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

February 27, 1997

Mr. David A. Lochbaum
Nuclear Safety Engineer
Union of Concerned Scientists
1616 P Street, NW., Suite 310
Washington, DC 20036

Dear Mr. Lochbaum:

I am responding to your letter of January 6, 1997, to Hubert J. Miller, Regional Administrator, Region I, U.S. Nuclear Regulatory Commission (NRC), regarding the Millstone, Salem, and Maine Yankee nuclear power plants.

In your letter, you appear to imply that any failure on the part of a nuclear power plant to meet any aspect of the NRC's regulations, license requirements, or technical specifications automatically translates to a finding that the plant was unsafe during the period of nonconformance. While compliance with the Commission's regulations, as a general matter, provides reasonable assurance that public health and safety will be adequately protected, the agency must exercise its judgment regarding thresholds for determining the safety of plant operation.

The NRC's approach to protecting public health and safety is based on the philosophy of defense-in-depth. Briefly stated, this philosophy (1) requires the application of conservative codes and standards, which create substantial safety margins in the design of nuclear plants (2) requires high quality in the design, construction, and operation of nuclear plants to reduce the likelihood of malfunctions, including the use of automatic safety system actuation features; (3) recognizes that equipment can fail and operators can make mistakes, thus requiring redundancy in safety systems and components to reduce the chances that malfunctions or mistakes will lead to accidents that release fission products from the fuel; and (4) recognizes that, in spite of these precautions, serious fuel damage accidents can happen, thus requiring containment structures and other safety features to prevent the release of fission products off site. Additionally, emergency planning is considered another layer of defense-in-depth. Therefore, even in the unlikely event of an offsite fission product release, there is reasonable assurance that emergency protective actions can be taken to protect the population around nuclear power plants.

It is a given that the agency regards compliance with regulations, license conditions, and technical specifications as mandatory. But the agency also recognizes that plants will not operate trouble-free. This is clearly articulated in Criterion XVI of Appendix B to Part 50, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants." Criterion XVI states that, "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected." The NRC does not contend that all reactors are in full compliance with their respective licensing basis on a continuous basis.

The appropriate regulatory response to an identified deficiency can and should vary, depending on the importance of the element in which the deficiency is found. For example, during rapidly developing situations where prompt action is required to assure plants are not in an unsafe condition, automatic safety systems are in place to shut down the reactor. In other, less time-critical situations, technical specifications, which cover the structures, systems and components (SSC) most vital to the safe operation of a nuclear plant, require specific actions within predetermined time periods when an SSC is determined to be inoperable. Even a pattern of lesser deficiencies such as degraded or nonconforming conditions emerging over a discrete time period may be enough to warrant a decision to shut down an operating plant. NRC Generic Letter 91-18, "Information to Licensees Regarding Two NRC Inspection Manual Sections on Resolution of Degraded and Nonconforming Conditions and on Operability," provides guidance for licensees when they identify degraded or nonconforming conditions. However, once a plant has been shut down, for whatever reason, it is often more prudent to permit restart only after significant nonconformances have been corrected. Thus, it is possible that a particular deficiency that would have been insufficient by itself to warrant shutdown of a plant might be sufficient to warrant repair prior to restart. Such decisions are typically reached following discussions between the NRC and the licensee and may result in the issuance of a confirmatory action letter. You appear to conclude that if a nuclear plant shuts down on any given day for reasons other than planned outages, it can be presumed to have been operating unsafely the previous day. For the reasons discussed above, this conclusion is invalid.

In your letter, you asked three specific questions, the first being "Does the NRC consider the three Millstone units, the two Salem units, and Maine Yankee safe enough to allow these plants to restart today?" As you noted, these plants remain shut down because of plant-specific safety concerns. Although the specific circumstances for the extended shutdown of these facilities vary, the respective licensee, for each of the sites identified, has begun to identify and address root causes for problems and to implement corrective actions for the specific problems identified. These units will remain shut down until the identified restart issues have been appropriately addressed.

Your second question was "If these plants are not safe enough to operate today, does the NRC think that these plants were operating safely in the days and weeks prior to their being shut down?" Although the causes of the extended shutdowns for each of the Millstone, Salem, and Maine Yankee units existed before the shutdown of the facilities, the NRC considers that the plants were operating safely before they were shut down because of the protection afforded by the defense-in-depth philosophy. Stated otherwise, although there are safety equipment deficiencies at each of these facilities, the conservatism provided by the multiple levels of design and operating requirements reasonably assured that there was no undue risk to public health and safety and the NRC did not find it necessary to require the shutdown of the plants to protect public health and safety. However, the resulting reductions of the margin of safety led the staff to conclude that correction of the problems is called for before the restart of the plants. Additionally, for Maine Yankee, and to an even greater extent, for the Millstone and Salem plants, it was determined that there were significant programmatic weaknesses that warranted correction before plant restart in order to prevent recurrence

of similar nonconformance problems. In this regard, Millstone has been designated as a Category 3 Watch List plant requiring Commission approval prior to restart. A confirmatory action letter (CAL) was issued on the Salem facility documenting broad programmatic and technical issues which need to be addressed prior to restart. Regarding Maine Yankee, NRC recently issued a CAL documenting actions required by the licensee to resolve several specific technical issues before restart of that facility.

Your third question was "If these plants are safe enough to operate today, does the NRC have the right to conduct additional inspections and impose additional requirements for these troubled plants that prolong the duration, and significantly increase the costs, of their outages?" You stated that your third question only applied if the staff believed the plants were safe enough to operate today. As noted previously, the staff concluded the plants have problems that should be corrected before they restart in order to prevent recurrence of similar nonconformance problems in future operation. However, you can be assured that when the NRC becomes aware of information which demonstrates that an undue risk to public health and safety exists, the NRC will take prompt remedial action, including shutdown of operating facilities. In taking any remedial measures, the NRC must choose actions sufficient to deal with the risk involved.

