this inspection was mailed to you by letter, dated February 13, 1992. A significant violation of NRC requirements was identified during the inspection and, on February 18, 1992, an enforcement conference was held in the Region III office. Attending the enforcement conference were Mr. David Ricci, your Supervisor of Nuclear Medicine; Mr. William L. Axelson, Deputy Director, Division of Radiation Safety and Safeguards, and other members of the NRC staff.

The December 27, 1991, loss of licensed material concerned two packages of technetium-99m, containing 76 and 78 millicuries, respectively. A technician employed at the Forest Lake, Minnesota, facility placed two metal "ammo" boxes on the bumper of a vehicle. The metal boxes were never secured to or placed inside the vehicle. One container later fell off the vehicle onto the roadway and the other fell at a service station. The former was struck by a vehicle. Subsequent examinations and surveys of the boxes and their contents found no contamination and the packages containing the technetium-99m had not ruptured.

The violation described in Section I of the enclosed Notice of Violation concerns your failure, on December 27, 1991, to secure or

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

maintain surveillance of licensed material and represents a significant failure to control access to licensed materials. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), this violation has been categorized at Severity Level III.

The NRC recognizes that this loss of control of licensed materials did not adversely affect public health and safety because the materials were in proper shipping containers and the containers did not rupture and were in the public domain for a relatively short period of time. However, it should be considered fortuitous that the technetium-99m contents of a severely damaged package did not leak and cause unnecessary exposures to the law enforcement officers who retrieved the packages and other members of the public. The NRC is concerned about this failure to effectively control radioactive materials transported in the public domain.

The root causes of the violation and the subsequent corrective actions were discussed during the February 18, 1992, enforcement conference. The major factor contributing to the violations appeared to be the carelessness of your employee in placing the licensed material in the bumper of the vehicle and the failure of the driver of the vehicle to establish that radioactive materials were secured to or within the vehicle prior to departure from your facility. The NRC recognizes that corrective action has been initiated and appears acceptable.

To emphasize the significance of a violation that could have placed the public at risk and the need to effectively implement your controls over licensed materials, I am issuing the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of \$2,500 for the Severity Level III violation.

The base value of a civil penalty for a Severity Level III violation is \$2,500. The civil penalty adjustment factors in the Enforcement Policy were considered. On balance no adjustment was made to the amount of the base civil penalty because the amount of mitigation permitted for your corrective actions and good past performance was offset by an equal escalating factor for the two examples of the violation. The civil penalty was initially mitigated 50% due to your corrective actions of hiring a supervisory technician for your facility at Forest Lake, Minnesota, and for instituting a disciplinary policy for the failure to control licensed materials. The civil penalty was mitigated an additional 50% for your prior good performance in transporting radioactive materials for the last 14 years without incident. Additional mitigation for past good performance was not appropriate

because you recently had several violations which were indicative of inattention to detail during the transport of licensed materials. The amount of the civil penalty was escalated 100% for multiple examples because control was lost over two packages of radioactive materials on December 27, 1991. No adjustment was made for the identification and reporting factor since the violation was identified by individuals outside of your organization. The remaining factors in the enforcement policy, prior notice of similar events and duration, were also considered and no further adjustment to the base civil penalty was considered appropriate.

The violations described in Section II of the enclosed Notice concern your failure to adhere to the applicable requirements of the U. S. Department of Transportation (DOT) for transporting radioactive materials. The violations concern your failures to: (1) mark the labels on the shipping package with the correct radionuclide, activity level, and transport index; (2) mark the shipping papers with the prescribed hazard class; and (3) enter on the shipping papers a 24 hour emergency response telephone number for use in the event of an emergency involving the material being shipped. None of those violations contributed to the loss of control of radioactive materials on December 27, 1991. However, continued violations of this type could cause a more serious incident and could lead to the assessment of civil monetary penalties.

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. In addition, please ensure that you describe the actions you have taken to strengthen the management and oversight of the transportation aspects of your NRC licensed program. This may include any improvements needed in your procedures and practices to achieve and maintain compliance with DOT requirements and internal or external audits to assess the effectiveness of your program. After reviewing your response to this letter and the response to the enclosed 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.

February 25, 1992

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Public Law No. 96-511.

Sincerely,

*Charles E. Toulson*  
for  
A. Bert Davis  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed  
Imposition of Civil Penalty

cc w/enclosure:  
DCD/DCB (RIDS)

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Shared Medical Technology, Inc.  
Rice Lake, Wisconsin

Docket No. 030-12948  
License No. 48-17543-01  
EA 92-026

During an NRC inspection conducted January 28 through February 5, 1992, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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. Violation Assessed a Civil Penalty

10 CFR 35.80(c) requires, in part, that a licensee providing mobile nuclear medicine service secure or keep under constant surveillance and immediate control all byproduct material when in transit or at an address of use.

Contrary to the above, on December 27, 1991, byproduct material was not secured or kept under constant surveillance and immediate control of the licensee when in transit in that two packages of technetium-99m (containing 76 and 78 millicuries, respectively) fell from a vehicle operated by the licensee upon a public roadway and were found by members of the public.

This is a Severity Level II violation (Supplement VI).  
Civil Penalty - \$2,500.

II. Violations Not Assessed a Civil Penalty

10 CFR 71.5(a) requires that a licensee who transports licensed material outside of the confines of its plant or other places of use, or who delivers licensed material to a carrier for transport, comply with the applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation (DOT) in 49 CFR Parts 170 through 189.

A. 49 CFR 172.403(g) requires that the name of the radionuclides, the activity level and the transport index

of the radioactive material contained in the shipping package, must be entered in the blank spaces on the RADIOACTIVE label.

Contrary to the above, as of January 28, 1992, the licensee routinely transported outside the confines of its plant or other places of use licensed, radioactive material, and the licensee did not enter the correct shipping name, the correct activity level, and the correct transport index in the blank spaces on the RADIOACTIVE label on the package. For example, on December 27, 1991, the licensee shipped two packages containing 76 and 78 millicuries, respectively, of technetium 99-m with a transport index of 0.1; however, the RADIOACTIVE labels indicated the contents of each package as technetium-99m, iodine-131, thallium-201, and indium-111, the activity level as 500 millicuries, and the transport index of 0.4.

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

- B. 49 CFR 177.817(a) requires that a carrier not transport a hazardous material unless it is accompanied by a shipping paper prepared in accordance with 49 CFR 172.200-203.

49 CFR 172.202(a)(2) requires, with certain exceptions not applicable here, that the shipping description of a hazardous material include on the shipping paper the hazard class prescribed for the material.

Pursuant to 49 CFR 172.101, radioactive material is classified as a hazardous material.

Contrary to the above, as of January 28, 1992, the licensee transported outside the confines of its plant or other places of use millicurie quantities of technetium-99m, a licensed, hazardous material, and did not include on the shipping paper the prescribed hazard class, "Radioactive material."

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

- C. 49 CFR 172.604 requires, in part, that a licensee who offers a hazardous material for transportation must enter on the shipping paper a 24-hour emergency response telephone number, including area code, for use in the event of an emergency involving the hazardous material.



Pursuant to 49 CFR 172.101, radioactive material is classified as a hazardous material.

Contrary to the above, as of January 28, 1992, the licensee transported outside the confines of its plant or other places of use millicurie quantities of technetium-99m, a licensed, hazardous material, and did not enter on the shipping paper a 24-hour emergency response telephone number for use in the event of an emergency involving the hazardous material.

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

Pursuant to the provisions of 10 CFR 2.201, Shared Medical Technology, Inc. (Licensee) is hereby required to submit a written statement of explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice 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 is 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 actions 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 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 V.B of 10 CFR Part 2, Appendix C (1991), should be addressed. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 10 CFR 2.201, but may incorporate parts of the 10 CFR 2.201 reply by specific reference (e.g., citing page and paragraph numbers) to avoid repetition. The attention of the Licensee is directed to the other provisions of 10 CFR 2.205, regarding the procedure for imposing a civil penalty.

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

The responses 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, 799 Roosevelt Road, Glen Ellyn, Illinois 60137.

FOR THE NUCLEAR REGULATORY COMMISSION

*Charles E. Nowlin*

for  
A. Bert Davis  
Regional Administrator

Dated at Glen Ellyn, Illinois  
this 25th day of February 1992



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

December 25, 1991

Docket No. 030-02526  
License No. 29-10191-02  
EA 91-175

St. Joseph's Hospital and Medical Center  
ATTN: Sister Jane Frances Brady  
President  
703 Main Street  
Paterson, New Jersey 07503

Dear Sister Brady:

Subject: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL  
PENALTIES (NOTICE) - \$6,250  
(NRC Inspection Report No. 030-02526/91-003)

This letter refers to the NRC inspection conducted on November 15, 1991, at St. Joseph's Hospital and Medical Center, Paterson, New Jersey, of activities authorized by NRC License No. 29-10191-02. The inspection report was sent to you on December 9, 1991. The inspection was conducted to review the circumstances associated with a therapeutic misadministration that occurred at your facility on October 25, 1991. The misadministration involved the use of a Strontium-90 source on the wrong patient resulting in a 1000 rad beta dose to the patient's right eye. During the inspection, two apparent violations of NRC requirements were identified. The violations involved: (1) the failure to review the patient's prescription which resulted in the misadministration; and (2) the failure to report the misadministration to the NRC within 24 hours of its discovery. On December 13, 1991, an enforcement conference was conducted with Mr. P. Scopac and other members of your staff to discuss the apparent violations, the causes, and your corrective actions. A copy of the Enforcement Conference Report is enclosed. The violations are described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice).

Although the patient was scheduled for a localization x-ray procedure (in preparation for an external beam therapeutic treatment of the neck area), the procedure for registration of external beam therapy patients had apparently been circumvented. The departmental secretary incorrectly directed the patient to the beta radiation treatment room even though

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

she did not recognize the patient nor ask the patient for proper identification. At that time, a patient chart did not accompany the patient to the treatment room. The secretary had mistakenly assumed that the patient was there for his second beta treatment and attempted to locate his chart. However, although she was unable to locate his chart initially so as to verify the prescription, she nonetheless escorted the patient into the beta treatment room, based on the belief that she would locate it later. Further, she notified the Oncologist that the patient was in the room and the Oncologist proceeded with the treatment. Notwithstanding the mistaken identity of the patient, the Oncologist should not have proceeded with the treatment until the secretary had obtained the patient's chart, which would have allowed him to check the prescription. The fact that a beta treatment chart had not been generated for this patient, since he was not scheduled for such treatment, would have alerted the Oncologist to the discrepancy.

The failure to properly identify the patient, and resolve the discrepancy as to why a patient chart could not be located, prior to administering the dose, directly contributed to the misadministration and represents a significant regulatory concern. Given the significant effect that resulted from this failure, the violation, which is set forth in Section I of the Notice, is classified at Severity Level III in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (Enforcement Policy) (1991).

The second violation involved the failure to make a telephone notification to the NRC of the misadministration within 24 hours after its discovery. Upon completion of the treatment, the Oncologist was immediately informed that he had administered the dose to the wrong patient. He then informed the Chief of the Radiation Oncology Department, who reviewed the incident that same day, and determined that it constituted a misadministration. Although the Chief of Radiation Oncology instructed the Oncologist to document the incident the same day, the NRC is concerned that at no time during that day did any member of the licensee staff attempt to report the misadministration to the NRC. It appeared that each of the individuals involved in the incident were aware that a NRC notification was required, but assumed that someone else was responsible for the notification, and did not ensure that such a notification occurred. As a result, the misadministration was not reported to the NRC until a letter, dated October 30, 1991, was sent to the NRC Region I office. This violation, which is set forth in Section II of the Notice, is classified at Severity Level III in accordance with the enforcement policy. As an additional concern, although the RSO was in the hospital at the time of the event, he was not notified of the misadministration until October 28, 1991.

The NRC recognizes that prior to the NRC inspection on November 15, 1991, prompt actions were initiated to correct the violations and affect improvements in the control and implementation of the radiation safety program. These actions, which were described at the enforcement conference, included: (1) revision of the administrative procedures such that no

patient will be directed to the treatment room without the patient's treatment chart; all patient charts, regardless of the type of the treatment, will have the patient's full face Polaroid photo; and all Strontium-90 beta applicator treatments will always be accompanied by one of the physics staff in order to assist the physicians in monitoring the proper treatment time; (2) replacement of the locks on the door of the Strontium-90 storage area, and implementation of a log to indicate access to the Strontium-90 Applicator so as to limit access to only the Chief technologist (for any emergency) and the Physics department; and (3) training of the staff on the NRC notification rule.

Notwithstanding the corrective actions that have been taken or planned, to emphasize the importance of ensuring that these actions are long lasting, and result in continued improvement in the management attention and oversight provided to the radiation safety program, I have been authorized to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$6,250 for the violations set forth in Sections I and II of the enclosed Notice.

The base civil penalty amount for a Severity Level III violation is \$2,500. The escalation and mitigation factors set forth in the enforcement policy were considered and the NRC has decided that a civil penalty in the amount of \$3,750 should be issued for the Severity Level III violation set forth in Section I of the Notice, as well as a civil penalty in the base amount of \$2,500 for the Severity Level III violation set forth in Section II of the Notice.

With respect to the violation set forth in Section I, the NRC has determined that, on balance, 50 percent escalation of the civil penalty amount is warranted because: (1) the event and its causes (which constitute a violation of NRC requirements) were identified by your staff, and therefore, 25 percent mitigation of the civil penalty on this factor is warranted; full 50% mitigation is not warranted since this was a self-disclosing event; (2) your corrective actions, as described herein, are considered prompt, and therefore, 25 percent mitigation of the civil penalty on this factor is warranted; full 50 percent mitigation on this factor was not warranted since additional training was not provided to the staff informing them of the incident and the corrective actions now in place to prevent recurrence; (3) your past performance in this area included problems with procedural compliance which occurred in January 1991, and for which corrective actions were not effective to prevent similar problems and therefore, 100 percent escalation of the civil penalty on this factor is warranted. Although the civil penalties for the violations identified in the January 1991 inspection were not issued until December 3, 1991, you were made aware of the deficiencies: (1) during the exit interview from the January 1991 inspection; (2) in a Notice of Violation issued on March 27, 1991; (3) during a subsequent investigation by the NRC

St. Joseph's Hospital and  
Medical Center

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Office of Investigations (OI); and (4) during an enforcement conference on October 18, 1991. The other escalation and mitigation factors were considered, and no adjustment on these factors was warranted since the violations did not involve prior notice, multiple examples, nor exist for an extended duration.

With respect to the violation set forth in Section II, the NRC has determined that, on balance, no adjustment of the civil penalty amount is warranted because, your corrective actions, although acceptable, were not considered prompt and comprehensive since at the time of the enforcement conference, only the hospital's senior staff had been retrained with respect to their responsibilities in the area of NRC notifications, and therefore, no adjustment on this factor is warranted. The other escalation and mitigation factors were considered, and no adjustment on these factors was warranted.

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 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 and the enclosures will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. 96-511.

Sincerely,



Thomas T. Martin  
Regional Administrator

St. Joseph's Hospital and  
Medical Center

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Enclosures:

1. Notice of Violation and Proposed Imposition of Civil Penalties
2. Enforcement Conference Report

cc:

Public Document Room (PDR)  
Nuclear Safety Information Center (NSIC)  
State of New Jersey

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTIES

St. Joseph's Hospital and Medical Center  
Paterson, New Jersey

Docket No. 030-02506  
License No. 29-10191-02  
EA 91-175

During an NRC inspection conducted on November 15, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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. VIOLATION INVOLVING A MISADMINISTRATION

10 CFR 35.25(a)(2) requires, in part, that a licensee that permits the use of byproduct material by an individual under the supervision of an authorized user shall require the supervised individual to follow the instructions of the supervising authorized user, and follow the procedures established by the Radiation Safety Officer with respect to the use of byproduct material.

The licensee's procedure written to meet the requirements of 10 CFR 35.25, entitled "Radiation Therapists Responsibilities", which was approved by the Radiation Safety Officer, states, in part, that the Radiation Therapists are responsible for the following: (1) prescription for daily treatment complete and signed; (2) the daily dose administered is recorded with a signature; and (3) any specific instructions important to the patient setup or treatment.

Contrary to the above, on October 25, 1991, an Oncologist (Radiation Therapist) working under the supervision of an authorized user, administered a strontium-90 (Sr-90) beta treatment with 95.5 millicuries of Sr-90, to the right eye of a patient, without first obtaining the patient's chart to ensure that: (1) the patient's prescription for daily treatment was complete and signed; (2) the daily dose administered was recorded with a signature; and (3) any specific instructions important to the patient setup or treatment were reviewed. As a result, the patient was delivered a dose of approximately 1000 rad to the right eye, even though the patient was not scheduled for such treatment.

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

Civil Penalty - \$3,750



## II. VIOLATION INVOLVING NRC REPORTING REQUIREMENTS

10 CFR 35.37(a) requires, in part, that when a misadministration involves any therapy procedure, the licensee shall notify by telephone the appropriate NRC Regional Office. This notification must be made within 24 hours after the licensee discovers the misadministration. 10 CFR 35.2 defines, in part, "misadministration," to mean the administration of radiation to the wrong person.

Contrary to the above, although the licensee discovered on October 25, 1991, that a therapeutic misadministration occurred at their facility, the licensee did not notify the NRC Regional Office by telephone within 24 hours of the misadministration, but rather reported the misadministration to the NRC Region I office in a letter dated October 30, 1991. Specifically, the misadministration involved the use of a Sr-90 source on the wrong patient resulting in a 1000 rad beta dose to the patient's right eye.

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

Civil Penalty - \$2,500

Pursuant to the provisions of 10 CFR 2.201, St. Joseph's Hospital and Medical Center (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 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 V.B of 10 CFR Part 2, Appendix C (1991), 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: 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, 475 Allendale Road, King of Prussia, Pennsylvania 19406.

Dated at King of Prussia, Pennsylvania  
this 26<sup>th</sup> day of December 1991



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

January 27, 1992

Docket No. 030-02941  
License No. 37-00148-06  
EA 92-004

Thomas Jefferson University  
ATTN: Thomas J. Lewis  
Senior Vice President and CEO  
111 South 11th Street  
Suite 2024L  
Philadelphia, Pennsylvania 19107-5096

Dear Mr. Lewis:

Subject: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL  
PENALTIES (NOTICE) - \$8,750  
(NRC Inspection Report No. 030-02941/91-003)

This letter refers to the NRC inspection conducted from December 4, 1991 to December 20, 1991, at Thomas Jefferson University, Philadelphia, Pennsylvania, of activities authorized by NRC License No. 37-00148-06. The inspection report was sent to you on January 9, 1992. The inspection was conducted to review the circumstances associated with the loss of 3 millicuries of radioactive material (sulfur-35) that was identified on November 18, 1991, the lack of security leading to this occurrence, and your actions to prevent recurrence. The loss was reported to the NRC by your Radiation Safety Officer on December 3, 1991, after the NRC staff inquired with your radiation staff regarding the loss of material. During the inspection, three apparent violations of NRC requirements were identified. On January 16, 1992, an enforcement conference was conducted with you and members of your staff to discuss the apparent violations, the causes, and your corrective actions. A copy of the Enforcement Conference Report is enclosed.

