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VIA FACSIMILE

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 US NRC

RE: Comments on Proposed Bulletin Supplement on Control Rod Insertion Problems. 62 Fed. Reg. 27,529 (May 20, 1997)

ATTN: Chief, Rules Review and Directives Branch

On May 20, 1997, the Nuclear Regulatory Commission ("NRC") issued the above-captioned proposed bulletin supplement for public comment. Provided below are the comments of the Nuclear Utility Backfitting and Reform Group ("NUBARG").^{1/} In addition, NUBARG supports the comments submitted separately by the Nuclear Energy Institute on behalf of the nuclear industry.

I. General Discussion

Though the proposed bulletin supplement purports to be an information request, it would require actions for licensees of Westinghouse and Babcock & Wilcox designed plants and would impose a significant burden on those licensees if it is ultimately issued as currently proposed. Specifically, the actions that the licensees would be *required* to take as a result of the proposed supplement involve testing of control rods in fuel assemblies upon reaching certain fuel burnup limits, and then approximately every six to eight weeks thereafter, or to perform a "rigorous engineering analysis" to justify individual fuel designs. Performing the testing necessitates plant shutdown. In addition, the proposed testing may create an unreviewed safety question under Section 50.59, which would require a license amendment prior to performance of the testing. The testing also necessitates cycling of plant systems, placing unnecessary wear on systems and equipment, to gather data when a substantial benefit to safety has not been demonstrated. Based on the foregoing, the proposed

^{1/} NUBARG is a consortium of 15 utilities formed in the early 1980s, which participated actively in the development of the NRC's backfitting rule (10 C.F.R. § 50.109) in 1985, and which has closely monitored the NRC's application of the rule since that time.



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information request certainly results in much more than the generation of information and should be carefully scrutinized.

Controls rods in pressurized-water reactors insert into the core to shut down the reactor by absorbing neutrons and terminating the fission process. Events described in the proposed supplement involved instances when control rods failed to fully insert, though adequate shutdown margin was maintained in each event. The NRC maintains that the intent of the proposed testing in the bulletin supplement is to assure that adequate shutdown margin is maintained and that the control rods will satisfactorily perform their intended function. The proposed bulletin supplement would require a plant shutdown to gather data on the control rod insertion times once a specific fuel burnup limit is reached, as specified in the proposed supplement for different core configurations. If the fuel cycle extends beyond the specified fuel burnup limits, further testing is necessary according to the proposed supplement, and a plant shutdown could be required as often as once every six weeks. The proposed fuel burnup limits appear to be very conservative compared to the fuel burnup limits discussed in the described events where problems occurred (e.g., 25,000 vs. 42,800 megawatt days per metric ton uranium for the 14-foot core). Currently, the NRC and Westinghouse are involved in a project that is aimed at assessing the safety concerns associated with control rod insertion.

The proposed information request supplements NRC Bulletin 96-01, "Control Rod Insertion Problems," issued May 8, 1996. Bulletin 96-01 requested that licensees perform testing and collect data through 1996 on control rod insertion times. In the proposed supplement, the NRC says:

While the tests performed in response to Bulletin 96-01 did not reveal any additional incomplete control rod insertions and all rod drop times measured met the Technical Specification limits for drop times to top of the dashpot, there were other disturbing results.

The so-called "disturbing results" relate to (1) drag values that were above certain criteria which are meant to be screening values for new fuel assemblies; and (2) control rod anomalies observed in spent fuel pools. The NRC appears to be misapplying the screening criteria to in-service fuel assemblies with no explanation of how these results relate to the primary safety concern.

II. Backfitting Concerns

The proposed supplement is intended to provide additional information to the NRC "to resolve the concerns about small-diameter thimble tube distortion leading to incomplete control rod insertion." The proposed bulletin supplement indicates that worldwide experience of incomplete control rod insertion problems indicates that the primary cause was thimble tube distortion caused by excessive compressive loads, with the problem being limited to those fuel designs that incorporate small-diameter (approximately 0.5 inch) thimble tubes.

