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POLICY ISSUE

(NEGATIVE CONSENT)

July 24, 1992 SECY-92-263

For: The Commissioners

From: James M. Taylor
Executive Director for Operations

Subject: STAFF PLANS FOR ELIMINATION OF REQUIREMENTS MARGINAL TO SAFETY

Purpose: To inform the Commission of public comments received on NRC's initiatives to eliminate requirements marginal to safety, and seek Commission approval of actions the staff plans to initiate and include in the report requested by the President in his memorandum dated April 29, 1992 on the subject.

Summary: As a culmination of several years of efforts, the NRC published a notice in the Federal Register on February 4, 1992, presenting the results, conclusions, and planned actions of its initiative to eliminate requirements marginal to safety. Twenty-four comments were received during the comment period which closed on May 4, 1992. Based on public comments, the staff plans to institute a continuing effort to eliminate requirements that are marginal to safety and yet impose a regulatory burden on licensees. The continuing effort will consist of a periodic review of existing regulations for elimination or relaxation every three years. Based on public comments received on NRC proposals and additional suggestions, the staff plans the following actions for the 1st three-year period:

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Moni Dey, RES
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NOTE: TO BE MADE PUBLICLY AVAILABLE WHEN THE FINAL SRM IS MADE AVAILABLE

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7-24-92

A. Initiate rulemaking in the three areas NRC proposed to reduce regulatory burden without an adverse impact on safety by making the regulations less prescriptive and more performance oriented:

   (a) Containment structure leakage testing procedures (10 CFR 50, Appendix J).

   (b) Fire protection features (10 CFR 50, Appendix R).

   (c) Features for post-accident combustible gas control (10 CFR 50.44)

B. Modify licenses in two areas that the NRC proposed to relax or eliminate:

   (a) Main steam isolation valve leak control system.

   (b) Allowable containment leakage rate utilized in containment testing.

C. Analyze the potential for burden reduction, without adverse impact on safety, in the following areas consistently suggested in the public comments:

   (a) Quality assurance criteria (10 CFR Part 50, Appendix B).
   (b) Environmental qualification of electric equipment important to safety (10 CFR § 50.49).
   (c) Plant security requirements (10 CFR 73.55).
   (d) Post-accident sampling systems (NUREG-0737 and Regulatory Guide 1.97).

Several commenters provided the following two proposals for which staff actions are already under way:

   (a) Modify 10 CFR 20 dose limits with regard to hot particles.

      The Supplementary Information on the revised 10 CFR 20 published on May 21, 1991 indicated that the NRC will consider both ICRP and NCRP Reports on the biological basis for dose limitation in the skin in a future rulemaking to set limits for skin irradiation from hot particles. The staff plans to initiate rulemaking following its review of the forthcoming recommendations of the NCRP (expected to be published in August 1993), and expects to complete the rulemaking in about 2

years and 3 months following receipt of the NCRP report.

(b) Permit licensee administered requalification examinations under NRC oversight.

As the staff earlier informed the Commission, it has initiated rulemaking to address this proposed action, and expects to provide the Commission with a draft rule by October 1992, and a final rule in the latter part of 1993.

Several areas suggested in the public comments, have not been chosen for action or analyses in the first three-year period due to resource constraints, but they appear to be promising and shall be revisited as potential candidates for further analyses in the next three-year period. These are listed later in this paper.

Background: In SECY-91-224, dated July 29, 1991, the staff informed the Commission of the conclusions and planned actions of a program conducted to identify, assess and eliminate regulatory requirements that have marginal importance to safety and yet impose a regulatory burden on licensees. Two candidates involving license conditions or commitments in many licenses that may be eliminated or relaxed based on cost-benefit considerations were identified. The staff also proposed that some specific regulations could be made more effective by decreasing their prescriptiveness and providing flexibility to licensees without reducing safety. In a Staff Requirements Memorandum dated August 26, 1991, the Commission approved the staff's conclusions and planned actions to solicit public comments on its proposals, and directed the staff to keep the Commission informed of the nature of the public comments and staff actions to reduce or eliminate requirements that are marginal to safety. Subsequently, a notice was published in the Federal Register (57 FR 4166, February 4, 1992) for a 90-day comment period. This notice is included in Enclosure A.

In the interim, in response to a request from President Bush, the Commission directed (in staff requirements memorandum dated February 7, 1992) the staff to initiate a Special Review of Existing Regulations by its Committee to Review Generic Requirements. The staff reported to the Commission on the results of this review in SECY-92-141 dated April 17, 1992. The CRGR received several comments and about one-third of the more than 100 items considered in the special review were referred to the marginal-to-safety program, the subject of this paper, since they did not fall within the scope or criteria for the special review. In SECY-92-141, the General Counsel and I indicated that apart

from recommendations in the CRGR report, action was being taken to pursue issues identified in the marginal-to-safety program, including a move toward making three regulations less prescriptive and more performance oriented. We also indicated that we would consider and recommend appropriate means to ensure continued pursuit of the remaining worthwhile items.

Discussion: In addition to the items referred to the marginal-to-safety program, 24 public comments have been received in response to the February 4, 1992 Federal Register notice. In addition to responses to NRC proposals, several candidate items have been suggested.

These comments are summarized in Enclosure B under categories for issues and proposed actions. Comments on reporting requirements and regulations for the use of nuclear materials shall be addressed and reported on in recently initiated staff programs in those areas. Further comments received on areas selected in the CRGR Special Review shall be considered in the conduct of those actions.

Ongoing Effort to Eliminate Requirements Marginal to Safety and Reduce Regulatory Burden

The number of comments and proposals received is much larger than initially expected, especially because of the over 30 candidate items referred to this program as a result of the CRGR Special Review of Existing Regulations. In addition, several new proposals were submitted in response to the February 4, 1992 Federal Register notice.

Several commenters have recommended, in written comments in response to the February 4, 1992 and February 24, 1992 Federal Register notices, and at the public meeting on March 27, 1992, that NRC develop a program and dedicate staff resources to a continuing examination of NRC regulations to reduce or eliminate burdensome requirements. A complete summary of these comments is presented in Enclosure B (Issue G1). Some commenters suggested that the most significant outcome of this current review process would be to establish a system for a periodic reassessment of NRC regulatory requirements. NRC's initiative to eliminate requirements marginal to safety recognizes the dynamic nature of the regulatory process, and that the importance and safety contribution of some existing regulatory requirements may not have been accurately predicted when adopted or may diminish with time. Commenters believe that the type of "sunset" review that the NRC is undertaking is of sufficient importance to effective regulation, by aiming to appropriately focus licensee resources, that it should be permanently incorporated into

the NRC regulatory process. They strongly encouraged NRC to continue this staff-initiated program. A few commenters recommended that the NRC should not pursue this program solely for the purpose of reducing licensee's costs, but could pursue the program if it resulted in a better allocation of resources for "competing risks."

As a result of the review of these comments and the several suggested new areas for potential improvement, the staff plans to initiate a continuing examination of NRC regulations to reduce or eliminate burdensome requirements that are marginal to safety, and to subsequently institutionalize the process. Several suggestions were made on ways to institutionalize such a program, one commenter suggested a specific amendment to the backfitting rule, 10 CFR § 50.109. The staff will review these suggestions, explore other alternatives, and recommend to the Commission, within one year, a method to institutionalize a continuing process.

The planned continuing effort will consist of three-year periods during which the following actions will be undertaken (Figure 1A. illustrates the periodic review process):

I. Initiate action to reduce or eliminate requirements that were suggested in public comments, analyzed by the staff to have potential for burden reduction and marginal impact on safety, and finally proposed by the NRC and endorsed by the public.

II. Initiate staff analyses of meritorious public proposals made in the preceding period that appear to have potential for burden reduction and marginal impact on safety (due to resource constraints all suggestions that appear to have merit may not be analyzed in a period and could be carried over into the next period).

III. Based on staff analyses, publish proposed NRC actions for public comment and solicit other suggestions from the public.

This set of actions will be repeated in every period, as long as potential candidates exist. Public input in a period will be used for determining NRC actions in future periods. After the initial backlog of candidate items are acted upon, there may be periods where no NRC action is warranted, however, public input will be solicited in each period.

Current Planned Staff Actions

As a result of a review of public comments received, the staff plans the following actions for the 1st period of the ongoing effort. Public comments received on each proposal are highlighted followed by specific staff plans for the proposals. Complete summaries of public comments on the proposed actions are included in Enclosure B. Figure 1B. shows the key milestones for staff actions in the first period.

NRC Proposal to Reduce Burden by Decreasing Prescriptiveness of Some Regulations

In the Federal Register notice (Enclosure A) published on February 4, 1992, the NRC concluded that decreasing the prescriptiveness of some regulations may improve their effectiveness by providing flexibility to licensees without reducing safety. By decreasing the prescriptiveness of some regulations and providing more flexibility to the licensees for proposing cost-effective safety features, the regulatory process may be made more effective.

The detailed and prescriptive technical requirements contained in these regulations could be removed and replaced with performance-based requirements and supporting regulatory guides. The regulatory guides could specifically allow alternative approaches, although the current detailed technical requirements now in the regulations could be reflected to indicate their continued acceptability.

Specifically, the NRC proposed to amend the following regulations in order to decrease the regulatory burden on licensees without reducing safety: (a) 10 CFR 50.44, "Standards for Combustible Gas Control Systems in Light-Water-Cooled Power Reactor;" (b) Appendix J of 10 CFR 50, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors;" and (c) Appendix R of 10 CFR 50, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979." In the Federal Register notice, the NRC noted that licensees or industry groups are in a better position to determine whether the reduction in burdens from such approaches would be sufficient that this effort would be cost-beneficial overall. Therefore, prior to initiating a resource-intensive program to modify these regulations, the NRC solicits assurances that the results of these efforts will be beneficial.

In response to the public announcement, the industry (through NUMARC) agreed with NRC's conclusion that certain regulations could be improved in effectiveness by decreasing

their prescriptiveness. Further, they noted that beyond the specific issue of prescriptiveness, further benefits to safety and reductions in burden could be accomplished by shifting to a philosophy of performance-based regulation.

The industry recognized that this opportunity to review burdensome regulations provides an excellent context in which to transition from a programmatic and compliance based approach to one that is performance-based and results oriented. Decreasing the prescriptiveness of regulations will allow licensees to determine how to meet performance-based requirements, which will stimulate self-initiative and overall result in a positive impact on safety. It will allow a focus on results more important to safety and more effective allocation of resources. Industry strongly encouraged NRC to pursue a performance-based approach to regulations at this time and to modify existing regulations accordingly.

However, some commenters recommended that the staff address some issues that would arise in developing performance-based regulations, particularly those relating to enforcement and consistent interpretation of the regulations in the inspection process. One commenter recommended limiting a performance-based approach to the new generation of standard design plants.

Comments received from industry groups and several utilities indicate agreement with the specific regulations proposed to be made less prescriptive for decreasing burden. In addition, they suggested Appendix B to 10 CFR Part 50, "Quality Assurance Criteria for Nuclear Power Plants," and § 50.49, "Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants," as candidates for improved effectiveness by making them more performance oriented.

Several commenters, industry groups, utilities and a state government indicated that probabilistic risk assessment (PRA) conclusions and NRC's stated safety goal criteria should be used in modifications to existing, and in the development of future regulations. Some suggested that PRAs and safety goals should be used in the development of non-prescriptive, performance-based regulations.

Based on the very positive feedback in these comments, the staff plans at this time to initiate rulemaking to modify and make less prescriptive, for decreasing burden without an adverse impact on safety, the three regulations proposed by the NRC: (1) 10 CFR 50.44, "Standards for Combustible Gas Control Systems in Light-Water-Cooled Power Reactors:" (2) Appendix J of 10 CFR 50, "Primary Reactor Containment

Leakage Testing for Water-Cooled Power Reactors:" and (3) Appendix R of 10 CFR 50, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979." The staff will utilize, as appropriate, PRA technology and safety goals in the transformation of these rules, and plans to address issues related to inspection and enforcement raised in the public comments. The other two suggested regulations will be examined to determine if there would be any potential benefit in modifying those regulations.

Figure 1B. provides a milestone chart for actions for these rulemakings. Workshops are planned to be conducted in early 1993, followed by publication of one or two proposed rules in about 1 year from that time. The staff will initially formulate the framework for developing performance-based regulations, and then develop preliminary specific applications to the three regulations. Following consideration of public comments on these efforts at the workshops, the staff will develop a staggered schedule which will put one or two rules ahead of the remaining in order to optimize the use of staff resources. The staff's goal is to publish one or two final rules in about three years corresponding to the end of the first period of the continuing effort. However, the milestone for publication of final rules may have to be adjusted depending on the complexity of issues involved in the transformation of these regulations.

NRC Proposal to Eliminate or Relax Two License Conditions

1. Eliminate main steam isolation valve leak control system per Reg. Guide 1.96, "Design of Main Steam Isolation Valve Leakage Control Systems for Boiling Water Reactor Plants."

   Commenters observed that NRC and industry efforts are already underway to resolve this issue and that these efforts should proceed towards resolution in an expeditious fashion. The completion of these efforts is pending the staff review of a topical report on the subject which was submitted by the BWR Owners Group in November 1991. If the report is found acceptable, the staff will issue guidance indicating its new position. Licensees could then take appropriate action based on this guidance.

2. Relax allowable containment leakage rate utilized in containment testing per Appendix J of 10 CFR Part 50.

   The majority of comments received endorsed the NRC proposal and indicated that the NRC and industry

efforts already underway should proceed in an expeditious fashion. Sufficient technical basis now exists to use recalculated source terms to determine allowable leakage rates. The resulting increase in allowable leakage rates would mean a major savings in station operating and maintenance costs.

As proposed earlier, the staff plans to relax the allowable containment leakage rate as part of ongoing revisions to 10 CFR parts 50 and 100. This relaxation for containment leakage testing would be beyond those in the final amendments to Appendix J recommended by the staff in SECY-91-348, dated October 25, 1991. The staff also plans to take advantage of revisions to 10 CFR parts 50 and 100 to examine the potential for burden reductions in the following areas:
(a) containment spray vs. filter tradeoff;
(b) increased containment valve closure times; and
(c) decoupling of operating basis earthquake and safe shutdown earthquake. This rulemaking is expected to be completed by the end of fiscal year 1993.

Other Proposed Actions that Merit Further Examination at this Time

The following proposals received in response to the February 4, 1992, Federal Register notice have been chosen for further analysis based on the number of commenters providing the proposal and the potential for burden reduction with marginal impact on safety (due to resource constraints all suggestions that appear to have merit have not been chosen for analysis, the remaining items will be carried over into the next period. These items are listed later).

1. Modify the requirements in 10 CFR 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to be consistent with performance-based regulations.

   Several commenters, industry groups and utilities, suggested a need for a change to quality assurance approaches in the nuclear power industry. As a transition takes place to a more performance-based approach to the regulatory process, 10 CFR Part 50, Appendix B, needs to be updated for consistency with performance-based regulations, and with new quality concepts. Many in the industry have long been aware not only of the administrative burden resulting from the interpretation of Appendix B requirements, but also of the instances in which Appendix B has forced a

focus on activities of lesser safety significance at the expense of other more significant ones.

The staff has reviewed these comments and concludes that sufficient information is provided in them that indicate that a reexamination of 10 CFR Part 50, Appendix B and its implementation is warranted. As a result of this reexamination and analyses (including estimates of cost savings), the staff plans to recommend any specific actions (for modifications to Appendix B and/or its implementation) to reduce regulatory burden without adverse impact on safety in this area by February 1995, corresponding to the milestones established for the periodic review of regulations (See Figure 1A).

2. Modify requirements in 10 CFR 50.49, "Environmental Qualification of Electric Equipment Important to Safety," by decreasing prescriptiveness as a means of improving its effectiveness.

Several commenters, including industry groups and utilities suggested that a less prescriptive approach in this regulation would allow licensees to focus more on electrical equipment that make important contributions to safety. The requirements of this regulation are based on the deterministic design basis accidents. The results of PRAs demonstrate that most of the components to which these requirements are applied have little or no importance to plant safety. Yet these requirements add significantly to the cost of equipment and documentation.