The violations, which are described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalties, involved: (1) the lack of security and control of licensed material on several occasions, which resulted in the loss of the 3 millicuries of sulfur-35 on one of those occasions; (2) the failure to promptly report that loss of the radioactive material to the NRC; and (3) the lack of proper labeling of containers that had been used to store the 3 millicuries of sulfur-35 prior to the loss of that material. As a result of these violations, a Confirmatory Action Letter (CAL 1-91-019) was issued to you on December 6, 1991, confirming your commitment to immediately initiate corrective actions regarding certain elements of your radiation safety program.

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The loss of the radioactive material was discovered when an authorized user was informed by a laboratory manager that 3 millicuries of sulfur-35 were missing from a freezer located on the third floor of the Bluemle Life Sciences Building in a common equipment room. The sulfur-35 was contained in three vials, each containing 1 millicurie of sulfur-35, in a bound form, and was stored in a cardboard box in the freezer. Immediate actions taken to retrieve the radioactive material were unsuccessful. The apparent cause of this loss was the lack of proper security of the material to prevent its unauthorized removal in that the storage freezer containing the material was not locked. In addition to this example of material being left unsecured, several other examples of violation of NRC security requirements were identified during the inspection. All of the examples are described in the violation set forth in Section I of the enclosed Notice.

This violation demonstrates a lack of adequate control of radioactive material that you were authorized to possess under the terms of your license. The failure to maintain such control could have resulted in misuse of the material by, and created a potential for an excessive exposure to, members of the public. With respect to the material that was lost, although sulfur-35, in its bound form, does not present an external radiation hazard, it does have the potential for a significant internal dose if ingested. In view of the above, the violation is classified at Severity Level III in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (Enforcement Policy) (1991).

The second violation, which is described in Section II of the enclosed Notice, involved the failure to immediately notify the NRC after you determined that the loss of licensed material had occurred. An authorized user was informed by his staff on November 18, 1991, that the material was missing. The authorized user, suspecting that the sulfur-35 was removed by a facility researcher other than the individual who had ordered the material, initiated his own investigation and delayed notifying the Radiation Safety Officer (RSO). Apparently, the authorized user had intended to notify the RSO as soon as he had determined that the material was actually lost and not being utilized somewhere in the facility. Although the RSO confirmed, on December 3, 1991, that the three vials were missing from the third floor freezer and notified the NRC on that same day, the RSO did so only after he was contacted by the NRC on December 2, 1991, concerning the status of the material. The NRC should have been notified of the loss of material on November 18, 1991, the date the material was discovered missing by the authorized user. Given the potential significance of this loss, the failure to report this matter to the NRC in a timely manner is classified as a Severity Level III violation in accordance with the enforcement policy.

The NRC recognizes that subsequent to the loss, you initiated actions to correct the violations and prevent recurrence. These actions included: (1) immediate attempts to retrieve the material; (2) securing of all other licensed material in the Bluemle Life Sciences Building; and (3) ensuring proper labeling of containers of radioactive material. In addition,

subsequent to the NRC inspection on December 4, 1991, other actions were initiated to improve the control and implementation of the radiation safety program, and to address the completion of the CAL commitments. These actions, which were described at the enforcement conference, included, but are not limited to: (a) actions to secure material by locking refrigerators, freezers, and other areas of storage of radioactive material; (b) issuing a memorandum to all employees informing them of the loss of radioactive material; (c) providing training to all Bluemie Life Sciences Building employees concerning security precautions; (d) providing training to authorized users to instruct them on their duties and responsibilities; (e) completing a comprehensive inventory of material, the results of which were submitted to the NRC on January 3, 1992; (f) commencing quarterly, unannounced, security inspections at the facility; (g) revising the administrative policy to provide the RSO's staff with the authority to confiscate unsecured radioactive material; and (h) plans to revise the facility's enforcement policy to include a point system to track and deter violations of license requirements.

Notwithstanding the corrective actions that have been taken or planned, to emphasize the importance of: (1) ensuring proper security of licensed material in the future; and (2) immediate notification of the NRC, when required, so that an appropriate response can be initiated, I have been authorized to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalties in the cumulative amount of \$8,750 for the violations set forth in Sections I and II of the enclosed Notice.

The base civil penalty amount for a Severity Level III violation is \$2,500. The escalation and mitigation factors set forth in the enforcement policy were considered and the NRC has decided that a civil penalty in the amount of \$7,500 should be issued for the Severity Level III violation set forth in Section I of the Notice, as well as a civil penalty in the amount of \$1,250 for the Severity Level III violation set forth in Section II of the Notice.

With respect to the violation set forth in Section I, the NRC has determined that, on balance, 200 percent escalation of the civil penalty amount is warranted because: (1) the majority of the examples of the security violation were identified by the NRC, and therefore, 50% escalation of the civil penalty on this factor is warranted; (2) although the immediate corrective actions taken in an attempt to recover the lost material were good, effective long term actions were not taken to improve security at your facility, in that additional security problems were identified by the NRC in December 1991, and therefore, no adjustment of the base civil penalty on this factor is warranted; (3) your past performance in this area included a prior loss of radioactive material in December 1989 (Ref: Notice of Violation and Proposed Imposition of Civil Penalty, dated March 13, 1990, EA-90-013); in addition, a total of eleven violations were identified during the four NRC inspections in the past two years, and therefore, 50 percent escalation of the civil penalty on this factor is warranted, and (4) the violation contained five examples of the failure to maintain appropriate security of radioactive materials, and therefore, 100 percent escalation of the civil penalty on this factor is

warranted. The other escalation and mitigation factors were considered, and no adjustment on these factors was warranted since the violation did not involve prior notice, nor did the violation exist for an extended duration.

With respect to the reporting violation set forth in Section II, the NRC has determined that, on balance, 50 percent mitigation of the base civil penalty amount is warranted because your corrective actions, which consisted of training all authorized users and strengthening the role of your radiation staff, were considered prompt and comprehensive and included actions to prevent recurrence. The other escalation and mitigation factors were considered, and no adjustment on these factors was warranted.

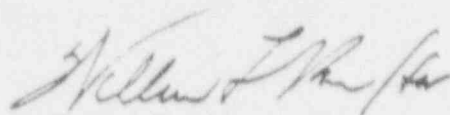
In addition to the violations set forth in Section I and II for which a civil penalty is proposed, another violation was also identified, involving the lack of proper labeling of containers designated to store radioactive material. This violation is set forth in Section III of the enclosed Notice and is 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. After reviewing your response to this Notice, including your proposed corrective actions, and the results of future inspections, the NRC will determine whether further 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 and the enclosures will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. 96-511.

Sincerely,



Thomas T. Martin  
Regional Administrator

Enclosures:

1. Notice of Violation and Proposed Imposition of Civil Penalties
2. Enforcement Conference Report

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTIES

Thomas Jefferson University  
Philadelphia, Pennsylvania 19107

Docket No. 030-02941  
License No.37-00148-06  
EA 92-004

During an NRC inspection conducted between December 4, 1991 and December 20, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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. VIOLATION OF SECURITY REQUIREMENTS

10 CFR 20.207(a) requires that licensed materials stored in an unrestricted area be secured against unauthorized removal from the place of storage. 10 CFR 20.207(b) requires that licensed materials in an unrestricted area and not in storage be under constant surveillance and immediate control of the licensee. As defined in 10 CFR 20.3(a)(17), an unrestricted area is any area access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials.

Contrary to the above, at various times between November 18, 1991 and December 18, 1991, quantities of licensed material stored in numerous unrestricted areas were not secured against unauthorized removal and were not under constant surveillance and immediate control of the licensee. The specific cases of unsecured material consisted of:

- a. as of November 18, 1991, 3 millicuries of sulfur-35, located in an unlocked freezer on the third floor, of the Bluemle Life Sciences Building in a common equipment room, was not secured against unauthorized removal from its place of storage, which resulted in the loss of this radioactive material;
- b. on December 17, 1991, 30 microcuries of tritium (incorrectly labeled as 30 millicuries) located in a cold storage room adjacent to room 808 of the Jefferson Medical College Building was not secured against unauthorized removal, in that the cold storage room was unlocked and no licensee personnel were in attendance;

- c. on December 17, 1991, 15 millicuries of sulfur-35 located in an unlocked refrigerator, in room 719 of the Jefferson Medical Curtiss Building, was not secured against unauthorized removal, in that the material was not under constant surveillance by the licensee;
- d. on December 17, 1991, a waste bottle containing tritium (less than .05 microcuries per gram) located in an unlocked laboratory in room 808 of the Jefferson Medical College Building, was not secured against unauthorized removal, in that the bottle was not under constant surveillance by the licensee; and
- e. on December 18, 1991, a waste drum marked as containing tritium and carbon-14 located in an unlocked cold room in room 447 of the Jefferson Alumni Hall, was not secured against unauthorized removal, in that the bottle was not under constant surveillance by the licensee.

This is a Severity Level III Violation. (Supplement IV)  
Civil Penalty - \$7,500

## II. VIOLATION OF REPORTING REQUIREMENTS

10 CFR 20.402 requires, in part, that each licensee shall report to the Commission, by telephone, immediately after it determines that a loss of licensed material has occurred in such quantities and under such circumstances that it appears that a substantial hazard may result to persons in unrestricted areas.

Contrary to the above, on November 18, 1991, the licensee was informed that a loss of 3 millicuries of sulfur-35 had occurred, and the licensee did not report to the Commission, by telephone, immediately after it determined that the loss of licensed material had occurred in such quantities and under such circumstances that it appeared that a substantial hazard may result to persons in unrestricted areas. Specifically, the licensee did not notify the Commission of this loss of licensed material until December 3, 1991.

This is a Severity Level III Violation. (Supplement IV)  
Civil Penalty - \$1,250

## III. VIOLATION OF LABELING REQUIREMENTS

10 CFR 20.203(f) requires that, except as provided by 10 CFR 20.203(f)(3), each container of specified amounts of licensed material bear a durable, clearly visible label identifying the radioactive contents.



Contrary to the above, on December 4, 1991, a freezer and the box (in the freezer) in the Bluemle Life Sciences Building, common equipment room, in which 3 millicuries of sulfur-35 had been stored, did not bear any label identifying the radioactive contents, nor as confirmed by the licensee, had it ever been labeled, and the container was not excepted from such labeling.

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

Pursuant to the provisions of 10 CFR 2.201, Thomas Jefferson University (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 penalties, the factors addressed in Section V.B of 10 CFR Part 2, Appendix C (1991), 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 234(c) 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 1, 475 Allendale Road, King of Prussia, Pennsylvania 19406.

Dated at King of Prussia, Pennsylvania  
this 27<sup>th</sup> day of January 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30323

DEC 23 1991

Docket No. 030-14659  
License No. 45-18209-01  
EA 91-178

Triad Engineering, Inc.  
ATTN: Mr. Randy L. Moulton  
Vice President  
2050 Garber Road  
Winchester, Virginia 22601

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY -  
\$500 (NRC INSPECTION REPORT NO. 45-18209-01/91-01)

This refers to the Nuclear Regulatory Commission (NRC) inspection conducted by Mr. J. Ennis on November 19, 1991, at the Triad Engineering facilities located at 2050 Garber Road, Winchester, Virginia. The inspection included a review of the facts and circumstances related to the failure to maintain control over licensed material in an unrestricted area on October 26, 1990. The report documenting this inspection was sent to you by letter dated December 6, 1991. As a result of this inspection, a failure to comply with NRC requirements was identified. An enforcement conference was conducted with you by telephone on December 16, 1991, to discuss the violations, their cause, and your corrective actions to preclude recurrence.

The violation described in Part I of the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice), involved a significant failure to maintain control over NRC licensed material in an unrestricted area. On October 26, 1990, a portable Troxler moisture/density gauge containing NRC licensed material (8 millicuries of cesium-137 and 40 millicuries of americium-241) was damaged at a construction site in Woodstock, Virginia. The damage resulted when the authorized user of the gauge left it unattended with the source in the shielded but unlocked position while he left the area for a short period. When he returned, he discovered that the gauge had been run over by a bulldozer at the construction site.

This violation is of particular concern to the NRC because it could have resulted in unnecessary exposure of individuals to radiation had the gauge's source been severely damaged and radioactive material released. It was fortuitous that even though a bulldozer ran over the gauge, the ground was soft enough to permit the gauge to be pushed into the ground causing only minor damage. The violation indicates a serious lapse of attention on the part of the authorized user which could have resulted in significant radiological consequences due to the failure to follow established procedures. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1990), the violation is classified as : Severity Level III violation.

Certified Mail Receipt  
No. P 258 014 566

DEC 23 1991

To emphasize the importance of consistently following procedures and complying with regulatory requirements and license conditions, I have been authorized to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$500 for the Severity Level III violation.

The base value of a civil penalty for a Severity Level III violation is \$500. The escalation and mitigation factors in the Enforcement Policy were considered. Neither escalation nor mitigation was warranted for identification and reporting because the violation was self-disclosing. Neither escalation nor mitigation was warranted for corrective action to prevent recurrence. Your immediate corrective action included securing the gauge and emphasizing to other users the need to maintain continuous control of licensed material. More extensive corrective action, such as establishment of a field audit program by management to ensure the proper use and control of licensed material, was not initiated until after the recent NRC inspection. Neither escalation nor mitigation was warranted for past performance considering that your last NRC inspection in March 1988 resulted in the identification of several violations and an inspection conducted by the State of Maryland in June 1991 resulted in a monetary fine for eight violations. The other adjustment factors in the Enforcement Policy were considered and no further adjustment of the base civil penalty is considered appropriate. Therefore, based on the above, no adjustment to the base civil penalty has been deemed appropriate.

The violations described in Part II of the Notice include the failure 1) to perform tests of sealed sources for leakage and/or contamination at intervals not to exceed six months, which was a repeat violation, and 2) to post the documents required by 10 CFR 19.11(a) or to post a notice which describes the documents and states where they may be examined which was also a repeat violation. These violations are of concern because licensees are expected to take effective corrective action to preclude the recurrence of similar violations. Violations A and B in Part II of the Notice have been categorized at Severity Level IV and Severity Level V respectively.

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 and its enclosures will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

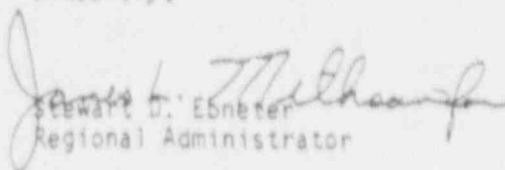
Triad Engineering, Inc.

3

DEC 23 1991

Should you have any questions concerning this letter, please contact us.

Sincerely,

  
Stewart D. Ebner  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed  
Imposition of Civil Penalty

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Triad Engineering, Inc.  
Winchester, Virginia

Docket No. 030-14669  
License No. 45-18209-01  
EA 91-178

During an NRC inspection conducted on November 19, 1991, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1990), 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. Violation Assessed a Civ 1 Penalty

10 CFR 20.207(a) requires that licensed materials stored in an unrestricted area be secured against unauthorized removal from the plane of storage. 10 CFR 20.207(b) requires that licensed material in an unrestricted area and not in storage be tended under constant surveillance and immediate control of the licensee. As defined in 10 CFR 20.3(a)(17), an unrestricted area is any area to which access is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials.

Contrary to the above, on October 26, 1990, licensed material (consisting of 8 millicuries of cesium-137 and 40 millicuries of americium-241 contained in a Troxler portable moisture/density gauge, Model 3411), located at a field construction site on Route 11 in Woodstock, Virginia, an unrestricted area, was not secured against unauthorized removal, nor was it under the constant surveillance and immediate control of the licensee's authorized user who left the gauge unattended at the field construction site.

This is a Severity Level III violation (Supplements IV and VI).  
Civil Penalty - \$500.

II. Violations Not Assessed a Civil Penalty

- A. Condition 12(a)(1) to License No. 45-18209-01 requires, in part, that the licensee test sealed sources possessed under the license for leakage and/or contamination at intervals not to exceed six months.

Contrary to the above, between October 1989 and May 1991, the interval between tests for leakage and/or contamination of sealed sources possessed under the licensee exceeded six months on two occasions.

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

- B. 10 CFR 19.11(a) and (b) require, in part, that the licensee post current copies of 10 CFR Parts 19 and 20, the license, license conditions, documents incorporated into the license, license amendments, and operating procedures relating to licensed activities; or that the licensee post a notice describing the documents and stating where they may be examined.

Contrary to the above, on November 19, 1991, the licensee did not post any of the required documents or notices.

This is a repeat Severity Level V violation (Supplement IV).

Pursuant to the provisions of 10 CFR 2.201, Triad Engineering, Inc. (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 V.B of 10 CFR Part 2, Appendix C (1990), 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. 282c.

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 II.

Dated at Atlanta, Georgia  
this 23<sup>rd</sup> day of December 1991





UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV  
811 RYAN PLAZA DRIVE, SUITE 1000  
ARLINGTON, TEXAS 76011

DEC 29 1989

Docket No. 30-12319  
License No. 35-17178-01  
EA No. 89-223

Tulsa Gamma Ray, Inc.  
ATTN: James C. Moss, President  
1127 South Lewis Avenue  
Tulsa, Oklahoma 74104

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY - \$7,500  
(NRC INSPECTION REPORT 89-02)

This is in reference to the October 2-4, 1989, inspection of Tulsa Gamma Ray, Inc.'s radiation safety program associated with its conduct of industrial radiography activities. This inspection, conducted by Ms. Linda Kasner of my staff, disclosed a number of violations of NRC requirements and resulted in an enforcement conference in NRC's Arlington, Texas office on November 20, 1989. NRC has also taken into consideration Tulsa Gamma Ray's letter dated November 17, 1989, in which you provided the reasons these violations occurred and described corrective actions.

NRC provided Tulsa Gamma Ray the results of its inspection in a report dated November 13, 1989. As we stated in the report and during the enforcement conference, the number and nature of violations disclosed by this inspection indicate to NRC a general weakness in the management of your company's radiation safety program.

NRC's inspector observed 10 violations which, considered collectively, indicate a lack of management attention to requirements in the following programmatic areas: 1) job-site radiation safety practices; 2) personnel radiation exposure evaluation and recordkeeping; 3) radiography device inventories; and 4) transportation of radiography devices.

In the case of the violations occurring at a job site, NRC is most concerned about the radiographer's failure to conduct surveys following radiographic exposures. The failure to conduct a survey with a radiation survey instrument following each radiographic exposure poses a serious risk of overexposure. NRC does not consider the excuse offered by Tulsa Gamma Ray -- that the radiographer "apparently went into a state of shock" when he saw the inspector and an official from Sun Refinery approaching -- as a valid excuse for having failed to perform this essential task. In fact, as documented in the inspection

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

report, the radiographer admitted to the inspector that he did not routinely perform a survey after each exposure as long as the device was operating without difficulty in cranking the source. In addition, the failure to assure that the radiography camera was properly secured within the vehicle during transport is of concern. This is especially of concern because you were not aware of the requirement to block and brace the camera during transport.