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The proposed bulletin supplement purports to be an information request pursuant to 10 C.F.R. § 50.54(f) "to determine whether addressees are taking appropriate action to ensure continued operability of the control rods." The NRC would further propose that "[t]o the extent that the actions requested [in the proposed supplement] are considered backfits, the backfits are justified under the compliance exception of the backfit rule." The applicable regulation cited as containing the requirements with which licensees would be expected to comply is given as 10 C.F.R. Part 50, Appendix B, Criterion XI, "Test Control." This criterion is one of several that are the basis for a licensee's Quality Assurance program, which gives general requirements that ensure the quality of a licensee's activities in maintaining and operating the facility. The criteria in Appendix B, however, do not include requirements for specific types of testing.

The NRC's assessment of the backfitting implications of the extensive efforts that would be required by the proposed supplement is wholly inadequate to comply with the NRC's backfitting rule, 10 C.F.R. § 50.109. The proposed action is much more than an information request, clearly imposing new testing requirements on licensees. Such testing is not currently required by any specific regulation, and is not a test described in the Appendix B criterion on test controls. Accordingly, the proposed request would impose a backfit as defined in 10 C.F.R. § 50.109(a)(1) and would not come within the "compliance" exception of the rule. The NRC, however, has not provided the requisite backfitting analysis under the standards of Section 50.109(a)(4) to demonstrate that the proposed actions would provide a substantial increase in overall safety and that the costs are justified in view of that increase.

A backfitting analysis, which objectively assesses the costs and benefits of the proposed actions, is particularly important in this case. Because the new testing requirements could result in frequent plant shutdowns, the NRC's action could have not only a massive cost impact on affected plants but also adverse safety consequences from cycling the reactors. The backfitting rule requires the NRC to consider these factors by assessing whether the proposed action would produce a "substantial" increase in "overall" safety (weighing both the positive and negative impacts on safety). Furthermore, the analysis of direct and indirect costs under the backfitting rule must consider, among other things, plant "downtime" associated with the proposed action and "continuing costs" (e.g., new engineering resources for carrying out the required testing program). 10 C.F.R. § 50.109(c)(5).

III. Administrative Procedures Act

The NRC states that the purpose of the proposed bulletin supplement is, in part, to "request all licensees of Westinghouse and Babcock and Wilcox designed plants *take actions* to ensure the continued operability of the control rods, and . . . require that all licensees of Westinghouse and Babcock and Wilcox designed plants send to the NRC a written response to this bulletin supplement relating to the actions and information requested in this supplement." (Emphasis added.)

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Licensees would be put into a position of having to take actions or, according to the NRC's justification for the actions, be found in noncompliance with Appendix B. Therefore, the proposed bulletin supplement is more than an information request and appears to be phrased in such a way as to impose regulatory *requirements* on licensees. Under the Atomic Energy Act and Administrative Procedure Act, the NRC may establish requirements only by rule, regulation, or order. To the extent that the proposed bulletin supplement imposes new requirements, such as testing or analysis, the NRC must comply with the provisions in the Administrative Procedure Act. 5 U.S.C. § 551 *et seq.*

IV. Small Business Regulatory Enforcement Fairness Act Considerations

In addition to the backfitting implications, NUBARG believes that this proposed supplement must be evaluated under the Small Business Regulatory Enforcement Fairness Act of 1996 ("SBREFA").^{2/} The application of SBREFA to the required actions is not discussed in the proposed bulletin supplement, yet it appears to be applicable to the proposed testing that would result from the requested actions.

On March 28, 1996, Congress passed legislation, identified as the Small Business Regulatory Enforcement Fairness Act of 1996, which provides a new mechanism for Congress to review most new administrative rules and regulations proposed by federal agencies. The new legislation amends Title 5 of the U.S. Code by requiring federal agencies to submit to Congress all new regulatory initiatives for review of the appropriateness of the new requirements by both houses of Congress.^{3/}

Under the Congressional review provisions, the NRC is required to submit a copy of the proposed initiative, inclusive of any cost-benefit analysis, to each house of Congress and to the U.S. Comptroller General. If the proposed rule is a "major rule,"^{4/} unless Congress passes a joint

^{2/} Public Law. No. 104-121, 110 Stat. 847 (1996).

