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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

February 19, 1997

The Honorable Joseph M. McDade  
Chairman, Subcommittee on Energy  
and Water Development  
Committee on Appropriations  
United States House of Representatives  
Washington, D.C. 20515

Dear Mr. Chairman:

In accordance with the directions in House Appropriations Committee Report 99-195, I am submitting the U.S. Nuclear Regulatory Commission's report for calendar year 1996 on changes to operating nuclear power plants that were imposed by the Commission or its staff. The report covers changes to the systems, structures, components, or design of operating nuclear power plants or the procedures and organizations required to implement them.

NRC issues documents that licensees are required to follow, such as regulations and orders, and documents that request or recommend action, such as bulletins, regulatory guides, generic letters, and policy statements. If certain recommendations are not adopted and NRC has evidence public health and safety are not adequately protected or a licensee is not in compliance with the provisions of its license, the agency will impose the recommendations as requirements on licensees.

During calendar year 1996, NRC issued seven orders to licensees. Five orders involved the approval of licensee restructuring. Two orders directed the completion of formal actions prior to the restart of the Millstone Nuclear Power Station.

NRC issued three bulletins in which the staff recommended that operating nuclear power plant licensees take certain actions and required that licensees submit written responses to NRC. These bulletins discussed control rod insertion problems, the movement of heavy loads over safety equipment, and the potential plugging of emergency core cooling suction strainers.

The staff issued six generic letters and two supplements to generic letters issued in previous years. These generic letters discussed several issues including the testing of safety-related logic circuits, valve mispositioning in pressurized-water reactors, nuclear power plant security requirements, reactor pressure/temperature curves and limits, boraflex degradation in spent fuel pool racks, motor operated valves, and the operability of equipment during design basis events.

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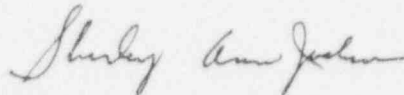
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In addition, all holders of operating licenses for nuclear power reactors received a 10 CFR 50.54(f) letter on the subject "Request for Information Pursuant to 10 CFR 50.54(f) Regarding Adequacy and Availability of Design Basis Information." The letter required information that would provide the NRC added confidence and assurance that nuclear power reactors are operated and maintained within the design bases and any deviations are reconciled in a timely manner.

NRC also published 31 rules in final form, some of which reduced the regulatory burden. Three of these rules imposed changes to the systems, structures, components, or design of operating nuclear power plants or the procedures and organizations required to implement them. These rules discussed environmental regulations, emergency planning regulations, and containment examination programs. NRC issued four regulatory guides which provided acceptable methods for complying with NRC's regulations in certain areas. NRC also issued one policy statement requiring changes to operating nuclear power plant procedures which highlighted licensees' existing obligation to establish and maintain safety-conscious environments in which employees of licensees and licensee contractors are free, and feel free, to raise concerns to their management and to NRC without fear of retaliation.

Sincerely,

A handwritten signature in cursive script, reading "Shirley Ann Jackson".

Shirley Ann Jackson

Enclosure: As stated

cc: Representative Vic Fazio

REPORT ON CHANGES IMPOSED BY THE NUCLEAR REGULATORY COMMISSION  
ON SYSTEMS, STRUCTURES, COMPONENTS, OR DESIGN OF OPERATING  
NUCLEAR POWER PLANTS, OR THE PROCEDURES AND  
ORGANIZATIONS REQUIRED TO IMPLEMENT THEM

1. PURPOSE

The U.S. Nuclear Regulatory Commission (NRC) is submitting this report to inform Congress of changes NRC imposed on operating nuclear power plants during calendar year (CY) 1996.

2. BACKGROUND

The NRC staff reviewed bulletins, generic letters, final rules, regulatory guides, policy statements, the plant-specific backfit tracking system, and orders to determine which changes NRC had imposed in CY 1996 on systems, structures, components, or design of operating nuclear power plants or the procedures and organizations required to implement them. NRC issued documents that licensees are required to follow, such as regulations and orders, and documents that request or recommend action, such as bulletins, regulatory guides, generic letters, and policy statements. Licensees may adopt NRC recommendations, propose alternative measures, or not adopt the recommendations. However, if the recommendations are not adopted and NRC has evidence public health and safety are not adequately protected or a licensee is not in compliance with the provisions of its license, the agency would need to impose the recommendations as requirements on licensees.