In your letter, you noted that "economics played a significant role in the poor safety performance at these troubled nuclear plants." Although you did not request that the staff address this comment, the NRC is concerned about potential safety impacts on NRC power reactor licensees from the economic deregulation and restructuring of the electric utility industry. The NRC staff is currently carrying out an action plan to determine the appropriate NRC response to deregulation and restructuring. Thus far, instead of economic indicators, the NRC has relied primarily on its inspection process to indicate when safety performance has begun to show adverse trends. On the basis of the results of the inspection program, the NRC can take appropriate action to adequately protect public health and safety.

I trust this discussion provides you with a better understanding of the NRC's process for assessing the appropriate regulatory response to identified nonconformances.

Sincerely,

Samuel J. Collins, Director
Office of Nuclear Reactor Regulation

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

February 14, 1997

Mr. Henry R. Myers
Post Office Box 88
Peaks Island, ME 04108

Dear Mr. Myers:

Your letters of December 13, 1996, December 30, 1996, and January 13, 1997, to Chairman Jackson have been referred to me for reply.

In your December 13 and December 30, 1996, letters, you requested that interested members of the public, including Mr. Paul Blanch and Mr. David Lochbaum, be afforded an opportunity to make presentations at the Commission's meeting on Maine Yankee that was then scheduled to be held on January 9, 1997. That meeting was postponed to February 4, 1997. The Commission is interested in hearing public concerns in this matter; thus, a portion of the meeting was devoted to presentations by the following individuals: Mr. David Lochbaum, representing the Union of Concerned Scientists; Mr. William Linnell II, representing the Committee for a Safe Energy Future; Mr. Raymond Shadis, representing the Friends of the Coast Opposing Nuclear Pollution; and Mr. Dana Connors, representing the Maine Chamber and Business Alliance.

In all three of your letters, you express your views regarding the standard that should be applied in determining whether or not plant operation should be allowed to continue. Your inquiry is best answered by these quotations from prior Commission decisions:

> [W]hile it is true that compliance with all NRC regulations provides reasonable assurance of adequate protection of the public health and safety, the converse is not correct, that failure to comply with one regulation or another is an indication of the absence of adequate protection, at least in a situation where the Commission has reviewed the noncompliance and found that it does not pose an "undue risk" to the public health and safety.

Ohio Citizens for Responsible Energy, Inc.; Denial of Petition for Rulemaking, 53 Fed. Reg. 41,178 (Oct. 20, 1988), *quoting* Specific Exemptions; Clarification of Standards, 50 Fed. Reg. 50,764 at 50,768 (Dec. 12, 1985).

The Commission has clearly stated the standard to be applied in the event of a violation of the Commission's requirements, as follows:

> The Commission agrees . . . that a violation of a regulation does not of itself result in a requirement that a license be suspended . . . . As the Atomic Energy Commission noted . . . some years ago:

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> It goes without saying that a violation posing an undue risk to public health and safety will, of course result in prompt remedial action, including shutdown if necessary. In other instances, however, the Commission has a wide spectrum of remedies for dealing with violations of regulations. These include show cause proceedings and proceedings for civil monetary penalties. The choice of appropriate mechanism for correction of an assumed violation rests within the sound discretion of this agency.

Petition for Emergency and Remedial Action, CLI-78-6, 7 NRC 400, 405-06 (1978), *quoting Petition for Shutdown of Certain Reactors*, CLI-73-31, 6 AEC 1069, 1071 (1973). These longstanding Commission rulings concerning appropriate agency actions when an operating reactor licensee fails to comply with regulations postdate, and address a different issue than, the Appeal Board's rulings about the requirements for initial issuance of an operating license (Vermont Yankee Nuclear Power Corp., (Vermont Yankee Nuclear Power Station), ALAB-138, 6 AEC 520, 528 (1973)) that you discuss in your letter of January 13, 1997.

As stated above, the standard for determining whether prompt remedial action is necessary, including shutdown, is whether a violation poses an undue risk to public health and safety. This is the standard the NRC is applying to Maine Yankee.

You ask in your January 13, 1997 letter, "[w]hat does it mean to state that 'overall performance' was adequate?" You also ask whether this means that design and as-built conditions are in an acceptable state of conformance with NRC regulations. The Independent Safety Assessment Team (ISAT) report on Maine Yankee states that "Maine Yankee was in general conformance with its licensing-basis although significant items of non-conformance were identified." The statement in Chairman Jackson's letter of October 7, 1996, that "[o]verall performance at Maine Yankee was considered adequate for operation[,]" as documented by the ISAT report, reflects the fact that the ISAT made no finding that continued operation of Maine Yankee posed an undue risk to public health and safety. In addition, you asked whether this means that Maine Yankee has satisfied quality assurance obligations arising from 10 C.F.R. Part 50, Appendix B. The ISAT did not perform an Appendix B inspection. The team, however, did review selected aspects of the audit and surveillance areas and concluded that "[t]he Quality Assurance Program had a generally successful record of assessing the overall quality of station activities and identifying specific areas of vulnerability before performance degraded or the vulnerabilities became the subjects of regulatory enforcement."

In your letter of December 13, 1996, you indicate that it is your understanding that the NRC is relying on an analysis that assumes the large-break loss-of-coolant accident (LBLOCA) is the bounding design basis event. You then question the regulatory basis for the NRC using such a mode of analysis when the Three Mile Island accident demonstrated that small-break

loss-of-coolant accidents (SBLOCAs) could lead to consequences as severe as those resulting from LBLOCAs. As explained to you in Chairman Jackson's letters of January 31, 1997, and October 18, 1996, and letters to you dated June 18, July 9, August 9, and December 5, 1996, the NRC did consider the potential consequences of a SBLOCA in reaching its conclusions regarding continued operation of the Maine Yankee plant.

Your letter of December 13, 1996, asks if the Director, Office of Nuclear Reactor Regulation explained to Chairman Jackson the use of 10 C.F.R. § 50.46(a)(2) as a foundation for the Order of January 3, 1996, when the Director explained to Chairman Jackson the basis for that Order. Your letter also asks when the other Commissioners were informed of this use of 10 C.F.R. § 50.46(a)(2). In a letter to you dated January 31, 1997, Chairman Jackson responded to these questions.

