



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

December 12, 2017

**U.S. Nuclear Regulatory Commission Public Meeting Summary**

**Title:** Summary of Meeting with the NRC Petition Review Board (PRB) and the Petitioner Regarding the 10 CFR 2.206 Petition Dated September 13, 2017, for All Renewed Reactor Operating Licensees and Applicants for Reactor Renewed Operating Licenses

**Meeting Identifier:** 20171269

**Date of Meeting:** November 16, 2017

**Location:** 11555 Rockville Pike  
Two White Flint North 9B6  
Rockville, Maryland

**Type of Meeting:** Category 3

**Purpose of the Meeting:** The purpose of this meeting was for the Petitioner to address the NRC Petition Review Board (PRB) regarding the September 13, 2017, petition.

**General Details:** The meeting began at 1:30 P.M. EST and ended at 3:30 P.M. ET. In addition to in-person attendees, participants also utilized an audio bridge line (a list of attendees is included in Enclosure 1). As many as 15 people (including individuals from Citizens' Resistance at Fermi 2 (CRAFT), Citizens' Environmental Coalition, and the State of Michigan) called in, and 10 people (nine NRC Staff and one member of the public) actively participated in the discussion. Two NRC staff members served as meeting facilitators.

**Summary of Presentations:**

The purpose of this meeting was to give the Petitioner an opportunity to provide an additional explanation or support for the petition before the Petition Review Board's (PRB's) initial consideration and recommendation. No decisions regarding the merits of this petition were made at this meeting. The meeting was transcribed and the transcript can be found in the NRC's Agencywide Document Access and Management System (ADAMS) (ADAMS Accession No. ML17326A371).

After the welcome and introductions, the facilitator provided general background information on the 10 CFR 2.206 process. Specifically, Section 2.206 of Title 10 of the Code of Federal Regulations (CFR) describes the petition process, the primary mechanism for the public to

request enforcement action by the NRC. This process permits anyone to petition the NRC to take enforcement-type action related to NRC licensees or licensed activities. Depending on the results of its evaluation, the NRC could modify, suspend, or revoke an NRC-issued license or take any other appropriate enforcement actions.

The Petitioner used slides during his presentation (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17320B100). Before beginning, the Petitioner noted that there was no staff from the Office of Inspector General (OIG) as he had requested.

The Petitioner quoted ANSI [American National Standards Institute]/ANS [American Nuclear Society]-51.1-1983, "Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants:"

The nuclear safety criteria have been established on the premise that:

- a. Those situations in the plant that are assessed as having a high frequency of occurrence shall have a small consequence to the public, and
- b. Those extreme situations having the potential for the greatest consequence to the public shall be those having a very low frequency of occurrence.

From this principle, four categories were derived and are stated in the ANS Standard N18.2, "Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants," which was issued 10 years earlier in 1973 **[bolded text added by petitioner]**:

Condition I, or Normal Operation: Operations that are expected frequently or regularly in the course of power operation, refueling, maintenance, or maneuvering of the plant

**$\geq 1/\text{reactor-year}$**

Condition II, or Incidents of Moderate Frequency: Incidents, any one of which may occur during a calendar year for a particular plant

**$\geq 0/\text{reactor-year}$**

Condition III, or Infrequent Incidents: Incidents, any one of which may occur during the lifetime of a particular plant

**$\geq 0/\text{plant-lifetime}$**

Condition IV, Limiting Faults: Faults that are not expected to occur but are postulated because their consequences would include the potential for the release of significant amounts of radioactive material

**$= 0/\text{plant-lifetime}$**

The Petitioner stated his interpretation that the frequency of occurrence for all conditions is defined in terms of the plant lifetime, not in terms of reactor year of operation. Further the Petitioner stated that the ANS Standards N18.2 (for pressurized water reactors) and N212 (for boiling water reactors) are part of licensees' current license basis, as defined in 10 CFR 54.3, "Definitions," because they are mentioned in licensee's final safety analysis reports (FSARs). The Petitioner provided pages from the Byron and Braidwood FSARs as an example. The Petitioner noted that an exact regulation is not needed to show that licensees are committed to meet this standard.