3. BULLETINS

During CY 1996, NRC issued four bulletins, three of which affected operating nuclear power plants. In these bulletins, the staff recommended that licensees take certain actions and required that licensees submit written responses to NRC. A summary of the three bulletins follows.

In NRC Bulletin 96-01, "Control Rod Insertion Problems," NRC alerted all holders of pressurized-water reactor operating licenses to problems encountered during recent events in which control rods failed to completely insert upon the scram signal, and requested licensees of Westinghouse-designed plants to assess the operability of control rods, particularly in high burnup fuel assemblies, to ensure that the required shutdown margin is maintained during a reactor trip. This bulletin is an information request under Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR 50.54(f)), and the requested actions support data collection during CY 1996 that will permit the staff to more effectively assess this issue and determine if further regulatory action is needed. The objective of the actions requested in the bulletin is to verify that licensees are complying with the current licensing basis for their facilities with respect to shutdown margin and control rod drop times. The issuance of the bulletin is justified on the basis of the need to verify compliance with the current licensing basis with respect to shutdown margin, control rod drop times, and proper operator action when control rods are not promptly inserted into the reactor. Therefore, no backfit analysis was performed. The reporting burden for this collection of information is estimated to be 240 hours per response. The staff also sought a voluntary submittal of licensee time and costs needed to respond to the bulletin.

ENCLOSURE

In NRC Bulletin 96-02, "Movement of Heavy Loads Over Spent Fuel, Over Fuel in the Reactor Core, or Over Safety-Related Equipment," NRC alerted all holders of operating licenses for nuclear power reactors to the importance of complying with existing regulatory guidelines associated with the control and handling of heavy loads at nuclear power plants while the plant is operating. It also reminded addressees of their responsibilities for ensuring that heavy-load activities carried out under their licenses are performed safely and within the requirements specified under Title 10 of the *Code of Federal Regulations*. In this bulletin NRC also requested that addressees (1) review their plans and capabilities for handling heavy loads while the reactor is at power in accordance with existing regulatory guidelines, (2) determine whether such activities are within the licensing basis or submit a license amendment request, and (3) determine whether changes to plant technical specifications are required to allow the handling of heavy loads over fuel assemblies in the spent fuel pool. Although this bulletin expresses the staff's particular concerns with heavy load movements while the plant is operating (i.e., in modes other than cold shutdown, refueling, and defueled), the staff is considering further generic actions on the issue of handling all heavy loads both during plant operation and during shutdown. This bulletin is an information request made pursuant to 10 CFR 50.54(f). The issuance of the bulletin is justified on the basis of the need to ensure compliance with the current licensing basis with respect to the weight of the heavy loads being moved over spent fuel, over fuel in the reactor core, or over safety-related equipment and the potentially severe consequences that can result if a load is dropped. Therefore, no backfit analysis was performed. The reporting burden for this collection of information is estimated to be 600 hours per response. The staff also sought a voluntary submittal of licensee time and costs needed to respond to the bulletin.

In NRC Bulletin 96-03, "Potential Plugging of Emergency Core Cooling Suction Strainers by Debris in Boiling-Water Reactors," NRC requested all holders of operating licenses for boiling-water reactors to implement appropriate procedural measures and plant modifications to minimize the potential for clogging of emergency core cooling system (ECCS) suppression pool suction strainers by debris generated during a loss-of-coolant accident (LOCA). The staff identified three potential resolution options; licensees, however, may propose others that provide an equivalent level of assurance that the ECCS will be able to perform its safety function after a LOCA. The three options identified by the staff are (1) the installation of large-capacity passive strainers; (2) the installation of continuous, self-cleaning strainers; and (3) the installation of a backflush system to remove debris from the surface of a strainer. Licensees are requested to implement the requested actions by the end of the first refueling outage starting after January 1, 1997. The actions requested by this bulletin are considered backfits in accordance with NRC procedures and are necessary to ensure that licensees are in compliance with existing NRC rules and regulations. Specifically, 10 CFR 50.46 requires that adequate ECCS flow be provided to maintain the core temperature at an acceptably low value and to remove decay heat for the extended period of time required by the long-lived radioactivity remaining in the core after a design-basis accident. Therefore, this bulletin was issued as a compliance backfit under the terms of 10 CFR 50.109(a)(4)(i), and a full backfit analysis was not performed. The reporting burden for this collection of information is estimated to be 160 hours per response. The staff also sought a voluntary



submittal of licensee time and costs needed to respond to the bulletin and to implement actions taken in response to the bulletin.

