



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

PDR

January 28, 1994

CHAIRMAN

The Honorable Tom Bevill, 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 providing the Nuclear Regulatory Commission's report for calendar year 1993 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, procedures, organization, or design of operating power plants.

Sincerely,

Ivan Selin

Enclosure:
As stated

cc: Rep. John T. Myers

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REPORT ON CHANGES IMPOSED BY THE NUCLEAR REGULATORY COMMISSION
ON SYSTEMS, STRUCTURES, COMPONENTS, PROCEDURES, ORGANIZATION,
OR DESIGN OF OPERATING NUCLEAR POWER PLANTS

1. PURPOSE

The U.S. Nuclear Regulatory Commission (NRC) is submitting this report to inform Congress of changes the NRC imposed on operating nuclear power plants during calendar year (CY) 1993.

2. BACKGROUND

The NRC staff reviewed bulletins, generic letters, final rules, regulatory guides, policy statements, the plant-specific backfit tracking system, and orders to identify changes that the NRC imposed in CY 1993 on systems, structures, components, procedures, organization, or design of operating nuclear power plants. The NRC imposed these changes by issuing documents that licensees are required to follow, such as regulations and orders, and documents that recommend action, such as bulletins, regulatory guides, generic letters, and policy statements. Licensees generally choose to adopt NRC recommendations. However, if such recommendations are not followed and the NRC has evidence that the public health and safety would be better protected if they were followed, this agency would establish the recommendations as NRC requirements imposed on licensees.

3. BULLETINS

During CY 1993, the NRC staff issued two bulletins that affected operating nuclear power plants. These recommended that licensees take certain actions and required that licensees submit a written response to the NRC. A summary of the two bulletins follows.

In NRC Bulletin 93-02, "Debris Plugging of Emergency Core Cooling Suction Strainers," the NRC requested licensees to identify all sources of fibrous materials not designed to withstand a loss-of-coolant accident that were installed or stored within the primary containment and to take prompt actions to remove all such material. The NRC also required that licensees submit the following: (1) a written report stating whether the requested actions have been or will be performed, the details regarding the location and quantity of this material, and a schedule for removing the material and (2) a written report confirming the completion of the requested actions. Should a licensee choose not to take the requested actions, the staff required the licensee to submit a report detailing a proposed alternative course of action and justifying the deviation from the requested actions. Because the cost

of the requested action is expected to be plant specific, the staff did not estimate the cost of licensee actions taken in response to the bulletin. However, the staff estimated that the reporting burden would average 60 person-hours per response.

In NRC Bulletin 93-03, "Resolution of Issues Related to Reactor Vessel Water Level Instrumentation in BWRs," the NRC (1) notified addressees of new information concerning level indication errors that may occur during plant depressurization; (2) requested that addressees take certain actions; and (3) required that addressees report to the NRC if and to what extent requested actions will be taken and to notify the NRC when all associated actions are complete. Actions requested by the NRC included short-term compensatory actions and hardware modifications. The short-term actions were:

- (1) Within 15 days of the date of the bulletin, implement the following measures to ensure that level instrumentation errors would not result in improper system or operator response:
 - (a) enhanced monitoring of reactor vessel level instrumentation,
 - (b) enhanced procedures for plant actions that have a potential to drain the reactor pressure vessel during Mode 3 operation,
 - (c) alerting operators to the potential for confusing or misleading level indications that may occur during Mode 3 operation.
- (2) By July 30, 1993, complete augmented operator training on loss of reactor pressure vessel inventory scenarios during Mode 3 operations.

In carrying out the requested actions, licensees had to implement changes necessary to ensure that the level instrumentation system design is of high functional reliability for long-term operation. The hardware modifications requested in Bulletin 93-03 were the same as those previously requested in Generic Letter 92-04, "Resolution of the Issues Related to Reactor Vessel Water Level Instrumentation in BWRs Pursuant to 10 CFR 50.54(f)."