These violations and the remaining violations, which were described in detail in the inspection report, point to a failure on the part of Tulsa Gamma Ray to meet its responsibility to ensure that all license requirements are being met. In addition, NRC is concerned about the declining performance of Tulsa Gamma Ray with respect to NRC-licensed activities, in that seven violations were disclosed in a 1988 inspection and three violations were found during a 1987 inspection. Tulsa Gamma Ray must recognize that its responsibilities go beyond maintaining required records and correcting violations discovered by NRC. Tulsa Gamma Ray must conduct effective audits or develop other mechanisms to assure itself that its personnel are complying with all requirements.

In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1989) (Enforcement Policy), the violations described in the enclosed Notice of Violation (Notice) have been classified in the aggregate as a Severity Level III problem to focus on the lack of adequate management oversight of licensed activities which resulted in a number of violations representing a breakdown in control of licensed activities. To emphasize the importance of strict adherence to radiation safety requirements and the need to have a program in place to ensure that these requirements are being met, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Materials Safety, Safeguards and Operations Support, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty in the amount of \$7,500.

The base value of a civil penalty for a Severity Level III violation is \$5,000. The civil penalty escalation and mitigation factors in the NRC's enforcement policy were considered. The Enforcement Policy allows for mitigation of the base civil penalty by up to 50% for prompt and effective corrective action. Prior to the enforcement conference, you did submit a letter dated November 17 that described acceptable corrective action for the specific violations, and therefore mitigation by 25% is considered appropriate. Further mitigation on the basis of corrective action is not considered appropriate because your letter did not address steps to assure that management, including the Radiation Safety Officer, would provide sufficient oversight to assure that the Assistant Radiation Safety Officer would carry out his responsibility and to assure overall compliance with the regulations. Your corrective action in that area has not been prompt given the previous concerns about management control expressed by NRC in our letter dated January 10, 1989 and again in our letter dated November 13, 1989, which forwarded the current inspection report.

Regarding past performance and prior notice, a prior inspection described in our letter dated January 10, 1989 prompted NRC to express concern at that time

about the implementation of your program in the area of management control. Also, as a result of that inspection, you were cited for a number of transportation violations. Transportation violations are again being cited in the attached Notice. In addition, our letter dated November 16, 1987 described violations involving the records required by 10 CFR 20.102(a) and the signature required on Form NRC-4 to assure the accuracy of the records. Those violations were found to have recurred during the current inspection. Furthermore, NRC has issued Information Notices concerning the need for adequate management oversight of licensed activities (IN No. 88-10, dated March 28, 1988); requirements for transportation of radiography devices, including the requirement to block and brace containers during transport (IN No. 87-47, dated October 5, 1987); and the need to properly survey for retraction of the source after each radiographic exposure (IN No. 87-45, dated September 25, 1987 and IN No. 88-66, dated August 22, 1988). Given the notice that you received, NRC would have expected sufficient improvement in the management control of your licensed program to self-identify and correct most of the violations listed in the enclosed Notice in advance of the NRC inspection.

The lack of attention to NRC communications is evident in your letter dated November 17, 1989, in which you state that you were not aware of the requirement to block and brace containers during transport. This violation is of added significance because the inspector observed that the radiographer also failed to secure the door at the rear of the vehicle and that the door flew open several times during transport with the unsecured container inside.

The base civil penalty amount could be increased by 100% because of your past enforcement history, and because you received prior notice concerning the need to effect proper management control over your licensed activities and concerning a number of the specific violations listed in the enclosed Notice. In this case; however, an unannounced inspection conducted at a temporary job site on September 13, 1989 identified no violations or deviations and therefore, escalation of 75% based on past enforcement history and prior notice is considered appropriate. Balancing this against the mitigation allowed for corrective action results in a 50% escalation of the base civil penalty. The remaining escalation and mitigation factors in the Enforcement Policy were considered and no further adjustment is deemed appropriate.

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. In doing so, you may make reference to any correspondence previously submitted to the NRC. In addition, your response should describe actions taken or planned to improve oversight of licensed activities by management above the level of the Assistant Radiation Safety Officer and to self-identify and correct violations of NRC requirements. You should include actions to assure that the Radiation Safety Officer, as well as the Assistant Radiation Safety Officer, are aware of and act on NRC communications such as bulletins and notices when they are sent to the address on your license. In developing your response, you may wish to consider obtaining the

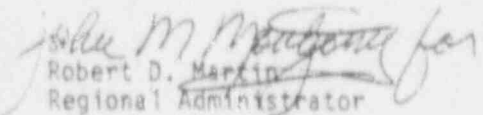
services of a qualified consultant to conduct training and to develop or conduct an effective audit program to assure that regulatory requirements are understood and are being met.

The NRC will review your response to this Notice, including your proposed corrective actions, and the results of future inspections to determine whether further NRC enforcement action is necessary to ensure compliance with NRC regulatory requirements.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,

  
Robert D. Markin  
Regional Administrator

Enclosure:  
Notice of Violation and  
Proposed Imposition  
of Civil Penalty

cc:  
Oklahoma Radiation Control Program Director  
NRC Public Document Room

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

Tulsa Gamma Ray, Inc.  
Tulsa, Oklahoma

Docket: 30-12319/89-02  
License: 35-17178-01  
EA No.: E9-223

During an NRC inspection conducted on October 2-4, 1989, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1989) (Enforcement Policy), 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:

1. Conduct of Licensed Activities at Temporary Jobsites

- a. 10 CFR 34.43(b) requires that a survey with a calibrated and operable radiation survey instrument be made after each radiography exposure to determine that the sealed source has been returned to its shielded position. If the radiographic exposure device has a source guide tube, the survey must include the guide tube.

Contrary to the above, on October 2, 1989, a licensee radiographer failed to conduct a survey of the exposure device and source guide tube after any of four exposures observed by an NRC inspector.

- b. 10 CFR 34.42 requires that areas in which radiography is being performed shall be conspicuously posted as required by 10 CFR 20.203(b) and (c)(1). § 20.203(c)(1) requires that each high radiation area shall be conspicuously posted with a sign bearing the radiation caution symbol and the words: "CAUTION HIGH RADIATION AREA." As defined in 10 CFR 20.202(b)(3), "high radiation area" means any area, accessible to personnel in which there exists radiation originating in whole or in part within licensed material at such levels that a major portion of the body could receive in any 1 hour a dose in excess of 100 millirem.

Contrary to the above, on October 2, 1989, the licensee's representatives failed, while conducting radiography, to post a high radiation area with a sign bearing the radiation caution symbol and the words: "CAUTION HIGH RADIATION AREA."

2. Radiation Exposure Evaluations, Records and Reports

- a. 10 CFR 20.201(b) requires that each licensee make or cause to be made such surveys as (1) may be necessary for the licensee to comply with the regulations in 10 CFR Part 20, and (2) are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As defined in 10 CFR 20.201(a), "survey" means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.

10 CFR 20.101(a) generally limits the permissible occupational exposure to the whole body to 1 1/4 rems per calendar quarter.

Contrary to the above, the radiation exposure records for six radiographers, covering the period from May 1989 through July 1989, indicated that personal monitoring devices had been damaged and could not be analyzed; and, as of October 2, 1989, the licensee had not performed evaluations to determine the radiation exposure received by these six individuals.

- b. 10 CFR 20.102(a) specifies that each licensee shall require any individual, prior to first entry into the licensee's restricted area during each employment or work assignment under such circumstances that the individual will receive or is likely to receive in any period of one calendar quarter an occupational dose in excess of 25 percent of the applicable standards specified in § 20.101(a) and § 20.104(a), to disclose in a written, signed statement, either: (1) that the individual had no prior occupational dose during the current calendar quarter, or (2) the nature and amount of any occupational dose which the individual may have received during that specifically identified current calendar quarter from sources of radiation possessed or controlled by other persons.

Contrary to the above, as of October 2, 1989, the licensee had failed to obtain the required information concerning the current quarterly occupational dose received by two radiographers prior to assigning them work in restricted areas.

This is a repeat violation.

- c. 10 CFR 20.102(b) requires that before a licensee permits, pursuant to § 20.101(b), any individual in a restricted area to receive an occupational radiation dose in excess of the standards specified in § 20.101(a), the licensee shall obtain a certificate on Form NRC-4, or on a clear and legible record containing all the information required in that form, signed by the individual showing each period of time after the individual attained the age of 18 in which the individual received an occupational dose of radiation, and perform the dose calculations required by 10 CFR 20.102(b) (2).

Contrary to the above, the licensee allowed an individual to receive an occupational radiation dose in excess of the standards specified in 10 CFR 20.101(a), without having Form NRC-4 or other authorized record signed by the individual to certify the completeness of the record of accumulated dose. (The licensee had otherwise completed the form, and the inspector verified that the individuals' accumulated dose was not in excess of regulatory standards.)

This is a repeat violation.

3. Inventory Control

10 CFR 34.26 requires that each licensee conduct quarterly physical inventories to account for all sealed sources received and possessed under the license.

Contrary to the above, although the licensee had conducted quarterly physical inventories, such inventories failed to include iridium-192 sealed sources removed from radiography exposure devices and placed into source changers for storage. These sealed sources were still in the licensee's possession when the quarterly inventory was conducted. For example, the licensee did not account for two iridium-192 sealed sources, Serial Nos. 3031 and 3066, during quarterly inventories conducted on June 30, 1989 and September 30, 1989, respectively.

4. Transportation of Licensed Material

10 CFR 71.5(a) requires that each licensee who transports licensed material outside of the confines of its plant or other place of use, or who delivers licensed material to a carrier for transport, comply with the applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation (DOT) in 49 CFR Parts 170-189.

- a. 49 CFR 172.403 requires that each package of radioactive material labeled as "RADIOACTIVE YELLOW II" include the following information entered on the label: (1) the name of the radionuclide, (2) the content activity expressed in appropriate curie units, and (3) the transport index of the package.

Contrary to the above, on October 2, 1989, the licensee's representatives transported two exposure devices containing iridium-192 sealed sources in packages that had "RADIOACTIVE YELLOW II" labels without having the required information on the labels.

- b. 49 CFR 177.842(d) requires that radioactive material packages be so blocked and braced that they cannot change position during conditions normally incident to transportation.

Contrary to the above, on October 2, 1989, the licensee's representatives transported Amersham Model 683 exposure devices, containing iridium-192 sealed sources, in the required overpack without having blocked or braced the package within the vehicle's darkroom where it is routinely placed for transport.

- c. 49 CFR 172.200 requires that each person who offers a hazardous material for transportation shall describe the hazardous material on the shipping paper in the manner required by Subpart C of 49 CFR 172. Subpart C, § 172.203(d) describes the required entries

for radioactive material, including the transport index assigned to each package bearing RADIOACTIVE YELLOW-II or RADIOACTIVE YELLOW-III labels and, for a package approved by the U.S. Nuclear Regulatory Commission (USNRC), a notation of the package identification marking.

Contrary to the above:

- (1) On October 2, 1989, the licensee's representative carried shipping papers incorrectly showing a transport index (T.I.) of 1.8 for a package bearing a RADIOACTIVE YELLOW II label that the NRC inspector determined to have a T.I. of 0.5.
  - (2) On October 2, 1989, the licensee's representative carried shipping papers with package identification descriptions that did not correspond with the markings on the package, and the package was approved by the USNRC. Further, the package descriptions on the licensee's standard shipping papers did not correspond with any packages possessed by the licensee.
- d. 49 CFR 172.502(a) states, with exceptions not applicable here, that no person may affix or display on a transport vehicle any placard unless the placard represents a hazard of the material being transported.

49 CFR 172.504 prescribes the requirements for placarding vehicles used to transport hazardous materials. Specifically, Table 1 specifies that the "RADIOACTIVE" vehicle placard applies only to transport vehicles containing packages of radioactive material bearing the "RADIOACTIVE YELLOW III" label.

Contrary to the above, on October 2, 1989, the licensee's representative transported a package appropriately categorized and labeled as "RADIOACTIVE YELLOW II" in a vehicle bearing a "RADIOACTIVE" placard. No packages labeled as "RADIOACTIVE YELLOW III" were present in the vehicle.

These violations have been categorized in the aggregate as a Severity Level III problem. (Supplements IV, V, and VI)

Cumulative Civil Penalty - \$7,500 (assessed equally among the 10 violations)

Pursuant to the provisions of 10 CFR 2.201, Tulsa Gamma Ray, Inc. (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. This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each alleged violation: (1) admission or denial of the alleged violation, (2) the reasons for the violation if admitted, (3) the corrective steps that have been taken and the results achieved, (4) the corrective steps that will be taken to avoid further violations, and (5) the date when full compliance will be achieved.



Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation. If an adequate reply is not received within the time specified in this Notice, an order may be issued to show cause why the license should not be modified, suspended, or revoked or why such other action as may be proper should not be taken. Consideration may be given to extending the response time for good cause shown.

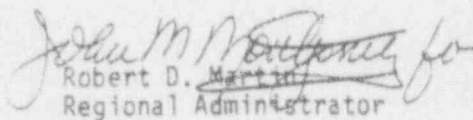
Within the same time as provided for the response required above under 10 CFR 2.201, the Licensee may pay the civil penalty by letter addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, or money order payable to the Treasurer of the United States in the amount of the civil penalty proposed above, or may protest the 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 V.B of 10 CFR Part 2, Appendix C should be addressed. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 10 CFR 2.201, but may incorporate parts of the 10 CFR 2.201 reply by specific reference (e.g., citing page and paragraph numbers) to avoid repetition. The attention of the Licensee is directed to the other provisions of 10 CFR 2.205, regarding the procedure for imposing a civil penalty.

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

The responses noted above (Reply to a Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Robert D. Martin  
Regional Administrator

Dated at Arlington, Texas,  
This 29 day of December 1989.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

JUN 06 1990

Docket No. 30-12319  
License No. 35-17178-01  
EA No. 89-223

Tulsa Gamma Ray, Inc.  
ATTN: James C. Moss, President  
1127 South Lewis Avenue  
Tulsa, Oklahoma 74104

Gentlemen:

SUBJECT: ORDER IMPOSING CIVIL MONETARY PENALTY - \$6,750

This refers to Tulsa Gamma Ray, Inc.'s letter dated February 22, 1990, in response to NRC's Notice of Violation and Proposed Imposition of Civil Penalty dated December 29, 1989. Our letter and Notice described 10 violations identified by NRC during an October 2-4, 1989, inspection.

To emphasize the importance of strict adherence to radiation safety requirements and the need to have a program in place to ensure that these requirements are being met, a civil penalty of \$7,500 was proposed.

In response, you admitted 9 of the 10 violations and provided new information in regard to 1 violation which would indicate that it did not occur. You also requested reconsideration of the penalty because, in your view, the violations were not serious and did not warrant the assessment of a \$7,500 civil penalty. You also addressed NRC's escalation of the base civil penalty due to "prior notice" and "past performance." After consideration of your response, we have concluded for the reasons given in the Appendix attached to the enclosed Order Imposing Civil Penalty that 1 of the 10 violations should be withdrawn. Accordingly, we hereby serve the enclosed Order on Tulsa Gamma Ray, Inc. imposing a civil monetary penalty in the amount of \$6,750. We will review the effectiveness of your corrective actions during a subsequent inspection.

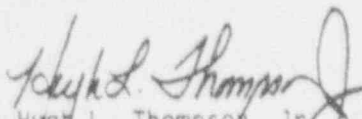
We note your apparent concern with respect to the size of the proposed civil penalty. Although we agree with your response that individually these violations do not normally rise above Severity Level IV, in the aggregate,

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

these violations are significant. The fact that no overexposures have occurred is fortuitous given the number of weaknesses in the program at Tulsa Gamma Ray, Inc. In our view, the fact that no overexposures have occurred does not mitigate the seriousness of our concern.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosures will be placed in the NRC's Public Document Room.

Sincerely,



Hugh L. Thompson, Jr.  
Deputy Executive Director for  
Nuclear Materials Safety, Safeguards,  
and Operations Support

Enclosures:  
As Stated

cc:  
Oklahoma Radiation Control Program Director  
NRC Public Document Room

UNITED STATES  
NUCLEAR REGULATORY COMMISSION

In the Matter of  
Tulsa Gamma Ray, Inc.  
Tulsa, Oklahoma

Docket No. 30-12319  
License No. 35-17178-01  
EA No. 89-223

ORDER IMPOSING CIVIL MONETARY PENALTY

I

Tulsa Gamma Ray, Inc. (licensee) is the holder of NRC Materials License No. 35-17178-01 issued by the Nuclear Regulatory Commission (NRC/Commission) on January 26, 1977. The license authorizes the licensee to possess sealed radioactive sources for use in various exposure devices in the conduct of industrial radiography and to possess sealed sources for use in calibrating radiation survey instruments. The license was scheduled to expire on March 31, 1987, but remains valid while a renewal application is being processed by NRC.

II

An inspection of the licensee's activities was conducted October 2-4, 1989. The results of this inspection indicated that the licensee had not conducted its activities in full compliance with NRC requirements. A written Notice of Violation and Proposed Imposition of Civil Penalty was served upon the licensee by letter dated December 29, 1989. The Notice stated the nature of the violations, the provisions of the NRC's requirements that the licensee had violated, and the amount of the civil penalty proposed for the violations. The licensee responded to the Notice of Violation and Proposed Imposition of Civil Penalty by letter dated February 22, 1990.

II.

After consideration of the licensee's response and the statements of fact, explanation, and arguments for mitigation contained therein, the Deputy Executive Director for Nuclear Materials Safety, Safeguards and Operations Support has determined as set forth in the Appendix to this Order that 9 of the 10 violations occurred as stated, that 1 violation should be withdrawn, and that the \$7,500 penalty proposed for the violations in the Notice of Violation and Proposed Imposition of Civil Penalty should be reduced by \$750 to \$6,750.

IV

In view of the foregoing and pursuant to Section 234 of the Atomic Energy Act of 1954, as amended (Act), 42 U.S.C. 2282, and 10 CFR 2.205, IT IS HEREBY ORDERED THAT:

The licensee pay a civil penalty in the amount of \$6,750 within 30 days of the date of this Order, by check, draft, or money order, payable to the Treasurer of the United States and mailed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555.

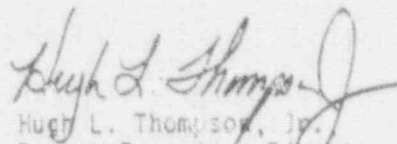
The licensee may request a hearing within 30 days of the date of this Order. A request for a hearing should be clearly marked as a "Request for an Enforcement hearing" and shall be addressed to the Director, Office of

Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk,  
Washington, D.C. 20555, with a copy to the Regional Administrator, U.S.  
Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 1000,  
Arlington, Texas 76011.

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

In the event the licensee requests a hearing as provided above, the issue to  
be considered at such hearing shall be whether, on the basis of the  
violations admitted by the licensee, consisting of the violations set forth in  
the Notice of Violation as modified by the withdrawal of Violation 3, this  
Order should be sustained.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Hugh L. Thompson, Jr.  
Deputy Executive Director for  
Nuclear Materials Safety, Safeguards,  
and Operations Support

Dated at Rockville, Maryland,  
this 6<sup>th</sup> day of June 1990.