#### 4. GENERIC LETTERS

During CY 1996, the staff issued six generic letters and two supplements to generic letters issued in previous years. A summary of each generic letter affecting operating nuclear power plants follows.

In NRC Generic Letter 96-01, "Testing of Safety-Related Logic Circuits," NRC notified all holders of operating licenses for nuclear power reactors of problems with the testing of safety-related logic circuits. The NRC staff finds that inadequate testing of safety-related actuation logic circuitry is safety significant in that inoperable, essential electric components required for automatic actuation of postaccident mitigation systems may not be detected for extended periods. This is particularly true for the reactor protection system, whose unavailability is shown in probabilistic risk assessments to be a dominant contributor to potential core damage scenarios. Undetected degradation of reactor protection system availability/reliability is also a potentially significant contributor to overall risk. Unavailability of those circuits associated with automatic ECCS actuation, especially in a loss-of-offsite-power situation, is a lesser contributor to overall risk but is important in ensuring postaccident recovery in accordance with licensing bases. Failure to automatically actuate safety systems also places the additional burden on the operators of having to manually actuate required functions and thus increases the chance for operator error. Therefore, the NRC staff finds that licensees should review their surveillance procedures for the reactor protection system, shedding and sequencing of emergency diesel generator loads, and actuation logic for the engineered safety features systems to ensure that complete testing is being performed as required by the technical specifications. NRC has requested that these actions be accomplished prior to startup from the first refueling outage commencing 1 year after the issuance of the generic letter. The actions requested in this generic letter are considered backfits in accordance with NRC procedures. Because established regulatory requirements exist but were not satisfied, these backfits are necessary to bring the addressees into compliance with existing requirements. Therefore, on the basis of 10 CFR 50.109(a)(4)(i), a full backfit analysis was not performed. The reporting burden for this collection of information is estimated to be 2000 hours per response. The staff also sought a voluntary submittal of licensee time and costs needed to respond to the generic letter and to implement actions taken in response to the letter.

In NRC Generic Letter 89-10, Supplement 7, "Consideration of Valve Mispositioning in Pressurized-Water Reactors," NRC notified all holders of operating licenses for nuclear power reactors that the staff no longer considers the inadvertent operation of motor-operated valves (MOVs) from the control room to be within the scope of Generic Letter 89-10 for pressurized-water reactors. Modifying the provisions in the generic letter for valve mispositioning does not affect the recommendations in the letter that licensees review safety analyses, emergency procedures, and other plant documentation to determine the design-basis fluid conditions under which all MOVs in safety-related piping systems may be called on to function. This position also does not supersede NRC generic recommendations or regulations on

valve mispositioning that pertain to such other issues as interfacing-systems LOCAs or fire protection. Licensees that have already taken action or made commitments regarding valve mispositioning may take advantage of this relaxed staff position provided the licensees document the change in their Generic Letter 89-10 programs. Implementation of this relaxation is voluntary, and the generic letter supplement requests neither actions nor information from licensees. Therefore, the supplement is not considered a backfit and the staff did not perform a backfit analysis.

In NRC Generic Letter 96-02, "Reconsideration of Nuclear Power Plant Security Requirements Associated With an Internal Threat," all holders of licenses for nuclear power reactors were notified that NRC had reconsidered its positions on certain security measures associated with protecting nuclear power plants against an internal threat. Some of the changes identified require licensees to submit changes to their security plans in accordance with the provisions of 10 CFR 50.90; other changes may be processed in accordance with the provisions of 10 CFR 50.54(p) and can be implemented without NRC approval. Licensee security plans may be revised in the following areas: (1) vital area access control measures, (2) access search of on-duty armed security guards, (3) containment access control measures, and (4) alternative measures for control of security badges. Implementation of the suggestions in this generic letter is voluntary, and the generic letter requests neither actions nor information from licensees. Therefore, this generic letter is not considered a backfit and the staff did not perform a backfit analysis.