In your letters of December 13 and December 30, 1996, you question how the Commission is able to consider the Maine Yankee matter in the absence of a comprehensive listing of noncomplying conditions identified at Maine Yankee over the last 12 months and with the potential existing for as-yet undiscovered deficiencies. In a letter to you dated February 3, 1997, I responded to these questions.

New issues that arise at the Maine Yankee plant, such as the recent cable separation issue that was the subject of a December 18, 1996, Confirmatory Action Letter and the lack of thermal relief valves to protect heat exchangers while they are isolated, will be evaluated for their safety significance and appropriate action will be taken. The emergence of new issues does not *ipso facto* require the conclusion that the Integrated Safety Assessment was "flawed," as you suggest.

A copy of your December 30, 1996, letter, in which you question NRC staff performance and the completeness of information provided to the Commission during an October 18, 1996, meeting, will be provided to the NRC's Office of the Inspector General for whatever action the Inspector General deems appropriate.

As a final matter, in your letter of January 13, 1997, you asked whether licensing action would be required in relation to recent announcements of a pending contractual relationship between Maine Yankee Atomic Power Company and

Entergy Operations. In a letter to you dated February 3, 1997, I responded to this question.

I trust this information is responsive to your concerns about the Maine Yankee plant.

Sincerely,

John A. Zwolinski, Deputy Director
Division of Reactor Projects
Office Of Nuclear Reactor Regulation

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

CHAIRMAN

January 31, 1997

Mr. Henry R. Myers
Post Office Box 88
Peaks Island, Maine 04108

Dear Mr. Myers:

I am responding to the letter you sent me on October 25, 1996, in which you question the basis for the U.S. Nuclear Regulatory Commission (NRC) staff's January 3, 1996, "Confirmatory Order Suspending Authority for and Limiting Power Operation and Containment Pressure (Effective Immediately), and Demand for Information" (Order) to the Maine Yankee Atomic Power Station, which allowed operation at 2440 megawatts (thermal) (MWt), considering the plant's nonconformance with Three Mile Island Action Plan Items II.K.3.30 and II.K.3.31.

Your letter states that the NRC letter of October 18, 1996, does not address the fact that the NRC staff appears to have allowed Maine Yankee to operate at 2440 MWt without having followed procedures for allowing the plant to operate when it does not conform with TMI Action Plan Items II.K.3.30 and II.K.3.31. As explained in the Order, the NRC staff's letters to you of June 18 and August 9, 1996, and in my letter of October 18, 1996, the Order was issued for the purpose of ensuring the safe operation of Maine Yankee pending completion of the staff's evaluation of the Maine Yankee emergency core cooling systems (ECCS) and containment design. The Order, the NRC staff's letter of April 10, 1996, and my letters of October 18 and December 5, 1996, explain in detail that the staff appropriately determined that operation at a reduced power level and with a reduced limit on containment internal pressure poses no undue risk to the public health and safety pending completion of the staff's evaluation of these Maine Yankee analyses.

Your letter requests documents showing Commission consideration of the Order issued on January 3, 1996, to Maine Yankee. No documents exist responsive to this request because the discussions between the Commission and the NRC staff regarding the order were conducted orally and were not recorded.

Your letter asks when the Director, Office of Nuclear Reactor Regulation (NRR), explained the basis for the Order of January 3, 1996, and whether it was before issuance of the Order. Your letter also asks whether the Director, NRR, explained the use of his authority provided by Section 50.46(a)(2) of Title 10 of the Code of Federal Regulations (10 CFR 50.46(a)(2)). As explained in the enclosure to the staff's letter of May 16, 1996, the staff's letters of June 18, July 9, and August 12, 1996, and my letters of October 18 and December 5, 1996, the Director, NRR, appropriately issued the Order of January 3, 1996, pursuant to his authority under 10 CFR 50.46(a)(2). That

authority, although not specifically referenced by the Order, is included within the general authority cited in the Order. Moreover, the Office of the General Counsel (OGC) provided advice and counsel to the NRR staff during the development of the Order and, in OGC's view, the Order is legally sound.

Your letter states that the NRC's letter of October 18, 1996, does not indicate any analysis demonstrating that a 10 percent reduction in the maximum power level under 10 CFR 50.46(a)(2) compensates for the increased risk resulting from the nonconformance with TMI Action Plan Items II.K.3.30 and II.K.3.31. Similarly, you state that there is no analysis to show the effect of reduced safety resulting from the nonconformance with TMI Action Plan Items II.K.3.30 and II.K.3.31 on the 90 percent power level limitation. You ask whether the 90 percent limitation is a net restriction of operation under 10 CFR 50.46(a)(2) or a net relaxation of regulatory requirements. As explained in the NRC staff's letters of June 18, and August 9, 1996, and in my letter of October 18, 1996, the Order did not relax regulatory requirements. The January 3, 1996, Order clearly restricted operations at Maine Yankee, as your letter acknowledges. Moreover, as explained in my letters of October 18 and December 5, 1996, and in the January 3, 1996, Order, operation at a power level of 2440 MWt and with a containment internal pressure of 2 psig poses no undue risk to public health and safety.