The staff has reviewed these comments and concluded that there is sufficient merit in them to warrant an examination and analyses (including estimates of cost savings) for burden reduction without reducing safety. The staff plans to conduct these analyses and recommend any specific actions for improving the effectiveness of this requirement by February 1995, corresponding to the milestones established for the periodic review of regulations (See Figure 1A).

3. Evaluate the possibility of reducing the security requirements of 10 CFR 73.55 that are marginally effective.

Industry groups, utilities and a vendor commented that, given the industry experience of the last decade and the recent imposition of more stringent personnel screening programs, that many security related requirements can be reduced without a significant

reduction in safety. The potential of security measures for hindering recovery actions during accidents or emergencies should be considered and perhaps may lead to some safety improvements.

The staff agrees that the potential for burden reduction without safety impact in this area is appropriate for examination. The Office of Nuclear Reactor Regulation is currently re-examining requirements associated with the insider threat at power reactors. The results of this re-examination, which was requested by the Commission in their Memorandum of September 3, 1992 (COMFR-91-005), will be provided to the Commission in the near future. In addition to the findings of re-examination of insider requirements, the staff plans to conduct further examination of security requirements, including estimates of cost savings without impact on safety, and recommend any actions by February 1995 as part of a continuing effort (See Figure 1A.).

4. Reduce Post-Accident Sampling System (PASS) Requirements

Several commenters disagreed with NRC's conclusion in the February 4, 1992, Federal Register notice that reducing PASS requirements would not result in significant savings for operating reactors. The costs of PASS maintenance, testing, training, and procedure development for the many years the systems will remain installed should be taken into account.

As a result of these comments, the staff plans to reestimate the cost savings resulting from the reduction of PASS requirements. Based on this reestimate of burden reduction, the staff plans to recommend any specific action by February 1995 as part of its ongoing effort (see Figure 1A.).

Other Proposed Actions That Will be Deferred to the Next Period of the Ongoing Review

The following proposals from the public that appear to have some merit will be deferred to the next period of the ongoing effort which is planned to commence in August 1995 (see Figure 1A.). These proposals will be listed, along with other NRC proposed actions based on staff analyses, as areas where further public comment is sought, in the next solicitation of comments planned for February 1995 (see Figure 1A.).

Deferred Items:

1. Modification of the requirements in 10 CFR 21, "Reporting of Defects and Noncompliance," particularly with respect to providing a more flexible definition of commercial grade items.

2. Modification of the requirements in 10 CFR 72, Subpart H, "Physical Protection-Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste."

3. Modify 10 CFR 55.31 to allow reactivity manipulations or power changes to be performed on a certified plant-specific simulator.

4. Make the requirements for the frequency of annual requalification examinations and performance of annual audits of security plan and procedures more flexible.

5. Specify criteria for requests for information under 50.54(f).

6. Provide for alternative means of obtaining approval of plant changes involving an unresolved safety question (USQ) by revising 50.59(c).

7. Provide for automatic incorporation of new ASME Code editions and addenda into 50.55a within 60 days of their publication.

8. Endorse the use of a graded response strategy for implementing emergency planning action.

9. Relax containment design basis pressure acceptance criteria.

10. Eliminate the requirement for dose calculations for secondary side accidents when no fuel failure is projected.

11. Reduce existing requirements for protection of plant structures against turbine missiles and tornados.

12. Review recordkeeping and other documentation requirements to eliminate those that are duplicative or unnecessary.

13. Reduce regulatory attention in future staff review of inservice inspection and testing programs.

14. Eliminate duplication of requirements in 10 CFR.

15. Provide flexibility in the timing and frequency of material status reports.

16. Eliminate unnecessary oath, affirmation and certification requirements.

In addition to the above, several proposals have been made that have been reviewed and closed out by the staff, as part of the CRGR Special Review of Regulations (reported in SECY-92-141, dated April 17, 1992) or current staff action. The proposals, comments and staff dispositions are included in Enclosure B (see Closed Issues).

Resource Implications: The resources required for this effort are included in the Five-Year Plan and estimated to be about 4.0 FTE per year. These resources will be drawn mainly from the expected reduction in the resources needed for the Generic Safety Issues program in the Office of Nuclear Regulatory Research.

Coordination: The Office of General Counsel has no legal objection to this paper. The staff has forwarded this paper to the Advisory Committee on Reactor Safeguards, and plans to provide an informational briefing to the Committee at their August 1992 full committee meeting. Subsequently, the staff plans to consult the Committee frequently for their comments and suggestions for this program. The staff is forwarding this paper to the Commission in advance of the ACRS briefing so that it may adequately prepare, and meet the milestones for, the report to the President. The staff has informed the ACRS of this time constraint.

Recommendation: That the Commission:

Note that unless instructed otherwise, the staff will initiate the ongoing program and the specific actions identified for the first period of that program described in this paper, and will include these actions in the report requested by the President in his memorandum of April 29, 1992 on the subject.

James M. Taylor
Executive Director
for Operations

Enclosures: – IN BP.
As stated

A. Federal Register notice published on February 4, 1992, "Elimination of Requirements Marginal to Safety."
B. Summary of Comments.

SECY NOTE: In the absence of instructions to the contrary, SECY will notify the staff on Friday, August 7, 1992, that the Commission, by negative consent, assents to the action proposed in this paper.

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ENCLOSURE A

FEDERAL REGISTER NOTICE

NUCLEAR REGULATORY COMMISSION

10 CFR Chapter I

Elimination of Requirements Marginal to Safety

AGENCY: Nuclear Regulatory Commission.

ACTION: Solicitation of public comments.

SUMMARY: The Nuclear Regulatory Commission (NRC) seeks public comment on the results, conclusions, and planned actions of its program to eliminate requirements marginal to safety. Two issues involving license conditions or commitments have been identified for elimination. The NRC has also concluded that decreasing the prescriptiveness of some of its current regulations may improve their effectiveness by providing flexibility to licensees without reducing safety. The NRC is seeking comments on this conclusion and the benefits of modifying some of its present regulations consistent with this conclusion. The NRC will consider a performance-oriented, non-prescriptive, approach in future regulatory initiatives. The NRC encourages the submittal of a petition for rulemaking whenever there is a brief that NRC regulatory requirements impose a significant economic burden without commensurate safety significance.

DATES: Comment period expires on May 4, 1992, for comments on the results, conclusions, and planned actions for this program.

ADDRESSES: Submit written comments to: Chief, Regulatory Publications Branch, Division of Freedom of Information and Publications Service, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Copies of the SECY paper, staff requirements memorandum, and NUREG and contractor reports may be examined at: the NRC Public Document Room, 2120 L Street, NW. (Lower Level) Washington, DC.

FOR FURTHER INFORMATION CONTACT: Moni Dey, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, (301) 492-3730.

SUPPLEMENTARY INFORMATION:

NRC Initiatives for the Elimination of Requirements Marginal to Safety

In 1984, the NRC's Annual Planning and Program Guidance (PPG) document stated that "Existing regulatory requirements that have marginal importance to safety should be eliminated. In accordance with the PPG document, the staff initiated a program to make regulatory requirements more efficient by eliminating those with marginal impact on safety.

At the start of the 1984 program, the NRC solicited comments from industry on specific regulatory requirements and associated regulatory positions that needed reevaluation. In response to NRC's request, a survey was conducted by the Atomic Industrial Forum providing most of industry's input. The industry survey results, which were published for the NRC in NUREG/CR-4330 [1] "Review of Light Water Reactor Regulatory Requirements," Vol. 1, April 1986, included a list of 45 candidates for potential regulation modification. A Program Advisory Group, composed of members from the major NRC offices was formed to review these candidates. The group selected 7 areas from the 45 candidates for analysis based on the potential benefit for licensees and the number of plants that would be affected: (1) Containment leak rate testing, (2) BWR main steam isolation valve (MSIV) leakage control systems, (3) fuel design safety review, (4) postaccident sampling systems, (5) turbine missiles, (6) combustible gas control systems, and (7) charcoal filters. The results of the analyses of the selected candidates have been published for the NRC in NUREG/CR-4330, "Review of Light Water Reactor Regulatory Requirements," Vols. 2 and 3, dated June 1986 and May 1987. The effects of selected eliminations or modifications to the regulations were evaluated in terms of such factors as public risk and costs to industry and NRC. The results indicated that potential modifications of the regulatory requirements in all the areas except charcoal filters would have little impact on risk. Impregnated charcoal filters in building ventilation systems did appear to limit risks to the public and plant staff. The cost analyses indicated that substantial savings in operating costs may be realized in the areas of containment leakage rates, MSIV leakage control systems, combustible gas control in inerted BWR containments, inspections for turbine missile protection, and postaccident sampling systems (for future plants only). While streamlining fuel design safety reviews would have marginal impact on safety, there appeared to be no significant cost savings in modifying them based on subsequent discussions with a number of utilities and industry groups, including fuel vendors.

The NRC has or proposes to take action in the areas of containment leakage rates, MSIV leakage control systems, and combustible gas control in inerted BWR containments (see Conclusions). The NRC is not proposing any action for the revision of requirements related to turbine missile protection and postaccident sampling systems at this time, since the effort now is focused on benefits for operating reactors, and the elimination of these requirements would not result in significant savings for operating reactors. Turbine missile protection reviews have already been completed, and the costs of installing postaccident sampling systems have already been expended by licensees of operating reactors.

The survey that was initially conducted provided industry's input to develop a list of potential candidates for modification or elimination. In order to complement this earlier work and ensure a complete search, a survey was conducted to collect suggestions based on the accumulated knowledge of NRC staff members, many of whom have spent years developing and applying plant regulations. A structured interview process utilizing each section of the Standard Review Plan (SRP) was developed. The SRP provided a systematic and comprehensive compilation of regulatory positions that served as the structure on which to organize the interview. Interviewees were selected so as to ensure reasonably comprehensive and insightful coverage of all areas of reactor regulation. They were to draw upon their expertise in their particular area, their experience in regulation, their knowledge of regulatory requirements, and any other information at their disposal. The survey identified 54 candidates [2], a number of which were previously identified in the earlier survey.

A method [3] was developed to evaluate the potential candidates

[1] Copies of NUREG series reports may be purchased through the U.S. Government Printing Office by calling (202) 512-2249 or by writing to the U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20013-7082. Copies may also be purchased from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161. A copy is available for inspection or copying for a fee in the NRC Public Document Room, 2120 L Street, NW., (Lower Level), Washington, DC.

[2] "Effectiveness of LWR Regulations in Limiting Risk," Prepared for the NRC by Battelle Columbus Labs., May 1989.

[3] "Elimination of Requirements Marginal to Safety," Prepared for the NRC by Scientech, Inc., Task 1: Methodology Development, Dec. 1990; Task 2: Application of Methodology, March 1991.

identified in the surveys to select those that have a marginal impact on safety and yet would reduce the regulatory burden on industry. An assessment of the short- and long-term NRC and licensee benefit and burden was conducted together with an evaluation of the safety importance of the potential regulatory candidates. This assessment was based on a qualitative analysis and engineering judgment. Eight candidate items were identified [3] as having the highest potential for saving resources while not significantly affecting safety margins: (1) Replace 10 CFR 50.44 (hydrogen rule) with a performance-based rule accompanied by a regulatory guide, (2) clarify 10 CFR 50.59, "Changes, Tests and Experiments," (3) replace fire protection requirements in appendix R with a performance-based rule accompanied by a regulatory guide, (4) eliminate the requirement for the MSIV Leakage Control System, (5) update Regulatory Guide 1.76, "Design Basis Tornado," with current technology, (6) clarify "Important to Safety" in the regulations, (7) replace containment testing requirements in appendix J with a performance-based rule accompanied by a regulatory guide, and (8) transfer ECCS evaluation models in appendix K to a regulatory guide.

The NRC has made specific conclusions on the results related to the hydrogen rule, and fire protection and containment testing requirements (See section C under Conclusions). 10 CFR part 50.46 was amended in 1988 to allow a best-estimate and non-prescriptive (compared to ECCS evaluation models contained in appendix K) calculational approach for demonstrating that the performance criteria in § 50.46 would not be exceeded. The NRC has in the past already initiated actions for clarifying 10 CFR 50.59 and eliminating the requirement for MSIV Leakage Control Systems (see Conclusion B). Since the current effort is focused on modifications of 10 CFR part 50, the NRC does not plan any efforts now for revising Regulatory Guide 1.76, "Design Basis Tornado." The NRC has for the past several years expended resources for clarifying "Important to Safety" in the regulations and a considerable amount of dialogue has occurred between the NRC, and the industry and public. The NRC has concluded that additional efforts at this time are not necessary given the history of past efforts. Independent of the studies noted above for eliminating regulatory requirements that have marginal importance to safety, the NRC had been taking action to eliminate or relax regulations (e.g., 10 CFR part 50, appendix A, "Requirements for Protection Against Dynamic Effects of Postulated Pipe Ruptures") that had marginal importance to safety. In other instances licensees have been exempted from some regulations (e.g., hydrogen recombiners in Mark I and Mark II inerted containments). As noted previously the NRC staff has also been working with industry to clarify some regulations, e.g., 10 CFR 50.59, "Changes, Tests and Experiments." These efforts have resulted in the Guidelines for 10 CFR 50.59 safety evaluations (NSAC-125). At the time the above noted studies were completed in March 1991, it was difficult to identify a regulation that warranted complete elimination because it was so burdensome on operating reactors and so marginal to safety.

Conclusions

The NRC has reviewed each of these items and has reached the following conclusions:

A. No additional 10 CFR part 50 regulations were identified that are so burdensome on operating reactors and so marginal to safety to warrant the expenditure of additional NRC resources to eliminate at this time. Some regulations have been identified that could potentially be rectified (See Conclusion C).

B. The following two candidates involving license conditions or commitments in many licenses may be eliminated or relaxed based on cost-benefit considerations.

(1) Main steam isolation valve leak control system per Reg. Guide 1.96, "Design of Main Steam Isolation Valve Leakage Control Systems for Boiling Water Reactor Plants." The NRC staff has already initiated a review to eliminate the MSIV leak control systems in BWRs. The completion of this review is pending submittal of a topical report from the BWRs Owners Group to confirm the fission product hold-up and trapping capability of the main condenser system. If justified, the NRC anticipates it will eliminate this requirement shortly after the submission of the topical report.

(2) The allowable containment leakage rate utilized in containment testing per appendix J of 10 CFR part 50 may be increased. The NRC has initiated a program to update the source term and to decouple siting from design. As part of this effort, amendments will be made to 10 CFR parts 50 and 100. The basis for the requirements for the allowable containment leakage rate is related to the source term and the radiation dose guidelines contained in 10 CFR Part 100. Therefore, as part of this action, the NRC plans to explore the merits of establishing criteria on containment performance (including a leakage rate) as a replacement for the part 100 dose calculation currently employed. This rulemaking is expected to be completed by the end of Fiscal Year 1993.

C. Decreasing the prescriptiveness of some regulations may improve their effectiveness by providing flexibility to licensees without reducing safety.

The surveys and interviews of the industry and NRC staff conducted as part of this program yielded a general indication that some of NRC's regulations need not be as prescriptive as they presently are. By decreasing the prescriptiveness of some regulations and providing more flexibility to the licensees for proposing cost-effective safety features, the regulatory process may be made more effective. Specifically, the following three regulations could be made less prescriptive: (1) 10 CFR 50.44, "Standards for Combustible Gas Control Systems in Light-Water-Cooled Power Reactors"; (2) appendix J of 10 CFR 50, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors"; and (3) appendix R of 10 CFR 50, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979."

The detailed and prescriptive technical requirements contained in these regulations could be removed and replaced with performance-based requirements and supporting regulatory guides. The regulatory guides could specifically allow alternative approaches, although the current detailed technical requirements now in the regulations could be reflected to indicate their continued acceptability.

There is considerable uncertainty whether licensees would take advantage of the flexibility offered by non-prescriptive regulations, and develop for NRC approval alternative approaches to meet the performance objectives contained in the revised regulations. Licensees or industry groups are in a better position than the NRC to determine whether the reduction in burdens from such approaches would be sufficient that this effort would be cost beneficial overall. Therefore, prior to initiating a resource-intensive program to modify these regulations, the NRC is soliciting comments and assurances that the results of these efforts will be utilized and beneficial. The NRC will also evaluate the feasibility of defining performance-based requirements in proposing regulatory initiatives and new regulations.

