



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

April 6, 2018

Mr. Samuel Miranda
2212 Forest Glen Road
Silver Spring, MD 20910

SUBJECT: LTR-17-0341-1—CLOSURE LETTER FOR SAMUEL MIRANDA, CITIZEN,
REGARDING HIS SEPTEMBER 13, 2017, E-MAIL TITLED, "RE: 2.206—
ENFORCEMENT PETITION REGARDING PLANT LIFETIME EXTENSIONS"

Dear Mr. Miranda:

This letter responds to your September 13, 2017, petition to U.S. Nuclear Regulatory Commission (NRC) Executive Director for Operations Victor M. McCree, regarding plant lifetime extensions (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17256B257). Your petition was supplemented by the following documents:

- Presentation material associated with Section 2.206, "Requests for action under this subpart," of Title 10 of the *Code of Federal Regulations* (10 CFR) petition regarding license renewals (ADAMS Accession No. ML17320B100)
- Transcript of your meeting with the Petition Review Board on November 16, 2017 (ADAMS Accession No. ML17326A371)
- Transcript of your meeting with the Petition Review Board on January 31, 2018 (ADAMS Accession No. ML18036A031)

The Executive Director for Operations referred your petition to the Office of Nuclear Reactor Regulation under 10 CFR 2.206. In your petition, you requested that the NRC take the following actions:

- (1) Suspend licensees' authorizations to operate their plants for any periods beyond their originally licensed plant lifetimes until they can demonstrate that their license renewals will not cause a significant increase in the probability of an accident previously evaluated, particularly with respect to Condition III events (i.e., incidents which may occur during the lifetime of a particular plant).
- (2) Suspend NRC review of licensees' applications for authorizations to operate their plants for any periods beyond their originally licensed plant lifetimes until licensees can demonstrate that their license renewals will not cause a significant increase in the probability of an accident previously evaluated, particularly with respect to Condition III events.

- (3) Allow licensees who are already operating their plants past their originally licensed plant lifetimes a maximum of 1 year from the date of this petition to submit a plan and schedule that will produce a verifiable demonstration that continued operation of their plants will not cause a significant increase in the probability of an accident previously evaluated, particularly with respect to Condition III events.

As the basis for your request, you stated that nuclear reactors must meet one of these two American Nuclear Society (ANS) design standards:

- Pressurized-water reactor designs must meet the requirements of Standard ANS-N18.2-1973, "Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants," August 6, 1973.
- Boiling-water reactor designs must meet the requirements of Standard ANS-N212, "Nuclear Safety Criteria for the Design of Stationary Boiling Water Reactor Plants," May 1974.

In addition, you cited 10 CFR 50.92, "Issuance of amendment," and stated that "a proposed license amendment (e.g., a license renewal) would not pose a significant hazard if, operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability of an accident previously evaluated." You then stated:

. . . it follows that an extension of the operating lifetime by 20 years (i.e., by 50%) will cause an increase in the frequency of Infrequent Incidents, by 50%. In other words, a license renewal will significantly increase the probability of a previously evaluated (Condition III) accident. Consequently, an applicant for a license renewal cannot truthfully claim there is *no significant hazard* associated with the proposed license renewal.

You met with the NRC's Petition Review Board to discuss your petition on November 16, 2017, and again on January 31, 2018. The Petition Review Board has considered those discussions in determining whether or not the petition meets the criteria for consideration under 10 CFR 2.206.

After careful consideration, the Petition Review Board has concluded that your petition does not meet the criteria for consideration under 10 CFR 2.206 because the issues you raised are not supported by sufficient, credible facts that would constitute the basis for taking the requested action or that would warrant further inquiry. In accordance with Management Directive 8.11, "Review Process for 10 CFR 2.206 Petitions," the Petition Review Board chair obtained concurrence from appropriate office-level management within the Office of Nuclear Reactor Regulation on the board's recommendations.

The enclosure to this letter provides further detail regarding the NRC's final decision on your petition.

Thank you for bringing these issues to the attention of the NRC.