Your letter states that the NRC staff says that a basis for the January 3, 1996, Order is that the large-break loss-of-coolant accident (LBLOCA) analysis bounds credible accidents. You ask what analysis the NRC staff has done to develop a position regarding power levels at which the LBLOCA bounds credible design-basis accidents, thereby making TMI Action Plan Items II.K.3.30 and II.K.3.31 superfluous. As explained in the NRC staff's letters of June 18, and August 9, 1996, and in my letter of October 18, 1996, the January 3, 1996, Order did not waive conformance with TMI Action Plan Items II.K.3.30 and II.K.3.31. As explained in the NRC staff's letters of April 10 and May 16, 1996, and in the January 3, 1996, Order, the NRC staff judged that the reduction in power level to 2440 MWt was necessary to account for post-Cycle 4 small-break loss-of-coolant accident (SBLOCA) model uncertainties. As required by the Order, the licensee has submitted its evaluation that the SBLOCA for Maine Yankee, under the operating conditions for Cycle 15 at 2440 MWt, continues to be less limiting than LBLOCAs. The licensee analysis confirmed that there is substantial margin to the criteria specified in 10 CFR 50.46, and that the additional effects of less significant parameters or intermediate break sizes between 0.1 ft^2 and 0.5 ft^2 would be accommodated. The NRC documented the results of its audit of the licensee's calculations in NRC Inspection Report 50-309/96-01, dated April 2, 1996 (enclosed). The NRC staff considers operation at 2440 MWt, using the core operating limit parameters based upon analyses performed for operation at 2700 MWt, acceptable. Furthermore, as explained in my letters of October 18 and December 5, 1996, and in the January 3, 1996, Order, operation restricted to a maximum power level of 2440 MWt and a containment internal pressure limit of 2 psig poses no undue risk to public health and safety.

Your letter asks whether Maine Yankee is in substantial compliance with NRC requirements, and whether the level of compliance has diminished to the point to which protection of public safety cannot be assured in the manner required by the Atomic Energy Act. As explained in my letters of October 18 and December 5, 1996, and in the January 3, 1996, Order, operation of Maine Yankee at 2440 MWt and with containment internal pressure limited to 2 psig, pending completion of the staff's evaluation of the Maine Yankee ECCS and containment pressure response analyses, poses no undue risk to public health and safety. Issues that arise at the Maine Yankee facility, such as a recent cable separation issue that was the subject of a December 18, 1996 Confirmatory Action Letter, and an offsite power source issue that was the subject of a January 30, 1997 supplement to the Confirmatory Action Letter, will be evaluated for appropriate action and impact on risk to public health and safety.

Thank you for the concerns that you have expressed about the operation of Maine Yankee. I have assigned Mr. John A. Zwolinski, the Deputy Director of the Division of Reactor Projects - I/II in NRR, the responsibility of responding to future correspondence from you. However, I will continue to monitor the staff's actions related to Maine Yankee, including your correspondence.

Sincerely,

Shirley Ann Jackson

Shirley Ann Jackson

Enclosure: NRC Inspection Report 50-309/96-01

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

CHAIRMAN

December 5, 1996

Mr. Henry R. Myers
Post Office Box 88
Peaks Island, Maine 04108

Dear Mr. Myers:

I am responding to your letters of September 4, 13, and 25, 1996, and October 7 and 14, 1996, expressing concerns at the Maine Yankee Atomic Power Station about (1) conformance with Three Mile Island (TMI) Action Plan Items II.K.3.30 and II.K.3.31, (2) competence and integrity questions resulting from the licensee's long-standing nonconformance with these two items, (3) whether Maine Yankee is in substantial compliance with U.S. Nuclear Regulatory Commission (NRC) regulations, and (4) whether the overall level of compliance with regulatory requirements endangers public health and safety. You also ask, "Prior to completion of the criminal process, what administrative actions will the Commission take in response to the licensee's violation of the requirements of TMI Action Plan Items II.K.3.30 and II.K.3.31?"

In your September 4 and 13 letters, you reiterate the request you made in your letter of August 14, 1996, asking for the Commission's position with respect to the regulatory basis for the order of January 3, 1996. This order restricted operation of Maine Yankee Atomic Power Station to 2440 megawatts thermal (MWt) with Small Break Loss of Coolant Accident (SBLOCA) requirements specified in TMI Action Plan Items II.K.3.30 and II.K.3.31. By letter dated October 18, 1996, I replied to your August 14 letter.

In your September 4 letter, you also urge the Commission to address directly the question of whether the level of compliance with regulatory requirements at Maine Yankee has diminished to the point at which protection of public safety cannot be ensured in the manner required by the Atomic Energy Act. As you are aware, the Commission directed that an independent safety assessment (ISA) review be conducted in response to findings made by the NRC's Office of the Inspector General in a report dated May 8, 1996. The overall goals of the ISA were to (1) independently assess the conformance of Maine Yankee to its design and licensing bases, including appropriate reviews at the site and corporate offices; (2) independently assess operational safety performance, giving risk perspectives when appropriate; (3) evaluate the effectiveness of licensee self-assessments, corrective actions, and improvement plans; and (4) determine the root cause(s) of safety-significant findings and draw conclusions on overall performance.

The ISA team found that overall performance at Maine Yankee was adequate for operation. However, a number of weaknesses and deficiencies were identified that will be evaluated for possible enforcement action. In coordination with the Region I and NRR staffs, the team concluded that the plant could be operated safely at 2440 MWt, taking into consideration the nature and scope of the problems identified and the immediate corrective actions taken by the licensee. I forwarded the report of the ISA team's efforts to Maine Yankee on October 7, 1996, a copy of which is enclosed.

Before the startup of Maine Yankee in late August 1996, the staff reviewed the licensee's resolution of several design issues raised by the ISA team regarding available net positive suction head for the containment spray pumps and the heat removal capacity of the primary and secondary component cooling water systems. The licensee's corrective actions for these issues at that time addressed operation at 2440 MWt. Therefore, the NRC staff concluded that operation of the plant at this power level did not pose an undue risk to public health and safety. However, further action on these issues will be required before the staff will consider a request from the licensee to allow Maine Yankee to be operated at power levels up to 2700 MWt.

As you also know, a public meeting was held at the Wiscasset Middle School on October 10, 1996, to discuss the team's findings. Additionally, an open Commission meeting was held on October 18, 1996, in which the managers of the ISA team described the key findings in their report. During this meeting, the Commission requested the staff to inform the licensee to present its response to these findings and any proposed corrective actions at a future Commission meeting. The NRC staff will evaluate the licensee's response to the findings of the ISA team, as well as other recent issues raised regarding licensed activities at Maine Yankee.