Comments Requested

The NRC solicits comments from the public and regulated industry on the results, conclusions and planned actions for this program. Initially, the NRC had planned a public workshop on this program. However, due to resource limitations, this public announcement is being published in lieu of the public workshop. The NRC welcomes and will appreciate all comments on this subject. The following questions are posed to help guide commenters, however, comments need not be restricted only to answers to these questions:

1. Are there any other 10 CFR part 50 regulations that are marginal to safety and yet impose an economic burden on licensees? How would licensees benefit from the elimination of these regulations?

2. Are there any other license conditions or commitments in many licenses, other than the two identified in Conclusion B, that could be eliminated or relaxed? Are the actions identified to eliminate or relax the two candidates in Conclusion B appropriate?

3. Would decreasing the prescriptiveness of some regulations improve their effectiveness by providing flexibility to licensees without reducing safety? If so:

(i) What are these regulations? Are there any beyond the three identified in Conclusion C?

(ii) How would the regulations identified in (i) be made less prescriptive and performance-based? How would this benefit licensees and the regulatory process?

(iii) Would licensees take advantage of the flexibility offered by nonprescriptive regulations and develop for NRC approval alternative approaches to meet the performance objectives contained in the revised regulations?

(iv) Should the NRC pursue this approach at this time, or limit it to future regulatory initiatives?

The NRC is considering efforts to evaluate its regulations for consistency against the safety goals outlined in the NRC policy statement, "Safety Goals for the Operation of Nuclear Power Plants," 51 FR 28044, August 4, 1986. This evaluation could be conducted for regulations proposed in the future, and also a retroactive evaluation could be made for the present body of regulations. This is likely to be a resource intensive process, particularly for evaluating existing regulations, and therefore the NRC seeks public comment on the merits of embarking on such a process.

4. How should the safety goals be best used in evaluating regulations? Should such evaluations be restricted to future regulations or should the evaluation also include present regulations? What would be the advantage foreseen, if any, of another evaluation of existing NRC regulations given that the NRC is proposing to conclude these assessment efforts already described above?

The NRC requests that proposals for the elimination or revision of requirements be accompanied by an analysis demonstrating that the benefits gained by the licensees outweigh the regulatory burden of implementing the change.

These questions are suggested to guide commenter's responses at this time. The NRC recognizes that its regulatory requirements evolve and some in the past have become marginal to safety. The industry and public are encouraged to submit petitions for rulemaking, with supporting justification, at any time when there is a belief that NRC regulatory requirements impose a significant economic burden without a commensurate safety significance.

Dated at Rockville, Maryland, this 29th day of January 1992.

For the Nuclear Regulatory Commission.

Themis P. Speis,

Deputy Director for Research, Office of Nuclear Regulatory Research.

[FR Doc. 92-2853 Filed 2-3-92; 8:45 am]

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Enclosure B

Summary of Public Comments

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Summary of Public Comments

INTRODUCTION

In a notice published in the FEDERAL REGISTER on February 4, 1992, the NRC requested public comment on the results, conclusions and planned actions of its program to eliminate requirements marginal to safety. The notice identified the requirements related to the design of main steam isolation valve leakage control systems, and the allowable containment leakage rate utilized in containment testing for which changes were anticipated following studies that are underway. In addition, the notice requested comment on decreasing the prescriptiveness of some regulations, proposing in particular, 10CFR50.44, "Standards for Combustible Gas Control Systems in Light-Water-Cooled Power Reactors," 10CFR50, Appendix J, "Primary Reactor Containment Leakage Testing for Water Cooled Power Reactors, and 10CFR50, Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979." Four specific questions related to these matters were included in the notice.

Following the issuance of the February 4, 1992, FEDERAL REGISTER Notice, a special review of potentially unnecessary regulatory requirements was conducted by the NRC Committee for Review of Generic Requirements (CRGR). The special review included public invitations to submit written comments as well as attend a meeting held on March 27, 1992. A Report on the Special Review of Existing Regulations was submitted to the Commission on April 17, 1992 (SECY-92-141).

Some of the issues raised by the public comments submitted to the CRGR did not meet the criteria for action within the special review, but were appropriate for consideration within the marginal to safety program. All of those issues and the related public comments are included in the discussion below. New issues raised by the comments submitted in response to the February 4, 1992 FEDERAL REGISTER Notice are added to those issues earlier identified by the CRGR. The comments are separately identified according to the basis for their submission. Comments that addressed issues being addressed by current staff action were not included in the discussion of individual issues below but are summarized in the following paragraphs.

The Nuclear Management and Resources Council (NUMARC)[1], the Nuclear Utility Backfitting and Reform Group (NUBARG)[2], Duke Power, Virginia Power, Cleveland Electric Illuminating, TU Electric, and Richard S. Barkley recommended elimination of requirements for duplicate reports. GPU Nuclear recommended elimination of those reports that are marginal to safety. Virginia Power recommended

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[1]NUMARC is the organization of the nuclear power industry that is responsible for coordinating the combined efforts of all utilities licensed by the NRC to construct or operate nuclear power plants in all matters involving generic regulatory issues.

[2]NUBARG consists of 22 nuclear utilities, each of which owns or operates a power reactor licensed by the NRC. In addition, Publice Service Electric and Gas Company joined in the NUBARG comments.

modification of the frequency requirements for many of the reports required by the NRC. These issues will be addressed by a systematic review of power reactor reporting requirements recently undertaken by the staff.
Richard S. Barkley supported changes in the frequency of FSAR updates, elimination of annual design change reports, and elimination of unnecessary event reports. Virginia Power commented that the threshold for LERs should not be lowered as provided in Draft Revision 1 to NUREG-1022. The New York Power Authority (NYPA) supported elimination of the annual design change report and changes in the frequency of FSAR updates. GPU Nuclear (GPUN) recommended that licensees have the option to submit updates to the FSAR no more than 24 months from the previous update. These issues are addressed by CRGR conclusions and actions resulting from the special review. Comments received from the Institute for Nuclear Medical Education, Nuclear Cardiology Systems, and the American Association for Nuclear Cardiology relating to requirements for medical applications will be addressed under the regulatory impact survey of materials licensees.

Florida Power, Virginia Power and Duke Power commented that the very broad interpretation of 10CFR50.55a in Generic Letter 90-05 imposes an undue burden and reduces safety. Because the comment states that the current regulatory guidance is detrimental to safety, the CRGR has referred this issue to NRR for review and disposition.

Richard S. Barkley supported proposed actions related to the fitness for duty rule; averted on-site costs; individual plant examinations of external events; operability determinations, and the maintenance rule for power reactors. Virginia Power recommended simplification of the fitness-for-duty rule. Cleveland Electric Illuminating recommended careful implementation of the maintenance rule to maintain effectiveness at reasonable cost. These issues were reviewed during the special study by the CRGR, which concluded that no action should be taken beyond that recently taken or currently under consideration by the NRC.
The comments received in response to the February 4, 1992 FEDERAL REGISTER Notice are listed in Table 1.

TABLE 1
Comments in Response to Federal Register Notice of February 4, 1992

	Organization Represented	Signed By
1	Institute for Nuclear Medical Eduction, Inc.	Clyde E. Pearce
2	Nuclear Cardiology Systems, Inc.	Gretchen S. Wheeler
3	American Association for Nuclear Cardiology, Inc.	Charlesz H. Rose
4	Florida Power Corp	G. L. Boldt
5	Self	Cynthia Truman Ellen Diamond Colleen Sweeney Kelly Griffin
6	Self	John Doe
7	Nuclear Utility Management and Resources Council	William Rasin
8	Self	Richard Barkley
9	Commonwealth Edison	Marcia Jackson
10	Nuclear Utility Backfitting and Reform Group (Winston and Strawn)	Nicholas Reynolds Daniel Stenger, William Horin
11	Tennessee Valley Authority	M. J. Burzynski
12	Omaha Public Power District	W. G. Gates
13	New York Power Authority	Ralph Beedle
14	Ohio Citizens for Responsible Energy	Susan Hiatt
15	GPU Nuclear	James Knubel
16	TU Electric	William Cahill, Jr.
17	BWR Owners' Group	Robert Binz IV
18	Northeast Utilities	J. F. Opeka
19	Virginia Power	William Stewart
20	Yankee Atomic Electric Company	D. W. Edwards
21	Illinois Department of Nuclear Safety	Thomas Ortciger
22	Duke Power	Hal Tucker
23	Cleveland Electric Illuminating	Michael D. Lyster
24	Entergy Operations	James Fisicaro

General Issues

The following four issues relate to general regulatory topics, rather than specific regulatory requirements.

ISSUE G1:

Continuing Examination of NRC Regulations

PROPOSED ACTION(S):

Develop a program for ongoing review and dedicate NRC staff resources to a continuing examination of NRC regulations to reduce or eliminate unnecessary, burdensome requirements.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92

Yankee Atomic: Recently, the staff proposed and the Commission accepted, termination of the program dedicated to elimination of requirements marginal to safety because the staff "... believe(d) that no further action should be taken ..." (SECY-91-224, dated August 26, 1991, released to the PDR September 25, 1991). This same program has apparently been reinitiated by the February 4, 1992 FEDERAL REGISTER Notice. It would indeed be tragic if this program becomes another example of a paper study without results despite this "rebirth."

NRC Staff: Make regulatory review for burden reduction a continuing effort, using particularly the advanced-reactor safety reviews as a vehicle for this additional aspect of review.

Richard Barkley: Continue and expand program of reviewing and evaluating current and future NRC regulations for possible elimination based on their marginal effect on safety.

Yankee Atomic and NUMARC: The NRC should move toward non-prescriptive and performance-based requirements.

SUMMARY OF COMMENTS RECEIVED AT PUBLIC MEETING 3/27/92

EPRI (G. Vine): EPRI supports the regulatory review process, and our comments focus on that process. We have two comments where we see an interrelationship between some of the optimization issues identified in the Advanced Light Water Reactor Program and this initiative. These comments are as follows:

1. The CRGR should focus attention on more effective use of the tools used in the regulatory process.
2. There are some regulations that can be modified or eliminated because they are updated and no longer applicable.

New York Power Authority (P. Kokolakis): There are only five Category I items; most of the issues are Category III. A time frame for regulatory review is needed to maintain the momentum of the regulatory process. The CRGR should develop a plan to address all the issues in a specific period of time.

NUBARG (D. Stenger, Counsel): The NRC should develop regulations to require periodic "sunset review" of regulations to identify those that have out lived their usefulness. These reviews should be conducted every 2 years.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

NUBARG: The importance and safety contribution of some current regulatory requirements may not have been accurately predicted when adopted or may have diminished with time. The NRC should amend its regulations to require a periodic review to identify and eliminate requirements marginal to safety, for example, by including the following requirement for periodic "sunset" review as a new paragraph (f) in the backfit rule, 10CFR50.109:

> The Executive Director for Operations or his designee shall review existing regulatory requirements on a periodic basis, not to exceed every three years, to identify any benefit to the overall protection of the public health and safety or the common defense and security, or for which the direct and indirect costs of implementation are not justified in view of this benefit. Public comment shall be solicited as part of this review. The Executive Director for Operations shall report to the Commission on the results of this review and on any changes recommended in the regulations.

The New York Power Authority, Cleveland Electric Illuminating, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) endorsed the NUBARG comments.

BWR Owners Group: Strongly supports a constant effort on the part of both the NRC and the industry to identify and eliminate marginal safety requirements. The reduction of those regulations enhances safety by allowing resources to be focussed on areas providing greater safety benefit. The BWROG actively participated in the work to resolve three of the original 45 issues identified in the 1986 report, NUREG/CR-4330, and notes that they are not yet resolved. It should be noted that the extensive time and resources required to support such efforts together with significant uncertainty concerning their outcome can serve to discourage the initiation of other similar efforts.

Florida Power: It is feasible for the staff to consider early reduction or elimination of certain existing requirements, many of which have a sufficient technical basis already well established so that extensive further research and evaluation is not required.

Cleveland Electric Illuminating: An ongoing effort in behalf of both industry and the NRC to identify and reduce marginal safety requirements is beneficial to a technically sound and well managed regulatory program. It is strongly

recommended that this initiative be the continuation of a review process and not just the conclusion of a program that was begun in 1984 and documented in NUREG/CR-4330. The "sunset" concept proposed by NUBARG is preferred.

Ohio Citizens for Responsible Energy: The D.C. Circuit Court of Appeals held (*UCS v. NRC*) that review of regulatory requirements for "adequate protection" cannot consider the economic cost of safety measures. Consequently, efforts to eliminate requirements that are marginal to safety should be abandoned.

Connecticut Yankee and Northeast Nuclear Energy: The NRC is encouraged to continue this staff-initiated program.

GPU Nuclear: We commend the staff in its efforts to review the regulations. We believe the effort produced worthwhile conclusions and results.

Cynthia Truman et al.: The NRC should not reduce or eliminate any rules concerning the safe operation of nuclear power plants, but should close plants that cannot meet current safety requirements and cease plans for building new plants.

John Doe: Commercial nuclear power is not an area where regulations can be relaxed or vigilance diminished; the NRC should reevaluate its requirements and its inspection and enforcement practices to make them more effective and require licensees to reestablish the safety basis for continued operation.

Virginia Power: Urges the NRC to proceed with the review of regulations and set deadlines for completing the review. Recommends that similar reviews take place on a periodic basis, e.g., every five years. The NRC considers costs and safety benefits before issuing many regulations. In practice, implementation of a regulation may result in higher costs or lower benefits than originally estimated. Sometimes regulations overlap. Other times, combinations of requirements may result in conflicting requirements or unanticipated higher costs. We urge the NRC to review existing regulations for consistency, duplication, continuing safety benefits, and cost on a systematic and periodic basis.

Yankee Atomic Electric: The lack of resolve to change established practices appears to be the largest factor inhibiting progress toward regulatory improvement. It would indeed be tragic if the marginal to safety program becomes another example of a paper study without results.

DISPOSITION:

The staff plans to initiate a program for ongoing review of NRC regulations to reduce or eliminate burdensome requirements that are marginal to safety. Regulatory requirements for "adequate protection" do not fall within the scope of this program. The staff will reduce or eliminate requirements that result in a marginal increase in safety beyond the level for "adequate protection," and are unduly burdensome.

ISSUE G2:

Criteria for Marginal-to-Safety

PROPOSED ACTION(S):

Modify the criteria for recognition and acceptance of marginal to safety candidates.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92:

TU Electric: Change the focus of the February 4 FEDERAL REGISTER request for comments to a more proactive effort and accept candidates that, while they do not show substantial economic gains, will allow the licensee to operate more efficiently.

Yankee Atomic: NRC's rationale for deciding on regulatory changes based on marginal safety significance is deficient in that it does not take into account all costs born by the licensees. For example, no action is intended on post-accident sampling system requirements "_the costs of installing [the systems] have already been expended_:" The obvious assumption is that maintenance, testing, training, procedure development are all without cost for the many years the system will remain installed. The rationale for removal of a requirement ought to be that any requirement that is marginal to safety and imposes any identifiable burden should be deleted.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

NUBARG: The granting of multiple exemption requests for the same or related regulations is certainly indicative of requirements for which the same safety benefit is achievable by acceptable alternative means, and may indicate that the provisions impose specific requirements that could be eliminated or made more flexible. The New York Power Authority, Cleveland Electric Illuminating, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) endorsed the NUBARG comments.

Florida Power: The regulatory burden imposed is routinely underestimated by the staff in its reviews.

Ohio Citizens for Responsible Energy: The only basis for eliminating or relaxing regulatory requirements is competing risk.

Cynthia Truman, et al.: The NRC should not reduce or eliminate any rules concerning the safe operation of nuclear power plants, but should close plants that cannot meet current safety requirements and cease plans for building new plants.

John Doe: Commercial nuclear power is not an area where regulations can be relaxed or vigilance diminished; the NRC should reevaluate its requirements and its inspection and enforcement practices to make them more effective and require licensees to reestablish the safety basis for continued operation.

Duke Power: Any requirement that is marginal to safety and imposes an identifiable burden should be removed.

Yankee Atomic Electric: NRC must revise its threshold for significant economic burden to be any at all if the source of that burden has little or no safety benefit.

