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

November 10, 2011

Mr. David Lochbaum
Director, Nuclear Safety Project
Union of Concerned Scientists
P.O. Box 15316
Chattanooga, TN 37415

Dear Mr. Lochbaum:

On behalf of the Nuclear Regulatory Commission (NRC), I am responding to your letter dated July 29, 2011,[1] in which you requested the NRC issue a Demand for Information (DFI) to a number of boiling-water reactor (BWR) licensees with Mark I and Mark II containment designs. You requested that the DFI compel each licensee to describe how the facility complies with General Design Criterion (GDC) 44, "Cooling Water," and with Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.49, "Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants."

As the basis of the request, you stated:

- The spent fuel pool in BWRs with Mark I and II containments is located within the reactor building, also called the secondary containment. The reactor building is a structure important to safety - it houses the emergency core cooling system pumps as well as the control rod drive system pumps and the reactor core isolation cooling system pump which are also capable of supplying makeup water to the reactor vessel. Following a design and licensing bases event, decay heat from irradiated fuel stored in the spent fuel pool is among the "combined heat load" within the reactor building that must be transferred to the ultimate heat sink to satisfy GDC 44. When system(s) prevent the spent fuel pool from boiling, the heat from piping losses, motor operation, etc. falls among the "combined heat loads." When system(s) cannot prevent the spent fuel pool from boiling following a design and licensing bases event, the heat emitted from the boiling pool falls among the "combined heat loads." One way or another, GDC 44 requires that the heat load from irradiated fuel stored in the spent fuel pools inside the reactor building at BWR Mark I and II plants be transferred to the ultimate heat sink. If GDC 44 is not satisfied, the plant's response to design and licensing bases events may be impaired or degraded. The licensees' responses to the DFI we seek would describe how they satisfy this GDC requirement, or not.

- ...when a spent fuel pool is prevented from boiling following a design and licensing bases event, the heat losses from piping and equipment used to achieve that outcome must be included or accounted for within the environmental qualification (EQ) programs mandated by 10 CFR 50.49. When a spent fuel pool cannot be prevented from boiling following a design and licensing bases event, the temperature, humidity and submergence conditions created by

[1] Agencywide Documents Access and Management System Accession No. ML11213A030.

the boiling pool must be included or accounted for within the EQ programs. If 10 CFR 50.49 is not satisfied, the plant's response to design and licensing bases events may be impaired or degraded. The licensee' responses to the DFI we seek would describe how they satisfy this 10 CFR 50.49 requirement, or not.

In accordance with Management Directive 8.11, "Review Process for 10 CFR 2.206 Petitions," dated October 25, 2000, the NRC has processed your letter under 10 CFR 2.206, "Requests for Action under this Subpart," and assigned this petition to the NRC's Office of Nuclear Reactor Regulation.

On August 16, 2011, the Petition Manager, Mr. Ed Miller, acknowledged receipt of your July 29, 2011, petition. On the same day, you declined to address the Petition Review Board (PRB) before its initial meeting to consider your petition.

On September 8, 2011, the PRB met internally to discuss your request for action. During this meeting, the PRB reached an initial recommendation that your petition meets the criteria for review. Additionally, the PRB identified that the topic of your petition, "the effects of the spent fuel pool during an accident," is undergoing NRC review as part of the lessons-learned from the Fukushima event. The PRB intends to use the results of the Fukushima review to inform its final decision on whether to implement the actions requested in your petition. This initial recommendation was conveyed to you via e-mail dated September 23, 2011.

Because you did not request to address the PRB after being provided this initial recommendation, the PRB's initial recommendation to accept your petition for review has become the PRB's final recommendation.

As required by 10 CFR 2.206, the NRC will act on your petition within a reasonable time. The Petition Manager, Mr. G. Edward Miller, can be reached at (301) 415-2481. I have enclosed for your information a copy of the notice that the NRC is filing with the Office of the Federal Register for publication. I have also enclosed for your information a copy of the brochure, NUREG/BR-0200, Revision 5, "Public Petition Process," issued February 2003, prepared by the NRC's Office of Public Affairs.

Sincerely,

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Enclosures:
1. *Federal Register* Notice
2. NUREG/BR-0200

cc: Listserv

ENCLOSURE 1

FEDERAL REGISTER NOTICE

NUCLEAR REGULATORY COMMISSION

RECEIPT OF REQUEST FOR ACTION UNDER 10 CFR 2.206

ADAMS ACCESSION NO. ML112800629

[7590-01-P]

U.S. NUCLEAR REGULATORY COMMISSION

RECEIPT OF REQUEST FOR ACTION UNDER 10 CFR 2.206

[NRC-2011-XXXX]

Notice is hereby given that by petition dated July 29, 2011, David Lochbaum (petitioner) has requested that the Nuclear Regulatory Commission (NRC) take action to issue a Demand for Information (DFI) of all boiling-water reactor nuclear power reactors with Mark I or Mark II containment designs.