In addition to these short- and long-term actions, the NRC required licensees to submit the following written reports: (1) for licensees choosing not to implement the requested actions, a report detailing the proposed alternative course of action, the schedule for completion, and a justification for any deviations from the requested actions; (2) by July 30, 1993, a report from all licensees describing the short-term actions taken and the hardware modifications to be implemented at the next cold shutdown after July 30, 1993; and (3) within 30 days of completing the requested hardware modifications, a report confirming completion and describing the modification implemented. Because the hardware modifications requested were the same as those recommended by

GL 92-04, the staff did not estimate the cost of those modifications for this bulletin. The NRC staff estimated that an average burden of 200 person-hours per response would be necessary for the reporting requirements.

4. GENERIC LETTERS

During CY 1993, the staff issued eight new generic letters and one supplement to a generic letter issued in a previous year. In four of the generic letters, the staff transmitted the following useful information to addressees: (1) a recommended schedule for testing the emergency response data system; (2) an announcement of a workshop on commercial-grade procurement; (3) the findings of an NRC inspection of plant records; and (4) resolution of Generic Issue 106, "Piping and the Use of Highly Combustible Gases in Vital Areas." Although no written response or specific actions were required of licensees for any of these four generic letters, the staff sought a voluntary response detailing licensee staff time and costs needed to address three of these generic letters.

The NRC issued three additional generic letters detailing the results of NRC review of technical specifications and suggesting wording for licensees to use for technical specification amendment requests. In two of these generic letters, the changes proposed by the staff did not reduce regulatory requirements on licensees but lessened the burden needed to modify certain administrative portions of the activities required by technical specifications. In the third generic letter, NRC review of technical specification surveillance requirements determined that some surveillance requirements could be reduced during power operations without lessening the safety and health of the public. A voluntary response detailing licensee staff time and costs needed to respond to the generic letter was sought for all three of these generic letters.

In the eighth letter, Generic Letter 93-04, "Rod Control System Failure and Withdrawal of Rod Control Cluster Assemblies," the NRC notified all addressees of a single-failure vulnerability in the Westinghouse solid-state rod control system and required addressees to submit a written report to the NRC, pursuant to 10 CFR 50.54(f), describing plant-specific findings related to the issue and any actions taken in response to the issue. Generic Letter 93-04 required that the licensee submit a report (1) within 45 days of the date of the generic letter, determining whether the licensing basis of the facility is still satisfied regarding system response to a single failure in the rod control system and, if the licensing basis is not satisfied, evaluating the impact of such a failure on the design basis safety function of the rod control system and describing any short-term actions taken or that will be taken to address the issue; and (2) within 90 days of the date of the generic letter, providing a plan and schedule for long-term resolution of the

issue. The staff estimated that 40 person-hours would be needed for each response to the request for information. The staff also sought a voluntary submittal of licensee time and costs needed to respond to the generic letter.

In Generic Letter 89-10, Supplement 5, "Inaccuracy of Motor-Operated Valve Diagnostic Equipment," the NRC requested that, on the basis of new information on motor-operated valve (MOV) diagnostic equipment, licensees reexamine their MOV programs and identify those measures taken or planned to account for the new uncertainties in properly setting valve operating thrusts to ensure operability. Licensees were also asked to evaluate the schedule necessary to (1) consider the new information on MOV diagnostic equipment inaccuracy and (2) respond to that information. In addition to the requested actions, the NRC required addressees to submit the following written response:

- (1) Within 90 days of receipt of the letter, all licensees must notify the NRC of the diagnostic equipment used to confirm that valve operators were set properly.
- (2) Within 90 days of receipt of the letter, licensees are required to report whether they have taken actions or plan to take actions to address the new information on the accuracy of diagnostic equipment.

The staff estimated the reporting burden of this generic letter to average 150 person-hours per licensee response. The staff also sought a voluntary submittal of licensee time and costs needed to respond to the generic letter.