In NRC Generic Letter 96-03, "Relocation of the Pressure Temperature Limit Curves and Low Temperature Overpressure Protection System Limits," NRC notified all holders of operating licenses for nuclear power reactors that they may request a license amendment to relocate the pressure/temperature limit curves from their plant technical specifications to a pressure/temperature limits report or a similar document. The low temperature overpressure protection system limits may also be relocated to the same document at the discretion of the licensee. Any action by licensees to propose changes to plant technical specifications in accordance with the guidance in the generic letter is voluntary and not a backfit under 10 CFR 50.109. The staff, therefore, did not perform a backfit analysis.

In NRC Generic Letter 96-04, "Boraflex Degradation in Spent Fuel Pool Storage Racks," NRC informed all holders of operating licenses for nuclear power reactors about test and surveillance information concerning the Boraflex degradation phenomenon, and requested all licensees with installed spent fuel pool storage racks containing the neutron absorber Boraflex to (1) assess the capability of the Boraflex to maintain a 5-percent subcriticality margin and (2) submit to NRC a plan describing their proposed actions if this subcriticality margin cannot be maintained by Boraflex material because of current or projected future Boraflex degradation. In the generic letter, NRC only requested information from the licensees under the provisions of Section 182a of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f). The information requested enabled the NRC staff to determine whether licensees were complying with the current licensing basis for their respective facilities with respect to (1) General Design Criterion 62 of Appendix A to 10 CFR Part 50 for the prevention of criticality during fuel storage and handling and (2) 5-percent subcriticality margins either contained in the technical specifications or committed to in the updated final safety analysis

reports of plants containing Boraflex in the spent fuel storage racks. The staff did not establish a new position for such compliance in the generic letter. Therefore, the letter does not constitute a backfit and no backfit analysis was prepared. The staff estimated that the reporting burden for this collection of information would be about 150 hours per response. The staff also sought a voluntary submittal of licensee time and costs needed to respond to the generic letter and to implement actions taken in response to the letter.

In NRC Generic Letter 96-05, "Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves," NRC requested that all holders of operating licenses for nuclear power reactors establish a program, or ensure the effectiveness of a current program, to verify periodically that safety-related MOVs continue to be capable of performing their safety functions within the current licensing bases of the facility. Furthermore, NRC requested that the program ensure that any changes in required performance resulting from degradation (such as those caused by age) can be properly identified and accounted for. Licensees that developed periodic verification programs in response to a prior generic communication (Generic Letter 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillance") were asked to review those programs to determine whether any changes were appropriate in light of the information in this generic letter. The actions requested in this generic letter are considered compliance backfits under 10 CFR 50.109(a)(4). In this regard, 10 CFR Part 50 (Appendix A, Criteria 1 and 4) and plant licensing safety analyses require and/or commit that licensees design and test components and systems to provide adequate assurance that they can perform their safety functions. Other individual criteria in Appendix A to 10 CFR Part 50, or commitments made by licensees in their final safety analysis reports, apply to specific systems. In accordance with those regulations and licensing commitments and under the additional provisions of Criterion XVI of Appendix B to 10 CFR Part 50, licensees are required to take actions to ensure that safety-related MOVs are capable of performing their required safety functions. Therefore, on the basis of 10 CFR 50.109(a)(4), a full backfit analysis was not performed. The reporting burden for this collection of information is estimated to be 75 hours per response. The staff also sought a voluntary submittal of licensee time and costs needed to respond to the generic letter and to implement actions taken in response to the letter.

In NRC Generic Letter 96-06, "Assurance of Equipment Operability and Containment Integrity During Design-Basis Accident Conditions," NRC notified all holders of operating licenses for nuclear power reactors about safety-significant issues that could affect containment integrity and equipment operability during accident conditions, and requested that licensees submit certain information pertaining to the issues that were identified and implement actions as appropriate to address these issues. These safety-significant issues were identified as a result of NRC inspection activities and licensee notifications and event reports and are as follows:

- Cooling water systems serving the containment air coolers may be exposed to the hydrodynamic effects of waterhammer during either a LOCA or a main steamline break (MSLB). These cooling water systems were not designed to withstand the hydrodynamic effects of waterhammer, and corrective actions may be needed to satisfy system design and operability requirements.