The Petitioner stated that Condition III is the subject of this petition which could include serious events. For example, a Condition III event occurred at a Westinghouse plant in Switzerland in 1974. The Beznau Plant had a turbine trip, which should not normally require any protective action, and had a stuck open/damaged pressurizer release valve (PRV). The damaged PRV

made the event a Condition III event. This event did not turn out to be very serious because the operators realized what was happening and were able to recover the plant without any problems.

The Petitioner explained that a similar event happened again in 1979 in Harrisburg at the Three Mile Island plant. In this case, the operators didn't know what was happening and made some mistakes. A Condition III event became a more serious Condition IV event, resulting in a partial core meltdown.

The Petitioner concluded that whatever frequency of Condition II events you had during the original operation period (40 years), should be the same for the renewed license (60 years). The Petitioner used the criterion in the significant hazard evaluation defined in 10 CFR 50.92, "Issuance of amendment," to state that the occurrence of Condition III events has increased because the lifetime of plants has increased by 50 percent (from 40 to 60 years).

The Petitioner stated that this increase in frequency of the Condition III events is why he filed the petition. He stated that the NRC has not fully considered the effects of increasing the plant lifetime by 20 years, or any other time specifically when it comes to the Condition III failures, which are defined in terms of plant lifetime, not in terms of plant years. The license renewals issued and currently underway have not shown that there is no significant increase in the probability of a Condition III event over the extended plant lifetime as required by 10 CFR 50.92.

The Petitioner concluded by stating that, since the frequency of occurrence of the Condition III event is defined in terms of plant lifetime, the lengthening of the lifetime increases the events probability and effectively reduces the safety margin because now the safety margin becomes harder to meet.

The Petitioner concluded his presentation by commenting on the 10 CFR 2.206 Process. Specifically, the Inspector General's Office has done an audit of the 2.206 process and noted that over the past three fiscal years ending fiscal year 2016, NRC has received 38 petitions and hasn't issued any orders. The Petitioner further noted that the reason the NRC chooses not to accept a petition is that the issues raised by the petitions have already been the subject of NRC staff review and evaluation, either on that facility, other similar facilities, or on a generic basis, for which a resolution has been achieved. If this is true, the staff should be able to provide an ADAMS Accession No. specifically addressing these issues.

Prior to the meeting, the staff sent three questions to the Petitioner to be discussed during the public meeting and are provided in Enclosure 2. During the meeting, the staff asked several questions, including

Staff question: In regards to the reference made to 10 CFR 50.92, and because that regulation is not intended as a technical criteria for the NRC staff in making their final determination as to whether or not we approve an amendment request, what is the relevance of that requirement to a renewed license?

Further, Section 50.92 only applies to license amendments submitted under 50.90. It does not apply to license renewals submitted under Part 54. So licensees, when they submit their license renewal, are not required to address those criteria.

Petitioner response: RIS says that licensees are required in 10 CFR 50.91 to submit this no significant hazards statement. I think there is a misunderstanding. I don't think the licensee or the NRC asked the right questions. I don't think the licensee or the NRC realize that this 1972 standard is in their current licensing basis and it needs to be met. So no questions are asked about these 1972 standards.

It was understood in my 40 years of experience that those criteria, apply to all license amendments, all licensing amendment requests, changes to design basis for example. And increasing the plant lifetime is a fundamental change to the design basis.

Staff question: Are you familiar with the two principles of license renewal where basically they say that the regulatory process is adequate to ensure the safety of all currently operating plants, with the possible exception of the detrimental effects of aging? And then the plant-specific licensing basis must be maintained during the renewal term in the same manner and to the same extent as during the initial licensing term. Those were the two principles of license renewal when we did that. Are you aware of those two principles?

Petitioner response: Yes, I am. Condition III and IV events are defined in terms of occurrences per plant lifetime. So their definition -- the specific licensing basis remains the same. The definition of "lifetime," as used in the plant licensing basis, has changed.

Staff question: Section 5.5.1 of the Generic Environmental Impact Statement (GEIS) evaluated postulated accidents and states "And except in the impact of 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 plants are controlled, and the probability of any radioactive releases from accidents will not increase over the license renewal period." Were you aware that postulated accidents are addressed in the environmental review?

Petitioner response: No. I was not involved in the environmental review. However, postulated accidents are accidents that are specified in Regulatory Guide 1.70, 'Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition),' which is the standard format and guide for safety analysis reports. These postulated accidents are one way the NRC judges the safety analysis reports.