## EVALUATIONS AND CONCLUSIONS

### Appendix to Order Imposing Civil Monetary Penalty

On December 29, 1989, a Notice of Violation and Proposed Imposition of Civil Penalty (Notice) was issued for the violations identified during an October 2-4, 1989, routine, unannounced inspection of Tulsa Gamma Ray, Inc., of Tulsa, Oklahoma. Tulsa Gamma Ray (the "licensee") responded to the Notice of Violation on February 22, 1990. The licensee admitted 9 of the 10 violations but requested reconsideration of the civil penalty for a variety of reasons. The NRC's evaluations and conclusions regarding the licensee's arguments follow:

#### Restatement of Violations

##### 1. Conduct of Licensed Activities at Temporary Jobsites

- a. 10 CFR 34.43(b) requires that a survey with a calibrated and operable radiation survey instrument be made after each radiography exposure to determine that the sealed source has been returned to its shielded position. If the radiographic exposure device has a source guide tube, the survey must include the guide tube.

Contrary to the above, on October 2, 1989, a licensee radiographer failed to conduct a survey of the exposure device and source guide tube after any of four exposures observed by an NRC inspector.

- b. 10 CFR 34.42 requires that areas in which radiography is being performed shall be conspicuously posted as required by 10 CFR 20.203(b) and (c)(1). § 20.203(c)(1) requires that each high radiation area shall be conspicuously posted with a sign bearing the radiation caution symbol and the words: "CAUTION HIGH RADIATION AREA." As defined in 10 CFR 20.202(b)(3), "high radiation area" means any area, accessible to personnel, in which there exists radiation originating in whole or in part within licensed material at such levels that a major portion of the body could receive in any 1 hour a dose in excess of 100 millirem.

Contrary to the above, on October 2, 1989, the licensee's representatives failed, while conducting radiography, to post a high radiation area with a sign bearing the radiation caution symbol and the words: "CAUTION HIGH RADIATION AREA."

##### 2. Radiation Exposure Evaluations, Records and Reports

- a. 10 CFR 20.201(b) requires that each licensee make or cause to be made such surveys as (1) may be necessary for the licensee to comply with the regulations in 10 CFR Part 20, and (2) are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As defined in 10 CFR 20.201(a), "survey" means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.

10 CFR 20.101(a) generally limits the permissible occupational exposure to the whole body to 1 1/4 rems per calendar quarter.

Contrary to the above, the radiation exposure records for six radiographers, covering the period from May 1989 through July 1989, indicated that personal monitoring devices had been damaged and could not be analyzed; and, as of October 2, 1989, the licensee had not performed evaluations to determine the radiation exposure received by these six individuals.

- b. 10 CFR 20.102(a) specifies that each licensee shall require any individual, prior to first entry into the licensee's restricted area during each employment or work assignment under such circumstances that the individual will receive or is likely to receive in any period of one calendar quarter an occupational dose in excess of 25 percent of the applicable standards specified in § 20.101(a) and § 20.104(a), to disclose in a written, signed statement, either: (1) that the individual had no prior occupational dose during the current calendar quarter, or (2) the nature and amount of any occupational dose which the individual may have received during that specifically identified current calendar quarter from sources of radiation possessed or controlled by other persons.

Contrary to the above, as of October 2, 1989, the licensee had failed to obtain the required information concerning the current quarterly occupational dose received by two radiographers prior to assigning them work in restricted areas.

This is a repeat violation.

- c. 10 CFR 20.102(b) requires that before a licensee permits, pursuant to § 20.101(b), any individual in a restricted area to receive an occupational radiation dose in excess of the standards specified in § 20.101(a), the licensee shall obtain a certificate on Form NRC-4, or on a clear and legible record containing all the information required in that form, signed by the individual showing each period of time after the individual attained the age of 18 in which the individual received an occupational dose of radiation, and perform the dose calculations required by 10 CFR 20.102(b) (2).

Contrary to the above, the licensee allowed an individual to receive an occupational radiation dose in excess of the standards specified in 10 CFR 20.101(a), without having Form NRC-4 or other authorized record signed by the individual to certify the completeness of the record of accumulated dose. (The licensee had otherwise completed the form, and the inspector verified that the individuals' accumulated dose was not in excess of regulatory standards.)

This is a repeat violation.



### 3. Inventory Control

10 CFR 34.26 requires that each licensee conduct quarterly physical inventories to account for all sealed sources received and possessed under the license.

Contrary to the above, although the licensee had conducted quarterly physical inventories, such inventories failed to include iridium-192 sealed sources removed from radiography exposure devices and placed into source changers for storage. These sealed sources were still in the licensee's possession when the quarterly inventory was conducted. For example, the licensee did not account for two iridium-192 sealed sources, Serial Nos. 3031 and 3066, during quarterly inventories conducted on June 30, 1989 and September 30, 1989, respectively.

### 4. Transportation of Licensed Material

10 CFR 71.5(a) requires that each licensee who transports licensed material outside of the confines of its plant or other place of use, or who delivers licensed material to a carrier for transport, comply with the applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation (DOT) in 49 CFR Parts 170-189.

- a. 49 CFR 172.403 requires that each package of radioactive material labeled as "RADIOACTIVE YELLOW II" include the following information entered on the label: (1) the name of the radionuclide, (2) the content activity expressed in appropriate curie units, and (3) the transport index of the package.

Contrary to the above, on October 2, 1989, the licensee's representatives transported two exposure devices containing iridium-192 sealed sources in packages that had "RADIOACTIVE YELLOW II" labels without having the required information on the labels.

- b. 49 CFR 177.842(d) requires that radioactive material packages be so blocked and braced that they cannot change position during conditions normally incident to transportation.

Contrary to the above, on October 2, 1989, the licensee's representatives transported Amersham Model 683 exposure devices, containing iridium-192 sealed sources, in the required overpack without having blocked or braced the package within the vehicle's darkroom where it is routinely placed for transport.

- c. 49 CFR 172.200 requires that each person who offers a hazardous material for transportation shall describe the hazardous material on the shipping paper in the manner required by Subpart C of 49 CFR 172. Subpart C, § 172.203(d) describes the required entries for radioactive material, including the transport index assigned to each package bearing RADIOACTIVE YELLOW-II or RADIOACTIVE YELLOW-III

labels and, for a package approved by the U.S. Nuclear Regulatory Commission (USNRC), a notation of the package identification marking.

Contrary to the above:

- (1) On October 2, 1989, the licensee's representative carried shipping papers incorrectly showing a transport index (T.I.) of 1.0 for a package bearing a RADIOACTIVE YELLOW II label that the NRC inspector determined to have a T.I. of 0.5.
  - (2) On October 2, 1989, the licensee's representative carried shipping papers with package identification descriptions that did not correspond with the markings on the package, and the package was approved by the USNRC. Further, the package descriptions on the licensee's standard shipping papers did not correspond with any packages possessed by the licensee.
- d. 49 CFR 172.502(a) states, with exceptions not applicable here, that no person may affix or display on a transport vehicle any placard unless the placard represents a hazard of the material being transported.

49 CFR 172.504 prescribes the requirements for placarding vehicles used to transport hazardous materials. Specifically, Table 1 specifies that the "RADIOACTIVE" vehicle placard applies only to transport vehicles containing packages of radioactive material bearing the "RADIOACTIVE YELLOW III" label.

Contrary to the above, on October 2, 1989, the licensee's representative transported a package appropriately categorized and labeled as "RADIOACTIVE YELLOW II" in a vehicle bearing a "RADIOACTIVE" placard. No packages labeled as "RADIOACTIVE YELLOW III" were present in the vehicle.

These violations have been categorized in the aggregate as a Severity Level III problem. (Supplements IV, V, and VI)

Cumulative Civil Penalty - \$7,500 (assessed equally among the 10 violations)

#### Summary of Licensee's Response to Notice of Violation

The licensee admitted 9 of the 10 violations, denied 1 violation (Violation 3) and discussed its view of the significance of 3 of the violations (Violations 1.a, 1.b, and 4.b.).

1. In response to Violation 1.a., the licensee admits the surveys were not conducted, but requests that NRC reevaluate the significance of the violation. The licensee contends that, although the radiographer was highly trained and outstanding in his training class, the presence of the NRC inspector created a stressful environment which was responsible for the violation having occurred.

The licensee also asserts that the radiographer misunderstood the inspector's question when the radiographer reportedly stated that he did not routinely conduct surveys of the exposure device and source guide tube if he experienced no difficulty in cranking out the source. According to the licensee, the radiographer understood that the question referred to perimeter surveys that were to be performed only four times per shift.

The licensee added that the subject radiographer was no longer employed by the licensee.

2. In response to Violation 1.b., the licensee admits this violation, but contends that the significance of the failure to post a high radiation area in this specific case is minimal since no one had entered the restricted area, access to the area was limited, the duration of the exposure was brief, and the area was under constant surveillance.
3. In response to Violation 3, the licensee acknowledges that one of the sources, Serial No. 3031, had not been documented on a June 1989 inventory, but asserted that it had determined that the source was located at the Panama City, Florida, office at the time of the inventory and should not have appeared on the inventory list. The licensee also provided records documenting the return and receipt of the second source, Serial No. 3066, by the manufacturer prior to September 30, 1989.
4. In response to Violation 4.b., the licensee admits the violation, but argues that it considered the failure to brace or block such packages acceptable to NRC, since it had observed that common carriers did not comply with this requirement. The licensee also contends that the method it previously used to transport the exposure device within a steel box bolted to the vehicle provided greater protection than use of the required overpack, and adds that although it was issued a violation in 1988 for failing to use the overpack, there was no mention of blocking and bracing requirements.

#### NRC Evaluation of Licensee's Response to Notice of Violation

1. In regard to Violation 1.a., the NRC staff does not dispute the licensee's contention that its workers were fully and properly trained to conduct the subject surveys. However, the fact remains that the NRC inspector observed the radiographer fail to conduct the surveys. Because major radiation exposures can result from failure to conduct this type of survey, the NRC expects radiographers to perform the required survey in every instance. The fact that an NRC inspector was present has no bearing on whether this violation occurred and does not, in NRC's view, alter its significance.

The licensee's statement that the radiographer misunderstood the inspector's question does not change NRC's original assessment of the violation. The violation is based primarily on what the inspector observed and not on what the radiographer stated to the inspector.

Similarly, the statement that the radiographer is no longer employed by the licensee does not alter the fact that the violation occurred.

The NRC staff concludes that the violation occurred as stated and that the explanation offered by the licensee does not merit reconsideration of the significance of the violation.

2. In regard to Violation 1.b., the NRC staff notes that the licensee committed in the license application to post the "CAUTION HIGH RADIATION AREA" signs required by 10 CFR 20.203(c)(1) for every radiography job. The licensee's operating procedures require such postings.

As stated in the licensee's response, ropes and radiation area signs were posted at three stairway access points to the rooftop where radiography was being conducted. However, access to the roof top or the building itself was not otherwise restricted, the licensee's signs were not immediately visible from the ground, and a plant QC inspector had confirmed that employees were working in the area.

Although NRC acknowledges that no incident occurred on this date, the plant QC inspector did indicate that, on more than one occasion, a plant employee had crossed a radiation area barrier at this plant. The design of this plant (a refinery), prevents full visual surveillance because of visual obstruction by various structures in the area. Although two licensee employees were available, they were positioned side by side on the roof, thus there was no surveillance of the area opposite structures located on the roof.

The NRC staff believes that adequate posting is important to ensure that individuals approaching the area are alerted to potential radiation fields.

NRC concludes that the violation occurred as stated, and the explanation provided by the licensee does not merit reconsideration of the significance of the violation.

3. In regard to Violation 3, the NRC staff has reviewed the documents submitted with the licensee's response, which were not available at the time of the inspection. Although the assistant RSO had stated that Source No. 3066 was still located at the licensee's facility on the date of the inspection, the licensee has provided verification from the manufacturer that the source had been received at its facility on September 19, 1989. The NRC accepts the licensee's explanation concerning the second sealed source that had been previously transferred to the licensee's facility in Florida.

The NRC staff concludes that neither of the sources in question was in the possession of the licensee at the times the inventories were performed and that this violation should be withdrawn.

4. In regard to Violation 4.b., NRC notes that the use of the overpack designed for use in transporting the radiography device is required by NRC and DOT regulations (10 CFR 71.5 and 49 CFR 173.471(a)). The use of the overpack, however, does not satisfy the separate regulatory requirement that packages be blocked and braced (10 CFR 71.5 and 49 CFR 177.842(d)). Both requirements are applicable. This violation is of increased significance because of the licensee's failure to secure the door at the rear of the vehicle. The inspector observed the door fly open several times during transport of the unsecured overpack containing the source.

NRC concludes that this violation occurred as stated and that the information provided by the licensee does not merit reconsideration of the significance of the violation.

#### Summary of Licensee's Request for Mitigation

The licensee makes the following points in requesting full mitigation of the proposed civil penalty:

1. The licensee contends that the violations cited would normally be classified at Severity Level IV or V and do not warrant a civil penalty. Of the 10 violations cited, the licensee contends that only 3 could be considered significant, while the remainder were recordkeeping errors or minor oversights.
2. The licensee offers mitigating circumstances for the three more severe violations which it believes should be considered toward the end of full mitigation. (The licensee's arguments in regard to this matter are addressed above).
3. The licensee claims that it has taken extensive corrective actions, including reassignment or removal of the two individuals whom it believes were responsible for the majority of the violations. The licensee also states that a replacement Assistant Radiation Safety Officer has been named.
4. The licensee asserts that NRC Information Notice (IN) 87-47 regarding blocking and bracing was reviewed upon receipt and that prior to instituting the use of the overpack, the licensee's previous manner of securing exposure devices in the licensee's transport boxes did satisfy the requirement for blocking and bracing. The licensee further asserts that it did not receive IN 88-10, "Materials Licensees: Lack of Management Controls over Licensed Programs."

#### NRC Evaluation of Licensee's Request for Mitigation

1. Although individually these violations may not warrant a civil penalty, NRC believes that collectively they represent a breakdown in control of licensed activities which has been properly classified at Severity Level III in accordance with the Enforcement Policy. While some of the

violations represented documentation problems, the number of violations in specific program areas is indicative of inadequate management oversight of licensed activities. NRC views the cumulative effect of these failures and the potential consequences to be more significant than the individual violations.

2. NRC does not believe that the licensee's explanations for the failures to conduct a radiation survey or to post a high-radiation area warrant mitigation. The failure to strictly adhere to radiation safety requirements cannot be overlooked. Strict adherence to these requirements must be observed regardless of circumstances.

NRC also does not believe that the licensee's statements regarding package blocking and bracing warrant mitigation. NRC believes this violation to have been significant in that on one occasion, the licensee's employees were observed transporting material without having braced the package or secured the door to the compartment where the package had been placed. Additionally, the licensee states that it was aware of the requirement to secure a package during transport.

3. NRC acknowledges the licensee's corrective actions regarding the violations noted during the inspection, including additional training and the reassignment of personnel. In fact, 25 percent mitigation of the base civil penalty was applied to the original penalty in recognition of the corrective action taken. However, at the time of the enforcement conference, the licensee's corrective actions did not address NRC's concerns regarding lack of sufficient management oversight to assure compliance with regulatory requirements. Therefore, in accordance with the Enforcement Policy, additional mitigation of the civil penalty based on corrective action is not appropriate.
4. With regard to the licensee's statements concerning past performance and prior notice, the licensee does acknowledge receipt of Information Notice 87-47, which described the requirement to block and brace radiography devices, as well as the separate requirement to use a protective overpack, during transport. In addition, while NRC accepts the licensee's statement that it has no record of receiving Information Notice 88-10, "Materials Licensees: Lack of Management Controls over Licensed Programs," in a previous letter to the licensee dated January 10, 1989, NRC did express concern about the implementation of the licensee's program in the area of management control. Therefore, the licensee did have specific prior notice concerning this problem. Mitigation is not considered appropriate because the licensee should have taken steps following NRC's 1988 inspection, during which seven violations were discovered, to improve oversight of its NRC-licensed programs.

NRC Conclusion

Based on NRC's evaluation of the licensee's response, the NRC staff concludes that 9 of the 10 violations occurred as stated, that one violation should be withdrawn and that Tulsa Gamma Ray has provided no information that would cause NRC to alter its view that the problem is a significant regulatory concern. NRC concludes that it has applied its Enforcement Policy correctly in determining that a monetary civil penalty is appropriate. Based on NRC's review of the licensee's arguments regarding the appropriateness of escalating the base civil penalty for prior notice and past performance, NRC concludes that such escalation is appropriate. Applying a 10 percent reduction due to the withdrawal of one violation results in an adjusted civil penalty of \$6,750. Accordingly, the NRC staff concludes that a civil penalty of \$6,750 should be imposed by order.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30333

AUG 28 1991

Docket Nos.	030-13584	License Nos.	52-01946-07
	030-31462		52-01946-09
	030-01183		52-01986-04
	030-01182		52-01986-01
	030-14313		52-10510-04
	030-19350		52-19434-02

EA 91-089

University of Puerto Rico  
ATTN: Dr. Jose M. Saldana  
President  
General Post Office Box 364984  
San Juan, Puerto Rico 00936-4984

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY - \$6,250  
(INSPECTION REPORT NOS. 52-01946-07/91-01, 52-01946-09/91-01,  
52-01986-04/91-01, 52-01986-01/91-01, 52-10510-04/91-01, AND  
52-19434-02/91-01)

This refers to the Nuclear Regulatory Commission (NRC) inspection conducted by Ms. C. Connell, Mr. H. Bermudez, Mr. J. Ennis, and Mr. L. Franklin on June 17-21, 1991, at the University of Puerto Rico facilities located on the Medical Sciences Campus, College of Natural Sciences Campus, Mayaguez Campus, and the Agricultural Experiment Station, in Puerto Rico. The inspection included a review of the organization and administration of each licensed program, radiation safety aspects of each program, radiation safety training of personnel, and radioactive waste storage and disposal. In addition, the inspection placed special emphasis on the review of management control and oversight of licensed activities. The report documenting this inspection was sent to you by letter dated July 23, 1991. As a result of this inspection, multiple failures to comply with NRC requirements were identified. An enforcement conference was held on July 26, 1991, with Dr. Saldana and other members of your staff in the Region II office to discuss the violations, their cause, and your corrective actions to preclude recurrence. A summary of this conference was sent to you by letter dated August 14, 1991.

The violations in Section I of the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) were identified by the NRC during the inspection of the broad scope NRC license program at the Medical Sciences Campus and include failures to: secure licensed material against unauthorized removal, conduct leak tests of sealed sources at the required intervals, properly evaluate dosimetry data, survey radiopharmaceutical waste storage areas, properly label radioactive material containers, adhere to Radiation Safety Committee meeting requirements, properly maintain sealed source inventory



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records, and maintain leak test records for sealed sources. Additional details regarding the violations are described in the previously issued NRC inspection report referred to above.

We are concerned with the results of the inspection of the University's Medical Sciences Campus broad license, particularly the research program. A similar concern was made known to you previously as a result of an NRC inspection conducted in April 1990 which resulted in the imposition of a civil penalty of \$12,500 for violations associated with both your broad license, specifically the nuclear medicine program operated under that license, and the teletherapy license. The 11 violations that were cited against your broad license resulted in a civil penalty of \$6,250. In our letter of July 19, 1990, which transmitted the Notice of Violation and Proposed Imposition of Civil Penalties, you were informed then of the NRC's concern about your inadequate management oversight and control and your apparent inability to assure lasting effectiveness of corrective actions. In addition, you were advised that repetitious violations were of particular concern and could not be tolerated. During this inspection, however, there were violations cited that were similar to previously cited violations.