Your letters mistakenly ascribe some semantic significance to distinctions in phraseology used in previous correspondence, and ask whether the Commission will affirm that the Maine Yankee plant is in "substantial compliance" with NRC regulations. As I noted above, the staff has found that, under current operational limitations, the Maine Yankee plant can be operated without undue risk to public health and safety. This finding is predicated on an assessment of the licensee's conformance to the Commission's regulations, license conditions (including technical specifications), and orders, and of the ability of the licensee's programs to ensure safe operation. The staff's finding reflects the judgment that operation in accordance with current license restrictions and authorizations can be conducted with reasonable assurance of adequate protection of public health and safety, the fundamental safety standard under the Atomic Energy Act.

Separate from the ISA issues, the staff is reviewing for appropriate action the recently issued NRC Office of Investigations report (as mentioned in your letter) along with its ongoing technical evaluation of the issues that were addressed in the staff's order of January 3, 1996. In the meantime, the NRC staff is enhancing its oversight of Maine Yankee Atomic Power Company through increased inspection activity.

I trust that you will find this information helpful in understanding the NRC's oversight activities at Maine Yankee.

Sincerely,

Shirley Ann Jackson

Shirley Ann Jackson

Enclosure: ISA Team Report

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

CHAIRMAN

October 18, 1996

Mr. Henry Myers
P. O. Box 88
Peaks Island, Maine 04108

Dear Mr. Myers:

I am responding to your letters of August 10 and August 14, 1996, in which you questioned the regulatory basis for the January 3, 1996 NRC Order to Maine Yankee permitting operation of the plant at 90% power. The Commission recognizes that you and other citizens of Maine are concerned about interim operation of the plant pending the completion of licensee actions that would bring the plant into conformance with regulatory guidance relevant to applicable NRC regulations for operation above 2440 MWt. However, before issuing the Order, the Director of NRC's Office of Nuclear Reactor Regulation (NRR) explained to me the basis for the proposed action. I was satisfied that the proposed action was sound and that it provided the necessary assurance that operation of Maine Yankee at the reduced power level was consistent with public health and safety. The Commission supports the action of the Director of NRR in issuing the Order in accordance with his general delegated authority to issue orders to power reactor licensees in order to protect public health and safety under the provisions of 10 CFR Parts 2 and 50, including the authority specified in 10 CFR 50.46(a)(2). There has been no information that would cause the Commission to reconsider that action.

As you know, the NRC staff received allegations in December 1995 regarding the inadequacy of the small-break loss-of-coolant accident (SBLOCA) analysis and containment analysis for Maine Yankee. The Director of the Office of Nuclear Reactor Regulation issued the "Confirmatory Order Suspending Authority for and Limiting Power Operation and Containment Pressure (Effective Immediately) and Demand for Information" (Order) on January 3, 1996, on the basis of technical information collected during the NRC staff's evaluation of the allegations. The Order was issued for the explicit purpose of ensuring safe operation of Maine Yankee pending completion of the staff's evaluation of the Maine Yankee emergency core cooling systems and containment design. The Order recited as a basis for those restrictions that the Maine Yankee Atomic Power Company (the licensee) had not applied computer code RELAP5YA, as it had proposed for Cycle 15 SBLOCA analyses, in conformance with the requirements of 10 CFR 50.46, and did not satisfy TMI Action Plan Items II.K.3.30 and II.K.3.31. As explained in letters to you dated June 18, July 9, and August 9, 1996, the Order did not "waive" TMI Action Plan Items II.K.3.30 and II.K.3.31. To the contrary, the Order required the submission of a SBLOCA analysis that, if submitted and accepted, would bring the licensee into conformance with the regulatory guidance of TMI Action Plan Items II.K.3.30 and II.K.3.31 and into compliance with the requirements of 10 CFR 50.46(a)(1) for operation above 2440 MWt.

Additionally, as explained in letters to you dated June 18, and July 9, 1996, the specific regulation that authorizes the restrictions imposed on the operation of Maine Yankee by the Order is 10 CFR 50.46(a)(2). Although not specifically referenced by the Order, that specific authority is included within the Commission's general authority cited in the Order, which was explicitly issued under the authority of Sections 103, 161b, 161i, 161o, 182, and 186 of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR 2.202 and 10 CFR Part 50. (See Order, Section VII.) In your letter of August 14, 1996, you state that you "do not dispute that 10 CFR 50.46(a)(2) authorizes the NRC to impose the limitation on the power level at which Maine Yankee operates."

With respect to your questioning the authority of the Commission to permit operation of Maine Yankee at all, the choice of an appropriate mechanism for correcting an apparent violation rests within the sound discretion of the agency, and the paramount concern in exercising that discretion is public health and safety (Petition for Emergency and Remedial Action, CLI-78-6, 7 NRC 400, 405-406 (1978); See also Advanced Medical Systems, Inc., CLI-94-6, 39 NRC 285, 312-313 (1994)). The staff was satisfied that Maine Yankee would be operated safely at the reduced power level, in accordance with 50.46(a)(2), but did not perform an independent SBLOCA analysis because it was determined to be unnecessary with the restrictions to be imposed. Specifically, with the imposed power penalty, the licensee's approved large-break loss-of-coolant accident analysis bounded credible design-basis accidents. The Order contains an extensive discussion of the safety basis for the staff's conclusion that power operation with the imposed restrictions did not pose an undue risk to public health and safety.

Regarding your question as to the view of the Office of the General Counsel (OGC), you should be aware that OGC provided advice and counsel to the staff of the Office of Nuclear Reactor Regulation (NRR) during the development of the Order and that, in OGC's view, the Order is legally sufficient. Allowing Maine Yankee operation up to 90%, notwithstanding nonconformance with TMI items II.K.3.30 and II.K.3.31, was considered during the development of the Order.

I hope this information will help resolve your concerns about interim operation of Maine Yankee.