As the basis for this request, the petitioner states that, during an accident scenario, the spent fuel pools have the potential to impact other plant equipment. The petitioner has requested that the DFI compel the subject licensees to demonstrate that the plant systems are capable of removing the combined heat loads from the reactor building during an accident, including the heat load from the spent fuel pool. Additionally, the petitioner requested that the DFI compel the subject licensees to demonstrate that, if the spent fuel pool were to boil, the equipment that would be exposed to additional temperature, humidity, and submergence conditions would be able to perform its design function.

The request is being treated pursuant to Title 10 of the *Code of Federal Regulations* Section 2.206 of the Commission's regulations. The request has been referred to the Director of the Office of Nuclear Reactor Regulation (NRR). As provided by Section 2.206, appropriate action will be taken on this petition within a reasonable time. The petitioner declined an opportunity to address the NRR Petition Review Board (PRB). After meeting internally, the PRB acknowledged the petitioner's concern about the impact of spent fuel pools during an accident, noting that this concern is consistent with the NRC's mission of protecting public health and safety. Additionally, the PRB noted that the effects of the spent fuel pool during an accident are

undergoing NRC review as part of the lessons-learned from the Fukushima event. The PRB intends to use the results of the Fukushima review to inform its final decision on whether to implement the requested actions.

A copy of the petition (Agencywide Documents Access and Management System Accession No. ML11213A030) is available for inspection at the Commission's Public Document Room (PDR), located at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available documents created or received at the NRC are accessible electronically through the Agencywide Documents Access and Management System (ADAMS) in the NRC Library at http://www.nrc.gov/reading-rm/adams.html. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC PDR Reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to PDR.Resource@nrc.gov.

FOR THE NUCLEAR REGULATORY COMMISSION

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this November 10, 2011

ENCLOSURE 2

NUREG/BR-0200

PUBLIC PETITION PROCESS

ADAMS ACCESSION NO. ML050900248

PUBLIC PETITION PROCESS

10 CFR 2.206

Introduction

The U.S. Nuclear Regulatory Commission (NRC) was established in 1975 to protect public health and safety in the civilian use of nuclear power and materials in the United States. As part of its responsibilities, NRC assesses all potential health and safety issues related to licensed activities and encourages members of the public to bring safety issues to its attention.

Section 2.206 of Title 10 of the *Code of Federal Regulations* (10 CFR 2.206) describes the petition process—the primary mechanism for the public to request enforcement action by NRC in a public process.* This process permits anyone to petition NRC to take enforcement action related to NRC licensees or licensed activities. Depending on the results of its evaluation, NRC could modify, suspend, or revoke an NRC-issued license or take any other appropriate enforcement action to resolve a problem. Requests that raise health and safety issues without requesting enforcement action are reviewed by means other than the 2.206 process.

In its effort to improve public confidence, the NRC periodically reassesses the 2.206 petition process to enhance its effectiveness, timeliness and credibility. As part of these reassessments, the NRC seeks feedback from petitioners and other stakeholders through public meetings and workshops, surveys and *Federal Register* notices, as well as from its own staff experience. Specific improvements to the 2.206 process resulting from these initiatives include:

- Offering petitioners two opportunities to discuss the petition with the NRC's petition review board (PRB). The first is to allow the petitioner to provide elaboration and clarification of the petition before the PRB meets to discuss the petition. The second opportunity comes after the PRB has discussed the merits of the petition and allows the petitioner to comment on the PRB's recommendations regarding acceptance of the petition and any requests for immediate action.
- Offering an opportunity for a staff-petitioner-licensee meeting to discuss the details of the issue during the course of the review.
- Providing better, more frequent communications between the staff and petitioner throughout the process.
- Providing copies of all pertinent petition-related correspondence and other documents to the petitioners.
- Providing a copy of the proposed director's decision on the petition, both to the petitioner and the affected licensee for comments, and considering such comments before issuing the decision in final form.

*The NRC also has an allegation process in which individuals who raise potential safety concerns for NRC review are afforded a degree of protection of their identity. Other processes for public involvement are listed at the end of this pamphlet.

The Petition Process

The 2.206 process provides a simple, effective mechanism for anyone to request enforcement action and obtain NRC's prompt, thorough, and objective evaluation of underlying safety issues. It is separate and distinct from the processes for rulemaking and licensing, although they too allow the public to raise safety concerns to NRC.

Under the 2.206 process, the petitioner submits a request in writing to NRC's Executive Director for Operations, identifying the affected licensee or licensed activity, the requested enforcement action to be taken, and the facts the petitioner believes provide sufficient grounds for NRC to take enforcement action. Unsupported assertions of "safety problems," general opposition to nuclear power, or identification of safety issues without seeking enforcement action are not considered sufficient grounds for consideration as a 2.206 petition.

After receiving a request, NRC determines whether the request qualifies as a 2.206 petition. If the request is accepted for review as a 2.206 petition, the NRC sends an acknowledgment letter to the petitioner and a copy to the appropriate licensee and publishes a notice in the *Federal Register*. If the request is not accepted, NRC notifies the petitioner of its decision and indicates that the petitioner's underlying safety concerns will be considered outside the 2.206 process.