Cleveland Electric Illuminating: The marginal to safety study should consider the regulatory requirements that are imposed by Generic Letters. This category of communication or information request has within the last 10 years developed into a significant burden for the industry on a number of topics. Generic Letters have assumed a quasi-regulation status by which the staff implements new criteria, and are used to direct licensee activities.

BWR Owners Group: Other mechanisms exist for evaluating the usefulness of existing regulations. Past regulatory impact surveys initiated by the NRC have had beneficial results. These mechanisms can be effective with adequate participation and receptiveness to change by both the industry and the NRC staff.

DISPOSITION:

The staff will consider all requirements that are marginal to safety for elimination or reduction, however, requirements imposing the most significant burdens will receive priority in the periodic review.

ISSUE G3:

Non-Prescriptive Regulations

PROPOSED ACTION(S):

Continue the modification of 10CFR50 to achieve less prescriptive regulations, including the development of performance-based regulations where appropriate.

BACKGROUND:

In the February 4, 1992 FEDERAL REGISTER Notice, NRC concluded that decreasing the prescriptiveness of some regulations may improve their effectiveness by providing flexibility to licensees without reducing safety, and proposed such modifications to specific regulations (See Issues A1, A2, and A3).

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92

Yankee Atomic. The NRC should move toward non-prescriptive and performance-based requirements.

NUMARC: Many regulations create burdens that are not commensurate with their safety significance because of their prescriptive, programmatic and compliance oriented nature. The February 4 FEDERAL REGISTER Notice (Conclusion C) notes that NRC believes certain regulations could be improved in effectiveness by decreasing their prescriptiveness. We agree with this conclusion, and believe other regulations beyond those specifically cited in the February 4 FEDERAL REGISTER Notice should be reviewed in this regard. Beyond the specific issue of prescriptiveness, further benefits to safety and reductions of burden could be accomplished by shifting to a philosophy of performance-based regulation. We recognize this involves a significant cultural change on the part of the industry as well as the regulator; however, this current opportunity to review burdensome regulations provides an excellent context in which to transition from a programmatic and compliance based approach to one that is performance-based and results oriented.

Often, NRC staff interpretations of regulations, as promulgated through Generic Letters (including the use of 10CFR50.54(f)), Regulatory Guides, NUREGs, and other methods, result in burdens far in excess of what the regulation itself appears to require. Further, significant new interpretations and requirements are often imposed through the inspection process. In order to fully address the issue of regulatory burden, it is necessary to go beyond review of the regulations themselves and to include reviews of the processes by which the NRC staff imposes compliance with the regulations. We are encouraged by NRC efforts to address this issue as a result of the regulatory impact survey process.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

NUMARC: Decreasing the prescriptiveness of regulations will allow licensees to determine how to meet performance-based requirements, which will stimulate self-initiative and overall result in a positive impact on safety. It will allow a focus on results more important to safety and more effective allocation of resources.

Performance based regulations will provide objective, rather than subjective, regulatory requirements and help resolve the related problem of individual interpretations of regulations through the inspection process and other regulatory mechanisms. We strongly encourage NRC to pursue a performance-based approach to regulations at this time. The Tennessee Valley Authority, New York Power Authority, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) and the BWR Owners Group endorsed the NUMARC comments.

Omaha Public Power District: The flexibility offered by non-prescriptive regulations would be of great advantage to licensees.

GPU Nuclear: When regulations are prescriptive, they conflict with the fact that each plant has unique design features. These features sometimes can provide a licensee with an economic approach to achieve the desired safety objective. We concur with the staff's proposal to replace detailed and prescriptive requirements with performance-based requirements and regulatory guidance.

BWR Owners Group: Agrees that some regulations need not be as prescriptive as they are and that decreasing the prescriptiveness would provide more flexibility to licensees without reducing safety, thereby creating a more efficient process. We share the staff's uncertainty whether licensees would take advantage of increased flexibility, at least to the extent that a better understanding of specific performance objectives would be needed to make such a determination. We are certainly willing to pursue the matter further. Cleveland Electric Illuminating endorsed the BWR Owners Group comments.

Virginia Power: Supports a regulatory environment that is performance-based rather than prescriptive. Changes to existing regulations from prescriptive to performance-based should be effected in a gradual and flexible manner. Often the strict adherence to prescriptive regulations requires extensive efforts in maintenance, surveillance, documentation , reporting and inspection that do not necessarily contribute to safety or the intended purpose of the regulations. The change to performance-based regulations would improve the effectiveness of regulations by encouraging innovative approaches that may result in higher safety and lower costs.

Yankee Atomic Electric: There needs to be a consistent approach to the amount of detail in regulations versus that appearing in guidance. Although the litigation problems caused by the presence of detailed requirements for seismological evaluations in 10CFR100 are well known, the current plans to rewrite the seismic

requirements would retain the detail in an appendix and thus perpetuate this malady.

Cleveland Electric Illuminating: Generally supports the concept of principal goals and objectives being outlined in the 10 CFR regulations, and details of compliance being within regulatory guides for flexibility. Not all existing rules are amenable to this transformation. Some caution should be given to circumstance like 10 CFR 50.73, where the details are within a NUREG which is in significant debate. The rule must be prescriptive enough to establish the basic goals and objectives, and possible principal criteria. Wherever the detailed guidance is provided, there is a need for consistent application by the NRC Regional Offices. The prescriptiveness should not be reduced to the extent that Regional interpretations are controlled.

Illinois Dept. of Nuclear Safety: Does not support performance-based regulations even though they will give licensees more flexibility to take advantage of alternative approaches to meeting regulatory requirements, because the variety of specific plant designs, the incomplete state of older plant design basis, and the potential number of alternative approaches that might be offered by licensees could tax the ability of the NRC to review them adequately. IDNS is concerned that without a well defined and documented safety basis, margins of safety designed into plants will be reduced. Determining a satisfactory safety basis is a subjective judgment that is more easily measured by performance based on prescriptive regulations, rather than performance-based regulations. Opportunity for the public to scrutinize licensee performance would also be reduced. Although a performance-based approach could be suitable for a new generation of standard design plants, it is unsatisfactory for the existing plants.

Northeast Utilities: Recognizing that the NRC program is likely to be a resource - intensive process for the NRC, NU would like to emphasize that we would certainly take advantage of the results of this effort and the flexibility offered by less prescriptive regulations. In spite of the considerable NRC front-end resources required to evaluate and change the many candidate regulations, we believe that over the long-term, implementation of this program will yield significant overall benefits to both the NRC and its licensees.

DISPOSITION:

The staff plans to initiate rulemaking to modify the three proposed regulations to make them less prescriptive and more performance oriented.

ISSUE G4:

Use of PRA and Safety Goals

PROPOSED ACTION(S):

Extend and improve the use of PRA and the Commission's safety goals in the routine conduct of NRC's regulatory activities.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92

New York Power Authority: Greater use should be made of PRA, i.e, place the basis of regulation more on risk considerations.

Detroit Edison: We believe CRGR should revisit requirements causing substantial continuing costs to licensees and review their original decisions. Where appropriate probabilistic risk assessment insights should be utilized to aid in identifying requirements which add little to safety. The NRC's Safety Goal acceptance criteria should be used in this review. Unnecessary requirements should be eliminated and, where costs are greater than originally estimated, less costly alternatives should be considered.

Yankee Atomic: The "track record" with regard to actual use of risk analysis for discrimination of requirements is not good. The Maintenance Rule is a failure as a pilot attempt to a risk-based regulation. BWRs with Mark I containments have been forced to retrofit hardened vents despite the immediate availability of the IPE analysis programs on these plants which could have provided definitive evaluation of the incremental benefit of such a change. Another opportunity lost.

SUMMARY OF COMMENTS RECEIVED AT PUBLIC MEETING 3/27/92

Robert Licciardo: Rejected the proposal to modify current protective measures in terms of PRA. Deterministic analyses should be used in establishing the licensing basis for a plant's design. PRA techniques should not be used to determine the safety basis of equipment, but could be used to make choices once an acceptable design is determined. PRA can then be used to determine the relative safety importance of systems and components. There is too much variability in PRA figures. What do PRA risk figures really mean? PRA figures have no realistic meaning when they are calculated over a long period of time and then divided by a time frame to yield risk per a specific time period or event. Plant safety features cannot be modified based on a PRA.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

NUBARG: The NRC should provide for the use of Probabilistic Risk Assessments, including the Individual Plant Examinations for internal and external events, to assess whether requirements are marginal to safety. From a broader perspective, PRAs should not be the sole basis for regulatory decisions due to the uncertainty in their results; however, if the results indicate that a particular

requirement has a contribution to risk significantly below the Safety Goal thresholds, the PRA information should be considered sufficient to justify elimination of the requirement as marginal to safety.

NUMARC: Strongly encourages NRC to move forward with efforts to evaluate its current and future regulations for consistency with the safety goals. This would validate existing and improve future regulatory cost/benefit analyses and be an important step to a more performance-based regulatory philosophy. The Tennessee Valley Authority, New York Power Authority, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) and the BWR Owners Group endorsed the NUMARC comments.

Omaha Public Power District: PRA provides a powerful tool for assessing regulatory requirements and their impact on public safety, and is a tool necessary for implementing the proposed non-prescriptive regulations.

New York Power Authority: Recommends that greater use be made of probabilistic safety assessments, i.e., place the basis of regulation more on risk considerations than the present deterministic basis.

Florida Power: The application of current Source Term knowledge to operating plant issues could also have significant benefit in increasing public confidence in the nuclear option, reducing its costs and making the industry's collective decisions more technically correct.

Ohio Citizens for Responsible Energy: In its December 18, 1991 letter on SECY-91-270, "Interim Guidance of Staff Implementation of the Commission's Safety Goal Policy," the ACRS stated that the safety goal is essentially a cost-benefit standard. As such, the safety goals cannot be used in establishing or reevaluating any adequate protection standard, pursuant to the August 1987 decision of the D.C. Circuit Court of Appeals, *Union of Concerned Scientists v NRC*, 824 F.2d 108. The safety goals neglect the increase in collective risk as the population of reactors grows, which would have a negative effect on the political acceptability of nuclear power.

GPU Nuclear: As a concept, safety goals could provide a useful tool in the evaluation of all regulations. However, the application of the safety goals in this process is still unclear and would require further definition before industry acceptance.

BWR Owners Group: A single technique, be it deterministic, performance-based, or probabilistic, may not be appropriate for all regulations. Experience should continue to be gained and applied to evaluate which technique(s) should be used. Safety goals should be used as a tool in evaluating evolving requirements; however, the substantial uncertainty as to how the safety goals should and will be implemented requires the industry position to be significantly qualified. Cleveland Electric Illuminating endorsed the BWR Owners Group comments.

Yankee Atomic Electric: Given the assertion made many times that the path to regulatory improvement lies in the adoption of a performance-based system, linkage must be established between the current body of regulations and the safety goals through the use of PRA. The track record with regard to actual use of risk analysis is not good. The failed pilot attempt at a risk-based Maintenance Rule should be recovered by another attempt at rule language.

Cleveland Electric Illuminating: Intrinsic to this issue is the application of probabilistic analysis and individual site IPE examinations. Safety goals should remain as "targets" by which the NRC should aspire, but recognize that the tools for analyzing facilities are not mature. Significant uncertainties exist in the methodologies and assumptions which prevent direct comparisons of results, but do allow relative comparisons of risk. Application of real numeric safety goals would of necessity be limited initially to those areas or systems of the most knowledge with the fewest variables, and the highest confidence the results are realistic and repeatable.

Illinois Dept. of Nuclear Safety: Modifications to existing, and development of future, regulations should be evaluated against plant-specific probabilistic risk assessment conclusions and against the NRC's stated safety goal criteria. Changes to regulations would then be based on objective standards.

DISPOSITION:

The staff plans to utilize the Commission's Safety Goals and PRA tools, to the extent deemed appropriate, in the development of performance-based regulations, and in the review and development of regulations.

Action Issues

The staff plans to execute the following seven proposed actions.

ISSUE A1:
Fire Protection (10CFR50 Appendix R)

PROPOSED ACTION(S):

Replace Appendix R of 10CFR50, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979" with a non-prescriptive performance-based regulation.

BACKGROUND:

Appendix R of 10CFR50 specifies fire protection requirements for nuclear power plants. The requirements state the need for a comprehensive fire protection program at each nuclear power plant in terms of:

1. establishment of a fire protection program;
2. performance of a fire hazards analysis;
3. establishment of fire prevention features for those areas containing or presenting a fire hazard to structures, systems, or components important to safety; and
4. alternative or dedicated safe shutdown capability in areas where fire protection features cannot ensure safe shutdown capability.

In addition to these requirements, various documents related to the implementation of Appendix R have been issued. These implementation documents include five Generic Letters (GL 81-12; GL 83-33; GL 85-01; GL 86-10; GL 88-10) and three Information Notices (IEN 83-41; IEN 83-69; IEN 84-09).

For those plants operating prior to January 1, 1979, these implementation guidance documents served as the basis for licensing reviews for fire protection and subsequent safety evaluation reports. For those plants not operating prior to January 1, 1979, Standard Review Plan(SRP) 9.5-1 (formerly BTP 9.5-1) applies to plants whose applications for construction permits were docketed after July 1, 1976, and Appendix A to BTP 9.5-1 applies to plants whose applications for construction permits were docketed prior to July 1, 1976. With few exceptions, SRP 9.5-1 and Appendix A to BTP 9.5-1 contain the same information found in Appendix R.

Appendix R has been implemented at all currently operating nuclear power plants. This implementation may have taken the form of backfits to operating plants, a determination that applicant plants meet the requirements of BTP 9.5-1, or exemptions to the specific requirements based on alternative approaches which achieve the requisite level of safety.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92:

NUMARC: In response to NRC's proposal of the above action in the February 4 and 24, 1992, FEDERAL REGISTER Notices, commenter concurred with the NRC that certain regulations could be improved in effectiveness by decreasing their prescriptiveness. Priority (sequence and schedules) to address NRC proposal should be determined based on input and discussions at the planned March 27 public meeting.

GPU Nuclear: Replace Appendix R with a performance-based rule and a regulatory guide in 1994.

Florida Power Corp: Appendix R review might need to be integrated with the IPEEE (Fire) schedule.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92

NUMARC: We encourage the NRC to move ahead with this activity. The Tennessee Valley Authority, New York Power Authority, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) and the BWR Owners Group endorsed the NUMARC comments.

Omaha Public Power District: Fire protection regulations often require fire protection program capabilities to greatly exceed the postulated hazard with no significant increase in safety. Decreasing the prescriptiveness of Appendix R would improve its effectiveness without reducing safety by providing flexibility to licensees.

GPU Nuclear: We concur with the replacement of the detailed and prescriptive fire protection requirements with performance-based requirements with regulatory guidance.

Richard S. Barkley: Reducing the prescriptiveness of fire protection requirements will not have a negative impact on safety, will result in more efficient regulation and avoid stifling engineering innovation.

Yankee Atomic Electric: Appendix R is an highly prescriptive regulation which imposes specific fire protection measures. Risk from fire is a subject that must be addressed by the PRA models used for evaluation under IPEEE. The body of PRA results should show which measures specified in Appendix R actually do contribute significantly to risk reductions and which are burdensome requirements not having significant importance to risk.

Entergy Options: This approach is a positive step since more flexibility will be afforded the utility. However, inspection efforts could be hindered unless clear guidance is provided in inspection mannuals.

ISSUE A2:

Containment Leak Testing Rulemaking

PROPOSED ACTION(S):

Replace Appendix J to 10CFR50 "Primary Reactor Containment Leak Testing for Water Cooled Power Reactors" with a non-prescriptive performance-based rule.

BACKGROUND:

10CFR50 Appendix J requires different types of containment leakage tests:

1. Measurement of the containment integrated leakage rate is required three times during each 10-year period during the operating life of the plant.
2. Measurement of the leakage across each pressure-containing or leakage-limiting boundary for various primary reactor containment penetrations is required at intervals not to exceed 2 years, except that air locks are tested every 6 months.
3. Measurement of the containment isolation valve leakage rates is required at intervals not to exceed 2 years.