Sincerely,

Shirley Ann Jackson

cc: Senator Cohen
Senator Snowe
Senator Lieberman
Senator Biden
Representative Dingell
Representative Markey

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

January 3, 1996

Mr. Charles D. Frizzle, President
Maine Yankee Atomic Power Company
329 Bath Road
Brunswick, ME 04011

SUBJECT: CONFIRMATORY ORDER SUSPENDING AUTHORITY FOR AND LIMITING POWER OPERATION AND CONTAINMENT PRESSURE (EFFECTIVE IMMEDIATELY), AND DEMAND FOR INFORMATION (TAC NO. M94194)

Dear Mr. Frizzle:

On December 4, 1995, the NRC received an allegation against Yankee Atomic Electric Company (YAEC), acting as agent for Maine Yankee Atomic Power Company (MYAPCo). In brief, it is alleged that YAEC knowingly performed inadequate analyses to support two license amendments to increase the rated thermal power at which Maine Yankee Atomic Power Station may operate. It is further alleged that MYAPCo was cognizant of these inadequate analyses, yet misrepresented them to the NRC in seeking the license amendments, which were granted.

As a result of these allegations, the NRC conducted a technical review and evaluation of the circumstances and records surrounding these applications to increase the station's maximum rated thermal power. This review and evaluation was conducted at YAEC Headquarters in Bolton, Massachusetts, on December 11-14, 1995, by a five-member NRC team. The NRC team was accompanied by two representatives of the State of Maine. On December 18, 1995, a meeting was held at NRC Headquarters, Rockville, Maryland, to discuss with MYAPCo the findings of the review and evaluation team and to seek any additional information the licensee or its agent, YAEC, could provide.

As a result of this review and evaluation, the NRC is herewith issuing the enclosed Confirmatory Order Suspending Authority for and Limiting Power Operation and Containment Pressure (Effective Immediately), and Demand for Information. This Order and Demand for Information specifies the requirements for reactor startup and operation to 2440 MWt, as well as any increase in thermal power to the previously approved maximum level of 2700 MWt.

Please contact me if you have any questions or require further information on this matter.

Sincerely,

William T. Russell, Director
Office of Nuclear Reactor Regulation

Docket No. 50-309

Enclosure: Order

cc w/encl: See next page

9601110182

cc:

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7590-01

UNITED STATES
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	Docket No. 50-309
MAINE YANKEE ATOMIC POWER COMPANY	)	License No. DPR-36
Maine Yankee Atomic Power Station	)	EA-96003

CONFIRMATORY ORDER SUSPENDING AUTHORITY FOR
AND LIMITING POWER OPERATION
AND CONTAINMENT PRESSURE
(EFFECTIVE IMMEDIATELY)
AND DEMAND FOR INFORMATION

I

Maine Yankee Atomic Power Company (Licensee) is the holder of Facility Operating License No. DPR-36, issued by the Atomic Energy Commission, predecessor to the Nuclear Regulatory Commission (NRC or Commission), pursuant to 10 CFR Part 50 on September 15, 1972. The license authorizes the operation of Maine Yankee Atomic Power Station (facility or Maine Yankee) in accordance with conditions specified therein. The facility is located on the Licensee's site in Lincoln County, Maine. The facility has been shut down for refueling and repairs to its steam generators since February 6, 1995.

II

On December 4, 1995, the NRC received both technical allegations and allegations of wrongdoing by Yankee Atomic Electric Company (YAEC) and the Licensee. In brief, it is alleged that YAEC, acting as agent for the Licensee, knowingly performed inadequate analyses of the emergency core

cooling systems (ECCS) and the containment to support two license amendments to increase the rated thermal power at which Maine Yankee may operate. It is further alleged that the Licensee deliberately misrepresented the analyses to the NRC in seeking the license amendments. Specifically, it is alleged that YAEC management knew that the ECCS for Maine Yankee, if evaluated in accordance with 10 CFR Section 50.46 using the RELAP5YA code, did not meet the licensing requirements for either the 2630 MWt or 2700 MWt power uprates that had previously been granted, and that deliberate misrepresentations were made to the NRC in order to obtain the 2700 MWt power uprate. (Operation at the initially licensed power level of 2440 MWt was not identified as a concern.)

It is also alleged that the Licensee had applied for power uprates on the basis of a fraudulent containment analysis. Specifically, the facility containment was designed for a pressure of 55 psig, but allegedly, YAEC deliberately excluded an energy source (steam generators) from the calculations to conceal the possibility that containment pressure could increase beyond the design pressure during a loss-of-coolant accident (LOCA).

In response to technical issues raised by these allegations, the NRC initiated a special technical review of the safety analysis performed by YAEC relating to the Licensee's license amendment applications for power uprate. An assessment team of NRC employees was dispatched to YAEC Headquarters in Bolton, Massachusetts, on December 11, 1995. The NRC team was accompanied by two employees of the State of Maine, who observed the activities of the team. The team reviewed documents and interviewed YAEC employees for 4 days,

concentrating their efforts in the areas of small-break loss-of-coolant accident (SBLOCA) analyses and peak containment pressure determinations. YAEC provided additional documents to the NRC after the inspection team completed its inspection and departed, but prior to the close of business on December 14, 1995. This additional information is related to the SBLOCA analysis supporting the Licensee's 15th operating cycle (Cycle 15).

This Order and Demand address requirements and information related to future reactor operation. Allegations related to violations of NRC requirements, including wrongdoing, will be addressed separately from this Order and Demand.

III

Maine Yankee Atomic Power Company was granted a license to operate Maine Yankee on September 15, 1972, at a power level of 2440 MWt, based in-part on a Combustion Engineering (CE) analysis of ECCS. By application dated August 1, 1977, the Licensee requested a single step increase in the maximum thermal power rating to 2630 MWt, again based on a CE ECCS analysis. On May 10, 1978, the NRC issued Amendment No. 38 to the License, which increased the licensed power level to 2630 MWt, but restricted operation to 2560 MWt until the Advisory Committee on Reactor Safeguards reviewed and recommended approval of the power increase from 2560 to 2630 MWt. On June 20, 1978, the Commission issued Amendment No. 39, which authorized the Licensee to operate its facility at 2630 MWt. On December 28, 1988, the Licensee submitted a request to amend

its license to increase the plant's maximum thermal power rating to 2700 MWt. The Commission granted this amendment request on July 10, 1989.