Sincerely,

/RA/

Joseph Donoghue, Deputy Director
Division of Materials and License Renewal
Office of Nuclear Reactor Regulation

Enclosure:
As stated

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**ADAMS Accession Nos.: Package (ML17346A945); Incoming (ML17256B257); *via e-mail;
Closure Letter (ML17346A939) *concurrence via e-mail**

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BASIS FOR NOT ACCEPTING THE PETITION REGARDING PLANT LIFETIME EXTENSIONS

Mr. Samuel Miranda, a concerned citizen, submitted a petition requesting that the NRC suspend renewed licenses for operating reactors, and its reviews of applications for renewed licenses, until the licensees/applicants can demonstrate that their license renewals will not cause a significant increase in the probability of an accident previously evaluated, particularly with respect to Condition III events. According to the American Nuclear Society (ANS), Condition III events are "Incidents, any one of which may occur during the lifetime of a particular plant," (ANS Standard N18.2-1973, "Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants," August 6, 1973).

In his petition, Mr. Miranda cited 10 CFR 50.92, "Issuance of amendment," as a basis for his request. During public meetings with the Petition Review Board (PRB), Mr. Miranda stated that 10 CFR 50.92(c)(1) and 10 CFR 50.92(c)(3) are part of the current licensing basis based on the definition of that term in 10 CFR 54.3, "Definitions." As such, Mr. Miranda asserted that licensees must demonstrate that renewal of their licenses would not pose a significant hazard, based on the criteria in 10 CFR 50.92. In other words, Mr. Miranda suggested that each licensee must demonstrate that operation of its facility in accordance with the proposed renewal would not involve a significant increase in the probability of an accident previously evaluated and would not result in a significant reduction in safety margin.

The criteria for reviewing petitions under Title 10 of the Code of Federal Regulations (10 CFR) 2.206, "Requests for action under this subpart," are provided in Management Directive 8.11, "Review Process for 10 CFR 2.206 Petitions." Under these criteria, the petition must specify the facts that constitute the basis for the NRC to take a particular enforcement action, and the supporting facts in the petition must be credible and sufficient to warrant further inquiry by the NRC. Furthermore, asserted deficiencies in existing NRC rules are not considered in the 2.206 process.

The PRB considered Mr. Miranda's petition and the supplemental information he provided in public meetings. For the reasons discussed below, the PRB determined that the petitioner did not provide sufficient, credible facts that constitute a basis for the requested action or warrant further inquiry.

No Significant Hazards Consideration Statement

The no significant hazards consideration requirements in 10 CFR 50.92 do not provide a credible basis for considering Mr. Miranda's petition request. The reasons for this can be summed up as follows:

- Consideration of the no significant hazards consideration criteria in 10 CFR 50.92(c) is not required when NRC issues a renewed license. The NRC standards for issuing a renewed license are found in 10 CFR 54.29, "Standards for issuance of a renewed license."
- Furthermore, the no significant hazards consideration criteria are not safety requirements or standards. The no significant hazards consideration determination is a procedural standard that governs whether the NRC must provide an opportunity for a

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prior hearing when issuing license amendments (see 10 CFR 50.91, "Notice for public comment; State consultation.").

Regulatory Framework and Scope of License Renewal

The regulations in 10 CFR Part 54 govern the issuance of renewed licenses, and the standards for issuance of renewed licenses are stated in 10 CFR 54.29. During his second public meeting with the NRC, Mr. Miranda asserted that the scope of the license renewal review is too limited and does not address (1) components other than passive components and (2) the probability of occurrence of Condition III events. To the extent that this petition asserts a deficiency within existing NRC rules, it does not fall within the scope of the 2.206 process. In addition, as discussed below, Mr. Miranda has not provided a credible basis for either of the above assertions.

First, the petition does not provide a credible basis for the assertion that license renewal review is too limited in scope because it addresses only passive components. In developing the license renewal rule framework and scope, the Commission formulated two principles of license renewal (60 Fed. Reg. 22461, 22469 (May 8, 1995)):

1. The current regulatory process, with the possible exception of the detrimental effects of aging, is adequate to ensure that the licensing bases of all currently operating plants provides and maintains an acceptable level of safety so that operation will not be inimical to public health and safety or common defense and security.
2. Plant-specific licensing basis must be maintained during the renewal term in the same manner and to the same extent as during the original licensing term, which would be accomplished, in part, through a program of aging management programs for systems, structures, and components within the scope of license renewal.