^{3/} 5 U.S.C. § 801. The actual language of the Act reads "[b]efore a rule can take effect, the Federal agency promulgating such rule shall submit to each House of the Congress and to the Comptroller General a report containing --

(i) a copy of the rule;

(ii) a concise general statement relating to the rule, including whether it is a major rule; and

(iii) the proposed effective date of the rule. 5 U.S.C. § 801(a)(1)(A).

^{4/} The term "major rule" means any rule that the Administrator of the Office of Information and Regulatory Affairs of the Office of Management and Budget finds has resulted in or is likely to result in--

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resolution of disapproval, the effective date of the major rule will be either sixty days after Congress receives the report or sixty days after the major rule is published in the Federal Register, whichever is later. If the proposed rule is not a major rule, then the effective date of the rule may be when the rule is submitted to Congress.

The actions requested by the proposed bulletin supplement should be subject to Congressional review under SBREFA. The NRC has generally agreed that generic letters and bulletins that impose new requirements or represent new Staff interpretations of existing requirements are within the definition of "rule."^{2/} The costs for the additional testing of control rod insertion are substantial, and have a potential for economically impacting the particular geographical areas which depend largely on nuclear plants for power generation. Accordingly, the proposed bulletin meets the criteria for a major rule. As a major rule, the proposed bulletin must be subjected to Congressional review.

While the exact costs for implementing the requested actions by the proposed bulletin have not been calculated (the costs will vary for each plant and depend on the replacement power costs at the time of plant shutdown), with more than fifty nuclear plants conducting the control rod insertion testing, the costs for such testing would likely exceed \$100 million, which would result in a major increase in costs for both the nuclear industry and the ratepayers. Included in these costs would be the purchase of replacement power (usually in the range of \$400,000 to \$500,000 per day for many plants) during the additional, unscheduled shutdowns for testing control rod insertion as proposed in the bulletin.

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- (A) an annual effect on the economy of \$100,000,000 or more;
 - (B) a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or
 - (C) significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic and export markets.

^{2/} NRC Memorandum from James M. Taylor, Executive Director for Operations, to Office Directors, dated June 25, 1996. "With limited exceptions, all final agency rules, policy statements, and agency documents interpreting agency requirements are defined as 'rules' for purposes of the Act." Also attached to this memo were two lists which identified NRC Statements that were and were not rules for the purposes of SBREFA. Listed among the "Agency Statements That Are Rules For The Purposes Of The Small Business Regulatory Enforcement Fairness Act " were "Bulletins and generic letters that provide new interpretations of law or policy." (Emphasis added.)

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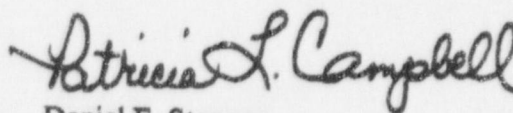
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IV. Recommendations

The NRC has not met its burden to justify the requested actions under the provisions of 10 C.F.R. § 50.109, "Backfitting." None of the described events compromised the safe shutdown of the affected plants and yet the NRC would require that plants shutdown during the course of a fuel cycle to perform testing. There is no indication that the affected plants have current problems that would compromise the ability to maintain adequate shutdown margin; thus, there are no immediate safety concerns that must be addressed. The research efforts that are currently underway could be continued.

There are currently no specific testing requirements associated with the control rod insertion times other than for new fuel assemblies (beginning of life testing). As a less burdensome alternative to the proposed testing, but one that must also be justified through the backfitting provisions of Section 50.109, the NRC could request that licensees perform testing when the end of the fuel cycle is reached and a plant shutdown is already planned. This approach would allow licensees to collect data without the severe burden imposed by requiring a plant shutdown simply to perform testing to monitor the control rod drop times. After the data are analyzed, an assessment by the industry and the NRC could determine whether any additional actions are needed.

Sincerely,



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and Reform Group