- Staff question: Based on your slides, would you expect a Condition III event to become a Condition IV event as a result of license renewal?
- Petitioner response: The definition merely states that these are accidents that can occur, but they define it in terms of plant lifetime. These are over the plant lifetime. And when you extend the plant lifetime, you can expect more of these occurrences.
- Staff question: Based on this discussion, you previously stated that licensees must comply with this standard as part of their current licensing basis for license renewal. Do you believe that the licensees are not currently in compliance with their current licensing basis with respect to the conditions? Do you have specific information that would indicate that they are not in compliance?
- Petitioner response: I would say this is an error of omission. Licensees haven't looked at it and the NRC hasn't asked these questions.
- Staff question: The Petitioner provided the comparison in a very easy-to-understand manner for frequency of occurrence of Condition III events -- one over 40 years versus one over 60 years. Do you believe or do you have any information that would cause us to question the sufficiency of aging management programs or the time limited aging analyses that are done for license renewals, such that the frequency of occurrence of Condition III events would increase from 40 years to 60 years?
- Petitioner response: The aging management program is kind of narrow in scope. So as far as it goes, the aging management program is a start. But then this is an unknown. When you increase the plant lifetime, all you know is that there are going to be more Condition III events, but you still don't know how many. So I think the NRC needs to ask the question - how frequently can these Condition III events be predicted to occur.
- Staff question: Does the guidance in ANS-18.2 specifically state one in 40 years, or is it actually a qualitative assessment?
- Petitioner response: The standard says, "These are events that could occur during the lifetime of a particular plant." They don't say how many. All we know is that it's not zero.

**Public Participation Themes:** Three members of the public provided comments at the end of the meeting:

- Jessie Collins, CRAFT, thanked Mr. Miranda for filing the 10 CFR 2.206 Petition. The fact that he is a former NRC employee gives more weight to the filing.
- Barbara Warren, Citizens' Environmental Coalition, asked the staff which license renewal document specifically addresses Mr. Miranda's concerns. The staff stated that accidents are addressed in both the Safety Evaluation Report (SER) and the

Environmental Impact Statement (EIS). Mr. Miranda stated that his concerns are not addressed in the SER at all.

- David Schonberger, Citizen from the State of Michigan, stated that the Atomic Energy Act which governs the Part 54 renewal process could keep the NRC from relicensing any existing nuclear power plant if it would be "inimical to the health and safety of the public." And so that statutory requirement is all-inclusive and aren't limited in scope. And all questions pertaining to a determination of safety for the license renewal period should be asked in the process of license renewal in order to determine adequate protection and reasonable assurance for health and safety for the public for the period of extended operations.

**Action Items/Next Steps:** The PRB plans to meet internally within a couple of weeks to discuss the information provided in the petition, as supplemented, to make its initial recommendation on the petition. Following that meeting, the petition manager will inform the petitioner of the PRB's initial recommendation to either accept or reject the 2.206 petition for review, in accordance with the criteria in Management Directive 8.11, "Review Process for 10 CFR 2.206 Petitions."

**Enclosures:**

- Meeting Attendance List
- Questions Posed by NRC Staff for Discussion During Public Meeting

**Attachments:**

- Incoming Petition: ML17256B257
- Pre-PRB meeting agenda: ML17320B105
- Petitioner's presentation: ML17320B100
- Transcript of meeting: ML17326A371
- Pre-PRB meeting summary ML17326A405

SUBJECT: Summary of Meeting with the NRC Petition Review Board (PRB) and the  
Petitioner Regarding the 10 CFR 2.206 Petition Dated September 13, 2017, for  
All Renewed Reactor Operating Licensees and Applicants for Reactor Renewed  
Operating Licenses

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**ADAMS Accession Nos:**

**(Package) ML17331A285**

**(Meeting Summary) ML17326A405**

**(Transcript) ML17326A371**

**\*concurrence via email**

OFFICE	PM:MRPB:DMLR	LA:MRPB:DMLR	ARCB:DRA	BC: MRPB:DMLR
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OFFICE	DD:DMLR	PM: MRPB:DMLR		
NAME	JDonoghue	LJames		
DATE	12/7/2017	12/12/2017		