- Cooling water systems serving the containment air coolers may experience two-phase flow conditions during postulated LOCA and MSLB scenarios. The heat removal assumptions for design-basis accident scenarios were based on single-phase flow conditions. Corrective actions may be needed to satisfy system design and operability requirements.
- Thermally induced overpressurization of isolated water-filled piping sections in the containment could jeopardize the capability of accident-mitigating systems to perform their safety functions and could also lead to a breach of containment integrity via bypass leakage. Corrective actions may be needed to satisfy system operability requirements.

NRC asked addressees to determine if their facility containment air cooler cooling water systems are susceptible to either waterhammer or two-phase flow conditions during postulated accident conditions, and if piping systems that penetrate the containment are susceptible to thermal expansion of fluid so that overpressurization of piping could occur; in addition to individual addressee's postulated accident conditions, NRC asked the addressees to review these items with respect to the scenarios referenced in the generic letter. If systems were found to be susceptible to the conditions discussed in the generic letter, addressees were expected to assess the operability of affected systems and take corrective action, as appropriate, in accordance with the requirements in 10 CFR Part 50, Appendix B, and as required by the plant technical specifications. The actions requested in the generic letter are considered compliance backfits under the provisions of 10 CFR 50.109(a)(4) to ensure that containment integrity will be maintained and that safety-related components and piping systems are capable of performing their intended safety functions and satisfying their licensing-basis code criteria, respectively, and that containment integrity and these safety-related piping systems and components will not be adversely affected by waterhammer, two-phase flow, or thermal overpressurization that may occur in safety-related and non-safety-related systems that penetrate the containment. Therefore, on the basis of 10 CFR 50.109(a)(4), a full backfit analysis was not performed. The reporting burden for this collection of information is estimated to be 300 hours per response. The staff also sought a voluntary submittal of licensee time and costs needed to respond to the generic letter and to implement actions taken in response to the letter.

##### 5. OTHER 10 CFR 50.54(f) LETTERS

In October 1996, all holders of operating licenses for nuclear power reactors received a 10 CFR 50.54(f) letter on the subject "Request for Information Pursuant to 10 CFR 50.54(f) Regarding Adequacy and Availability of Design Basis Information." The letter required information that would provide the NRC added confidence and assurance that nuclear power reactors are operated and maintained within the design bases and any deviations are reconciled in a timely manner. The NRC's position has been, and continues to be, that it is the responsibility of individual licensees to know their licensing basis, to have appropriate documentation that defines their design bases, and to have procedures for performing the necessary assessments of plant or procedure changes required by NRC regulations. Therefore, the information obtained can be used to verify compliance with the terms and conditions of a facility license and NRC regulations, and that the facility updated final safety analysis report properly describes the facility, as well as to determine if



other inspection activities or enforcement action should be taken. The staff did not establish a new position for such compliance in the letter. Therefore, the letter does not constitute a backfit and no backfit analysis was prepared. The staff estimated that the reporting burden for this collection of information would be about 400 hours per response. The staff also sought a voluntary submittal of licensee time and costs needed to respond to the letter.

## 6. FINAL RULES

In CY 1996, NRC published 31 rules in final form, some of which reduced the regulatory burden. Three of these rules imposed changes to the systems, structures, components, or design of operating nuclear power plants or the procedures and organizations required to implement them. These rules are summarized below.

On June 5, 1996, NRC published a notification that it was amending its environmental regulations in 10 CFR Part 51 to improve the efficiency of the environmental review process for applicants seeking to renew an operating license for up to an additional 20 years. The amended regulations define those environmental impacts for which a generic analysis has been performed that will be adopted in plant-specific reviews for license renewal, and those environmental impacts for which plant-specific analyses are to be performed. The increased regulatory efficiency will result in lower costs to both the applicant in preparing a renewal application and the NRC in reviewing plant-specific applications, and will enable review resources to better focus on significant case-specific concerns.

On June 14, 1996, NRC published a notification that it was amending its emergency planning regulations in 10 CFR 50.47 and Appendix E to 10 CFR Part 50, to allow greater flexibility in licensees' emergency preparedness training activities in the 2-year period between biennial full-participation exercises. The amended rule relieves licensees of having to conduct a full formal exercise of the onsite emergency plan annually, and gives licensees the flexibility to choose the activities to be conducted in the 2-year period between biennial full-participation exercises. The amended regulations do not impose any new or increased requirements in this area. The changes permit, but do not require, licensees to change their existing emergency plans and procedures to use scenarios in "off-year" training or drills that do not go to severe core damage or result in offsite exposures. No backfitting is intended or approved in connection with this rule change.