5. FINAL RULES

In CY 1993, the NRC published 24 rules in final form, some of which reduced regulatory burden. Five imposed changes to systems, structures, components, procedures, organization, or design of operating nuclear power plants. These rules are summarized below.

On April 26, 1993, the NRC published an amendment to its regulations that requires each applicant for and each holder of a license to operate a nuclear power plant to establish, implement, and maintain a training program for nuclear power plant personnel based on a systems approach to training. This amendment, effective May 26, 1993, meets the directives of Section 306 of the Nuclear Waste Policy Act of 1982. A regulatory analysis prepared for this rulemaking, assuming a 10-percent discount rate, resulted in an estimated net total cost to the industry of \$24M (lower bound) to \$43M (upper bound) for the remaining life of the plants.

On June 23, 1993, the NRC published an amendment to its regulations for monitoring the effectiveness of maintenance programs at commercial nuclear power plants. This amendment, effective July 10, 1996, changes the time interval for conducting evaluations from a mandatory "once every year" to "at least once every refueling cycle, but not to exceed

24 months." Because most refueling outages normally occur in the 15- to 18-month range, the time between periodic assessments, assuming a 16-month average, would be increased by about 33 percent. Therefore, the licensee staff hours to complete a periodic assessment under this rule would be reduced from approximately 460 staff hours to about 310 staff hours per year per plant. This would save the licensee approximately 150 staff hours per year per plant.

On July 26, 1993, the NRC published an amendment to its regulations, effective October 25, 1993, that requires holders of a specific license for possession of certain byproduct material, source material, special nuclear material, or for independent storage of spent nuclear fuel and high-level radioactive waste to prepare and maintain additional documentation that identifies all restricted areas in which licensed materials and equipment were stored or used, all areas outside of restricted areas for which documentation is required under current decommissioning regulations for unusual occurrences or spills, all areas outside of restricted areas in which waste has been buried, and all areas outside of restricted areas containing material for which the licensee would be required to decontaminate the area or seek special approval for disposal if the license were terminated. Only a small effort, not exceeding approximately five hours, is needed to compile the information and create the required list, which essentially documents information the licensee already has or will have. It is possible that licensee costs may be reduced to the extent that these requirements allow the license to be terminated more expeditiously.

On August 27, 1993, the NRC published an amendment to its regulations that consistently applies the requirement that nuclear power plant licensees submit updates to the final safety analysis report annually or six months after each refueling outage. These amendments, effective September 27, 1993, will eliminate the confusion caused by the conflicting requirements in different sections of the regulations. Nuclear power plant licensees would not incur any additional costs because of this change to the regulations.

On October 8, 1993, the NRC published an amendment to its regulations regarding the protection of employees who provide information to the NRC or their employers concerning safety issues. This amendment, effective November 8, 1993, conforms NRC regulations to the new nuclear whistleblower protection provisions of the Energy Policy Act of 1992, which was enacted on October 24, 1992. This rule extends and clarifies protection to new classes of employees and employers and extends the period in which an employee may file a whistleblower complaint. This rule does not have a significant economic impact on operating nuclear power plants.

6. REGULATORY GUIDES

The NRC does not issue regulatory guides to impose changes on licensees; it issues them to inform licensees about methods that the NRC would find acceptable to meet regulatory requirements or commitments. In CY 1993, the NRC issued seven regulatory guides, six of which applied to commercial nuclear power plants. In addition, an eighth regulatory guide was withdrawn. Details on the guides that are applicable to operating power plants are provided below.

Regulatory Guide (RG) 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," provides guidance on meeting the Commission's rules on maintenance and on monitoring the effectiveness of maintenance in nuclear power plants.

Regulatory Guide 8.38, "Control of Access to High and Very High Radiation Areas in Nuclear Power Plants," describes methods acceptable to the NRC staff for implementing the Commission's requirements for controlling access to high and very high radiation areas in nuclear power plants.