Licensees are required, in accordance with Appendix K to 10 CFR Part 50 and 10 CFR Section 50.46, to perform specific accident analyses, including SBLOCA analysis, for operation at their licensed maximum power level. NUREG-0737, "Clarification of TMI Action Plan Requirements," (NUREG-0737) issued following the accident at Three Mile Island provides guidance for performing SBLOCA analysis. In particular, Item II.K.3.30, "Revised SBLOCA Methods to Show Compliance With 10 CFR Part 50, Appendix K," and Item II.K.3.31, "Plant-Specific Calculations to Show Compliance with 10 CFR Section 50.46," requested licensees submit to the NRC for approval both the revised methods and SBLOCA analysis. In response to Item II.K.3.30, the Licensee submitted licensing topical report YAEC-1300P, "RELAP5YA: A Computer Program for Light Water Reactor System Thermal-Hydraulic Analysis."

By letter dated January 30, 1989, the NRC found that RELAP5YA was acceptable, under certain conditions, as a licensing method for use in meeting 10 CFR Part 50 Appendix K and NUREG-0737 Item II.K.3.30 for SBLOCA analysis for Maine Yankee. Specifically, the NRC's Safety Evaluation for RELAP5YA listed twelve conditions, including specifications for future plant specific licensing submittals, justifying options taken and sensitivity studies performed. Of specific interest are conditions 4, 7, 8, 9, and 12, which identified justification for model nodalization used when a two-phase mixture level dropped below the top of the core, justification of all selected options and

input data used in plant specific licensing submittals, documentation of plant specific sensitivity studies including, but not limited to, time step and break sizes, justification of steam generator nodalization, and the need to perform a break size study to include the worst SBLOCA case for the plant specific licensing application. This licensee has not provided the justifications or submittals specified by the safety evaluation to support Maine Yankee compliance with II.K.3.31 and 10 CFR Section 50.46. The NRC review team found that the RELAP5YA code as applied for the Maine Yankee Cycle 15 reload included noding changes and time step selection which differed from those reviewed by NRC in its January 30, 1989 SER for RELAP5YA.

NUREG-0737 Item II.K.3.5, "Automatic Trip of Reactor Coolant Pumps During Loss-of-Coolant Accident," also identified issues related to 10 CFR Section 50.46. Generic Letter 83-10, "Resolution of TMI Action Item II.K.3.5, Automatic Trip of Reactor Coolant Pumps" requested licensees to justify use of manual action to trip the RCPs for SBLOCA events.

In its reply of June 28, 1985, the licensee concluded that use of a sub-cooled margin of 25°F for manually tripping the RCPs satisfied the generic letter and 10 CFR Section 50.46. By letter dated April 15, 1986, the NRC accepted the licensee's position which was based upon analyses performed with the RELAP5YA code.

The containment surrounding the facility's nuclear reactor is designed to an internal pressure of 55 psig. The containment was tested at 115% (63 psig) of

its design pressure for structural acceptance. The original licensing basis analysis to predict the peak containment pressure, following a postulated loss-of-coolant accident, yielded a peak containment pressure of 49.5 psig when an initial containment pressure of 0.8 psig was assumed. Because the containment is designed to 55 psig, approximately 5 psig margin was available at the time of initial licensing. As a result of plant changes (e.g., increase in licensed power, and reactor coolant temperature increase) and calculational assumptions (e.g., containment volume) the calculated peak design-basis accident (DBA) pressure has increased. In the December 18, 1995, meeting, the licensee discussed containment calculations performed. The licensee stated that, when plant changes and calculation assumptions consistent with the as built plant are included and the initial containment pressure is limited to 2.0 psig, the calculated peak DBA pressure is less than 55 psig, the containment design pressure. It is noted that plant Technical Specifications limit the maximum operating pressure in containment to 3.0 psig. Assuming an initial containment pressure is 3.0 psig, the Technical Specification limit, the calculated peak design pressure would exceed the containment design pressure.

As required by 10 CFR Part 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors," the Licensee has tested its containment based upon peak DBA pressure, Pa, of 50 psig as specified in plant Technical Specifications. The last containment leakage test conducted at this pressure was in October 1988. This value of Pa (i.e., 50 psig) is not

consistent with plant changes and calculational assumptions reflective of the as built plant as discussed above.

IV

As a result of technical concerns discussed above, questions remain as to whether operation of Maine Yankee at a power level of 2700 MWt and 3 psig containment pressure meets NRC requirements for ECCS and containment design. Thus, this Order and Demand for Information address actions necessary to ensure safe operation of the Maine Yankee Nuclear Power Plant pending completion of the NRC staff's evaluation of the allegations, including the allegations of wrongdoing, and information necessary to complete the staff's evaluation.

Based upon a meeting held with the Licensee on December 18, 1995, and the NRC staff's assessment team review, the NRC has determined that computer code RELAP5YA, which was proposed for use by Maine Yankee for Cycle 15 SBLOCA analyses to demonstrate, in part, compliance with the ECCS requirements specified at 10 CFR Section 50.46, has not been applied in a manner conforming to the requirements of 10 CFR Part 50, Appendix K, "ECCS Evaluation Model," nor has it been applied in a manner conforming to the conditions specified in the staff's Safety Evaluation dated January 30, 1989 (SE), as necessary for NRC acceptance of the use of RELAP5YA for SBLOCA analyses for Maine Yankee. Specifically, the Licensee has not demonstrated that the code will reliably calculate the peak cladding temperature for all break sizes in the small-break

LOCA spectrum for Maine Yankee, nor has the Licensee submitted the justification for the code options selected, in accordance with Condition 7 of the staff's SE, nor has the Licensee submitted other justifications and sensitivity studies to satisfy Conditions 4, 8, 9, and 12 of the January 30, 1989, SE. Because the Licensee did not satisfy the conditions specified in the NRC's approval, the plant-specific application of RELAP5YA, is not acceptable at Maine Yankee for SBLOCA. Therefore, the SBLOCA portion of the emergency core cooling analyses performed by Maine Yankee for Cycle 15 does not conform with the requirement of 10 CFR Section 50.46. For the same reasons, the staff also concludes, that TMI Action Plan Items II.K.3.30, II.K.3.31, and II.K.3.5 are likewise not satisfied.