**OFFICIAL RECORD COPY**

ROCKVILLE, MEETING BETWEEN THE NRC STAFF AND THE PETITIONER  
REGARDING THE 10 CFR 2.206 PETITION DATED SEPTEMBER 13, 2017, FOR ALL  
RENEWED REACTOR OPERATING LICENSEES AND APPLICANT'S FOR REACTOR  
RENEWED OPERATING LICENSES  
ROCKVILLE, MARYLAND

MEETING ATTENDANCE LIST  
SEPTEMBER 16, 2017

PARTICIPANTS

AFFILIATIONS

Lois James, Sr. Project Manager and Petition Manager	Division of Materials and License Renewal (DMLR) Office of Nuclear Reactor Regulation (NRR) U.S. Nuclear Regulatory Commission (NRC)
Joseph Donoghue, Deputy Director and PRB Chair	DMLR, NRR, NRC
Marcia Simon, Senior Attorney	Office of General Counsel (OGC), NRC
Jerry Dozier, Senior Reliability and Risk Analyst	Division of Risk Assessment, NRR, NRC
James Kim, Project Manager	Division of Operating Reactor Licensing (DORL), NRR, NRC
Douglas Broaddus, Chief	DORL, NRR, NRC
Robert Benton, Reactor Systems Engineer	Division of Safety Systems (DSS), NRR, NRC
Eric Oesterle, Chief	DMLR, NRR, NRC (previously DSS, NRR, NRC)
Rhex Edwards, Senior Health Physicist and Facilitator	Division of Nuclear Materials and Safety, Region III
Daniel Mussatti, Economist and Facilitator	Division of Safety Systems, Risk Assessment & Advanced Reactors (DSRA) Office of New Reactors (NRO)
Russell Arrighi, Senior Enforcement Specialist	Office of Enforcement (OE)
Samuel Miranda	Petitioner, Public
Jessie Collins	Citizens' Resistance at Fermi 2 (CRAFT)
Barbara Warren	Citizens' Environmental Coalition
David Schonberger	Citizen from the State of Michigan
Dave Lochbaum	Union of Concerned Scientists



ROCKVILLE, MEETING BETWEEN THE NRC STAFF AND THE PETITIONER  
REGARDING THE 10 CFR 2.206 PETITION DATED SEPTEMBER 13, 2017, FOR ALL  
RENEWED REACTOR OPERATING LICENSEES AND APPLICANT'S FOR REACTOR  
RENEWED OPERATING LICENSES  
ROCKVILLE, MARYLAND

QUESTIONS POSED BY NRC STAFF FOR DISCUSSION DURING PUBLIC MEETING

**From:** [James, Lois](#)  
**To:** ["Samuel Miranda"](#)  
**Cc:** [Keegan, Elaine](#)  
**Subject:** Questions NRC staff intend to ask the 2.206 Petitioner  
**Date:** Wednesday, November 15, 2017 2:50:00 PM

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Mr. Miranda,

In order to make the meeting more productive and interactive, we have developed several questions that we would like to discuss with you:

1. Please clarify if your underlying concern is based on a potential safety issue, a potential non-compliance, or both, and provide any additional information you have that supports that a potential non-compliance or hazardous condition exists. This information will help the PRB in its consideration whether to institute a proceeding pursuant to 10 CFR 2.202, "Orders," and in particular, whether the underlying concern addresses one or more of the criteria in § 2.202(a).
2. Please clarify the relevance of the reference to whether there is "no significant hazard," as addressed in 10 CFR § 50.92, associated with the operation of a power reactor under a renewed license. Your request specifically identifies licensees who have requested license renewal, or to whom the NRC has issued a renewed operating license. The specific requirements that must be met for operating reactor licensees to request, and for the NRC staff to issue a renewed operating license, are contained in 10 CFR Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants." As such, it would be helpful to the PRB if you could clarify how your request, including references to the criteria in 10 CFR § 50.92, relates to the requirements for granting a renewed license, or to any NRC issued or endorsed guidance or positions applicable to the renewal of an operating license. Specific references that relate to or describe your underlying concern and its applicability to license renewal would be particularly helpful.
3. Your petition states that the designs of all Pressurized Water Reactors (PWRs) must meet the requirements of ANS-N18.2-1973 and the designs of all Boiling Water Reactors (BWRs) must meet the requirements of ANS-N212. Please provide the appropriate regulation which states that these ANS standards must be met.

I look forward to meeting you.

Lois

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