

POLICY ISSUE NOTATION VOTE

October 20, 2000

SECY-00-0210

FOR: The Commissioners

FROM: William D. Travers
Executive Director for Operations

SUBJECT: DENIAL OF PETITION (PRM 51-7) FOR RULEMAKING TO DELETE THE
REQUIREMENT FROM 10 CFR PART 51 TO CONSIDER SEVERE ACCIDENT
MITIGATION ALTERNATIVES IN OPERATING LICENSE RENEWAL REVIEWS

PURPOSE:

To obtain Commission approval for denying the petition for rulemaking to delete the requirement from 10 CFR Part 51 to consider Severe Accident Mitigation Alternatives (SAMAs) in operating license renewal reviews (PRM 51-7).

BACKGROUND:

By letter dated July 13, 1999, the Nuclear Energy Institute (NEI), on behalf of the commercial nuclear energy industry, submitted a petition for rulemaking seeking to delete 10 CFR 51.53(c)(3)(ii)(L). This provision requires an evaluation of SAMAs as part of the Commission's National Environmental Policy Act (NEPA) review of applications for license renewal. The petitioner requested that the NRC take this action to achieve consistency in the scope of its regulatory requirements for environmental protection under NEPA (10 CFR Part 51), and its technical requirements for license renewal under the Atomic Energy Act (10 CFR Part 54). A notice of receipt of the petition was published in the Federal Register on September 2, 1999, (64 FR 48117) with the comment period closing on November 16, 1999. The NRC received letters from 11 commenters. Ten of the comment letters supported the petition. Nine of those letters were from nuclear utilities and the tenth was from NEI, providing supplemental

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information to support the arguments made in the petition. A public interest group provided the one letter opposed to the petition.

The Part 51 requirement to consider SAMAs in license renewal reviews was placed in the final rule, "Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, (61 FR 28467; June 5, 1996) after careful deliberation. Section 51.53(c)(3)(ii)(L) states—

If the staff has not previously considered severe accident mitigation alternatives for the applicant's plant in an environmental impact statement or related supplement or in an environmental assessment, a consideration of alternatives to mitigate severe accidents must be provided.

This requirement reversed the provision in the proposed Part 51 rule (56 FR 47016; September 17, 1991) that SAMAs need not be assessed in individual license renewal reviews. The provision in the proposed rule was thought to be justified for three reasons. First, the 1980 Commission policy statement, "Statement of Interim Policy, Nuclear Power Plant Accident Considerations Under the National Environmental Policy Act of 1969" (45 FR 40101; June 12, 1980) stated that the consideration of additional features or other actions that would prevent or mitigate the consequences of severe accidents should be made before the operating license review stage because plant changes may be more easily incorporated when construction has not progressed very far. Second, the NRC has in place a process and programs to effectively identify and appropriately disposition issues related to the prevention and mitigation of severe accidents subsequent to the receipt of an operating license. Third, the risk to the environment from a severe accident is low.

After considering public comments and the implications of the decision in *Limerick Ecology Action v. NRC*, 867 F.2d 719 (3d Cir. 1989), the staff concluded that the reasons under the proposed rule for not requiring SAMA analyses were not legally sufficient and that SAMAs need to be considered in license renewal reviews. Because a generic assessment of SAMAs was not performed for NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants," May 1996, the final rule requires a SAMA analysis for each license renewal review unless the NRC staff has previously considered SAMAs for the applicant's plant. Note that in the final rule, the phrase "Severe Accident Mitigation Alternatives (SAMAs)" was adopted, rather than the previously used phrase "Severe Accident Mitigation Design Alternatives (SAMDAs)." This terminology recognizes that severe accident mitigation can involve plant procedural and programmatic improvements in addition to plant design modifications. In promulgating the final rule, the Commission stated—

The Commission notes that upon completion of its IPE/IPEEE (individual plant examination/individual plant examination for externally initiated events) program, it may review the issue of severe accident mitigation for license renewal and consider, by separate rulemaking, reclassifying severe accidents as a Category 1 issue.

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In the rule, Category 1 issues are those that have been satisfactorily assessed generically, and Category 2 issues are those that have not been satisfactorily assessed generically and thus need to be assessed in individual license renewal reviews. The NEI petition would eliminate the requirement to address SAMAs in license renewal, in contrast to addressing SAMAs generically and reclassifying it as a Category 1 issue that need not be reviewed for individual license renewal applications.