It is apparent that the root causes of your continuing poor performance are inadequate management oversight, your staff's lack of understanding of the regulatory requirements associated with your broad license, and your failure to assure that corrective actions to resolve violations in one area of your broad license (nuclear medicine) were applied to other areas such as research. Effective management oversight and control is extremely important because of the wide range of authority associated with your broad license. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), the violations in Section I are classified in the aggregate as a Severity Level III problem.

To emphasize again the need for stronger management oversight, more effective control of your licensed radiation programs, and effective implementation of corrective actions throughout the entire program so as to ensure that problems and potential violations are self-identified, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Materials Safety, Safeguards, and Operations Support, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) in the amount of \$6,250 for the Severity Level III problem.

The base value of a civil penalty for a Severity Level III problem is \$2,500. The escalation and mitigation factors in the Enforcement Policy were considered. The base civil penalty has been increased by 50 percent because the violations were identified by the NRC. Neither escalation nor mitigation was warranted for corrective action to prevent recurrence because, even though immediate corrective actions were taken for some of the violations, adequate long term corrective action to address the root cause issues had not been formulated and implemented at the time of the enforcement conference (for example, actions to assure adequate understanding of the regulatory requirements associated with your broad license). Additional escalation of 100 percent was warranted

because of your poor past enforcement history. It is apparent that the corrective actions implemented in response to the enforcement action, EA 90-076, which was issued on July 19, 1990, have not been effective in preventing non-compliance with the regulations as identified in Inspection Report 52-01946-07/91-01. None of the other factors warranted further adjustment of the civil penalty. Therefore, based on the above, the base civil penalty has been increased by 150 percent.

As discussed during the enforcement conference, the NRC expects the University of Puerto Rico to bring its programs into full compliance. During the enforcement conference it was evident that the University is committed to long term program improvement and that you now recognize the importance of focusing management attention and resources on these problems. It is particularly noteworthy that Dr. Saldana has decided to appoint a high level official from his immediate staff to provide the day-to-day management oversight and control of licensed programs throughout the University system and that this individual will report directly to Dr. Saldana. Also, Dr. Saldana's personal assurance that there is full institutional commitment to the resolution of the problems should have both an immediate and far reaching positive effect on your efforts to achieve and maintain compliance.

The violations in Section II of the enclosed Notice were identified by the NRC during the inspection performed at the College of Natural Sciences, Rio Piedras, and include failure to: check packages for contamination before opening, perform and record surveys, and verify that forms for receiving and handling radioactive material were completed properly.

The violations in Section III of the enclosed Notice were identified by the NRC during the inspection performed at the University's Agricultural Experiment Station, Rio Piedras, and include failure to: perform inventories to account for all sources, properly secure licensed material, and properly post a licensed material storage area.

The violations in Section IV of the enclosed Notice were identified by the NRC during the inspection performed at the University's Mayaguez campus, and include failure to: perform annual audits of the radiation safety program, perform inventories of licensed material, perform monthly surveys, conduct a Radiation Survey Committee meeting during fiscal year 1989, and post required documents and notices at the Marine Sciences Laboratory.

Although the violations in Sections II through IV were categorized at either Severity Level IV or V and were not assessed a civil penalty, they represent a lapse in attention to detail which, if continued in the long term, could lead to more serious violations and escalated enforcement action. It is apparent that the root cause of several of these violations is inadequate training, a recurrent problem that was noted throughout the inspection. We do recognize that there has been some improvement as indicated by the inspection results in the medical teletherapy license program. During the inspection in April 1990, violations associated with that program also resulted in a civil penalty. No violations associated with that program were identified during the June 1991 inspection.

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During the inspection at the College of Natural Sciences in Rio Piedras, the inspectors noted that records of routine contamination wipe surveys were being recorded in counts per minute (cpm) instead of disintegrations per minute (dpm), and that licensee personnel did not know the efficiency of the counting equipment used to count the wipe test samples. This resulted in licensee personnel not knowing whether they were exceeding their wipe test action level, which is 100 dpm per 100 square centimeters. To preclude further occurrence of this type of potentially significant problem, you should include in your response to this letter actions taken or planned to assure that the efficiency of the counting equipment is known for all contamination wipe surveys performed in connection with licensed activities under all of the University's NRC licenses, and that the results of the wipe test surveys are recorded in dpm per 100 square centimeters, which is the unit of measurement for wipe test action levels. This issue was discussed during the exit interview and identified as an apparent violation; however no violation is being issued.

Lastly, but of no less significance, the NRC is particularly concerned about the public health and safety implications associated with your lack of aggressive action to resolve your radioactive waste storage and disposal problem. Therefore, in addition to the information that you submitted in your letter of August 6, 1991, we are requesting the specific written information identified below.

We emphasize that a license to use NRC regulated material is a privilege granted by the NRC, and any further recurrence of violations or problems in managing your licensed activities may result in escalated enforcement action, such as higher civil penalties or modification, suspension, or revocation of your licenses.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In addition to this response, we request that you develop and submit to NRC within 60 days of the date of this letter:

- 1.a. A Radiation Safety Improvement Plan, suitable for incorporation into the terms and conditions of your licenses, that addresses those actions necessary to ensure timely and lasting improvement in the radiation safety program, improvements needed in procedures and practices to achieve and maintain compliance with NRC requirements and license conditions, and periodic internal or external audits that you plan to implement to assess your program effectiveness.
- 1.b. A schedule for completion of all actions described in the plan, including interim milestones for the more complex actions.
- 2.a. A description of actions that you have taken or plan to take to ensure that radioactive waste at the University of Puerto Rico is properly identified, packaged, labeled, and stored; and that it is secured against unauthorized removal and disposed of in accordance with regulatory requirements.
- 2.b. A schedule for accomplishing the actions that you describe.

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NRC needs this information in order to have assurance that, in the future: 1) your licensed activities will be conducted in accordance with regulatory requirements and 2) the existing radioactive waste disposal problem at the University of Puerto Rico will be resolved in a timely manner and in accordance with regulatory requirements. If you do not intend to develop and submit to NRC the information requested in Paragraphs 1 and 2 above, you are required, pursuant to Section 182 of the Atomic Energy Act of 1954 as amended, to provide in writing, under oath or affirmation, your reasons as to why you should not be required to develop and submit the requested information.

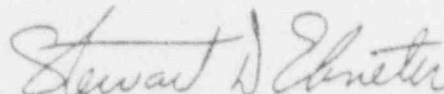
After reviewing your responses, including your proposed corrective actions and the results of future inspections, the NRC will determine whether further NRC enforcement action is necessary to ensure compliance with NRC regulatory requirements.

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

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96.511.

Should you have any questions concerning this letter, please contact us.

Sincerely,



Stewart D. Ebnetter  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed  
Imposition of Civil Penalty

NOTICE OF VIOLATION  
AND  
PROPOSED IMPOSITION OF CIVIL PENALTY

University of Puerto Rico

EA 91-089

Medical Sciences Campus  
San Juan, Puerto Rico

Docket No. 030-13584  
License No. 52-01946-07

College of Natural Sciences  
Rio Piedras, Puerto Rico

Docket No. 030-01183  
License No. 52-01986-04

Agricultural Experiment Station  
Rio Piedras, Puerto Rico

Docket No. 030-01182  
License No. 52-01986-01

Mayaguez Campus  
Mayaguez, Puerto Rico

Docket No. 030-14313  
License No. 52-10510-04

During an NRC inspection conducted on June 17 - 21, 1991 violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), 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 of License Number 52-01946-07 (Broad License)  
(Violations Assessed A Civil Penalty)

- A. 10 CFR 20.207(a) requires that licensed materials stored in an unrestricted area be secured against unauthorized removal from the place of storage. 10 CFR 20.207(b) requires that materials not in storage be tended under the constant surveillance and immediate control of the licensee. As defined in 10 CFR 20.3(a)(17), an unrestricted area is any area to which access is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials.

Contrary to the above, on June 18, 1991, licensed material consisting of 250 microcuries of sulfur 35 located in an unlocked refrigerator in Room 607A of the Medical Sciences Building, an unrestricted area, was not secured against unauthorized removal and was not tended under the constant surveillance and immediate control of the licensee.

This is a second repeat violation (Inspections 90-01 and 89-01).

- B. 10 CFR 35.59(b)(2) requires, in part, that a licensee in possession of a sealed source test the source for leakage at intervals not to exceed six months or at other intervals approved by the Commission or an Agreement State.

Contrary to the above, sealed sources containing approximately 150 microcuries of cesium 137 and 150 microcuries of barium 133 with a leak test frequency not to exceed six months were not tested for leakage between April 3, 1990 and June 18, 1991, an interval exceeding six months.

This is a repeat violation (Inspection 90-01).

- C. 10 CFR 20.201(b) requires that the licensee make or cause to be made such surveys as may be necessary to comply with the requirements of Part 20 and which are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As defined in 10 CFR 20.201(a), "survey" means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.

Contrary to the above, as of June 17, 1991, the licensee did not make surveys to assure compliance with 10 CFR 20.101(a) that limits the radiation exposure of individuals in a restricted area. Specifically, in April and May 1990, the licensee's personnel dosimetry processor notified the licensee that four dosimetry badges (three ring badges and one whole body badge) were non-readable, and the licensee did not make necessary surveys to evaluate the radiation dose received by the individuals who used those badges.

- D. Condition 12.C. of License No. 52-01946-07 requires that licensed material for other than human use be used by, or under the supervision of, individuals designated by the Radiation Safety Committee.

Contrary to the above, on June 18, 1991, a researcher located in Room 617A of the Medical Sciences Building was using sulfur 35 for other than human use and was not designated by the Radiation Safety Committee to do so, nor was he using the licensed material under the supervision of an individual designated by the Radiation Safety Committee. The researcher ordered and received licensed material under his own name and was not, at that time, conducting his research under the supervision of an individual designated by the Radiation Safety Committee.

- E. 10 CFR 35.70(b) requires the licensee to survey with a radiation detection survey instrument at least once each week all areas where radiopharmaceutical waste is stored. 10 CFR 35.70(i) requires the licensee to retain a record of this survey with specific information for three years.

Contrary to the above, between April 3, 1990, and June 19, 1991, the licensee did not survey with a radiation detection survey instrument at least once each week in areas where radiopharmaceutical waste is stored.

- F. 10 CFR 20.203(f) requires that, except as provided by 10 CFR 20.203(f)(1), each container of licensed material bear a durable, clearly visible label identifying the radioactive contents.

Contrary to the above:

1. On June 18, 1991, several containers of radioactive waste in the waste storage building did not bear durable, clearly visible labels identifying the radioactive contents and the containers were not excepted from such labeling; and
2. On June 19, 1991, a container of radioactive materials located in the sealed source storage vault below the Health Physics Office did not bear any label identifying the radioactive contents and the container was not excepted from such labeling.

- G. 10 CFR 35.22(a)(2) requires the Radiation Safety Committee to meet at least quarterly.

Contrary to the above, the Radiation Safety Committee failed to meet from December 20, 1989 through April 4, 1990, and from December 19, 1990 through April 3, 1991, periods in excess of one calendar quarter.

- H. 10 CFR 35.22(a)(3) requires the Radiation Safety Committee to establish a quorum in order to conduct business with at least one-half of the committee's membership present, including a management representative.

Contrary to the above, on December 19, 1990, April 3, 1991, and May 22, 1991, the Radiation Safety Committee met and conducted business without first establishing a quorum in that a representative of management was not present at those meetings.

- I. Condition 20 of License No. 52-01946-07 requires that the licensee conduct its program in accordance with the statements, representations, and procedures described in the licensee's application dated August 29, 1988.

1. Attachment 11, Subparts 11.1, 11.1.2, and 11.1.6 of the licensee's application state that radioactive waste will be placed in clearly identified receptacles which are appropriately marked with the radiation standard tag or label and that under no circumstance will radioactive materials be discharged into waste baskets or other containers which would permit the contamination of the regular trash.

Contrary to the above, on June 18, 1991, phosphorus 32 waste located in Room B-316 of the Medical Sciences Building was placed in a receptacle of biological waste, without any radiological warning signs, and was prepared to be disposed of as biological waste.

2. Attachment 10.6.A.3. of the licensee's application states that all shipments of radioactive materials are to be received in the Hot Lab (Room R-133 of the Biomedical Building) and in the Health Physics Laboratory (Room R-179 of the Biomedical Building) and inspected by the Health Physics Office staff prior to delivery to the user.

Contrary to the above, as of June 19, 1991, packages containing radioactive materials had been delivered directly to the Neurobiology Laboratory and had not been initially received and surveyed by the Health Physics Office staff at the Central Medical Science Campus prior to delivery to the user.

3. Attachment 8.2 of the licensee's application states that candidates for use of radioactive materials in research should submit evidence of training and experience equivalent to 40 hours of academic radiation disciplines including specific subjects.

Contrary to the above, on September 19, 1990, November 8, 1990 and November 30, 1990, candidates for use of licensed materials in research were approved without submitting evidence of training and experience equivalent to 40 hours of academic radiation disciplines.

4. Attachment 10.12 of the licensee's application states that the licensee will establish and implement the model procedure for area surveys that was published in Appendix N to Regulatory Guide 10.8, Revision 2 (August 1987). Item 1.e. (Records) of Appendix N specifies that the licensee will keep records which include actions taken in the case of excessive dose rates or contamination and follow up survey information.

Contrary to the above, as of June 18, 1991, records of surveys performed in the research laboratories did not indicate the actions taken and follow up survey information for cases involving excessive dose rates or contamination.

- J. 10 CFR 35.22(a)(5) requires the Radiation Safety Committee to promptly provide each member with a copy of the meeting minutes.

Contrary to the above, as of June 17, 1991, the Radiation Safety Committee was not providing copies of the meeting minutes to all committee members.

- K. 10 CFR 35.59(g) requires the licensee to maintain inventory records of quarterly physical inventories for all sealed sources and requires those records to contain specified information including model number of each source and serial number if one has been assigned.



Contrary to the above, as of June 17, 1991, the licensee was not recording assigned source model numbers and serial numbers on its quarterly sealed source inventory records.

- L. 10 CFR 35.59(d) requires the licensee to retain leak test records for five years which contain specified information for all sources tested.

Contrary to the above, as of June 17, 1991, records of leak test, were not maintained for the sixteen Cesium 137 sources received in August 1990.

These violations have been categorized in the aggregate as a Severity Level III problem (Supplements IV and VI).

Cumulative Civil Penalty - \$6,250 (assessed equally among the 15 violations).

II. Violations of License No. 52-01986-04 (College of Natural Sciences)  
(Violations Not Assessed A Civil Penalty)

Condition 15 of License No. 52-01986-04 requires that the licensee conduct its program in accordance with the statements, representations, and procedures described in the licensee's application received November 9, 1989, and letter dated July 24, 1990.

1. Procedure 5.c. of Item 10 of the licensee's application states that the surface of the source container will be checked for contamination using a cotton swab when initially opening packages containing radioactive material.

Contrary to the above, as of June 20, 1991, the surface of source containers received in Room JGD 217 were not being checked for contamination when initially opening packages containing material.

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

2. Procedure 5.d. of Item 10 of the licensee's application states that the Radiation Safety Technician is to be notified upon receipt of material.

Contrary to the above, as of June 20, 1991, the Radiation Safety Technician had not been notified of all receipts of material in Rooms JGD 107 and JGD 216.

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

3. Procedure 10 of Item 10 of the licensee's application states that laboratories using radioactive material will perform surveys at the end of the experiment and that a permanent record would be kept of all survey results, including negative results.

(a) Contrary to the above, from February 1991 until June 20, 1991, required surveys were not performed in Room JGD 217 at the end of the experiments.

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

(b) Contrary to the above, as of June 20, 1991, a permanent record of results of all surveys in Room JGD 216, including negative results, was not maintained.

This is a Severity Level V violation (Supplement VI).

4. The licensee's letter dated July 24, 1990, states that the Radiation Safety Technician will verify that the researchers complete forms for receiving and handling radioactive material in compliance with the standards and regulations established in the license.

Contrary to the above, as of June 20, 1991, the licensee's Radiation Safety Technician was not verifying that the forms for receiving and handling radioactive material were completed properly. Specifically, the technician was not verifying that the forms demonstrated that packages were routinely surveyed for contamination prior to opening, that the technician was being notified of all material receipts and that laboratory surveys were being performed and recorded as required.

This is a Severity Level V violation (Supplement VI).

III. Violations of License No. 52-01986-01 (Agricultural Experiment Station)  
(Violations Not Assessed a Civil Penalty)

1. Condition 17 of License No. 52-01986-01 requires the licensee to conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license.

Contrary to the above, from October 17, 1990 until June 20, 1991, an interval in excess of 6 months, the licensee did not perform inventories to account for all sources and/or devices received and possessed.

This is a repeat violation (Inspection 90-01).

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

- B. 10 CFR 20.207(a) requires that licensed materials stored in an unrestricted area be secured against unauthorized removal from the place of storage. 10 CFR 20.207(b) requires that materials not in storage be tended under the constant surveillance and immediate control of the licensee. As defined in 10 CFR 20.3(a)(17), an unrestricted area is any area to which access is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials.

Contrary to the above, on June 20, 1991, licensed material consisting of eleven vials of carbon 14 ranging from 50 microcuries to 386 microcuries per vial stored in an unlocked refrigerator in an open hallway, an unrestricted area, was not secured against unauthorized removal, and was not tended under the constant surveillance and immediate control of the licensee.

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

- C. 10 CFR 20.203(e) requires that rooms or areas in which specified amounts of licensed material are used or stored be conspicuously posted "Caution - Radioactive Material."

Contrary to the above, on June 20, 1991, a refrigerator which contained eleven vials of carbon 14 ranging from 50 to 386 microcuries per vial and which was located in an open hallway was not posted as required.

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

IV. Violations of License No. 52-10510-04 (Mayaguez Campus)  
(Violations Not Assessed A Civil Penalty)

- A. Condition 20 of License No. 52-10510-04 requires that the licensee conduct its program in accordance with the statements, representations, and procedures described in the licensee's application dated August 9, 1983, which includes the licensee's Radiation Safety Regulations Manual, and letter dated April 11, 1986.

1. Section 2.2.7.7 of the Radiation Safety Regulations Manual requires that the Radiation Safety Committee perform an annual audit of the radiation safety program.

Contrary to the above, the Radiation Safety Committee failed to perform annual audits of the radiation safety program for the calendar years 1989 and 1990.

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

2. Section 2.5 of Appendix 2 of the Radiation Safety Regulations Manual requires that the Radiation Protection Officer perform inventories of licensed material every six months.

Contrary to the above, between January 1989 and March 1990 and between May 1990 and June 17, 1991, intervals which exceed six months, the Radiation Protection Officer failed to perform inventories of licensed material.