On August 8, 1996, NRC published a notification that it was amending its regulations in 10 CFR 50.55a to incorporate by reference the 1992 Edition with the 1992 Addenda of Subsection IWE and Subsection IWL of Section XI, Division 1, of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code to ensure that the critical areas of containments are routinely inspected in order to detect and take corrective action for defects that could compromise a containment's structural integrity. On the basis of a preponderance of reliable information, including the increased rate of reported corrosion and degradation of containment structures, the extent of containment degradation, and the large variation in the performance and effectiveness of licensees' containment examination programs, the NRC has

concluded that this rule can be justified as a cost-justified safety enhancement backfit, as well as a compliance backfit.

## 7. REGULATORY GUIDES

NRC does not issue regulatory guides to impose changes on licensees; it issues them to inform licensees about methods it would find acceptable to meet regulatory requirements or commitments. In CY 1996, NRC issued eight regulatory guides, four of which applied to operating commercial nuclear power plants. A summary of each guide applicable to operating nuclear power plants follows.

Regulatory Guide 1.152, Revision 1, "Criteria for Digital Computers in Safety Systems of Nuclear Power Plants," dated January 1996, describes a method acceptable to the NRC staff for complying with the Commission's regulations for promoting high functional reliability and design quality for the use of digital computers in safety systems of nuclear power plants. This guide endorses the Institute of Electrical and Electronics Engineers Standard 7-4.3.2-1993, "Standard Criteria for Digital Computers in Safety Systems of Nuclear Power Generating Stations."

Regulatory Guide 1.149, Revision 2, "Nuclear Power Plant Simulation Facilities for Use in Operator License Examinations," dated April 1996, contains guidance on methods acceptable to the NRC staff for complying with NRC's regulations on the certification of a simulation facility consisting solely of a plant-referenced simulator and on applications for prior approval of a simulation facility for testing. This guide endorses, with certain exceptions and clarifications, American National Standards Institute/American Nuclear Society Standard 3.5-1993, "Nuclear Power Plant Simulators for Use in Operator Training and Examination."

Regulatory Guide 1.82, Revision 2, "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident," dated May 1996, has been revised to provide current guidance on methods acceptable to the NRC staff for meeting the Commission's requirements with respect to the sumps and suppression pools that perform the functions of water sources for emergency core cooling, containment heat removal, and containment atmosphere cleanup. This guide also updates the guidance on evaluating blockage by debris in the sumps and suppression pools.

Regulatory Guide 1.153, Revision 1, "Criteria for Safety Systems," dated July 1996, describes a method acceptable to the NRC staff for complying with the Commission's regulations with respect to the design, reliability, qualification, and testability of the power, instrumentation, and control portions of safety systems of nuclear power plants. This guide endorses the Institute of Electrical and Electronics Engineers Standard 603-1991, "Criteria for Safety Systems of Nuclear Power Generating Stations" (including the correction sheet dated January 30, 1995).

## 8. POLICY STATEMENTS

In CY 1996, NRC issued 11 policy statements, none of which required licensees to make changes to the systems, structures, components, or design of operating nuclear power plants or the procedures and organization required to implement

them. However, one of the policy statements, which was published in the *Federal Register* (61 FR 24336) on May 14, 1996, highlights licensees' existing obligation to establish and maintain safety-conscious environments in which employees of licensees and licensee contractors are free, and feel free, to raise concerns to their management and to NRC without fear of retaliation. The expectations and suggestions in the policy statement do not establish new requirements, but licensees are reminded that if an effective safety-conscious environment has not been established, appropriate enforcement action may be taken against a licensee, its contractors, and involved individual supervisors for violations of NRC requirements. Therefore, any cost associated with determining the need and establishing alternative programs for raising and addressing concerns is at the option of the licensees.

#### 9. PLANT-SPECIFIC BACKFIT TRACKING SYSTEM

A plant-specific backfit is a modification or addition NRC requires or recommends for systems, structures, components, or design of a specific single facility or for the procedures required to design, construct, or operate that facility. In CY 1996, NRC did not impose any plant-specific backfits.