DISCUSSION:

The Petition

In its petition, NEI makes three arguments for eliminating the requirement to consider SAMAs as part of the NEPA review associated with license renewal reviews. The first argument is that severe accident mitigation is within the scope of each licensee's current licensing basis and not within the scope of the technical requirements for renewal of operating licenses specified in 10 CFR Part 54. NEI argues that the provisions of Part 54 define the scope of the proposed Federal action and, therefore, the scope of the environmental review. It cites a number of NEPA court cases that it believes supports its argument. The second argument is that the decision in *Limerick Ecology Action v. NRC* does not extend to renewal of licenses for operating reactors. The third argument is that there is a legal basis to eliminate SAMAs upon a finding that severe accidents are highly unlikely.

Basis for Denying the Petition

NEI's principal argument for eliminating SAMAs as part of the NEPA review associated with license renewal is that Part 54 defines the scope of the proposed Federal action and, thereby, the scope of the environmental review. NEI states that, because NRC's safety review under Part 54 does not require consideration of all aspects of plant operation and administration, the NRC's review of environmental impacts pursuant to NEPA should be similarly limited. In its petition and subsequent comments submitted on November 16, 1999, NEI identified several Federal court cases and NRC decisions to support its position. NEI believes that the primary thrust of these cases is that no consideration of impacts is necessary when the proposed Federal action either maintains the current level of safety or does not change the "status quo."

The staff does not agree with the petitioner's argument. By approving a license renewal application under Part 54, the Commission authorizes operation of the entire plant for an additional 20 years beyond the initial licensing term irrespective of the scope of review determined to be necessary to support the action. The petitioner is correct that the Commission, in promulgating 10 CFR Part 54, has limited its safety review under the Atomic Energy Act to certain aspects of the plant that are directly related to aging and other issues specific to the license renewal. The petitioner is also correct in pointing out that many environmental impact issues, such as SAMAs, are not factored into the NRC's safety review under Part 54. The fact that NRC has excluded a specific aspect of the plant in conducting its safety review under Part 54 does not excuse it from considering the potential for an associated environmental impact in meeting its NEPA obligations. In fact, the vast majority of environmental impacts from license renewal required to be considered by NRC in its NEPA review (in accordance with Part 51) are not related to the specific technical aspects of plant operation analyzed to fulfill the agency's Atomic Energy Act responsibilities under Part 54. The staff believes that the various court cases offered by the petitioner do not provide convincing support for the elimination of SAMAs. The attached Federal Register notice addresses each of the cases raised by the petitioner.

The petitioner's second argument for the elimination of SAMAs as part of the NEPA review associated with license renewal is that *Limerick Ecology Action v. NRC* does not preclude the NRC from eliminating SAMAs, through rulemaking, from the scope of the NEPA review for license renewal. The court held that the NRC could not generically dispense with the consideration of SAMAs through a policy statement. Instead, the NRC would need to do so through a generic rulemaking similar to the one completed for Table S-3 (see 10 CFR 51.51) and upheld by the Supreme Court in *Baltimore Gas and Electric v. Natural Resources Defense Council*, 464 U.S. 87 (1983). Despite the limited nature of its holding, the court in the *Limerick* decision identified a variety of issues that NRC would have to overcome in order to eliminate the consideration of SAMAs. The court suggested that the generic consideration of SAMAs would be difficult to accomplish, given differences in individual plants. The staff agrees with the petitioner that *Limerick* does not preclude NRC from eliminating SAMAs from the NEPA license renewal review through rulemaking. However, the NRC has not made the findings necessary to support such a rulemaking.

Regarding NEI's third argument that there is a legal basis for eliminating SAMAs upon a finding that severe accidents are highly unlikely, the staff agrees that there is support in case law for the proposition that NEPA does not require the consideration of remote and speculative risk. In *Limerick*, the court rejected NRC's argument that severe accidents were remote and speculative because no basis for this conclusion was established in the agency's record. The Commission has continued to commit resources to programs to assess severe accidents and their mitigation. Even though there is a low probability of a severe accident, the NRC has invested considerable resources toward severe accident mitigation in its containment performance improvement program, its IPE/IPEEE program, and its accident management program but it has not yet established an agency record that severe accidents are "remote and speculative" as contemplated by courts.