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

3. Section 4.3 of Appendix 4 of the Radiation Safety Regulations Manual require that laboratory areas where less than 100 microcuries of licensed material are used be surveyed monthly by each user.

Contrary to the above, from January 1989 to June 17, 1991, monthly surveys had not been performed in Biology and Chemistry laboratories which frequently use licensed material in amounts less than 100 microcuries.

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

4. The licensee's letter dated April 11, 1986, states that the Radiation Safety Committee will meet no less than once each fiscal year.

Contrary to the above, the Radiation Safety Committee failed to meet during the fiscal year 1989.

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

- B. 10 CFR 19.11(a) and (b) require, in part, that the licensee post current copies of Part 19, Part 20, the license, license conditions, documents incorporated into the license, license amendments and operating procedures; or that the licensee post a notice describing these documents and where they may be examined. 10 CFR 19.11(c) requires that a licensee post Form NRC-3, "Notice to Employees."

Contrary to the above, on June 19, 1991, the licensee did not have posted any of the required documents or notices at the Marine Sciences Laboratory.

This is a Severity Level V violation (Supplement VI).

Pursuant to the provisions of 10 CFR 2.201, the University of Puerto Rico (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 may be issued to show cause why the license should not be modified, suspended, or revoked or why such other action as may be proper should not be taken. Consideration may be given to extending the response time for good cause shown. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Within the same time as provided for the response required above under 10 CFR 2.201, the Licensee may pay the civil penalty by letter 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.

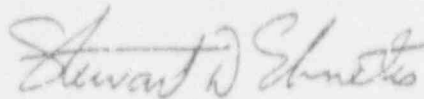
In requesting mitigation of the proposed penalty, the factors addressed in Section V.B of 10 CFR Part 2, Appendix C (1991), should be addressed. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 10 CFR 2.201, but may 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 II, Suite 2900, 101 Marietta Street, N.W., Atlanta, Georgia 30323.

FOR THE NUCLEAR REGULATORY COMMISSION



Stewart D. Ebner  
Regional Administrator

Dated at Atlanta, Georgia  
this ~~28th~~ day of August 1991



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

DEC 30 1991

Docket Nos. 030-13584, 030-31462,	License Nos. 52-01946-07
030-01183, 030-01182,	52-01946-09
030-14313, 030-19550	52-01986-04
	52-01986-01
	52-10510-04
	52-19434-02

EA 91-089

University of Puerto Rico  
ATTN: Dr. Jose M. Saldana  
President  
General Post Office Box 364984  
San Juan, PR 00936-4984

Gentlemen:

SUBJECT: ORDER IMPOSING CIVIL MONFTARY PENALTY - \$5,830

This refers to your letter dated September 27, 1991, in response to the Notice of Violation and Proposed Imposition of Civil Penalty (Notice) sent to you by our letter dated August 28, 1991. Our letter and Notice described twenty-eight violations identified during an inspection conducted on June 17-21, 1991 at the University of Puerto Rico.

Section I of the Notice described fifteen violations associated with activities at your Medical Services Campus (License No. 52-01946-07), for which a civil penalty of \$6,250 was proposed.

In your response to Section I, (Violations assessed a Civil Penalty), you admitted nine violations, partially admitted five violations and denied violation I.D, and requested a reduction of the civil penalty based on the corrective actions taken.

After consideration of your response to Section I, we have concluded for the reasons given in the Appendix attached to the enclosed Order Imposing Civil Monetary Penalty that Violation I.D should be withdrawn but that, with the exception of Violation I.D, the violations occurred as stated in the Notice. Because we have withdrawn Violation I.D, the amount of the civil penalty has been reduced by one-fifteenth. However, a sufficient basis was not given for further reduction of the civil penalty. Accordingly, we hereby serve the enclosed Order on the University of Puerto Rico imposing a civil monetary penalty in the amount of

\$5,830. We will review the effectiveness of your corrective actions during a subsequent inspection.

In your response to Sections II, III, and IV of the Notice (Violations not assessed a Civil Penalty), you admitted nine violations, partially admitted three violations, and denied one violation. Our evaluation of your response to the violations that were denied or partially admitted is provided in Enclosure 2.

In your response to the Violations of License No. 52-01986-01 (Agricultural Experiment Station), you indicated that the Radiation Safety Officer is Dr. J. Singmaster and that he has not received correspondence concerning NRC inspections since 1982. In the license renewal request for License No. 52-01986-01, dated April 13, 1988, Victor Snyder was designated as the principal Radiation Safety Officer, with Dr. J. Singmaster and Ms. N. Acir, as backup Radiation Safety Officers. Since Dr. Snyder was not available during the inspection on June 17-21, 1991, the inspection was conducted in the presence of Dr. Singmaster. If you need to change the RSO designated on the license, you should notify NRC's Region II office.

Our August 28, 1991 letter requested a description of the actions that you have taken or plan to take to ensure that radioactive waste is properly packaged, labeled, and stored; and that it is secured against unauthorized removal and disposed of in accordance with regulatory requirements. In your response to the Notice and in your Radiation Safety Improvement Plan dated October 28, 1991, you discussed your plans to license a waste incinerator and to procure equipment to identify the radioactive content of the waste. However, you did not describe your plans for temporary storage of waste until the incinerator is operational and NRC has authorized its use; and you did not describe your plans for long term storage of waste that cannot be incinerated. We request that you provide this information within the next 30 days. NRC Information Notice No. 90-09 (enclosed) describes the specific information the NRC needs to address your capability to safely store waste for up to five years. Address your response to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region II, Suite 2900, 101 Marietta Street, N.W., Atlanta, Georgia 30323.



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

Sincerely,



Hugh L. Thompson, Jr.  
Deputy Executive Director for  
Nuclear Materials Safety,  
Safeguards and Operations Support

Enclosures:

1. Order Imposing Civil Monetary Penalty w/Appendix
2. Evaluation of Violations Not Assessed a Civil Penalty
3. Information Notice 90-09

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

UNITED STATES  
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	Docket No. 030-13584,
UNIVERSITY OF PUERTO RICO	)	License No. 52-01946-07
San Juan, Puerto Rico	)	EA 91-089

ORDER IMPOSING CIVIL MONETARY PENALTY

I

University of Puerto Rico (Licensee) is the holder of Broad Medical, Teletherapy and Research and Development License Nos. 52-01946-07, 52-01946-09, 52-01986-04, 52-01986-01, 52-10510-04, 52-19434-02 issued by the Nuclear Regulatory Commission (NRC or Commission) on January 3, 1978, March 8, 1990, March 18, 1969, February 13, 1957, August 15, 1978, and March 9, 1982, respectively. The licenses authorize the Licensee to use byproduct material in accordance with the conditions specified therein.

II

An inspection of the Licensee's activities was conducted on June 17-21, 1991. The results of this inspection indicated that the Licensee had not conducted its activities in full compliance with NRC requirements. A written Notice of Violation and Proposed Imposition of Civil Penalty (Notice) was served upon the Licensee by letter dated August 28, 1991. Section I of the

Notice (Violations Assessed a Civil Penalty) states the nature of the violations, the provisions of the NRC's requirements that the Licensee had violated, and the amount of the civil penalty proposed for the violations associated with License Number 52-01946-07. The Licensee responded to the Notice by letter dated September 27, 1991. In its response to the violations in Section I of the Notice, the Licensee admitted nine violations, partially admitted five violations (Violations I.E, I.G, I.I.3, I.I.4, and I.L), and denied one violation (Violation I.D). In addition, the Licensee requested that the amount of the civil penalty be reduced.

### III

After consideration of the Licensee's response and the statements of fact, explanation, and argument for mitigation contained therein, the NRC staff has determined, as set forth in the Appendix to this Order, that the violations, with the exception of Violation I.D., occurred as stated. With respect to Violation I.D., the NRC staff has determined that the violation should be withdrawn.

IV

In view of the foregoing and pursuant to Section 234 of the Atomic Energy Act of 1954, as amended (Act), 42 U.S.C. 2282, and 10 CFR 2.205, IT IS HEREBY ORDERED THAT:

The Licensee pay a civil penalty in the amount of \$5,830 within 30 days of the date of this Order, by check, draft, money order, or electronic transfer, payable to the Treasurer of the United States and mailed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555.

V

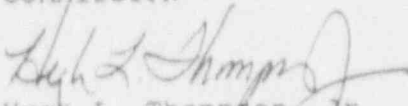
The Licensee may request a hearing within 30 days of the date of this Order. A request for a hearing should be clearly marked as a "Request for an Enforcement Hearing" and shall be addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555. Copies also shall be sent to the Assistant General Counsel for Hearings and Enforcement at the same address and to the Regional Administrator, NRC Region II, 101 Marietta Street N.W., Atlanta, Georgia 30323.

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

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

- (a) Whether the licensee was in violation of the Commission requirements as set forth in Violations I.E, I.G., I.I.3., I.I.4, and I.L of the Notice, and
- (b) Whether, on the basis of such violations and the additional violations set forth in the Notice of Violation that the Licensee admitted, this Order should be sustained.

FOR THE NUCLEAR REGULATORY  
COMMISSION

  
Hugh L. Thompson, Jr.  
Deputy Executive Director for  
Nuclear Materials Safety,  
Safeguards and Operations Support

Dated at Rockville, Maryland  
this 30<sup>th</sup> day of December 1991

## APPENDIX

### EVALUATIONS AND CONCLUSION

On August 28, 1991, a Notice of Violation and Proposed Imposition of Civil Penalty (Notice) was issued for violations identified during an NRC inspection. The University of Puerto Rico responded to the Notice in a letter dated September 27, 1991. In its response to Section I (Violations Assessed a Civil Penalty), the licensee denied one violation (Violation I. D.) and admitted in part five violations (Violations I.E., I.G., I.I.3., I.I.4, and I.L.). In addition, the licensee requested a reduction of the civil penalty. The NRC's evaluation and conclusion regarding the licensee's requests are as follows:

#### Restatement of Violation I.D.

Condition 12.C. of License No. 52-01946-07 requires that licensed material for other than human use be used by, or under the supervision of, individuals designated by the Radiation Safety Committee.

Contrary to the above, on June 18, 1991, a researcher located in Room 617A of the Medical Sciences Building was using sulfur 35 for other than human use and was not designated by the Radiation Safety Committee to do so, nor was he using the licensed material under the supervision of an individual designated by the Radiation Safety Committee. The researcher ordered and received licensed material under his own name and was not, at the time, conducting his research under the supervision of an individual designated by the Radiation Safety Committee.

#### Summary of Licensee's Response to Violation I.D.

The licensee denied that a researcher who was not designated by the Radiation Safety Committee had ordered, received and used licensed material. The licensee stated that during the NRC inspection the Radiation Safety Officer confused an unauthorized individual with an authorized individual having the same name, and thus, it appeared that an unauthorized individual had ordered and received licensed material when in fact it was ordered and received by an authorized individual. (The unauthorized individual was in fact working under the supervision of an authorized user.)

#### NRC Evaluation of Licensee's Response

The inspectors acknowledge that during the inspection, they were aware that there were two researchers with the same last name, and there was a possibility for confusion.

Therefore, the NRC is withdrawing this violation. Since the civil penalty was assessed equally among 15 violations, NRC is reducing the civil penalty by 1/15, or \$420, based on the withdrawal of Violation I.D.

Restatement of Violation I.E.

10 CFR 35.70(b) requires the licensee to survey with a radiation detection survey instrument at least once each week all areas where radiopharmaceutical waste is stored. 10 CFR 35.70(h) requires the licensee to retain a record of this survey with specific information for three years.

Contrary to the above, between April 3, 1990, and June 19, 1991, the licensee did not survey with a radiation detection survey instrument at least once each week in areas where radiopharmaceutical waste is stored.

Summary of Licensee's Response to Violation I.E.

The licensee denied that radiation surveys were not being made at least once each week in areas where radiopharmaceutical waste is stored but admitted that the Radiation Safety Officer failed to keep records of the results.

NRC Evaluation of Licensee's Response

During the inspection, the Radiation Safety Officer stated that he or someone from his office visited the radiopharmaceutical waste storage area weekly and carried a survey instrument. However, he indicated no measurements of radiation levels were performed in or around the radiopharmaceutical waste storage facility (restricted and unrestricted areas).

Therefore, NRC concludes that the violation did occur as stated in the Notice.

Restatement of Violation I.G.

10 CFR 35.22(a)(2) requires the Radiation Safety Committee to meet at least quarterly.

Contrary to the above, the Radiation Safety Committee failed to meet from December 20, 1989 through April 4, 1990, and from December 19, 1990 through April 3, 1991, periods in excess of one calendar quarter.

Summary of Licensee's Response to Violation I.G.

The licensee stated that the Radiation Safety Committee met four times each year during 1989 and 1990, but failed to meet during each calendar quarter which constituted only a deviation of 15 days.

NRC Evaluation of the Licensee's Response

10 CFR 35.22(a)(2) requires the Radiation Safety Committee meetings be held at least quarterly. The periods of time between meetings (from December 20, 1989 through April 4, 1990, and December 19, 1990 through April 3, 1991) are in excess of one calendar quarter.

Therefore, the NRC concludes that the violation did occur as stated in the Notice.

Restatement of Violation I.I.1.

Condition 20 of License No. 52-01946-07 requires that the licensee conduct its program in accordance with the statements, representations, and procedures described in the licensee's application dated August 29, 1988.

Attachment 8.2 of the licensee's application states that candidates for use of radioactive materials in research should submit evidence of training and experience equivalent to 40 hours of academic radiation disciplines including specific subjects.

Contrary to the above, on September 19, 1990, November 8, 1990 and November 20, 1990, candidates for use of licensed materials in research were approved without submitting evidence of training and experience equivalent to 40 hours of academic radiation disciplines.

Summary of Licensee's Response to Violation I.I.1

The licensee stated that most of the radioisotope users have been on-campus for more than 10 years and have taken courses and on-the-job training in radioisotope handling at the Medical Sciences Campus, but no certificates have been issued, and that in the past it was not required to submit evidence of training.

NRC Evaluation of Licensee's Response

The licensee's procedures as written in Attachment 8.2 of the licensee's application dated August 29, 1988, require research



candidates for use of radioactive material to submit evidence of training and experience equivalent to 40 hours of academic radiation disciplines including specific subjects. The researchers who were approved on September 19, 1990, November 8, 1990 and November 30, 1990, were new candidates for use of materials, and no evidence of training and experience equivalent to 40 hours of academic radiation disciplines, including specific subjects, was submitted prior to their approvals.

Therefore, NRC concludes that the violation did occur as stated in the Notice.

#### Restatement of Violation I.I.4

Condition 20 of License No. 52-01946-07 requires that the licensee conduct its program in accordance with the statements, representations, and procedures described in the licensee's application dated August 29, 1988.

Attachment 10.12 of the licensee's application states that the licensee will establish and implement the model procedure for area surveys that was published in Appendix N to Regulatory Guide 10.8, Revision 2 (August 1987). Item 1.e (Records) of Appendix N specifies that the licensee will keep records which include actions taken in the case of excessive dose rates or contamination and follow up survey information.

Contrary to the above, as of June 18, 1991, records of surveys performed in the research laboratories did not indicate the actions taken and followup survey information for cases involving excessive dose rates or contamination.

#### Summary of Licensee's Response to Violation I.I.4

The licensee partially admitted the violation and stated that when high dose rates or contamination were detected, areas were initially surveyed and decontaminated until dose rates reached approved levels; however, the licensee failed to keep records of the action taken.

#### NRC Evaluation of Licensee's Response

This citation was not for failing to survey or decontaminate areas, but rather for not retaining records of actions taken and follow up survey information for cases involving excessive dose rates or contamination. The licensee admitted that it had not kept these records.

Therefore, NRC concludes that the violation did occur as stated in the Notice.

Restatement of Violation I.L.

10 CFR 35.59(d) requires the licensee to retain leak test records for five years which contain specified information for all sources tested.

Contrary to the above, as of June 17, 1991, records of leak tests were not maintained for sixteen Cesium 137 sources received in August 1990.

Summary of Licensee's Response to Violation I.L.

The licensee stated that the sealed sources were leak tested as required, but the new cesium 137 sources were not clearly identified in the form used as a permanent record.

NRC Evaluation of Licensee's Response.

This citation was not for failing to leak test sealed sources, but rather for not maintaining leak test records as required. The licensee's leak test records did not identify the sources tested and did not contain the specified information on the sixteen cesium 137 sources received in August 1990.

Therefore, NRC concludes that the violation did occur as stated in the Notice.

Summary of Licensee's Request for Mitigation.

The licensee stated that, as of September 27, 1991, more than 75 percent of the violations had already been corrected, and that in order to develop a stronger Radiation Safety Program, the University of Puerto Rico has initiated the acquisition of personnel, equipment and materials. The licensee requested that, for these reasons, the NRC consider reducing the amount of the proposed civil penalty.

NRC Evaluation of Licensee's Request for Mitigation.

Corrective actions are always required for identified violations. As stated in the NRC letter dated August 28, 1991, neither escalation nor mitigation was warranted for corrective action to prevent recurrence because, at the time of the enforcement conference, even though immediate corrective actions had been taken for some of the violations, adequate long-term corrective

action to address the root cause issues had not been formulated and implemented. Therefore, NRC concludes that the licensee has not provided a sufficient basis for mitigation of the proposed civil penalty.

NRC Conclusion

The NRC has concluded that, with the exception of Violation I.D., the violations occurred as stated, and that the licensee has not provided a sufficient basis for any mitigation of the civil penalty. However, based on the withdrawal of Violation I.D., a reduction of the civil penalty in the amount of \$420 is warranted.

Consequently, a civil penalty in the amount of \$5,830 should be imposed.

ENCLOSURE 2

EVALUATION OF VIOLATIONS

NOT ASSESSED A CIVIL PENALTY

Of the violations not assessed a civil penalty, the licensee admitted nine of the 13 violations (Violations II.3.(a), II.3.(b), II.4., III.A., III.B., IV.A.1., IV.A.2., IV.A.3., and IV.B.), denied one violation in its entirety (Violation III.C.), and admitted in part three violations (Violations II.1., II.2., and IV.A.4.).

Restatement of Violation III.C.

10 CFR 20.203(e) requires that rooms or areas in which specified amounts of licensed material are used or stored be conspicuously posted "Caution - Radioactive Material."

Contrary to the above, on June 20, 1991, a refrigerator which contained eleven vials of carbon 14 ranging from 50 to 386 microcuries per vial and which was located in an open hallway was not posted as required.

Summary of Licensee's Response to Violation III.C.

The licensee denied that posting was required for this refrigerator. The licensee stated that the activities of carbon 14 stored in a refrigerator at the Agricultural Experiment Station and recorded by the inspector were misread on the container labels during the NRC inspection. By checking old papers on the containers, the licensee found that the total activity stored in the refrigerator was less than 0.8 millicuries of carbon 14; therefore, the refrigerator did not require a sign warning "Caution Radioactive Material" in accordance with 10 CFR 20.203(e), which requires posting for more than one millicurie of carbon-14.

NRC Evaluation of Licensee's Response

The inspector agrees that the labels on the containers were difficult to read. Since the licensee was able to check old papers after the inspection and determined that the total activity in the refrigerator was less than 0.8 millicuries, then the refrigerator would not require posting in accordance with 10 CFR 20.203(e).