The American National Standards Institute Standard ANSI N45.4-1972, "Leakage Rate Testing of Containment Structures for Nuclear Reactors," was incorporated by reference into Appendix J with modifications and exceptions. Appendix J provides test frequencies, pretest requirements, test methods, and acceptance criteria for each of the tests described above. Appendix J also describes the situations that call for special test requirements and the reporting requirements for the test results.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92

NUMARC: In response to NRC's proposal of the above action in the February 4 and 24, 1992, FEDERAL REGISTER Notices, commenter concurred with the NRC that certain regulations could be improved in effectiveness by decreasing their prescriptiveness. Priority (sequence and schedule) to address NRC proposal should be determined based on input and discussions at the planned March 27 public meeting. This proposal is preferable to continuing with the current effort to change Appendix J now and then again in 1993, which in all likelihood will not happen if the current proposed revision is promulgated.

Detroit Edison: A review of Appendix J of 10CFR50 to make this regulation less prescriptive should be expedited since these activities are primarily performed during outages, when resource constraints are more acute.

GPU Nuclear Corp: Replace containment testing requirements in Appendix J with a performance-based rule and a regulatory guide in 1993.

Detroit Edison: The Appendix J requirement to determine as-found leakage for isolation valves when maintenance is already planned for the valve should be revised to permit only determination of as-left leakage after the maintenance has been performed. The as-found data provides minimal information of safety significance. An as-left leakage determination following maintenance is sufficient to assure public health and safety.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

NUMARC: We encourage the NRC to move ahead with this activity. The Tennessee Valley Authority, New York Power Authority, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) and the BWR Owners Group endorsed the NUMARC comments.

BWR Owners Group: While changes to Appendix J proposed by the staff late last year are generally viewed as improvements to the current regulation, additional changes are needed to remove inconsistencies with other requirements and within the proposed regulation itself. Had there been more receptivity by the staff to changes suggested by NUMARC and BWROG, the concerns with the proposed Appendix J would have been resolved at this point. Cleveland Electric Illuminating endorsed the BWR Owners Group comments.

Omaha Public Power District: Favors a non-prescriptive approach for containment performance, including a leakage rate, as a replacement for 10CFR Part 100 dose calculation methods currently employed.

GPU Nuclear: We concur with the replacement of the detailed and prescriptive containment leakage testing requirements with performance-based requirements with regulatory guidance.

Richard S. Barkley: Recommended reductions in the prescriptiveness of regulations, as discussed in the FRN, on the basis that the cited regulations claimed resources out of proportion to their safety significance. In addition, the commenter noted the prescriptive nature of these regulations acted as a disincentive for innovative engineering on the part of licensees.

Entergy Operations: Making this regulation less prescriptive would be beneficial by allowing flexibility and utilization of the latest technology.

ISSUE A3:

Combustible Gas Control System (10CFR50.44)

PROPOSED ACTION(S):

Replace 10CFR50.44, "Standards for Combustible Gas Control Systems in Light Water Cooled Power Reactors," with a non-prescriptive performance-based rule.

BACKGROUND

10CFR50.44 established specific standards for the control of hydrogen, including a method and basis for calculating the amount of hydrogen generated after a loss-of-coolant accident. The requirements for hydrogen control are numerous and specific. A summary of these requirements is as follows:

1. Capabilities must be provided to monitor and control combustible gas concentrations in the containment following a postulated loss-of-coolant accident.
2. It must be shown that an uncontrolled hydrogen-oxygen recombination will not take place in the containment or that the plant could withstand the consequences of such a recombination. If these conditions can not be demonstrated, the atmosphere inside the containment must be made inert.
3. High point vents must be provided for the reactor coolant system, the reactor vessel head, and other systems required to maintain adequate core cooling.
4. Specific requirements are provided regarding the amount of hydrogen that must be considered during postulated loss-of-coolant accidents.

Section 50.44 also requires equipment necessary for safe shutdown and containment integrity to be qualified for the environmental conditions resulting from hydrogen deflagration or detonation, as appropriate.
In addition, the BWR Mark I and Mark II containments are required to operate with an inerted atmosphere (by addition of an inert gas, such as nitrogen), which effectively precludes combustion of any hydrogen generated.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92:

NUMARC: In response to NRC's proposal of the above action in the February 4 and 24, 1992, FEDERAL REGISTER Notices, commenter concurred with the NRC that the subject regulation could be improved in effectiveness by decreasing its prescriptiveness.

GPU Nuclear Corp.: Replace 10CFR50.44 with a performance-based rule and a regulatory guide in 1993.

Florida Power Corp.: Hydrogen control changes might be of immediate benefit to FPC.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

NUMARC: We encourage the NRC to move forward with this activity. The Tennessee Valley Authority, New York Power Authority, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) and the BWR Owners Group endorsed the NUMARC comments.

Omaha Public Power District: Concurs with the NRC conclusion that decreasing the prescriptiveness of some regulations may improve their effectiveness by providing flexibility to licensees without reducing safety.

GPU Nuclear: We concur with the replacement of the detailed and prescriptive combustible gas control requirements with performance-based requirements with regulatory guidance.

ISSUE A4:

Main Steam Isolation Valve Leakage Control System

PROPOSED ACTION(S):

Eliminate the requirement for Boiling Water Reactor Main Steam Isolation Valve Leakage Control System.

BACKGROUND:

General Design Criterion 54 "Piping Systems Penetrating Containment" requires, in part, that piping systems penetrating containment be provided with leak detection, isolation, and containment capabilities having redundancy, reliability, and performance capabilities that reflect the importance to safety of isolating these piping systems. Operating experience in the early 1970s showed degradation of BWR MSIVs. This led to supplemental design features to control and contain the leakage of radioactive material from MSIVs as described in Regulatory Guide 1.96 and Standard Review Plan Section 6.7. Standard Review Plan Section 15.6.5, Appendix D, describes acceptable means for calculating the release of fission products and their contribution to off-site doses following a large break LOCA.

A detailed review of the matter (NUREG/CR-4330) using NRC value impact guidelines concluded that, if treated as a new requirement for operating reactors, the MSIV LCS would not be justified as a backfit. The review of the MSIV LCS requirements is a current, ongoing regulatory activity.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92:

NUMARC: NRC and industry efforts are already underway to resolve this issue and these efforts should proceed towards resolution in an expeditious fashion.

GPU Nuclear: Reduce the MSIV leakage requirements based on the results of the BWR Owner's Group Topical Report in 1992.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

BWR Owners Group: The BWR Owners Group supports the elimination of MSIV LCS requirements. Cleveland Electric Illuminating endorsed the BWR Owners Group comments.

NUMARC: The actions identified in Conclusion B (FRN 2/4/92) to eliminate or relax requirements associated with BWR MSIV leakage control systems are appropriate. The Tennessee Valley Authority, New York Power Authority, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) and the BWR Owners Group endorsed the NUMARC comments.

Richard S. Barkley: Delete the requirement on the grounds that the NRC Staff had already found this to be appropriate. It would have the clear benefit of reducing plant complexity.

GPU Nuclear: Supports the elimination of MSIV LCS requirements

Ohio Citizens for Responsible Energy: Noted that the regulatory analysis for Generic Issue C-8, "MSIV Leakage and LCS Failure", stated that licensees are expected to continue their efforts to maintain the LCS and satisfactory MSIV performance.

Illinois Dept. of Nuclear Safety: Is reluctant to endorse the elimination of MSIV leakage control systems until the supporting reports and analyses are made available for public review. IDNS believes it is inappropriate to deliberately reduce safety margins without clear and compelling reasons.

ISSUE A5:

Allowable Containment Leakage Rates

PROPOSED ACTION(S):

Increase allowable containment leakage rates.

BACKGROUND:

The containment design leakage rate is specified in the technical specifications or other design bases for an individual plant. NUREG/CR-4330 reported that probabilistic risk assessments have shown that containment leakage at or slightly above the design leakage rate is a relatively minor contributor to overall nuclear reactor risk. The dominant containment-related contributions to risk stem from accidents in which the containment ruptures or the containment isolation system fails or is bypassed. While the risk contribution due to containment leakage may be small, the cost impact of containment leakage testing is substantial.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92:

NUMARC: NRC and industry efforts are already underway to resolve this issue and these efforts should proceed towards resolution in an expeditious fashion.

BWR Owners Group: The BWR Owners Group endorsed relaxation of the containment leakage requirements.

Detroit Edison: Resolution of these issues should proceed expeditiously.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

NUMARC: The actions identified in Conclusion B (FRN 2/4/92) to eliminate or relax requirements associated with containment leakage rates are appropriate. The Tennessee Valley Authority, New York Power Authority, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) and the BWR Owners Group endorsed the NUMARC comments.

BWR Owners Group: The BWR Owners Group supports the staff effort to increase the allowable containment leakage rate. Cleveland Electric Illuminating endorsed the BWR Owners Group comments.

Commonwealth Edison: Allowed containment leakage rates should be based upon post-accident off-site dose rates. It is neither necessary nor advisable to maintain the lowest leak rates practical, as this is of marginal safety benefit and diverts significant resources from other safety activities. Sufficient technical basis now exists to use the recalculated source terms of NUREG-1150 to determine the allowable leakage rates. The resulting increase in allowable leakage rates would mean a major savings in station operating and maintenance costs.

Omaha Public Power District: An increase in allowable leakage would be beneficial as it would decrease the duration of the Type A tests and allow more flexibility in management of the Type B and C leakage test results. This would reduce the emergent outage repair work and result in cost savings. The current prescriptive regulation of containment leakage has a small effect on off-site dosages.

GPU Nuclear: Relaxation of containment leak rate is warranted.

Ohio Citizens for Responsible Energy: Noted that NUREG/CR-5747, "Estimate of Radionuclide Releases Characteristics Into Containment Under Severe Accident Conditions," shows bounding radionuclide release magnitudes greater than those currently in use. OCRE suggests that this provides justification for reduced (more stringent) leakage limits, not relaxation of these requirements.

Illinois Dept. of Nuclear Safety: Does not believe that sufficient basis exists for increasing allowable containment leakage rates. Source term estimation and off-site dose calculations are bounded by large uncertainties, which have direct implications for the health and safety of the public under severe accident conditions.

Entergy Operations: Increasing the limits in this regulation could save critical path time during outages and would not make an appreciable difference in the safety analyses due to recent source term information.

ISSUE A6:

Dose Limits for Hot Particles (10CFR20)

PROPOSED ACTION(S):

Modify 10CFR20 dose limits with regard to hot particles.

BACKGROUND:

In the 1980s, nuclear power reactor licensees experienced skin contamination incidents associated with personnel exposures to "hot particles." These very small (5-250 μm) particles of fuel or activated corrosion products have been discovered in reactor facilities, on workers or their clothing, and, in a few isolated cases, in worker's vehicles or homes. The particles are generally too large to pose a significant risk from inhalation, but are capable of producing intense beta-radiation doses over very small areas of the skin. Hot particles apparently become electrically charged as a result of radioactive decay and, therefore, tend to be fairly mobile, "hopping" from one surface to another. The principal hazard of exposure to these hot particles appears to be skin ulceration, and the primary uncertainty associated with evaluating their hazard is determining the skin area or tissue volume to which the dose is to be computed.

The NRC asked the National Council on Radiation Protection and Measurements (NCRP) to review the hot particle issue and develop recommendations, which are contained in NCRP Report No. 106, Limit for Exposure to "Hot Particles" On the Skin (1989).

The Supplementary Information on the revised 10CFR20 published on May 21, 1991, indicated that the NRC will consider both NCRP Report No. 106 and ICRP Publication 59, Biological Basis for Dose Limitation in the Skin in a future rulemaking to set limits for skin irradiation.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92

NUMARC: The absence of a dose limit for hot particle exposures requires recording and reporting these "technical" overexposures, even though the associated health risk is less than that for a total effective dose equivalent dose limit. In additional, lack of a technically sound dose limit for hot particle exposure will frustrate implementation of practices that ensure that total effective dose equivalents are ALARA. The requirement is a logical candidate for consideration as a requirement of marginal safety significance.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

Richard S. Barkley: Efforts to protect radiation workers from hot particle contamination appear to be out of proportion to the associated health risk.

ISSUE A7:

Operator Requalification Examinations

PROPOSED ACTION(S):

Revise NUREG-1021 to allow licensees greater flexibility and responsibility for implementation of operator requalification examinations.

BACKGROUND:

10CFR55 requires applicants for renewal of six year licenses to pass a comprehensive written examination and operating test administered by the NRC during the term of the current six year license.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92

NUMARC: The NRC's role in the administration of the operator requalification examinations should be changed to the oversight of an examination conducted by the licensee. This is supported by the experience with the current revision of NUREG-1021, which clearly points to safety improvements arising from reduction of licensed operator stress and reduced burden arising from increased efficiency of exam administration. Modification of the administration of the operator requalification examinations should be included as a candidate for consideration as a requirement of marginal safety significance. The Tennessee Valley Authority, New York Power Authority, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) and the BWR Owners Group endorsed the NUMARC comments.

Virginia Power: The NRC's role in the administration of operator requalification examinations should be changed to one of oversight of licensee-administered examinations. This is consistent with the current revision of NUREG-1021.

Detroit Edison: NUREG-1021, on Operator Requalification Exam Standards is used in an excessively prescriptive manner to define the content of training programs thus imposing a significant burden not inherent in the regulations.

Duke Power: The NRC's role in operator requalification examinations should be changed to one of oversight of licensee-administered examinations.

Study Issues

The following four issues will be analyzed further by the staff during the first period of the ongoing program.

ISSUE S1:

Performance-Based Quality Assurance (10CFR50 Appendix B)

PROPOSED ACTION(S):

Modify the requirements in 10CFR50 Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to be consistent with performance-based regulations.

BACKGROUND:

Appendix B contains the basic NRC requirements for Quality Assurance. It was initially published in 1971 and has not been substantially changed since that time. The basic requirements in Appendix B are interpreted and implemented through Regulatory Guides, Generic Letters and the Standard Review Plan.

In 1979 and 1980, serious deficiencies in quality and quality assurance were discovered at several nuclear power plants under construction. During the mid-1980s, quality assurance at nuclear power plants received special attention by the Congress, the Commission, and the management and staff on the NRC. Standards and practices underwent a major change and became more rigorous. NRC inspectors demanded adherence to the letter of the requirements; variances that earlier would have been resolved by engineering judgment resulted in reworking installed material and equipment.

The quality assurance requirements imposed on NRC licensees extend also to vendors that supply materials and equipment subject to the requirements.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92:

NUMARC: Appendix B to Part 50 needs to be updated for consistency with performance-based regulations and with new quality concepts such as total quality management. The regulation needs to be adapted to support total quality management by the industry and a wholesale shift to performance-based inspection concepts by NRC inspectors. Appendix B is a logical candidate for consideration as a requirement of marginal safety significance.

NRC Staff: One staff comment supported revision of Appendix B to eliminate burdensome requirements without reducing protection of public health and safety.

SUMMARY OF COMMENTS RECEIVED AT PUBLIC MEETING 3/27/92

NUMARC (William Rasin): The current approach to quality assurance is a paperwork nightmare. A total quality management (TQM) approach to qualify assurance has been used elsewhere, including overseas. The TQM concept places the responsibility for quality on the workers responsible for the work. A TQM program focuses on end results and measures success. TQM is an example of performance-based regulations. Appendix B equipment can cost as much as 10 times the cost of non-Appendix B equipment. Studies indicate that the performance and failure rates of Appendix B equipment are no different than the performance and failure rates of non-Appendix B equipment. In addition, PRA results can show that some Appendix B equipment is not significant to risk.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

BWORG: Another regulation that would benefit from application of a performance-based approach, emphasizing results rather than process, would be Appendix B to 10CFR Part 50. Cleveland Electric Illuminating endorsed the BWORG comments.

NUMARC: The nuclear industry's approach to achieving quality needs to be completely rethought to arrive at a mutual understanding of what quality means in a regulatory sense and how it can be achieved. This should include the application of concepts such as Total Quality Management, which have been successfully applied in other industries. As these new concepts are developed, the regulations need to be adapted to support the transition. The Tennessee Valley Authority, New York Power Authority, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) and the BWR Owners Group endorsed the NUMARC comments.

New York Power Authority: Urges the NRC to review the risk significance of its quality assurance/quality control processes. Current QA/QC requirements may not produce a discernable statistical impact on SSC failure rates, and may still be risk insignificant even if a measurable impact is produced. NRC inspectors need to move toward performance-based inspection concepts (NUREG/CR-5751) to support licensee changes. Many in the industry have long been aware not only of the administrative burden resulting from the interpretation of Appendix B requirements, but also of instances where it has forced a focus on activities of lesser safety significance at the expense of other, more significant activities.