The scope of license renewal is limited by design. In the statements of consideration for the final license renewal rule (60 Fed. Reg. 22461, 22469 (May 8, 1995)), the Commission concluded as follows:

. . . existing programs and regulatory requirements that continue to be applicable in the period of extended operation and provide adequate aging management for systems, structures, and components [SSCs] should be credited for license renewal." Accordingly, the license renewal rule focuses the renewal review on long-lived, passive structures and components for which current activities and requirements may not be sufficient to manage the effects of aging in the period of extended operation.

Under this approach, active components that are within the scope of 10 CFR Section 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants" (the maintenance rule) are addressed outside of the license renewal review. As the statements of consideration further explain, "The Commission believes that crediting the [maintenance] rule (along with the entire regulatory program) is acceptable to support managing the effects of aging for certain systems, structures, and components." (60 Fed. Reg. at 22,470).

Second, the petition does not provide a credible basis for why issuance of a renewed license based on the standards in 10 CFR 54.29 does not address the probability of occurrence of Condition III events. Although Mr. Miranda stated that the frequency of occurrence of

Condition III events at facilities with renewed licenses increases by 50 percent when the licensed lifetime of the facility increases by 50 percent, he did not provide any supporting facts (such as plant operating data) to substantiate this supposition.

In the original 1996 version of NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants," (GEIS) the following statement was made in Section 5.5.1, "Impacts from Design-Basis Accidents":

In assessing the impact on the environment from postulated accidents during the license renewal period, the assumption has been made that the license renewal process will ensure that aging effects on the plant are controlled and that the probability of any radioactive releases from accidents will not increase over the license renewal period.

In the 2013 revision of NUREG-1437 (Revision 1), Section 4.9.1.2, "Environmental Consequences of Postulated Accidents," confirmed the findings of the 1996 GEIS regarding consideration of postulated accidents during the period of extended operation.

For passive components, aging management mitigation procedures are in place or will be implemented during the license renewal period. For other SSCs, the plant-specific licensing basis is maintained during the renewal term in the same manner and to the same extent as during the original licensing term (i.e., SSCs continue to meet the regulatory requirements as well as the design, material, and construction standards applicable to the SSC in license renewal). For these reasons, the NRC staff does not expect any significant increases in accident frequency.

Furthermore, the petition does not provide a credible basis for why the probability of occurrence of Condition III events would significantly increase or exceed the criteria established in the current licensing basis for facilities that have undergone license renewal or whose applications for renewal are currently under review.

Regarding reactor incidents, ANS Standard N18.2-1973 defines Condition II and Condition III events as follows:

- Condition II—Incidents, any one of which may occur during a calendar year for a particular plant
- Condition III—Incidents, any one of which may occur during the lifetime of a particular plant

ANS Standard N18.2-1973 does not impose any specific limit to the number of Condition II or Condition III events that may occur during the timeframe of interest (calendar year for Condition II and plant lifetime for Condition III). Thus, for most licensees, accidents and transients have been divided into categories based upon a qualitative assessment of frequency. As discussed in Regulatory Guide 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments," dated November 2000, minimal increases in frequency of accidents resulting from subsequent licensee activities do not significantly change the licensing basis of the facility and do not impact the conclusions reached about acceptability of the facility design.

The NRC's objective when conducting a license renewal review is to determine whether the licensee (or applicant) will adequately manage the detrimental effects of aging, which could adversely affect the functionality of SSCs. By maintaining the functionality of systems, structures, and components within the scope of license renewal, the licensee maintains the current licensing basis, and thus the current level of safety, throughout the extended operating period.

Conclusion

For the reasons discussed above, the PRB has determined that the petition should not be accepted for review under 10 CFR 2.206." If the petitioner believes that there are deficiencies within existing NRC rules, such as in the regulations of 10 CFR Part 54, he could consider filing a petition for rulemaking with the NRC pursuant to 10 CFR 2.802. Such petitions should be addressed to The Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemakings and Adjudications Staff.