Accordingly, Violation III.C is withdrawn.

Restatement of Violation II.1.

Condition 15 of License No. 52-01986-04 requires that the licensee conduct its program in accordance with the statements, representations, and procedures described in the licensee's application received November 9, 1989, and letter dated July 24, 1990.

Procedure 5.c. of Item 10 of the licensee's application states that the surface of the source container will be checked for contamination using a cotton swab when initially opening packages containing radioactive material.

Contrary to the above, as of June 20, 1991, the surface of source containers received in Room JGD 217 were not being checked for contamination when initially opening packages containing material.

Summary of Licensee's Response to Violation II.1.

The licensee stated that the incoming packages were checked for contamination but negative results were not recorded.

NRC Evaluation of Licensee's Response

Based on a telephone conversation between the Radiation Safety Officer and an inspector on November 4, 1991, it is our understanding that there was a misunderstanding as to what constituted the required surveys on incoming packages. The researcher in Room JGD 217 indicated to the Radiation Safety Officer that he was performing the required surveys and not recording negative results. However, the Radiation Safety Officer indicated that the researcher had been surveying the exterior surface of the incoming packages for radiation levels but had not performed the required checks for contamination on the surface of the source containers when initially opening the packages.

Therefore, NRC concludes that the violation did occur as stated in the Notice.

Restatement of Violation II.2.

Condition 15 of License No. 52-01986-04 requires that the licensee conduct its program in accordance with the statements, representations, and procedures described in the licensee's application received November 9, 1989, and letter dated July 24, 1990.

Procedure 5.d. of Item 10 of the licensee's application states that the Radiation Safety Technician is to be notified upon receipt of material.

Contrary to the above, as of June 20, 1991, the Radiation Safety Technician had not been notified of all receipt of material in Rooms JGD 107 and JGD 216.

Summary of Licensee's Response to Violation II.2.

The licensee stated that the violation was due to a misunderstanding of the use of the form employed to notify the RSO. The licensee stated that the personnel in Room JGD 107 always notified the Radiation Safety Technician (RST) by telephone of receipt of material and the personnel in Room JGD 216 always notified the RST in writing and not by telephone. The licensee also stated that the notification forms are available in the RST's files.

NRC Evaluation of Licensee's Response

The information provided to the NRC inspectors concerning not notifying the RST was obtained through interviews with personnel in the laboratories during the inspection. There is a possibility that other personnel in the laboratory who were not present during the inspection may have notified the RST of receipt of these materials, and since the RST has forms in his files which demonstrate that he was notified, we agree with the licensee's conclusion that Item II.2. did not constitute a violation.

Accordingly, Violation II.2 is withdrawn.

Restatement of Violation IV.A.4.

Condition 20 of License No. 52-10510-04 requires that the licensee conduct its program in accordance with the statements, representations, and procedures described in the licensee's application dated August 9, 1983, which includes the licensee's Radiation Safety Regulations Manual, and letter dated April 11, 1986.

The licensee's letter dated April 11, 1986, states that the Radiation Safety Committee will meet no less than once each fiscal year.

Contrary to the above, the Radiation Safety Committee failed to meet during the fiscal year 1989.

Summary of Licensee's Response to Violation IV.A.4.

The licensee stated that the Radiation Safety Committee met at least once each year, including 1989; however no record of the meeting held in 1989 had been kept.

NRC Evaluation of Licensee's Response

At the time of the inspection, there were minutes for other Radiation Safety Committee meetings, but no minutes for a meeting held during fiscal year 1989. Also, through interviews with the Radiation Safety Officer, it was determined that no Radiation Safety Committee meeting was held during fiscal year 1989.

Therefore, NRC concludes that the violation did occur as stated in the Notice.

NRC Conclusion

The NRC concludes that the licensee provided an adequate basis for withdrawal of Violations II.2. and III.C. of the Notice of Violation dated August 28, 1991. Consequently, Violations II.2 and III.C are withdrawn. However, the NRC concludes that the licensee did not provide an adequate basis for withdrawal of any additional violations. Therefore, the NRC concludes that Violations II.1. and IV.A.4. occurred as stated in the Notice.

II.B. MATERIALS LICENSEES, SEVERITY LEVEL III VIOLATION,  
NO CIVIL PENALTY





UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV  
811 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-8084

MAR 17 1992

Docket No. 30-06415  
License No. 42-08456-02  
EA 92-031

Century Inspection, Inc.  
ATTN: David McCorkle, President  
P.O. Box 59126  
10931 Indian Trail  
Dallas, Texas 75229-1126

Gentlemen:

SUBJECT: NOTICE OF VIOLATION (NRC INSPECTION REPORT NO. 30-06415/92-01)

This is in reference to NRC's February 13, 1992, inspection at your offices in Dallas, Texas. This inspection, which was described in a report issued on February 21, 1992, focused on the circumstances surrounding the failure of a Century Inspection radiographer to comply with all radiation safety requirements while performing radiography in a fabrication shop near Prudhoe Bay, Alaska, on November 27, 1991. An enforcement conference was conducted in NRC's Arlington, Texas offices on March 10, 1992, to discuss an apparent violation of NRC requirements disclosed by this inspection and to assist NRC in deciding what enforcement action should be taken.

On January 15, 1992, Century Inspection informed NRC's Region IV office by telephone that a 15-rem radiation exposure had been indicated on an employee's film badge. On January 16, 1992, Century Inspection informed NRC that it appeared that the exposure had occurred to the badge but not to the individual because the individual had not been wearing the badge at the time the exposure occurred (during radiographic operations on November 27, 1991). Subsequent reviews of this event by both Century Inspection and by NRC revealed that the radiographer in this case was not wearing a film badge, direct-reading pocket dosimeter or alarm ratemeter while conducting radiography. This is a violation of the requirements of 10 CFR 34.33(a), which requires that all three be worn at all times during radiography operations. From all indications, the failure to wear a film badge and pocket dosimeter was inadvertant; the radiographer left both in his arctic gear after entering the fabrication shop. In the case of the alarm ratemeter, the radiographer taped his to his radiation survey instrument, apparently because he believed this afforded adequate protection.

NRC recognizes that in this case, these failures did not have an impact on the safety of the radiography activities. However, because these devices are important to safety -- the alarm ratemeter and the pocket dosimeter are there to alert radiographers to unexpectedly high radiation fields and to prevent radiographers from receiving significant exposures -- NRC considers these failures to be a significant regulatory concern. Therefore, this violation has been classified at Severity Level III.

In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), a civil penalty is considered for a Severity Level III violation. However, after consultation with the Director, Office of Enforcement, I have decided that a civil penalty will not be proposed in this case because: this violation appears inconsistent with Century Inspection's past regulatory performance, which has been good; because it does not appear to be indicative of a broader compliance problem with Century Inspection personnel; and because Century Inspection took both prompt action to address this violation and actions to preclude a recurrence.

NRC views Century Inspection's actions in response to this matter positively. In addition to making prompt notification to NRC once you became aware of the film badge results, you arranged for a medical evaluation of the radiographer to assure that he had not been exposed to significant radiation levels, took immediate action to warn other employees against violations of this type, conducted a safety audit of your radiography activities in Alaska, and purchased belts to hold personal radiation monitoring equipment in order to minimize the possibility of inadvertent failures of this type.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice of Violation (Notice) when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. To the extent that you have already provided this information in previous correspondence, you may make reference to such correspondence. 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 and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,

  
Robert D. Martin  
Regional Administrator

Enclosure:  
Notice of Violation

cc:  
State of Texas Radiation Control Program Director  
State of Alaska Radiation Control Program Director

NOTICE OF VIOLATION

Century Inspection, Inc.  
Dallas, Texas

Docket No. 30-06415  
License No. 42-08456-02  
EA 92-031

During an NRC inspection (investigation) conducted on February 13, 1992, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), the violation is listed below:

10 CFR 34.33(a) states, in part, that the licensee may not permit any individual to act as a radiographer or a radiographer's assistant unless, at all times during radiographic operations, the individual wears a direct-reading pocket dosimeter, an alarm ratemeter, and either a film badge or thermoluminescent dosimeter (TLD).

Contrary to the above, on November 27, 1991, at a facility near Prudhoe Bay, Alaska, a licensee radiographer did not wear a direct reading pocket dosimeter, an alarm ratemeter or a film badge while conducting radiographic operations.

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

Pursuant to the provisions of 10 CFR 2.201, Century Inspection is hereby required to submit a written statement or explanation to the Regional Administrator, Region IV, with a copy to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the viola. (2) the corrective steps that have been taken and the results achieved, (3) corrective steps that will be taken to avoid further violations, and (4) estimate when full compliance will be achieved. If an adequate reply is not received within the time specified in this Notice, an order may be issued to show cause why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Dated at Arlington, Texas  
this 17th day of March 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION II  
101 MARSHALL STREET, N.W.  
ATLANTA, GEORGIA 30323

JAN 29 1992

Docket No. 70-143  
License No. SNM-144  
EA 91-186

Nuclear Fuel Services, Inc.  
ATTN: Mr. Charles R. Johnson  
President  
Post Office Box 337, MS 123  
Erwin, Tennessee 37650

Gentlemen:

SUBJECT: NOTICE OF VIOLATION (NRC INSPECTION REPORT NO. 70-143/91-31)

This refers to the Nuclear Regulatory Commission (NRC) inspection conducted by Mr. S. Burris on October 26 - December 4, 1991, at the Nuclear Fuel Services facility located in Erwin, Tennessee. The inspection included a review of the facts and circumstances related to an event that occurred on November 8, 1991, and involved the transfer of a raffinate solution containing uranium from a favorable to an unfavorable geometry vessel without verifying that the uranium concentration of the raffinate solution was safe for such a transfer. The report documenting this inspection was sent to you by letter dated December 20, 1991. As a result of this inspection, a violation of NRC requirements was identified. An enforcement conference was held on January 3, 1992, in the NRC Region II office to discuss the violation, its cause, and your corrective action to preclude recurrence. The letter summarizing this conference was sent to you on January 15, 1992.

The violation described in the enclosed Notice of Violation (Notice) involved the inadvertent transfer of a raffinate solution containing a higher than normal concentration of uranium from raffinate columns to a storage tank and subsequently to the Waste Water Treatment Facility (WWTF) on November 8, 1991. An accountability sample result found that the value of the raffinate solution that was transferred on November 8, 1991, was 0.0324 gU/l which exceeded the established administrative limit of 0.03 gU/l.

The safety significance of this event is based on the fact that administrative nuclear safety controls failed. The administrative nuclear safety controls in this case consisted of two required independent verifications of the laboratory analysis results for the raffinate solution which would permit the transfer to the WWTF if the solution was within the required limits. The procedure required both the operator and the supervisor to independently review the analysis to determine if the solution met the limits for discharge to an unfavorable geometry vessel. In this particular event the wrong sample number was inadvertently selected and reviewed by the operator and subsequently verified by the supervisor. Sample number 899500, the sample number for a previous raffinate solution batch that had been analyzed and found to be within discharge limits on November 7, 1991, was inadvertently reviewed instead of sample number 899950 which was the sample number for the raffinate solution

JAN 29 1992

being processed for discharge on November 8, 1991. The analysis for sample number 899950 indicated that the solution exceeded the control limit of 0.03 gU/l for transfer to an unfavorable geometry vessel, whereas the analysis for sample number 899500 was within the control limit. Both the operator and supervisor verified the analysis for sample number 899500 as being within control limits, and the solution represented by sample number 899950 was subsequently discharged to the WWTF after drawing an accountability sample. A subsequent review of that accountability sample revealed that the raffinate solution discharged on November 8, 1991, exceeded the control limit of 0.03 gU/l.

The root cause of this event was the design of the system used by operations personnel in calling up and verifying sample numbers. This event clearly highlights a system deficiency in that sample results were called up on the system computer screen by sample number but there was no requirement to cross-match sample numbers to information regarding a specific raffinate solution being processed. In this case, both the operator and supervisor relied only on the wrong sample number called up on the computer screen without checking against actual log sheets which provided additional identifying information relative to the raffinate solution and its assigned sample number. Although the concentration and quantity of uranium transferred in this event were well below the levels necessary to initiate a criticality, the fact remains that a solution with an unverified concentration of uranium was transferred to an unfavorable geometry vessel. Therefore, this violation has been categorized at Severity Level III because of the failure of the administrative nuclear safety controls that were relied upon to prevent a nuclear criticality event.

In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), a civil penalty is considered for a Severity Level III violation. However, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Materials Safety, Safeguards, and Operations Support, I have decided that a civil penalty will not be proposed in this case. Full mitigation was appropriate for your identification of the event and reporting of the violation. Full mitigation was also warranted for your corrective action to prevent recurrence, including your immediate actions to initiate an investigation and evaluation of the event, re-instructing personnel relative to the importance of ensuring proper verification of sample numbers, a review of other operational systems to determine whether similar problems could occur, and corrective actions to systems with the potential for a similar problem. In addition, consideration was also given to your proposed long term corrective actions that include installation of in-line monitors, human factors evaluations, procedural improvements, and computer hardware and software enhancements. Neither escalation nor mitigation was warranted for the factor of past performance. Two escalated enforcement actions, EA 90-124 and EA 91-004, were issued on March 20, 1991. These escalated enforcement actions addressed two events, the first of which occurred on March 29, 1990, and involved the transfer of a solution containing a high concentration of uranium to a waste collection tank. The second event occurred on November 28, 1990, and involved the transfer of a solution containing a high concentration of uranium to an unfavorable geometry

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tank. Escalation, which is normally considered for previous escalated enforcement actions, was offset because of the significant overall program improvements that have been made at your facility. Specifically, the reconfiguration of the piping system that was accomplished after the November 28, 1990 event which was effective in limiting the potential consequences of the recent event in that the reconfiguration eliminated potential pathways for solutions with high concentrations of uranium to enter unfavorable geometry tanks. Other actions which have resulted from the Performance Improvement Program and have improved criticality safety, including installation of in-line monitors, improved operations and maintenance performance, and recent completion of selective Management Oversight Risk Tree (MORT) analyses, were also considered. The other adjustment factors in the Enforcement Policy were considered, and no further adjustments were appropriate.

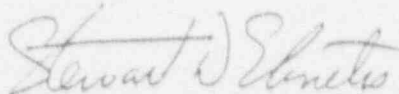
You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to this 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 and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Should you have any questions concerning this letter, please contact us.

Sincerely,



Stewart D. Ebnetter  
Regional Administrator

Enclosure:  
Notice of Violation

cc w/enc1:  
State of Tennessee

NOTICE OF VIOLATION

Nuclear Fuel Services, Inc.  
Erwin, Tennessee

Docket No. 70-143  
License No. SNM-124  
EA 91-186

During an NRC inspection conducted on October 26 - December 4, 1991, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), the violation is listed below:

Condition 9 of Special Nuclear Material License No. 124 (SNM-124), requires that licensed materials be used in accordance with statements, representations, and conditions contained in Section 100 through 500, 700, and 1000 of the application dated August 30, 1976, and supplements thereto.

Section 300, Subsection 376.01, specifies that "Solutions in which it is credible that critical concentrations may accumulate and thus are confined to safe geometry or fixed-poisoned vessels may be released to vessels of unsafe geometry and volume only if: (a) safe concentration is verified by analysis of a representative sample; or (b) the safe geometry is a secondary criticality control and at least two separate stages function between the potential source of fissile material and the unsafe vessel to remove the fissile material."

Section 300, Subsection 376.02, specifies that "It is the foreman's responsibility to ascertain that the concentration is safe before authorizing release to the unsafe geometry and volume."

Contrary to the above, on November 8, 1991, the licensee transferred the contents of raffinate columns T-11, 12, and 13 (safe geometry vessels where it is credible that critical concentrations may accumulate) to Tank T-3 (unsafe geometry vessel) without ascertaining that the raffinate contained a safe concentration that was verified by analysis of a representative sample. Safe geometry was the primary, not secondary criticality control.

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

Pursuant to the provisions of 10 CFR 2.201, Nuclear Fuel Services, Inc. is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D. C. 20555 with a copy to the Regional Administrator, Region II, and a copy to the NFS-Erwin NRC Resident Inspector, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid further violations; and (4) 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 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. Where good cause is shown, consideration will be given to extending the response time. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Dated at Atlanta, Georgia  
this 29th day of January 1992





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

March 5, 1992

Docket No. 030-02539  
License No. 29-11935-01  
EA 92-022

Raritan Bay Medical Center  
Perth Amboy Division  
Attn: Keith McLaughlin  
Chief Executive Officer  
530 New Brunswick Avenue  
Perth Amboy, New Jersey 08861

Dear Mr. McLaughlin:

Subject: NOTICE OF VIOLATION  
(NRC Inspection Report No. 030-02539/92-001)

This letter refers to the NRC inspection conducted on January 30, 1992, at the above mentioned facility in Perth Amboy, New Jersey, of activities authorized by NRC License No. 29-11935-01. The inspection report was sent to you on February 19, 1992. The inspection was conducted to review the circumstances associated with a missing cobalt-60 sealed source, as well as missing cobalt-57 sealed sources (which are regulated by the State of New Jersey) at that facility, as well as your Old Bridge facility. This loss was identified by your staff during a routine inventory of your source storage area and reported to the NRC. On February 26, 1992, an enforcement conference was conducted with Ms. M. Pagano and other members of your staff to discuss the loss, the related violation, its causes and your corrective actions. A copy of the Enforcement Conference Report is enclosed.

The loss of the radioactive material was discovered when the required routine physical inventory of radioactive materials was conducted at the facility. Although the sources were being kept by the licensee in lead storage containers in a locked storage area, the inventory revealed that the sources, and their lead storage containers, were missing. The sources had been last identified as being in your possession on August 8, 1991, during a previous routine physical inventory. Although immediate actions were taken, upon identification, to attempt to locate the radioactive material, those efforts were unsuccessful.

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The apparent cause of this loss was the lack of proper security of the material to prevent its unauthorized removal in that the sources were stored in the Nuclear Medicine Hot Laboratory, with the key to the laboratory located in an unsecured location (hanging on a cord) in the adjacent scan room, thereby allowing access to the room. This lack of security constitutes a violation of NRC requirements and is described in the enclosed Notice.

This violation demonstrates a lack of adequate control of radioactive material that you were authorized to possess under the terms of your license. The failure to maintain such control could have resulted in misuse of the material by, and could have created a potential for an excessive exposure to, members of the public. With respect to the material that was lost, the loss is significant because the sources have the potential to inflict radiation injury on any person who kept the unshielded source close to the body a long period of time. In view of the above, the violation is classified at Severity Level III in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (Enforcement Policy) (1991).

The NRC recognizes that subsequent to the inspection, prompt and extensive actions were initiated to correct the violation and effect improvements in the control of these sources. These actions, which were described either during the inspection or at the enforcement conference, included: (1) immediate attempts to locate the sources, including a search of the hospital facility, a review of the hospital disposal records, and a report of the loss to the Perth Amboy Police who performed a joint investigation with the Hospital Security Director; (2) purchase of a combination safe for storage of dose calibrator sources not in use; (3) removal of the master key from housekeeping; (4) changing the locks on the hot lab and scan room doors; and (5) placing the hot lab key in a locked box in the scan room.