Virginia Power: Appendix B to Part 50 should be given top priority for conversion to a performance-based regulation. The current Appendix B requirements and the way they are interpreted and enforced by the staff have resulted in a cumbersome exercise in documentation and reporting.

ISSUE S2:

Environmental Qualification of Electric Equipment (10CFR50.49)

PROPOSED ACTION(S):

Modify the requirements in 10CFR50.49, "Environmental Qualification of Electric Equipment Important to Safety" to be less prescriptive.

BACKGROUND:

Pursuant to 10CFR50.49, licensees or applicants must have a program for qualifying electric equipment important to safety. Electric equipment important to safety includes 1) safety-related electric equipment, 2) non-safety-related electric equipment whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions, and 3) certain post-accident monitoring equipment. The electric equipment qualification program must include and be based upon:

- o Temperature and Pressure,
- o Humidity,
- o Chemical Effects,
- o Radiation,
- o Aging,
- o Submergence,
- o Synergistic Effects, and
- o Margins to account for uncertainty.

Qualification methods are the following:

- o Testing of an identical item under identical or similar conditions with supporting analysis,
- o Testing of a similar item with supporting analysis,
- o Experience with identical or similar equipment under similar conditions with supporting analysis, and
- o Analysis in combination with partial type test data that supports the analytical assumptions and conclusions.

Recordkeeping requirements are specified. Additionally, a large portion of the rule discusses deadlines for compliance and requirements for licensee justification for continued operation pending completion of equipment qualification in accordance with the requirements. Because of the complex technical issues involved, implementation of these environmental qualification requirements by licensees took longer than originally anticipated.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92

NUMARC: The requirements of this regulation are based on deterministic design basis accidents while probabilistic risk analyses have shown that most of the

components to which these requirements are applied have little or no importance to plant safety.

NRC Staff: One comment proposed revision to clarify and reduce 50.49 requirements.

SUMMARY OF COMMENTS RECEIVED AT PUBLIC MEETING 3/27/92

NUMARC (W. Rasin): The environmental qualification of electrical equipment is another example of a paperwork nightmare. Qualification of certain equipment is required despite tremendous cost with little reduction in risk and very little safety benefit. In response to questions, Mr. Rasin stated that he does not recommend giving up the principle of defense in depth. However, the probability of design-basis accidents is very low, and the focus on these accidents results in wasted efforts and costs. More attention should be given to credible accident scenarios. In response to additional questions, Mr. Rasin stated that PRAs can be used to determine the relative safety significance of components without relying strongly on (widely variable) numbers.

NUBARG (Bill Horin, Counsel): Supported Mr. Rasin's important points. Other rulemaking activities could also have an impact in this area, such as leak before break and source term.

Robert Licciardo: Mr. Licciardo favored rejection of the proposal to modify current protective measures in terms of PRA. Deterministic analyses should be used in establishing the licensing basis for a plant's design. PRA techniques should not be used to determine the safety basis of equipment, but could be used to make choices once an acceptable design is determined. PRA can then be used to determine the relative safety importance of systems and components. There is too much variability in PRA figures. PRA figures have no realistic meaning when they are calculated over a long period of time and then divided by a time frame to yield risk per a specific time period or event.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

NUMARC: The requirements of this regulation are based on deterministic design basis accidents while probabilistic risk analyses have shown that most of the components to which these requirements are applied have little or no importance to plant safety. A less prescriptive approach would save unnecessary expenditures and allow licensees to focus on electrical equipment that make important contributions to plant-specific safety. The Tennessee Valley Authority, New York Power Authority, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) and the BWR Owners Group endorsed the NUMARC comments.

Virginia Power: Equipment qualification regulations are examples of an accumulation of requirements that has resulted in unwieldy reporting and documentation, high costs, and questionable safety improvements.

GPU Nuclear: Probabilistic risk assessments are challenging whether the electrical equipment covered by 10 CFR 50.49 contributes to plant safety. If this technique or others can provide us with our intended safety goals, then the licensees should have the flexibility to implement the results of their efforts.

Entergy Operations: The rule is unnecessarily prescriptive regarding the requirement for tested components to be pre-aged. Generic Letters 86-15 and 88-07 that require special administrative attention for non-conformances/deficiencies associated with environmental qualification of electric equipment is too prescriptive and is certainly marginal to safety.

ISSUE S3:

Physical Protection for Power Reactors

PROPOSED ACTION(S):

Evaluate the possibility of improvements to safety and burden reduction by reducing the requirements of 10CFR73.55.

BACKGROUND:

The requirements for physical protection of nuclear power reactors against radiological sabotage in 10CFR73.55 were initially issued in 1977 and have been modified several times since. 10CFR73.55 establishes the requirement to protect against the design basis threat, which is defined in 10CFR73.1(a). 10CFR73.55 establishes requirements for physical security organizations, physical barriers, access requirements, detection aids and communication requirements.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92

NUMARC: The NRC is evaluating this regulation in response to a Staff Requirement Memorandum, dated last fall. The requirement is a logical candidate for consideration as a requirement of marginal safety significance. The industry experience of the last decade and the recent imposition of more stringent personnel screening programs (fitness for duty; access authorization) suggest that the insider threat has been minimized. Three specific areas should be considered as marginal to safety: separate vital area security; watch-person control of containment access; and compensatory security measures for certain events.

Detroit Edison: The regulatory burden of many security related requirements, including fitness for duty requirements, can be reduced without a significant reduction of safety.

Florida Power: There is a growing trend in the security arena to give greater credence to the "design basis threat" than we believe was originally intended. The evolution of the RER reviews into what the NRC now terms OSRE reviews and other factors has and is leading to a proliferation of new requirements. [Activities] for moving from deterrent to expected interdiction is unwarranted and imposes many real burdens.

Virginia Power: Physical protection regulations are examples of an accumulation of requirements that has resulted in unwieldy reporting and documentation, high costs, and questionable safety improvements.

B&W: A complete review should be made of the security requirements pertaining to nuclear power plants in the U.S.

NRC Staff: One comment was received in support of the proposed action.

SUMMARY OF COMMENTS RECEIVED AT PUBLIC MEETING 3/27/92

NUMARC (R. Whitesel): Vital area security requirements are burdensome. The requirements need to be reevaluated because licensees now have more experience in establishing physical security. Fitness-for-duty requirements and access authorization rules have minimized the insider threat. This rule should be modified to eliminate unnecessary requirements because of the reduced insider threat.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

Duke Power: The requirement for containment access control in 10CFR73.55(d)(8) is a materials-control requirement, as opposed to a security requirement, and should be removed from the regulation. Public health and safety will not be affected by deletion of this rule. Security will continue to perform firearm, explosives, etc., searches at the entrance to the protected area.

Florida Power: The shift from a well-trained guard force, with contingency and response plans sufficient to act as a deterrent, to a highly specialized tactical force capable of interdiction of the design basis threat is leading to a proliferation of requirements that impose significant and unwarranted burdens.

Richard S. Barkley: The history of security events at nuclear power plants does not demonstrate a need for the level of resources currently devoted to security requirements. In addition, more stringent personnel screening is in place, further reducing the significance of the security threat. Certain security measures have hampered operational event mitigation.

GPU Nuclear: More stringent screening programs for utility workers have minimized the internal security threat and the separate security provisions for vital areas can be reduced.

ISSUE S4:

Post-Accident Sampling System

PROPOSED ACTION(S):

Reduce post-accident sampling system requirements.

BACKGROUND:

The PASS requirements in 50.34(f)(1)(viii) were imposed in the aftermath of the accident at Three Mile Island. Criteria for PASS are found in NUREG-0737. The purpose of PASS is to allow sampling of the reactor coolant and the containment atmosphere under accident conditions to obtain information on the condition of the core and the amount of radioactive material and combustible gasses present in the containment atmosphere.

An analysis (NUREG/CR-4330) of several possible modifications of the PASS requirements found the impact on risk to be marginal and the cost savings to be small for operating plants, larger for new plants.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92:

Yankee: In the program on requirements that are marginal to safety, (some) requirements for post accident sampling systems were found to be marginal to safety. However, no action was intended because the major costs (of design and installation) had already been borne. The requirements should yet be reduced to save the operating and maintenance costs.

Richard S. Barkley: Comment supports the proposed action.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92

NUMARC: The NRC is urged to reconsider its statement in the FEDERAL REGISTER that elimination of the PASS requirements would not result in significant savings for operating reactors. Although PASS installation costs have already been expended, significant resources are allocated to operation, testing, maintenance, and training related to PASS at operating reactors. These resources can be allocated to more safety-significant areas if PASS requirements are eliminated. Elimination is justified by the apparent NRC conclusion, with which NUMARC agrees, that the PASS requirements are marginal to safety. The Tennessee Valley Authority, New York Power Authority, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) and the BWR Owners Group endorsed the NUMARC comments.

Virginia Power: Disagrees with staff conclusion that elimination of PASS requirements would not result in significant savings for operating reactors. The cost of maintenance, replacement of parts that may need to be tested and

qualified, equipment calibration, drill preparation, and reporting of inoperability of various components, all combine to a considerable annual expenditure of resources. In addition, the NRC expends resources on review and inspection.

Duke Power: Action to reduce the PASS requirements found to be marginal to safety should be taken to reduce operating and maintenance costs.

Yankee Atomic Electric: The costs of PASS maintenance, testing, training, and procedure development for the many years the systems will remain installed should be taken into account. Plant operating and maintenance costs have been increasing at a rate above inflation for many years, due to NRC initiatives in many areas.

Richard S. Barkley: The perception that reduction in PASS requirements would have small benefit is in error because it ignores the recurring operations and maintenance costs (including training and replacement costs), and the positive benefit of reduced plant complexity.

BWR Owner's Group: The BWROG continues to believe that post-accident sampling system requirements have significant impact on utility operation, maintenance, and training activities. Substantial benefits could be realized through further evaluation of these requirements.

Deferred Issues

The following sixteen issues have been deferred to the second period of the ongoing program.

ISSUE D1:

Defects and Noncompliance Reports (10CFR21)

PROPOSED ACTION(S):

Modification of the requirements in 10CFR 21, "Reporting of Defects and Noncompliance," particularly with respect to providing a more flexible definition of commercial grade items.

BACKGROUND:

10CFR21 requires responsible officers of organizations building, operating, or owning NRC-licensed facilities or supplying *basic components* to such facilities, to report defects in components which may result in "a loss of safety function to the extent that there is a major reduction in the degree of protection provided to public health and safety. . . ." *Basic components* are, simply stated, those that have a role in safe shutdown and the prevention or mitigation of accidents. A *commercial grade item* is not a part of a *basic component* until after *dedication*. A *commercial grade item* is an item that is a) not subject to design requirements unique to an NRC licensed facility, b) used in other applications, and c) ordered on the basis of a manufacturer's published specifications.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92:

NUMARC: The current definition of "commercial grade item" restricts the ability of a utility to assume the Part 21 liability responsibility for safety related applications of, primarily, replacement piece parts. The requirement is a logical candidate for consideration as a requirement of marginal safety significance.

SUMMARY OF COMMENTS RECEIVED AT PUBLIC MEETING 3/27/92:

NUMARC (W. Rasin): The primary concern is the manner in which the Part 21 rule is currently written. The rule is a tremendous disincentive for vendors to work with the nuclear industry. Many vendors who produce high-quality items will not work with the nuclear industry because the nuclear portion of their business is too small to justify the additional burden placed on them by Part 21. The effect of Part 21 information should be reviewed. How many defects has the Part 21 process actually exposed compared with equipment problems detected through operational experience? Is the Part 21 process worth the effort required to maintain the rule when compared with other means of monitoring component performance within an operating plant?

NUBARG (D. Stenger, Counsel): A review of Part 21 reports reveals that there two categories: (1) reports on defects, and (2) reports on failure to comply related to a substantial safety hazard. Failure- to-comply reports duplicate the failure-to-comply reports required by 10CFR50.72 and 10CFR50.73. This duplication could be eliminated with no effect on safety.

Commonwealth Edison Co. (Marcia Jackson): The burden of evaluating potential equipment defects should rest with the vendor, not the licensee. Determining whether there was prior notification of a defect is another burden on licensees. A Part 21 database would be effective in determining whether there was prior notification. Does a vendor's report of a potential safety problem constitute "prior notification," as required by Part 21?

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92

NUMARC: Due to the decreased market for nuclear equipment, vendors capable of supplying parts to original design requirements no longer find it desirable to maintain Appendix B quality programs and to accept Part 21 requirements. They are concerned with their liability for defects of which they are unaware in products provided by sub-tier vendors, and with the implied removal of the normal time limits on implied warranty of performance. Evolving regulatory requirements and utility audit programs with regard to manufacturer's quality assurance programs further exacerbate this situation. As the number of available nuclear vendors decreases, the utility is forced to seek alternative sources of supply, usually with significantly increased costs and delivery times, to pursue design changes that allow use of an alternative replacement, to procure a commercial grade item and verify its suitability by a process known as "dedication," or to request an exemption from the NRC.
Utility dedication of commercial grade items has become common enough that standardization of the process through an EPRI guideline and NRC Generic Letters has occurred. Under the improved and explicit dedication process, it is appropriate that Part 21 responsibility should be shifted to the party performing dedication and that the unnecessary and unworkably restrictive definition of commercial grade items in 21.3(a)(4)(a-1) be revised. NUMARC will soon provide specific proposed Part 21 revisions to the staff for consideration. The Tennessee Valley Authority, New York Power Authority, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) and the BWR Owners Group endorsed the NUMARC comments.

Richard S. Barkley: Comment supports the proposed action.

ISSUE D2:

Physical Protection of Independent Spent Fuel Storage Installations (10CFR72, Subpart H)

PROPOSED ACTION(S):

Modification of the requirements in 10CFR72, Subpart H, "Physical Protection-Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste."

BACKGROUND:

Subpart H to 10CFR72 requires each licensee to establish and maintain a detailed plan for security measures for physical protection of Independent Spent Fuel Storage Installations. A section of this plan must demonstrate compliance with applicable requirements of Part 73 during transportation to and from the proposed ISFSI.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92

NUMARC: Utilities installing ISFSIs are required to employ virtually all of the security measures found at operating nuclear power plants. More realistic requirements consistent with providing basic industrial security should be used. The requirement is a logical candidate for consideration as a requirement of marginal safety significance.

SUMMARY OF COMMENTS RECEIVED AT PUBLIC MEETING 3/27/92

NUMARC (R. Whitesel): Utilities are preparing and installing independent spent fuel storage installations (ISFSIs). Spent fuel is less vulnerable to design-basis threats specified for operating nuclear power plants. Spent fuel in ISFSIs pose less risk for off-site exposure because of a lack of energy and pathways. Therefore, separate and more realistic industrial requirements are needed for these structures. This is a case of regulation overkill. NUMARC would like to work with the NRC staff on developing new security requirements.

Duke Power Co. (R. Gill): Duke requests CRGR support for the declassification of a Sandia National Laboratory report that shows a potential for off-site exposures resulting from an accident in an ISFSI. These Sandia conclusions are inconsistent with the industry's understanding of the potential risk.

Consumers Power Co. (P. Donnelly): The cost of installing the security system required at Palisades is $1.4 million.

TRW (P. Krishna) TRW would like the CRGR to look at this issue from the perspective of monitored retrievable storage (MRS) facilities.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

NUMARC: Independent spent fuel storage facilities are largely impervious to the design-basis threat of Part 73. References to Part 73 should be removed from Part 72, and regulations consistent with adequate industrial security should be provided. The Tennessee Valley Authority, New York Power Authority, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) and the BWR Owners Group endorsed the NUMARC comments.

ISSUE D3:

Tracking and Documenting Operator Control Manipulations (Part 55)

PROPOSED ACTION(S):

Modify 10CFR55.31 to allow reactivity manipulations or power changes to be performed on a certified plant-specific simulator.
Eliminate the requirement in 10CFR55.59 for tracking and documenting operator control manipulations.