On the basis of an evaluation of the petition, the appropriate office director issues a decision and, if warranted, NRC takes appropriate enforcement action. Throughout the evaluation process, NRC sends copies of all pertinent correspondence to the petitioner and the affected licensee. NRC places all related correspondence in its Public Document Room (PDR) in Rockville, Maryland, and in the agency document control system. However, the agency withholds information that would compromise an investigation or ongoing enforcement action relating to issues in the petition. The NRC also sends the petitioner other information such as pertinent generic letters and bulletins.

The NRC notifies the petitioner of the petition's status every 60 days, or more frequently if a significant action occurs. Monthly updates on all pending 2.206 petitions are available on NRC's web site at http://www.nrc.gov/reading-rm/doc-collections/petitions-2-206/index.html, and in the PDR.

Petition Technical Review Meeting

A petition technical review meeting serves not only as a source of potentially valuable information for NRC to evaluate a 2.206 petition, but also affords the petitioner substantive involvement in the review and decision-making process through direct discussions with NRC and the licensee. Such a meeting will be held whenever the staff believes that it would be beneficial to the review of the petition. Note that the meeting can be offered at any time during NRC's review of a petition and is open to public observation.

Director's Decision

The NRC's official response to a 2.206 petition is a written decision by the director of the appropriate office that addresses the concerns raised in the petition. The agency's goal is to issue a proposed decision for comment within 120 days from the date of the acknowledgment letter. However, additional time may be needed to conduct an investigation, complete an inspection, or analyze particularly complex technical issues. If the goal is not met, the NRC staff will promptly inform the petitioner of a schedule change.

The director's decision includes the professional staff's evaluation of all pertinent information from the petition, correspondence with the petitioner and the licensee, information from any meeting, results of any investigation or inspection, and any other documents related to petition issues. Following resolution of any comments received on the proposed decision, the director's decision is provided to the petitioner and the licensee, and is posted to NRC's web site and made available in the PDR. A notice of availability is published in the *Federal Register*.

Director's decisions may be issued as follows:

- A decision granting a petition, in full, explains the basis for the decision and grants the action requested in the petition (e.g., NRC issuing an order to modify, suspend, or revoke a license).
- A decision denying a petition, in full, provides the reason for the denial and discusses all matters raised in the petition.
- A decision granting a petition, in part, in cases where the NRC decides not to grant the action requested, but takes other appropriate enforcement action or directs the licensee to take certain actions that address the identified safety concerns.
- A partial director's decision may be issued by the NRC in cases where some of the issues associated with the petition can be completed promptly but significant schedule delays are anticipated before

resolution of the entire petition. A final director's decision is issued at the conclusion of the effort.

The Commission will not entertain requests for review of a director's decision. However, on its own, it may review a decision within 25 calendar days.

NRC Management Directive 8.11, "Review Process for 10 CFR 2.206 Petitions," contains more detailed information on citizen petitions. For a free copy of the directive, write to the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20013-7082, or call 202-512-1800.

Electronic Access

Those parts of the monthly status report on 2.206 petitions that are not of a sensitive nature, as well as recently issued director's decisions, and Management Directive 8.11, are placed on the NRC's web site at http://www.nrc.gov/reading-rm/doc-collections/petitions-2-206/index.html and in the agency's Public Document Room.

Other Processes for Public Involvement

In addition to the 2.206 petition process, NRC has several other ways that permit the public to express concerns on matters related to the NRC's regulatory activities.

- The NRC's *allegation process* affords individuals who raise safety concerns a degree of protection of their identity.
- Under the provisions of 10 CFR 2.802, NRC provides an opportunity for the public to petition the agency for a *rulemaking*.
- The NRC's *licensing process* offers members of the public, who are specifically affected by a licensing action, an opportunity to formally participate in licensing proceedings. This process applies not only to the initial licensing actions but also to license amendments and other activities such as decommissioning and license renewals.
- For major regulatory actions involving preparation of environmental impact statements, NRC offers separate opportunities for public participation in its *environmental proceedings*.
- The public can attend a number of *meetings* including open Commission and staff meetings, periodic media briefings by Regional Administrators, and special meetings held near affected facilities to inform local communities and respond to their questions.

More information on these activities can be found in NRC's pamphlet entitled, "Public Involvement in the Nuclear Regulatory Process," NUREG/BR-0215.

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Sincerely,
/ra/
Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Enclosures:
1. *Federal Register* Notice
2. NUREG/BR-0200

cc: Listserv

Distribution: See next page
ADAMS ACCESSION NOS: Package: ML112800592; Incoming: ML11213A030; Letter: ML112800606; FR Notice: ML112800629; NUREG/BR-0200: ML050900248

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Letter to David Lochbaum from Eric J. Leeds dated

SUBJECT: ACKNOWLEDGMENT LETTER - PETITION OF JULY 29, 2011

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