Revision 3 to Regulatory Guide 1.9, "Selection, Design, Qualification, and Testing of Emergency Diesel Generator Units Used as Class 1E Onsite Electric Power Systems at Nuclear Power Plants," provides guidance acceptable to the NRC staff for complying with the Commission's requirements that diesel generator units intended for use as on-site emergency power sources be selected with sufficient capacity, be qualified, and have the necessary reliability and availability for station blackout and design basis accidents.

The staff periodically revises the following three guides to update the listing of acceptable code cases and to include the results of public comment and the staff's additional review. Revision 29 to Regulatory Guide 1.84, "Design and Fabrication Code Case Acceptability, ASME Section III, Division 1," and Revision 29 to Regulatory Guide 1.85, "Materials Code Case Acceptability, ASME Section III, Division 1," list those code cases that are generally acceptable to the NRC staff for implementation in the licensing of light-water-cooled nuclear power plants. Revision 10 to Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1," lists those code cases that are generally acceptable to the NRC staff for implementation in the in-service inspection of light-water-cooled nuclear power plants.

The staff withdrew Regulatory Guide 1.108, "Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants." The guidance in RG 1.108 has been updated and incorporated into Revision 3 to Regulatory Guide 1.9, "Selection, Design, Qualification, and Testing of Emergency Diesel Generator Units Used as Class 1E Onsite Electric Power Systems at Nuclear Power Plants."

7. POLICY STATEMENTS

In CY 1993, the NRC issued four policy statements and one proposed policy statement. None of these required licensees to make changes to the systems, structures, components, or the design of operating nuclear power plants or the procedures and organization required to operate them. However, one of the policy statements, "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors," issued July 22, 1993, encouraged licensees to implement a voluntary program to update their technical specifications to be consistent with improved vendor-specific Standard Technical Specifications issued by the NRC in September 1992.

8. PLANT-SPECIFIC BACKFIT TRACKING SYSTEM

A plant-specific backfit is a modification or addition the NRC requires or recommends to systems, structures, components, or design of a specific single facility or to the procedures required to design, construct, or operate that facility. In CY 1993, the NRC did not impose any plant-specific backfits. However, one issue related to the operation of Joseph M. Farley Nuclear Plant, Units 1 and 2, was identified as a potential backfit. The concerns identified by the staff were associated with provisions contained within Technical Specification (TS) 3.8.1.1, which provided latitude beyond that normally allowed regarding diesel generator and off-site circuit operability, availability, and allowed outage times. The staff concluded that to change these provisions in the Farley TS is a backfit requiring a regulatory analysis. The concerns were discussed with the licensee, and by letter dated December 11, 1992, the licensee submitted a TS change request resolving the staff concerns. Therefore, backfit imposition was no longer required.

9. ORDERS

In January 1993, the NRC issued an order imposing civil monetary penalties in the amount of \$300,000 to the New York Power Authority (NYPA). The order resulted from numerous violations identified at the James A. FitzPatrick Nuclear Power Plant by NRC inspections conducted between December 2, 1991, and May 1, 1992. NRC had originally considered civil penalties in the amount of \$500,000, as stated in the associated Notice of Proposed Imposition of Civil Penalties. NYPA admitted the violations, but requested full mitigation of civil penalties in its response to the notice. NRC exercised broad discretion and reduced the civil penalties to \$300,000 because of the extensive corrective actions taken by NYPA.

The estimated cost to the licensee for the NRC order is \$300,000 in civil penalties.

Also, in December 1993, the NRC issued an order to Gulf States Utilities (GSU) approving a merger between GSU and Entergy Corporation and the addition of Entergy Operations, Inc. to the license as the management

authority for River Bend Station. The merger resulted in GSU becoming a wholly owned subsidiary of Entergy Corporation. Gulf States Utilities remains a 70-percent owner of River Bend Station. Cajun Electric Power Cooperative, Inc. continues to own the remaining 30 percent of River Bend Station. The merger is effective on January 1, 1994.