BACKGROUND:

Applicants for an operator's license must submit evidence of successful manipulation of, as a minimum, five significant control actions affecting reactivity or power level per 10CFR55.31. The rule explicitly provides for submission of evidence of satisfactory performance of simulated control manipulation as part of a Commission-approved training program on a simulation facility acceptable to the Commission, but only when the facility for which the license is being sought has not completed initial startup testing.

Records of the requalification program must include "documentation of operating tests" per 10CFR55.59.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

NUMARC: The requirement in 55.31 that trainees perform five significant control manipulations on the plant itself is no longer necessary in light of the fidelity of present-day simulators. Nearly all utilities have control room simulators that are utility certified and recognized by NRC. The regulation should be modified to allow reactivity manipulations or power changes to be performed on a certified plant-specific simulator.

The additional tracking and documenting of operator control manipulations required by 55.59 is a costly administrative burden for utilities. Since all operator training programs are developed through a systems approach to training, with extensive use of certified, plant-specific simulators, and trainees perform all the required manipulations,which are documented as part of the curriculum, this requirement should be eliminated. The Tennessee Valley Authority, New York Power Authority, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) and the BWR Owners Group endorsed the NUMARC comments.

ISSUE D4:

Annual Requalification Examinations and Annual Security Audits

PROPOSED ACTION(S):

Make the requirements for the frequency of annual requalification examinations and performance of annual audits of security plan and procedures more flexible.

BACKGROUND:

Licensed operator qualification and requalification examinations are conducted by NRC personnel. NUREG-1021 contains detailed guidelines, criteria and requirements relating to the preparation for and conduct of the examinations.

Review of the contingency plan and the security program is required at least every 12 months, specified in 10CFR73.40(d) and 73.55(g) respectively.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92:

Duke Power: Part 73 Appendix B requires certain requalifications to occur on a frequency not to exceed 12 months. Some degree of flexibility in scheduling should be allowed so as to not unnecessarily impact the licensee resources. Also, the frequency of performing annual audits of the security plans and procedures (10CFR73.40 (d) and 73.55 (g)) is not consistent with the flexibility permitted by SRP 17.3 wherein scheduling is established based on status and safety importance. Since similar resources are utilized by licensees to perform both security audits and other audits, having different criteria/requirements for scheduling is a burden.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

Duke Power: Flexibility should be allowed in the frequency of requalifications to avoid unnecessary impact on licensee resources. This is consistent with the current revision of NUREG-1021. Also, the frequency of performing annual audits of the security plans and procedures (73.40(s) and 73.55(g)) is not consistent with the flexibility permitted by Standard Review Plan Section 17.3, wherein scheduling is based on status and safety significance. Since similar resources are used by licensees to perform both security and other audits, having different requirements/criteria for scheduling is a burden.

ISSUE D5:

Requests for Information (10CFR50.54(f))

PROPOSED ACTION(S):

To specify criteria for requests for information under 50.54(f), for example, by adding the following new third and fourth sentences:

> *Where the information is sought to verify licensee compliance with the current licensing basis, the staff will identify the specific regulation or other provision of the licensing basis for which verification of compliance is sought. Where the information request would result in the establishment of a new program, including testing or analysis, or an extensive study using new criteria, in order to develop the information required, the provisions of 10CFR50.109 will be followed.*

BACKGROUND:

According to 10CFR50.54(f): "The licensee shall at any time before expiration of the license, upon request of the Commission, submit, as specified in 50.4, written statements, signed under oath or affirmation, to enable the Commission to determine whether or not the license should be modified, suspended, or revoked. Except for information sought to verify licensee compliance with the current licensing basis for that facility, the NRC must prepare the reason or reasons for each information request prior to issuance to ensure that the burden to be imposed on respondents is justified in view of the potential safety significance of the issue to be addressed in the requested information. Each such justification provided for an evaluation performed by the NRC staff must be approved by the Executive Director for Operations or his or her designee prior to issuance of the request."

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

NUBARG: Current staff practice with respect to the issuance of Request for Information under 10CFR50.54(f) continues to place significant burdens on licensees without clear evidence of actual safety benefits. The NRC should ensure that only those requests are issued that are intended to verify compliance with existing licensing basis requirements or where it is demonstrated clearly that a public health and safety concern justifies the request. Requests for information should not be used to impose new programs, such as testing or analysis programs, or to require an analysis of plants using criteria not reflected in the licensing basis. The New York Power Authority, Cleveland Electric Illuminating, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) endorsed the NUBARG comments.

Cleveland Electric Illuminating: Generic Letter 88-01 addressed Intergranular Stress Corrosion Cracking near weldments in BWR piping made of austenitic stainless steel, four inches or larger in diameter, and containing reactor coolant hotter than 200°F. This document contained 13 staff positions as appendices and requested a response (pursuant to 10CFR50.54(f)) to five specific questions. CEI's response was rejected in part by the staff although the positions were documented and well founded. CEI has taken a 10CFR50.109 "Backfit" position. This process is difficult and burdensome to our engineering staff and truly the application of regulation and not information requests as noted by 10CFR50.109.

ISSUE D6:

Flexible Approach to Approval of USQ (10CFR50.59(c))

PROPOSED ACTION(S):

Provide for alternative means of obtaining approval of plant changes involving an unresolved safety question (USQ) by revising 50.59(c), for example by including the following new third and fourth sentences:

> *Where a proposed change to the facility involving an unreviewed safety question does not require revision to current technical specification or operating license text, the licensee shall submit a request for staff approval in writing, in accordance with 50.4, together with the licensee's safety evaluation performed pursuant to this section.*

BACKGROUND:

According to 10CFR50.59(c): "The holder of a license authorizing operation of a production of utilization facility who desires (1) a change in technical specifications or (2) to make a change in the facility or the procedures described in the safety analysis report or to conduct tests or experiments not described in the safety analysis report, which involve an unreviewed safety question or a change in technical specifications shall submit an application for amendment of his license pursuant to50.90."

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

NUBARG: Licensee experience has shown that some unreviewed safety questions (USQs) do not necessitate revisions to the text of the operating license (OL) or the Technical Specifications (TS). For example, a new condition similar to ones already evaluated at initial licensing (e.g., a new small break) but not specifically evaluated at that time would be unlikely to require change to the OL or the substantive provisions of the TS. Nonetheless, 10CFR50.59(c) requires that the licensee seek an amendment to the OL or TS. The preparation of a license amendment package, staff review of the submittal and publication in the FEDERAL REGISTER of notice with an environmental assessment and determination of no significant impact represents a significant administrative burden on licensees and the NRC staff. Provision of an alternative procedure for review and approval by the staff would lessen this administrative burden and leave the staff the option of determining that an amendment is warranted. The New York Power Authority, Cleveland Electric Illuminating, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) endorsed the NUBARG comments.

ISSUE D7:

Automatic Incorporation of ASME Code Changes (10CFR50.55a)

PROPOSED ACTION(S):

Provide for automatic incorporation of new ASME Code editions and addenda into 50.55a within 60 days of their publication, for example, by revising 50.55a to include the following new language:

> *New Editions and Addenda to ASME Code provisions previously approved for use in this Section will automatically be incorporated by reference herein 60 days following publication by the ASME. Licensees may utilize those provisions consistent with the terms of the new Code provisions and this Section. Public notice of such incorporation and NRC exceptions, if any, will be published in the FEDERAL REGISTER within 15 days of Code publication by the ASME.*

BACKGROUND:

10CFR50.55a(a) requires licensed nuclear power plants to meet the requirements of the ASME Boiler and Pressure Vessel Code editions and addenda specified in 50.55a unless the Director of the Office of Nuclear Reactor Regulation has approved an older or a newer edition or addenda. Limitations and exceptions to the applicability of specific editions and addenda are also included in 50.55a.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

NUBARG: NRC practice concerning the incorporation of new ASME Code editions and addenda currently results in a substantial delay between ASME publication and formal incorporation into 10CFR50.55a. New code provisions can allow for new or alternative means for current licensees to satisfy code obligations with little or no reduction in the margin of safety. Until such provisions are formally adopted by the NRC, licensees must expend considerable resources seeking NRC permission to use the new code provisions.

Given the NRC's involvement in ASME committees and monitoring of the ASME's consideration of new provisions, NRC exceptions to the new provisions, if any, should have been identified prior to their publication. This would allow the exceptions to be included in a FEDERAL REGISTER notice of incorporation. The New York Power Authority, Cleveland Electric Illuminating, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) endorsed the NUBARG comments.

ISSUE D8:

Emergency Planning Using a Graded Response

PROPOSED ACTION(S):

Endorse the use of a graded response strategy for implementing emergency planning actions

BACKGROUND:

Regulations include detailed emergency planning requirements for the communities surrounding nuclear power plants (10CFR50.34 and 10CFR50 Appendix E). Criteria for responses were established in 1980 by the NRC and FEMA.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

New York Power Authority (NYPA): The graded response strategy for emergency plan action implementation is highly effective and relatively easy to implement. Its adoption is recommended although this would not specifically require elimination of or change to current regulations, as it would enhance public health and safety while reducing the burden on licensees. (Two reports containing information on the graded response strategy (evacuation of a limited segment of the population within the Emergency Planning Zone in a general emergency with sheltering for the remainder) and resulting benefits were attached to the comments (NUMARC/NESP-005 and IAEA-CN-48/286)).

ISSUE D9:

Containment Pressure Limit

PROPOSED ACTION(S):

Relax containment design basis pressure acceptance criteria

BACKGROUND:

GDC 50 requires the containment to accommodate the calculated pressure and temperature conditions resulting from any loss-of-coolant accident with sufficient margin. The SRP requires the containment design to provide at least a 10% margin above the peak calculated pressure following a loss-of-coolant accident, or a steam or feedwater line break. The peak pressure is calculated by the licensee using acceptable analytical models and confirmed by the NRC using its own independently developed analytical models.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

New York Power Authority: Relax containment design basis pressure acceptance criteria in light of recent experiments and analyses. For example, NUREG/CR-4551 presents containment failure probabilities at various pressures for the Zion plant, showing that the failure probabilities at pressure levels far in excess of the design pressure are extremely low. Demonstrating that present pressure margins have remained adequate has become a burdensome effort without commensurate safety benefit.

ISSUE D10:

Secondary-Side Accident Analysis.

PROPOSED ACTION(S):

Eliminate the requirement for dose calculations for secondary side accidents when no fuel failure is projected.

BACKGROUND

The Standard Review Plan Chapter 15 requires calculation of doses at the exclusion area and low population zone boundaries for accidents involving main steam line or steam generator tube failures. For accidents not involving fuel failures, the dose calculation is required to be based on primary coolant iodine concentrations resulting from an assumed iodine spike immediately prior to, or associated with, the accident.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

Northeast Utilities: The Standard Review Plan (SRP) requires an evaluation of the radiological consequences of a main steam line break and a steam generator tube rupture. The SRP approach uses several low probability assumptions that result in dose calculations that approach the SRP limits. Consequence calculations for credible accidents result in doses in the millirem range, 1000 times less than the SRP limits.

The need to perform such calculations results in a considerable ongoing industry expenditure and unnecessary occupational exposure. The latter results from excessively restrictive primary to secondary leak rate limits and overly restrictive tube repair criteria that have been established solely to meet dose limits. These exposures can be reduced by revising SRP Sections 15.1.5 and 15.6.3 to read, "If no fuel failures are projected as a consequence of these events, the resulting doses will be a very small fraction of 10CFR100 limits, and no site-specific dose calculations are required."

ISSUE D11:

Turbine and Tornado Missiles

PROPOSED ACTION(S):

Reduce existing requirements for protection of plant structures against turbine missiles and tornados.

BACKGROUND:

Regulatory Guide 1.76 has been used since 1974 by industry and the staff to determine the design basis tornado (DBT) for each of the geographical regions defined in the Guide. Due to the fact that very little area specific data on the damage areas and tornado intensity was available, generalized conservative estimates were used in the development of the DBTs in the Guide. Pacific Northwest Laboratories (PNL) conducted an NRC-sponsored study using data for the 30,000 tornadoes during the period 1954-1983 and published the results in NUREG/CR-4461, "Tornado Climatology of the Contiguous United States," dated May 1986. PNL found that the 10-7 annual probability wind speed ranged from 153 mph to 332 mph and concluded that it would appear to be reasonable to use DBT wind speeds of 200 mph west of the Rocky Mountains and 300 mph east of the Rocky Mountains. The staff agreed with PNL's proposed revisions to the methodology, but considered that the uncertainties in the data base and analyses required the use of a conservative strike probability. Using the PNL upper 90% confidence level for the 10^{-7} probability of occurrence, the staff developed DBT parameters for each of four geographic regions of the contiguous United States. These DBTs were issued as an interim position applicable to the Advanced Light Water Reactor standard design in the form of a "Safety Evaluation by the Office of Nuclear Reactor Regulation of Recommended Modification to the R.G. 1.76 Tornado Design Basis for the ALWR."

Regulatory Guide 1.115 describes acceptable methods for showing that the risk from turbine missiles is acceptably small, either through spatial orientation or physical protection. The Reg. Guide was last revised in 1977 and provides guidance for plants that have tangentially oriented turbines. Most newer plants have, and future plants are expected to have, radially oriented turbines. In addition there have been substantial improvements in turbine materials, turbine monitoring and overspeed protection which appear to have substantially reduced the risk of catastrophic failure.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92:

GPU Nuclear: The staff is not proposing any actions for the revision of requirements related to the protection of plant structures and components from turbine missiles or tornados. Since modifications are still being performed on operating reactors, these requirements can still impose additional costs during the design and construction. We recommend the Staff review these areas.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

Virginia Power: Disagrees with staff conclusion that elimination of turbine missile protection requirements would not result in significant savings for operating reactors. The cost of maintaining the design and system features required by these regulations continues to impose a financial burden on licensees.

Duke Power: The staff should review these requirements because modifications are still being performed to meet these requirements.

ISSUE D12:

Eliminate Unnecessary Documentation Requirements

PROPOSED ACTION(S):

Review recordkeeping and other documentation requirements to eliminate those that are duplicative or unnecessary.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92

NUMARC: Other regulations may be reduced in the "early" time frame without the need for extensive reviews. These regulations generally involve requirements for extensive paperwork, and/or reporting requirements. These burdensome regulations do not in any way affect plant equipment of operation, have no impact on safety, and in many cases are duplicative.

B&W Nuclear Technologies: Examples of excessive documentation include those related to recordkeeping and personnel exposure, fitness-for-duty and safety analysis report updates.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92

NUBARG: NRC forms should be reviewed and modified to eliminate duplicative, non-essential requests for information. Some forms request information already on file with the NRC or information which is unnecessary for demonstrating reasonable assurance of safety. The New York Power Authority, Cleveland Electric Illuminating, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) endorsed the NUBARG comments.

Duke Power: Many recordkeeping requirements, such as personnel exposure data, fitness-for-duty, and safety analysis report updates, require extensive paperwork and recordkeeping. These burdensome regulations do not in any way affect plant operation or equipment, have no impact on safety, and in many cases are duplicative.

Virginia Power: A number of regulations have resulted in an inordinate emphasis on documentation and paper generation. This is sometimes the result of the specific requirements in the regulation , and other times due to the manner in which the requirements have been interpreted and enforced by the NRC staff. Examples include quality assurance and equipment qualification.

ISSUE D13:

Inservice Inspection and Inservice Testing Requirements

PROPOSED ACTION(S):

Reduced regulatory attention might be appropriate in the future NRC staff review of inservice testing programs. Similar arguments might be made for reduced attention to inservice inspection programs (10CFR50.55a(g) and ASME Code).

BACKGROUND:

The regulations require staff review and approval of licensees' IST programs.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92:

NRC Staff: Licensees are required to base their ISI and IST programs on the latest applicable ASME Code edition. The staff has issued guidance on the acceptability of inservice testing programs and acceptable relief requests. This guidance has done much to help improve licensees' programs. Since about 1985, the staff has spent a considerable amount of resources reviewing licensees' programs. Most programs have been reviewed, although revisions and updates are periodically received. Some licensees are now in their 10-year program and have received the benefits of experience gained in past programs. Additional documents, which will provide detailed guidance to licensees, are in preparation. However, until the underlying ASME Code sections are revised and improved, and detailed guidance is published, the present regulations and level of staff effort should be maintained.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

Duke Power: The ISI and IST programs should be administered by the NRC on an audit basis, rather than by prior review. The preparation of ISI and IST programs has progressed to the point where prior NRC involvement is no longer necessary to assure an adequate program. Utilities with multiple units, in particular, can adapt previously approved programs for other units without prior review. Also, it is not clear what the NRC does with the IST reports.