For these reasons, the staff finds that the arguments presented in the petition do not support rulemaking to delete the requirement to consider SAMAs as part of the NEPA review associated with operating license renewal reviews from 10 CFR Part 51.

Related Staff SAMA Activities

In early 1999, in anticipation of completion of the IPE and IPEEE programs, the staff began considering the actions needed to fulfill the commitment made in the Federal Register notice for the license renewal Part 51 final rule (61 FR 28467; June 5, 1996). The commitment was that the Commission "may review the issue of severe accident mitigation for license renewal and consider, by separate rulemaking, reclassifying severe accidents as a Category 1 issue."

The IPE program has been completed and the findings of the program are summarized in NUREG-1560, "Individual Plant Examination Program: Perspective on Reactor Safety and Plant Performance," December 1997. The IPEEE program is nearing completion. The current target for completing the reviews of the balance of the individual submittals is January 2001. A draft insights report will be issued for public comment in April 2001, and the final report is scheduled to be completed in October 2001.

Over the past year, the staff has considered the scope of the analysis that would be required to reach generic technical conclusions supporting a rulemaking to reclassify severe accidents as a Category 1 issue. While the information developed in the IPE/IPEEE program provides a valuable starting point to understand the differences among plants at the time the IPE/IPEEE reviews were undertaken, considerable staff and contractor effort would be required to extend the conclusions resulting from the IPE/IPEEE reviews to draw generic conclusions regarding SAMAs. This would include the need to evaluate changes in plant design and procedures since the IPEs/IPEEEs were completed, incorporate changes in the state of knowledge regarding certain severe accident issues, and to extend the IPE/IPEEE analyses to include offsite consequences. In addition, both benefit and cost considerations of potential plant improvements would need to be developed. Further, there is uncertainty whether, at the conclusion of this effort, staff would be successful in developing a sufficient technical basis to reclassify severe accidents as a Category 1 issue.

It should also be noted that the SAMA reviews for Calvert Cliffs Nuclear Power Plant and the Arkansas Nuclear One Nuclear Power Plant identified several cost-beneficial enhancements.

The staff had originally estimated that to develop a technical basis for reclassifying SAMAs from Category 2 to Category 1 would cost approximately 2.0 FTE and \$700,000 over 3 years. The staff estimates that an additional 2 years and approximately 1 to 1.5 FTE would be needed to then complete the rulemaking. Although a reclassification of severe accidents as a Category 1 issue for license renewal would reduce unnecessary regulatory burden and improve the efficiency and effectiveness of staff reviews, these outcomes need to be weighed against the staff resources needed to pursue this rulemaking. Given the resources that would be required and the uncertainty in achieving a successful outcome, the staff does not believe it would be cost beneficial to pursue rulemaking at this time.

Since the completion of the Calvert Cliffs and Oconee reviews, the staff has issued Supplement 1 to Regulatory Guide 4.2, "Preparation of Supplemental Environmental Reports for Applications to Renew Nuclear Power Plant Operating Licenses," which includes guidance on information and analysis content on SAMAs for the environmental reports submitted as part of license renewal applications. Its use is intended to ensure the completeness of the information provided, to assist the NRC staff and others in locating the information, and to shorten the review process. The staff will continue to work with stakeholders to determine if additional efficiencies in the process can be realized. Furthermore, if new information becomes available that indicates that it is feasible to reclassify SAMAs to Category 1, the staff will notify the Commission and provide a recommendation as to a course of action.

COORDINATION:

The Office of the General Counsel has no legal objection to the denial of the petition. The Office of the Chief Financial Officer has reviewed this Commission paper for resource implications and has no objection. The Office of the Chief Information Officer has reviewed this Commission paper for information technology and information management implications and concurs in it.

The Commissioners

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RECOMMENDATION:

That the Commission:

Approve publication of the attached Notice of Denial of Rulemaking Petition in the Federal Register and the issuance of the attached letter of denial to the petitioner.

/RA/

William D. Travers
Executive Director
for Operations

Attachments:

1. Federal Register Notice
2. Letter of Denial

The Commissioners

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Template SECY-012
FRN Accession No.: ML003750141
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*See previous concurrence

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