Normally, a civil penalty is issued for such a violation in order to emphasize the importance of implementing long-lasting corrective actions to ensure that (1) licensed activities are conducted safely and in accordance with requirements; and (2) licensed materials are properly controlled to prevent their loss or theft. However, after consideration of the escalating and mitigating factors in this case, I have been authorized to issue the enclosed Notice of Violation without a civil penalty in view of your identification and reporting of the issue, your prompt and comprehensive corrective actions, as well as your past good enforcement history. The NRC emphasizes, however, that any similar violations in the future may result in escalated enforcement action.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice of Violation 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 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," Part 2, a copy of this letter and the enclosures will be placed in the NRC's Public Document Room.

The responses directed by this letter and Enclosure 1 are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. 96-511.

Sincerely,



Thomas T. Martin  
Regional Administrator

Enclosures:

1. Notice of Violation
2. Enforcement Conference Report

cc:

Public Document Room (PDR)  
Nuclear Safety Information Center (NSIC)  
State of New Jersey

## NOTICE OF VIOLATION

Raritan Bay Medical Center  
Riverside, New Jersey 08075

Docket No. 030-02539  
License No. 29-11935-01  
EA 92-022

During an NRC inspection conducted on January 30, 1992, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), the violation is set forth below:

- A. 10 CFR 20.207(a) requires that licensed materials stored in an unrestricted area shall be secured against unauthorized removal from the place of storage. 10 CFR 20.207(b) requires that licensed materials in an unrestricted area and not in storage shall be tended under the constant surveillance and immediate control of the licensee. As defined in 10 CFR 20.3(a)(17), an unrestricted area is any area access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials.

Contrary to the above, on at least one occasion between August 8, 1991 and November 14, 1991, licensed material consisting of a 19.3 microcurie cobalt-60 sealed source, stored in the Nuclear Medicine Hot Laboratory, an unrestricted area, was not secured against unauthorized removal from the place of storage, and was not under constant surveillance and immediate control of the licensee. Specifically, the key to the Nuclear Medicine Hot Laboratory was located in a visible location in the scan room, thereby allowing access to the hot laboratory, and on November 14, 1991, the licensee reported to the NRC that the 19.3 microcurie cobalt-60 sealed source was lost.

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

Pursuant to the provisions of 10 CFR 2.201, Raritan Bay Medical Center (Licensee) is hereby required to submit a written statement or explanation to the Regional Administrator, Region I, with a copy to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the Regional Administrator, Region I, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reasons for the violation, or if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, and (3) the corrective steps that will be taken to avoid further violations, and (4) 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. Where good cause is shown, consideration will be given to extending the response time. Under the authority of Section 182 of the Atomic Energy Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Dated at King of Prussia, Pennsylvania  
this 5<sup>th</sup> day of March 1992



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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

JAN 27 1992

Docket No. 40-8027  
License No. SUB-1010  
EA 91-153

Sequoyah Fuels Corporation  
(Subsidiary of General Atomics)  
ATTN: James J. Sheppard  
President  
P.O. Box 610  
Gore, Oklahoma 74435

Gentlemen:

SUBJECT: NOTICE OF VIOLATION (NRC INSPECTION REPORT NOS. 40-8027/90-04,  
90-05, 90-06, 90-07, 91-01, 91-02, 91-05, 91-09, and 91-10)

This is in reference to several NRC inspections following Sequoyah Fuels Corporation's August 22, 1990 report to NRC that uranium-contaminated water was found in an open excavation adjacent to the solvent extraction building at the Sequoyah Facility. The inspections referenced in this document took place between August 1990 and July 1991.

Violations of NRC requirements identified during these and other inspections, as well as violations and concerns developed during investigations conducted by NRC's Office of Investigation (OI), resulted in an Order Modifying License & Demand For Information (Order) being issued to Sequoyah Fuels Corporation (SFC) on October 3, 1991.

Several violations identified in other inspection reports resulted in Notice of Violations to which SFC was required to respond. However, as indicated in the inspection reports referenced in this document, NRC deferred issuing citations for certain apparent violations of NRC requirements and deferred a decision on enforcement action while OI's investigations were in progress. These apparent violations of NRC requirements were described in NRC inspection reports 40-8027/90-04, 90-05, 90-06, 90-07, 91-01, 91-02, 91-05, 91-09, and 91-10, which were issued, respectively, on October 11, 1990; November 20, 1990; February 21, 1991; March 1, 1991; April 5, 1991; May 3, 1991; June 11, 1991; July 1, 1991; and July 22, 1991.

These violations involved failures on the part of SFC to conduct radiation surveys as necessary, to inform and instruct individuals working in restricted areas of the presence of radioactive materials and the precautions to be taken, to exercise adequate radioactive contamination controls over materials being taken from the facility, to report events to NRC in accordance

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with established requirements, to establish procedures for all activities involving radioactive or hazardous materials, to follow procedures that had been established, and to comply with license conditions and requirements designed to ensure the protection of the environment.

In the aggregate these violations indicate significant weaknesses in SFC's radiation safety and environmental protection programs and a failure on the part of the responsible SFC managers to ensure that such programs were sufficient to ensure compliance with all NRC requirements and the conditions of SFC's NRC license. Therefore, the violations in the enclosed Notice of Violation 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," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), a civil penalty is considered for a Severity Level III problem. However, after consultation with the Director, Office of Enforcement, the Deputy Executive Director for Nuclear Materials Safety, Safeguards and Operations Support, and the Commission, I have decided that a civil penalty will not be proposed in this case.

This decision is based on the actions that SFC has taken to remedy these weaknesses, the significant actions that SFC is now required by the October 3, 1991, Order to take to improve the radiation safety and environmental protection programs at the Sequoyah Facility, and the fact that SFC is prevented from operating the facility until many of these improvements are in place.

SFC is required to respond to this letter and enclosed Notice of Violation (Notice) and should follow the instructions specified in the Notice when preparing its response. In its response, SFC should document the specific actions taken and any additional actions it plans to prevent recurrence. In documenting the corrective actions for any particular violation, SFC may make reference to information in other documents, including information provided to NRC in response to other Notices of Violation issued since August 1990, and information provided to NRC in response to the October 3, 1991 Order. Given the significant efforts underway to respond to the Order, NRC is extending the normal 30-day response to 60 days in this case. 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.

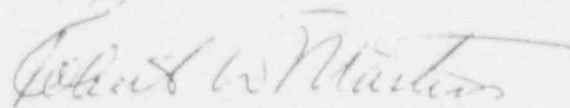
Some issues identified as apparent violations in the referenced NRC inspection reports were intentionally not included in this Notice of Violation and will not be cited. These include the apparent failure to clearly delineate by procedure the responsibility for identifying changing conditions such that a change to a Hazardous Work Permit is necessary (Inspection Reports 90-05 and 91-02), the apparent failure to follow the provisions of Procedure G-160 (Inspection Report 90-06), the apparent failure to instruct a contract employee

in accordance with 10 CFR 19.12 (Inspection Report 91-01), and the apparent failure to take proper mitigating actions in response to sample results that exceeded action levels (Inspection Report 91-05). These issues were not included in the Notice because, upon review, they did not appear to involve violations of NRC requirements.

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

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Sincerely,



Robert D. Martin  
Regional Administrator

Enclosure:  
Notice of Violation

cc:  
Oklahoma Radiation Control Program Director

Diane Curran, Esq.  
Harmon, Curran & Tousley  
2001 S Street, N.W., Suite 430  
Washington, D.C. 20009

Brita Haugland-Cantrell, Esq.  
2300 North Lincoln Boulevard  
112 State Capitol Building  
Oklahoma City, OK 73105-4894

James Wilcoxon, Esq.  
Wilcoxon & Wilcoxon  
Attorney for Cherokee Nation  
P.O. Box 357  
Muskogee, OK 74402-0357

Newman & Holtzinger, P.C.  
ATTN: Maurice Axelrad  
1615 L Street, N.W.  
Suite 1000  
Washington, D.C. 20036



NOTICE OF VIOLATION

Sequoyan Fuels Corporation  
(Subsidiary of General Atomics)  
Gore, Oklahoma

Docket No. 40-8027  
License No. SUB-1010  
EA 91-153

During NRC inspections conducted between August 27, 1990, and June 14, 1991, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), the violations are listed below:

- A. 10 CFR 20.201(b) requires that each licensee make such surveys as may be necessary to comply with the requirements of Part 20 and which are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As defined in 10 CFR 20.201(a), "survey" means an evaluation of the radiation hazards incident to the production, use, release, disposal or presence of radioactive materials or other sources of radiation under a specific set of conditions.
1. Contrary to the above, between August 1 and 21, 1990, during excavation activities adjacent to the solvent extraction (SX) building which placed individuals in close proximity to and in contact with uranium-contaminated soil and water, the licensee did not make such surveys to assure compliance with the requirements of Part 20 and which were reasonable under the circumstances to evaluate the extent of radiation hazards that may be present, as follows:
    - a. The licensee did not make surveys to assure compliance with 10 CFR 20.203(e)(2), which requires areas in which natural uranium is used or stored in certain quantities to be posted as areas containing radioactive materials. Specifically, the licensee did not evaluate the results of sample analyses to determine uranium quantities in the excavation and thus to determine whether the area should be posted.
    - b. The licensee did not make surveys to assure compliance with 10 CFR 20.203(b), which requires certain areas to be posted as radiation areas. Specifically, the licensee did not make radiation surveys of the walls of the excavation to determine radiation levels and thus whether the area should be posted as a radiation area.

(Reference NRC Inspection Reports 40-8027/90-05 and 90-06, dated November 20, 1990, and February 21, 1991, respectively)
  2. Contrary to the above, on June 5, 1991, during work in an enclosure in which airborne uranium was present, the licensee did not make surveys adequate to assure compliance with 10 CFR 20.103(a)(1), which limits the amount of licensed material an individual may inhale or absorb through the skin. Specifically, the licensee did not make

surveys to determine airborne radioactivity levels during work in the Depleted Uranium Tetrafluoride (DUF4) facility. (Reference NRC Inspection Report 40-8027/91-10 dated July 22, 1991.)

3. Contrary to the above, between October 27, 1988, and September 20, 1990, the licensee did not make surveys to assure compliance with 10 CFR 20.106, which limits releases of licensed material to unrestricted areas. Specifically, the licensee did not evaluate the migration of licensed materials to unrestricted areas, despite the fact that licensee managers and staff were aware that environmental contamination existed under and around the SX and main process buildings. As a result, licensed materials were found to have migrated into unrestricted areas through the bedding surrounding underground piping. (Reference NRC Inspection Report 40-8027/90-07 dated March 1, 1991.)
- B. 10 CFR 19.12 states, in part, that all individuals working in any portion of a restricted area shall be kept informed of the storage, transfer, or use of radioactive materials in such portions of the restricted area; shall be instructed in the health protection problems associated with exposure to such radioactive materials and in the precautions or procedures to minimize exposure; and shall be advised as to the radiation exposure reports which workers may request pursuant to 10 CFR 19.13. Furthermore, 10 CFR 19.12 states that the extent of these instructions shall be commensurate with potential radiological health protection problems in the restricted area.

Contrary to the above, from August 1-31, 1990, at least five individuals who worked on the excavation project in that portion of the restricted area adjacent to the SX building were not informed that radioactive materials were present in the excavation, were not instructed in the health protection problems associated with exposures to such radioactive materials, were not instructed in the precautions or procedures to minimize exposure to those radioactive materials, and were not advised as to the radiation exposure reports which workers may request pursuant to 10 CFR 19.13. (Reference NRC Inspection Report 40-8027/90-06 dated February 21, 1991.)

- C. License Condition 9 of NRC License SUB-1010 authorizes use of licensed materials in accordance with the statements, representations, and conditions contained in Chapters 1 through 8 of the license renewal application dated August 23, 1985, as supplemented.
  1. Chapter 1, Section 1.8 of this license renewal application, as supplemented, states, in part, that articles which may have been contaminated with source uranium materials in the facility shall be disposed of or transferred to persons not licensed to possess radioactive materials when certain release criteria are satisfied and

that generally, the following conditions must be met: surveys of accessible surfaces by Sequoyah facility personnel verify that the beta-gamma radiation is not in excess of one millirad per hour with an average not in excess of 0.2 millirad per hour as measured by an open-window beta-gamma survey meter with a window thickness of not more than seven milligrams per square centimeter.

Contrary to the above, between October 27, 1988, and November 28, 1990, Sequoyah Facility personnel did not perform surveys of accessible surfaces of articles to verify that the beta-gamma radiation was not in excess of the limits specified. Consequently, articles that had been used in the SX excavation activities and that were contaminated to a level of at least 8 millirad per hour were released from the facility and were found at a private residence offsite. (Reference NRC Inspection Report 40-8027/90-06 dated February 21, 1991.)

2. Chapter 3, Section 3.3.4.7 of this license renewal application as supplemented, states, in part, that decontamination shall be performed on personal clothing, when leaving restricted areas if contamination levels exceed a total of 100 dpm/100 cm<sup>2</sup>.

Contrary to the above, on June 5, 1991, an SFC employee left the site and went home with a contaminated wristwatch that SFC personnel later surveyed and measured 380 dpm of alpha activity on contact, and 4000 dpm of beta activity on contact (both readings were under the probe face, an area of approximately 15 cm<sup>2</sup>). (Reference NRC Inspection Report 40-8027/91-10 dated July 22, 1991.)

3. Section 2.7.1 in Chapter 2 of this license renewal application, as supplemented, states, in part, that it shall be the responsibility of the Senior Vice President to see that written operating procedures are established, maintained, and adhered to for all operations and safety-related activities involving source or hazardous materials.
  - a. Contrary to the above, the Senior Vice President did not see that written operating procedures were established for all operations and safety-related activities involving source or hazardous waste materials. Specifically, as of October 1, 1990, SFC did not have adequate written operating procedures to prevent SFC personnel from using specific metals in areas of the plant that were not intended for their use. As a result, a monel valve stem, which had incorrectly been used in the digestion area, failed on September 27, 1990, spraying a worker in the face with a solution containing source and hazardous materials. (Reference NRC Inspection Report 40-8027/90-05 dated November 20, 1990.)

- b. Contrary to the above, the Senior Vice President did not see that written operating procedures were adhered to for all operations and safety-related activities involving source or hazardous materials. Specifically:

- (1) Section 4.0 of Procedure G-113, "Non-Routine Handling of Radioactive Materials," requires that a full face respirator be used in the nonroutine handling of yellowcake.

Contrary to the above, on November 23, 1990, a member of the licensee's staff did not wear a full face respirator during the handling of yellowcake, when performing nonroutine work to unclog the feed conveyor that transports yellowcake from the sampling plant to the digestion area. (Reference NRC Inspection Report 40-8027/90-06 dated February 21, 1991.)

- (2) Sections 4.3.1 and 4.3.2 of Procedure G-114, "Change Room Procedure," require, in part, that workers monitor at the change room frisker station prior to exiting the change room.

Contrary to the above, on December 1, 1990, two workers did not monitor at the change room frisker station prior to exiting the change room. The radiation detector had malfunctioned and was turned off. (Reference NRC Inspection Report 40-8027/90-06 dated February 21, 1991.)

- (3) Section 2.6 of Procedure G-304, "Hazardous Work Permits," requires, in part, that all personnel must be cognizant of present conditions and report any changes that affect permit conditions immediately to the shift supervisor and to Health and Safety. Also, Section 4.1.4 requires that a copy of the HWP be at the work site.

Contrary to the above, on June 5, 1991, two workers changing out filters in the DUF4 facility encountered changes to expected working conditions that affected HWP clothing requirements, but did not report the changes to the shift supervisor or to Health and Safety. Also, a copy of the HWP was not at the work site. (Reference NRC Inspection Report 40-8027/91-10 dated July 22, 1991.)

- (4) Section 3.3.2 of Procedure HS-506, "Laundry Facility Operations," requires that approximately two pieces of

protective clothing per dryer load be monitored for fixed contamination.

Contrary to the above, as of June 4, 1991, protective clothing had not been routinely monitored for contamination for a period of about a year. (Reference NRC Inspection Report 40-8027/91-10 dated July 22, 1991.)

4. Chapter 2, Section 2.2 of the license renewal application, as supplemented, states in part, that the Manager, Health and Safety shall be responsible for developing and implementing programs, procedures, and guidance in the functional area of health physics.

- a. Contrary to the above, as of June 5, 1991, the Manager, Health and Safety, did not develop and implement programs, procedures, and guidance in the functional area of health physics. Specifically, no programs, procedures or guidance existed to:

- (1) Prevent the spread of radioactive contamination by personnel exiting areas of higher contamination to areas of lower contamination.
- (2) Describe when and how workers should wear and remove protective clothing to prevent both skin contamination and the resuspension of loose contamination on protective clothing.
- (3) Describe when and how temporary enclosures should be used for work having a potential to generate airborne radioactive material.

(Reference NRC Inspection Reports 40-8027/91-09 and 91-10 dated July 1 and July 22, 1991, respectively)

- b. Contrary to the above, as of May 17, 1991, the Manager, Health and Safety, had not developed procedures or guidance that addressed beta-gamma contamination limits for the controlled and semi-controlled areas of the plant inside the restricted area, even though SFC had identified this as a problem in early summer 1990. (Reference NRC Inspection Report 40-8027/91-09 dated July 1, 1991.)

- D. 10 CFR 20.409(b) states, in part, that when a licensee is required pursuant to 10 CFR 20.405 to report to the Commission any exposure of an individual to radiation or radioactive material, the licensee shall also notify the individual, and states that such notice shall be transmitted at a time not later than the transmittal to the Commission.

Contrary to the above, on October 9, 1990, and as amended on November 9 and 30, 1990, the licensee reported, pursuant to 10 CFR 20.405, exposures to 43 individuals but failed to notify at least 21 of said individuals of their exposures at the time the notification was transmitted to the Commission. Notifications to these individuals were transmitted approximately 2 months later. (Reference NRC Inspection Report 40-8027/90-06 dated February 21, 1991.)

- E. 10 CFR 20.403(b) states, in part, that each licensee shall, within 24 hours of discovery of the event, report any event involving licensed material possessed by the licensee that may have caused or threatens to cause damage to property in excess of \$2000.

Contrary to the above, on August 17, 1990, the licensee did not report, within 24 hours, the discovery that the soil around the SX building was significantly contaminated with licensed material, to the extent that a reasonable estimate of the costs of characterization and remediation clearly threatened to exceed \$2000. (Reference NRC Inspection Report 40-8027/90-05 dated November 20, 1991.)

This is a repeat violation.

Collectively, this is a Severity Level III problem (Supplements IV and VI).

Pursuant to the provisions of 10 CFR 2.201, Sequoyah Fuels Corporation is hereby required to submit a written statement or explanation to the Regional Administrator, Region IV, with a copy to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, within 60 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) 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 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. Where good cause is shown, consideration will be given to extending the response time. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Dated at Arlington, Texas  
this 27th day of January 1992

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11. ABSTRACT (200 words or less)

This compilation summarizes significant enforcement actions that have been resolved during one quarterly period (January - March 1992) and includes copies of letters, Notices, and Orders sent by the Nuclear Regulatory Commission to 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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