#### 10. ORDERS

By letter dated November 1, 1995, Pacific Gas and Electric Company (PG&E) requested NRC approval of its plans for a corporate restructuring that would result in the formation of a holding company, with the temporary name PG&E Parent Company, Inc., under which PG&E would become a subsidiary. PG&E is the sole owner of the Diablo Canyon Nuclear Power Plant, Units 1 and 2. The transfer of any right under an operating license for a production or utilization facility is subject to the consent of the Commission in writing pursuant to 10 CFR 50.80(a); an NRC order was issued on October 18, 1996, approving PG&E's reorganization plan. The costs associated with the order, the restructuring to establish a holding company, and the transfer of the licenses were at the option of the licensee and did not result from any NRC action; the order merely allowed the licensee to implement its reorganization plan.

In response to a request from Ohio Edison Company, an order was issued on July 25, 1996, allowing the transfer of Ohio Edison's 12.58-percent share in the ownership of the "common facilities" associated with the Perry Nuclear Power Plant, Unit 1, to a wholly owned subsidiary of Ohio Edison, namely, OES Nuclear, Inc. The costs associated with the order were at the option of the licensee and did not result from any NRC action; the order merely allowed the licensee to take the prescribed action.

By letter dated April 4, 1996, MidAmerican Energy Company (MEC), a 25-percent owner of Quad Cities Nuclear Power Station, Units 1 and 2, informed NRC that MEC would restructure itself by establishing a holding company, MidAmerican Energy Holding Company, which would become the parent corporation to and sole owner of MEC. The transfer of any right under an operating license for a production or utilization facility is subject to the consent of the Commission in writing pursuant to 10 CFR 50.80(a); such approval was given in an order approving the indirect transfer of licenses, that was issued on July 29, 1996. The costs associated with the order, the restructuring to establish a holding company, and the indirect transfer of control of the

licenses were at the option of the licensee and did not result from any NRC action; the order merely confirmed the actions taken by the licensee.

On November 29, 1996, the NRC issued an order to Texas Utilities Electric (TUE), pursuant to 10 CFR 50.80(a), approving the corporate restructuring of Texas Utilities Company (TUC), the parent holding company for TUE, the licensee for Comanche Peak Steam Electric Station (CPSES), Units 1 and 2. TUC proposes to acquire ENSERCH Corporation (ENSERCH), a company engaged in natural gas and oil exploration and production; natural gas pipeline gathering, processing, and marketing; and natural gas distribution and power generation. On the consummation of this transaction, TUC and ENSERCH will become wholly owned subsidiaries of TUC Holding Company, which will change its name to Texas Utilities Company. TUE would remain the sole owner and operator of CPSES. The costs associated with the order and the corporate restructuring are at the option of the licensee and do not result from any NRC action; the order merely allows the licensee to take the prescribed actions.

By letter dated August 14, 1996, NRC issued a confirmatory order to Northeast Nuclear Energy Company (NNECO) establishing the Independent Corrective Action Verification Program (ICAVP) for Millstone Nuclear Power Station, Units 1, 2, and 3. The ICAVP will consist of an independent review to confirm that the physical and functional characteristics of the plants are in conformance with their licensing bases. The order also states that the selection of the ICAVP team members and the plan for the conduct of the review are subject to NRC approval. It is expected that NNECO will incur substantial costs as a result of this order.

By letter dated October 24, 1996, NRC issued an order to NNECO directing that before restart of any Millstone unit, NNECO develop and submit to NRC a comprehensive plan for reviewing and dispositioning safety issues raised by its employees, and ensuring that employees who raise safety issues can do so without fear of retaliation. The plan must address past performance failures including those identified in the Millstone ICAVP team report. The order also directed NNECO to retain an independent third party to oversee implementation of its plan. It is expected that NNECO will incur substantial costs as a result of this order.

By letter dated October 18, 1996, NRC issued an order to Baltimore Gas and Electric Company (BG&E) approving the transfer of the licenses for Calvert Cliffs Nuclear Power Plant, Units 1 and 2, and the Independent Spent Fuel Storage Installation from BG&E to Constellation Energy Corporation. This corporate restructuring was done in anticipation of a merger between BG&E and Potomac Electric Power Company. The costs associated with the order are at the option of the licensee and are not the result of any NRC action; the order merely confirmed actions taken by the licensee.