Richard S. Barkley: The commenter noted that frequent changes to this regulation, so long as it remains in its present form, are inherent. Reviews required under the current regulations require significant effort by the NRC Staff. Also, the scope of the associated examinations may be out of proportion to the safety benefit derived.

ISSUE D14:

Duplication of Requirements

PROPOSED ACTION(S):

Eliminate duplication of requirements in 10 CFR.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92:

Florida Power Corporation: Revise 10CFR50.36 (c) to allow relocation of duplicative information on Design Features and Administrative Controls from the Technical Specifications to other more appropriate documents. An exemption request to this effect was referred to the TSIP several years ago but it was dropped, although there was general agreement by senior NRC management with the efficacy of the proposal. The fact that 50.36 required the inclusion of such chapters made their complete relocation legally difficult. When 50.54(a) was promulgated, conforming changes were not made in 50.36 to avoid duplicative requirements.

50.54(a) requires one to have and follow a QA Plan consistent with 10 CFR 50, Appendix B, including many aspects addressing administrative controls which is duplicated by 50.36(c)(5) and Section 6 of the Technical Specifications. There are many other parallel situations. Such duplication always results in a certain amount of confusion and burden and never improves safety.

SUMMARY OF COMMENTS RECEIVED AT PUBLIC MEETING 3/27/92:

NUBARG (D. Stenger, Counsel): An example of a requirement that is an administrative burden is 10 CFR 50.54, which lists the conditions required for an operating license. The regulations contain approximately 10 pages of license conditions. Some of these conditions duplicate other regulations and could be a burden when licensees need to evaluate impacts on operating license conditions. This regulation could be streamlined with the removal of the duplicative conditions.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92

NUBARG: Numerous license conditions imposed through 10CFR50.54 simply reiterate a licensee's obligation to satisfy NRC regulations. Inclusive of these unnecessary "conditions" is an administrative duplication of the NRC's substantive regulatory scheme. This may create situations where a licensee might unnecessarily be required to submit a license amendment to reflect a change in its licensing basis when such a change could most efficiently be handled through an FSAR change., exemption, or modification of another written commitment. 10CFR50.54 should be revised to eliminate license "conditions" that simply reiterate a licensee's obligation to comply with a substantive regulation.

The New York Power Authority, Cleveland Electric Illuminating, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) endorsed the NUBARG comments.

ISSUE D15:

Material Status Reports

PROPOSED ACTION(S):

Revise 10CFR74.13(a)(1) to provide flexibility in the timing and frequency of material status reports or to make the timing and frequency correspond to the duty cycle of nuclear power plants.

BACKGROUND:

Each licensee who is authorized to possess special nuclear material in specified quantities is required to submit a Material Balance Report and a Physical Inventory Listing to the NRC twice each year. The reports are to be compiled as of March 31 and September 30 and submitted within 30 days thereafter.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

Cleveland Electric Illuminating: For most utilities in the United States the peak loads occur in the summer or winter. Consequently, refueling outages are in the spring or fall. In the middle of refueling outages, it is often required to stop fuel movement operations to perform the material inventory, although fuel movement is usually critical path or close to critical path during an outage. Inventories take on the order of 8 - 16 hours (time out of fuel movement), and an additional 3 days to complete the paperwork. While the paper work is not critical path, it pulls the reactor engineering staff away from being more cognizant of fuel movement activities.

Since very little fuel movement occurs between refueling outages, it is recommended that the inventories and reports be required within a fixed period after each refueling outage. If a strong reason exists for maintaining the current reporting frequency, offset the date to some time in the winter or summer, bypassing the peak spring/fall outage seasons.

ISSUE D16:

Oath, Affirmation and Certification

PROPOSED ACTION(S):

Eliminate unnecessary oath, affirmation and certification requirements.

BACKGROUND:

Section 182.a of the Atomic Energy Act provides, in part:

> *Applications for, and statements made in connection with, licenses under sections 103 and 104 shall be made under oath or affirmation.*
>
> —
>
> *The Commission may require any other applications or statements to be made under oath or affirmation.*

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

NUBARG: The use of oath or affirmation in filings before the NRC is mandated by statute only in certain circumstances. While discretionary use of the oath or affirmation is also permitted, current regulatory provisions render such discretionary application unnecessary. The underlying purpose of an oath or affirmation is to ensure the truth and accuracy of submittals to the NRC. With the adoption of 10CFR50.9, codifying the requirement for completeness and accuracy of those submittals, the NRC authority to take enforcement action for providing inaccurate information is well established. The use of the oath or affirmation requirement for licensee responses to a show cause order (10CFR2.202), a Notice of Violation (10CFR Part 2, Appendix c, Section VI.A), and NRC requests for information (10CFR50.54(f)) duplicate the "truth assurance" function of 10CFR50.9.

Also duplicating the purpose of 10CFR50.9 are certifications of (1) the contents of a license application (50.30(a)(4)), insurance funds expended and available (50.54(w)(4)(iv)), and the completeness and accuracy of an FSAR update. Elimination of these and other oath, affirmation and certification requirements not mandated by the Atomic Energy Act would have no impact on safety and reduce an unnecessary administrative burden involving additional hours and paperwork devoted to a superfluous task.

Closed Issues

The following four issues have been closed out by the staff.

ISSUE C1:

Modify Sholly Amendment Requirements

PROPOSED ACTION(S):

Reduce or eliminate the administrative burden associated with the public notice of 50.91 and 50.92 reviews of license amendments for no significant hazards.

BACKGROUND:

Section 50.91 provides the administrative procedures for issuing a public notice and state consultation of an application for an amendment to a 50.21(b) or 50.22 operating license. Section 50.92 provides criteria for a determination that the license amendment involves no significant hazards.

The review requirements of Parts 50.91 and 50.92 implement Public Law 97-414, which amended the Atomic Energy Act in accordance with a court decision to fortify the right of the public and the states to review proposed license amendments and request public hearings. The regulations modified the requirements for reviewing Significant Hazards Considerations (SHC), increasing their complexity and impacting the amount of paperwork needed to support the SHC. Several utilities and industry organizations indicated that these changes greatly increased the time required to obtain even an "emergency" license amendment.

For license amendments involving significant hazards, notice must be given in the FEDERAL REGISTER with at least 30 days for response. This license amendment process applies to any and all changes in a facility operating license, which includes the plant technical specifications.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92

NUMARC: The time for publishing and processing a FEDERAL REGISTER notice, except for the exigent or emergency situations, takes at least six weeks with no effect on safety. Applicants are required to perform unnecessary assessments. A primary suggestion is that only irreversible decisions, such as venting the containment at Three Mile Island, need the kind of advance notice and opportunity for hearing that is currently required. For other decisions, a notice and opportunity for hearing could be provided after the license amendment is issued.

Florida Power: The rulemaking option chosen by the NRC is administratively burdensome. The applicant must do an unnecessary and somewhat convoluted assessment. The NRC staff must ascertain whether or not they agree with it

sufficiently to publish it in the FEDERAL REGISTER. If no party requests a hearing, the NRC staff avoids making a decision altogether. If a hearing is requested, the NRC staff routinely concludes that no hazards consideration is involved and proceeds. The whole process of exigent and emergency technical specification changes is an outgrowth of developing work-arounds to this poorly conceived rule.

TU Electric: Examine the NRC amendment process and internal policies so that neither will impede or delay review of a License Amendment Request submitted in accordance with 10CFR50.

NRC Staff: One comment suggested noticing all amendments without first making a significant hazards determination. Another comment proposed limiting the 50.91 FEDERAL REGISTER notices to those amendments which cannot demonstrate no significant hazard. An additional comment proposed changing the terminology of 50.59 to read more like 50.92, with respect to "significant" increase in the probability of an accident and a "significant" reduction in the margin of safety.

SUMMARY OF COMMENTS RECEIVED AT PUBLIC MEETING 3/27/92

NUMARC (Ellen Ginsberg): Currently, when a utility proposes an action that requires a license amendment, the utility cannot proceed with the proposed action until it is published in the FEDERAL REGISTER and the period for public comment expires without a request for hearing. The utility must wait regardless of whether or not the proposed action has safety significance. Here is an opportunity for a decrease in regulatory burden without any adverse effect on the public interest or public health and safety. The regulations could be amended to allow the utility to proceed with the proposed action, prior to public notification, provided the action has been shown not to involve a significant hazard consideration and has been shown to be reversible.

In response to a question regarding how NUMARC would define the term "reversible," Ms. Ginsberg stated that NUMARC did not have a definition for the term but would be developing one.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92

NUBARG: Licensees expend significant resources in performing *Sholly* evaluations to accompany license amendment requests, even though many such requests obviously present "no significant hazards consideration." The existing guidance on the types of amendments not likely to present significant hazards has not eliminated in actual application the need to perform many detailed evaluations. The NRC should review its experience with respect to *Sholly* determinations to broaden the scope of the generic determinations that serve as examples of "no significant hazards consideration," for example, to include: a purely administrative change in Technical Specifications, including an organizational change; additional restrictions or controls being added to the Technical Specifications; a core reload with equivalent fuel assemblies; and a

minor adjustment (e.g., less that 5 percent) in ownership shares of a facility. The NRC should also encourage the use of a mechanism whereby licensees may use the generic examples, with a demonstration of applicability, to satisfy the *Sholly* requirements. The New York Power Authority, Cleveland Electric Illuminating, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) endorsed the NUBARG comments.

NUMARC: Resubmitted the comments summarized above and noted that: The rule in its current form has not contributed to safety in any way. The process is convoluted and imposes significant time and cost penalties. It is a disincentive to improvements, such as technical specification changes, that have the potential to benefit safety. The Tennessee Valley Authority, New York Power Authority, TU Electric, Yankee Atomic Electric, Connecticut Yankee Atomic Power, and Northeast Nuclear Energy (the latter two with Northeast Utilities) and the BWR Owners Group endorsed the NUMARC comments.

Florida Power: (Comments were similar to those offered in response to FRN 2/24/92)

Virginia Power: The Sholly amendments have proven to be administratively burdensome to both the licensees and the NRC staff. A quick look at the amount of space taken by Sholly notices in the FR and the number of "emergency" license amendments that have been necessary through the last few years should be clear indications that the system is in urgent need of simplification. We need also to ask whether these amendments have resulted in more public participation or higher safety.

DISPOSITION:

This issue was closed in the CRGR Special Review. A FEDERAL REGISTER Notice and opportunity to request a public hearing would have to be provided in any event. The time delays and burdens of processing licensing amendments would not be reduced substantially by the proposed actions. Some increase in time delay could be expected for those cases where a hearing is requested if the finding of no significant hazards were not made in advance. Also, the comments appear to assume that no increase in requests for hearing would occur if the proposed changes were made in the current practices; but such may well not be the case.

ISSUE C2:

Additional TMI-Related Requirements (10CFR50.34(f))

PROPOSED ACTION(S):

Modify the requirements in 10CFR50.34(f) "Additional TMI-related requirements."

BACKGROUND:

10CFR50.34(f) imposes at least 50 major requirements and most are quite specific. They include a plant/site specific PRA, various accident and reliability analyses, operability studies, improved simulation capability, improved operating procedures, control room design review, safety parameter displays, hydrogen control systems, valve qualification programs, QA program requirements, dedicated containment penetrations and more.

10CFR50.34(f) was intended to ensure that the information contained in the construction permit and manufacturing license applications pending in early 1982 would be sufficient to assure the NRC that these applicants had given appropriate attention to TMI-related requirements, many of which were in the process of being introduced into the regulations and imposed on OL applicants and operating plants.

The Commission's July 30, 1985 Policy Statement on Severe Reactor Accidents Regarding Future Designs and Existing Plants affirms its belief that a new nuclear power plant design can be shown to be acceptable for severe accident concerns if the applicant demonstrates compliance with the procedural requirements and criteria of the current Commission regulations, including the Three Mile Island requirements for new plants as reflected in the so-called CP Rule (10CFR50.34(f)). The reference to the rule was clarified in NUREG-1070 by staff responses to public comments. 10CFR Part 52 requires applications for design certification to demonstrate compliance with any technically relevant portions of 10CFR50.34(f).

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92:

NUMARC: Most of the actions required by 50.34(f) have been implemented by all current licensees and the Commission's Severe Accident Policy Statement published in August 1985 (50FR32138) renders a number of the actions unnecessary. Additionally, the February 4 FEDERAL REGISTER Notice recognizes that modifications of the regulatory requirements in the areas of post accident sampling systems and combustion gas control systems would have little impact on safety.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

Richard S. Barkley: The commenter recommended modification of the regulation to eliminate requirements for systems that have been shown to have marginal safety benefit. Although installation costs have already been incurred, the significant costs of operation, maintenance and replacement of these systems is still significant. Elimination of requirements for systems of marginal safety significance would have the clear benefit of reducing plant complexity.

BWR Owners Group: The BWR Owners Group suggested retroactive application of relaxed requirements for post-accident sampling systems as may result from the review of future designs. Cleveland Electric Illuminating endorsed the BWR Owners Group comments.

DISPOSITION:

Combustible gas control (Issue A3) and post accident sampling systems (Issue S4) are addressed separately. The public comments added no new information to the analysis of the remaining requirements under this issue. No action is proposed by the staff on this issue.

ISSUE C3:

Use of More Realistic Break Sizes

PROPOSED ACTION(S):

Extend the application of the leak-before-break analyses.

BACKGROUND:

The instantaneous, double-ended guillotine pipe break is a deterministic design basis used for nuclear power plants for four decades. The "leak before break" modification of GDC 4 in the mid-1980s eliminated the need to design for protection against the dynamic effects of such accidents where plant-specific analysis demonstrated that such breaks were not credible. The accident continued to be the design basis for other purposes, such as design of reactor internals, containment and ECCS, and environmental qualification of electrical equipment.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/4/92:

New York Power Authority: Extend the conclusions reached in various leak-before-break analyses. More realistic scenarios should be used for establishing regulatory requirements based on analysis: ECCS requirements, blowdown loads, containment peak pressures, containment spray flow, pipe restraints, and HELB mitigation.

Florida Power: The NRC staff has the opportunity to make many other relevant changes to its regulations based upon the technical validity of the engineering work done to support the leak-before-break methodologies and yet has chosen not to do so.

DISPOSITION:

The staff has considered and previously rejected the extension of the leak before break design basis to the proposed areas.

ISSUE C4:

Safety and Security Requirements for Defueled Reactors Prior to Decommissioning

PROPOSED ACTION(S):

Establish safety and security requirements for defueled reactors prior to decommissioning.

BACKGROUND:

Safety and security requirements at nuclear power plants are largely based on the potential for serious consequences for the public health and safety resulting from accidents or sabotage. Following permanent defueling of the reactor, the nature and magnitude of the potential consequences is substantially changed.

SUMMARY OF COMMENTS IN RESPONSE TO FRN 2/24/92:

NRC Staff: Recommended the proposed action.

DISPOSITION:

In the absence of industry interest in this issue, no action is proposed by the staff.

FIGURE 1 SCHEDULE FOR PERIODIC REVIEW OF
REGULATIONS AND CURRENT PLANNED STAFF ACTIONS

A. Periodic Review of Regulations

2/92	Start of Period ← 8/92	3 years ← 2/95	→ End of Period/Start of New Period 8/95
• Published proposed NRC actions for comment • Solicited other proposals from public	• Initiate staff action on publicly endorsed NRC proposals • Initiate staff analyses of meritorious public proposals	• Based on staff analyses publish 2nd set of proposed NRC actions • Solicit other proposals from public	• Complete actions initiated in 1st period • Initiate staff actions on publicly endorsed NRC proposals • Initiate staff analyses of meritorious public proposals

B. Schedule for Current Planned Staff Actions

8/92	2/93	8/93	2/94	8/95
• Initiate 3 rulemakings • Initiate action to modify 2 license conditions • Initiate staff analyses for institutionalizing continuing review of regulations, and 4 potential areas for burden reduction.	Conduct workshops on 3 rule-makings	Staff recommendation for institution-alizing periodic review of regulations	Publish proposed rules	Publish final rules