Accordingly, the staff considers operation of Maine Yankee at 2700 MWt unacceptable.

The staff does, however, consider operation of Maine Yankee at 2440 MWt, using core operating limit parameters based upon analyses performed for operation at 2700 MWt acceptable because:

1. The operating limits in Revision 1 to the Core Operating Limits Report (COLR) submitted December 1, 1995, are restricted by non-LOCA transient analyses and large-break LOCA analyses which have been performed using NRC-approved methods and assuming power levels up to 2700 MWt. The power level of 2440 MWt is within this range.

2. The relatively low small-break LOCA peak cladding temperature (PCT), explicitly calculated with NRC-approved SBLOCA methods in previous cycles at power levels greater than 2440 MWt, met the requirements of 10 CFR Section 50.46 with substantial margin (e.g., Cycle 4 calculated PCT of 1348° F is substantially less than the 2200° F required limit at a power level of 2630 MWt). The power reduction to 2440 MWt provides additional margin to account for SBLOCA modeling uncertainties such as those identified in NUREG-0737.

3. Review of the analysis performed for other CE and Westinghouse plants related to NUREG-0737 Item II.K.3.5 have demonstrated that manual tripping of the RCPs meets the requirements of 10 CFR Section 50.46. Based on the similarity of the initial Maine Yankee plant response to a SBLOCA to other CE and Westinghouse plants, the staff concludes that the manual tripping of the RCPs is acceptable for Maine Yankee.

Therefore, since operating limits have been developed for power levels up to 2700 MWt based upon limiting events that have been analyzed using approved methods, and a power reduction margin is being imposed to account for SBLOCA modeling uncertainties, the staff finds that Maine Yankee operation at 2440 MWt does not pose an undue health or safety risk to the public.

The staff has reviewed the results of containment peak accident pressure analysis performed by the Licensee for a licensed thermal power level of 2700 MWt, with initial containment pressure limited to 2 psig. The calculated pressure is 54.8 psig, and is within the containment design pressure of 55 psig. The 54.8 psig value was generated using sensitivity analysis in conjunction with the original licensing basis results. The sensitivity studies were performed by YAEC using a CE mass and energy analysis and the CONTEMPT computer program. All known, relevant changes to the facility (e.g., spray system changes, power uprates, and containment maximum temperature increase) were considered, in addition to certain effects not encompassed in the original analyses (e.g., reactor coolant system (RCS) thermal expansion, use of lower bound containment volume assumption, and increased containment operating pressure of 2 psig).

The staff further notes that there is substantial margin beyond containment design pressure. Specifically, containment was successfully tested to a pressure of 63 psig upon completion of construction and a finite element analysis performed by Sandia Laboratories for the staff calculated a lower bound on the ultimate strength of the Maine Yankee containment of 96 psig.

The Licensee recently performed calculations of the leakage expected at the maximum containment internal pressure (Pa) for a DBA of 54.8 psig. Extrapolating from previous Appendix J testing to this revised Pa, the Licensee confirmed that the revised leakage was within the required acceptance criteria for Type A tests as specified in 10 CFR Part 50 Appendix J.

The staff concludes that operation with initial containment pressure limited to 2.0 psig and power limited to 2440 MWt does not pose an undue health or safety risk to the public.

V

On Monday, December 18, 1995, a transcribed public meeting was held at NRC Headquarters, Rockville, MD, to discuss with the Licensee the findings of the review and evaluation team and to seek any additional information the Licensee or its agent, YAEC, could provide. In concluding the meeting, the NRC advised the Licensee that the NRC had concerns regarding the adequacy of proprietary computer code RELAP5YA, applied by the Licensee for Cycle 15 SBLOCA analysis, and that this analysis is not adequate for demonstrating compliance with 10 CFR Section 50.46, "Acceptance Criteria for Emergency Core Cooling Systems for Light Water Nuclear Power Reactors," and NUREG-0737, "Clarification of TMI Action Plan Requirements," Items II.K.3.30 and II.K.3.31. This determination led the staff to conclude that operation at 2700 MWt was not supported, and that the Licensee should evaluate operation at the 2440 MWt level established in the original license issued on September 15, 1972. The staff indicated that operation at a lower power level could be found acceptable if operation is based upon methods previously found acceptable by the staff, and not dependent on RELAP5YA for SBLOCA analysis. Further, the NRC advised the Licensee that the NRC would identify terms and conditions under which the Licensee could propose resumption of power operation of its facility.

On Tuesday, December 19, 1995, the Licensee informed the NRC staff that they intended to use RELAP5YA to analyze transients not associated with core operating limits. In a December 20, 1995, telephone call the NRC advised the Licensee that, based on this broader use of RELAP5YA, the NRC would require additional time to determine its further actions. In addition, the Licensee committed to not restart the facility until NRC had completed its review of new information regarding the use of RELAP5YA and containment pressure limits. A letter summarizing events of the week of December 18, 1995, was sent to the Licensee on December 21, 1995.

By letter dated December 22, 1995, the Licensee committed to: (1) limit thermal power output of the plant at or below 2440 MWt until a SBLOCA analysis specific to the Maine Yankee plant has been submitted to the NRC and written approval from the NRC staff for operation at a higher power has been received, (2) develop and document the justification for the use of Cycle 15 operating limits using methods approved for Maine Yankee without reliance on the RELAP5YA computer code prior to achieving initial criticality for Cycle 15 operation, (3) limit the maximum internal containment operating pressure to 2 psig prior to Cycle 15 initial criticality, and (4) conduct a thorough review in order to identify any other applications where RELAP5YA would be relied on for Cycle 15 operation.

VI

I find that implementation of the Licensee's commitments to limit power to 2440 MWt and initial containment pressure to 2 psig as set forth in the Licensee's letter of December 22, 1995, is acceptable and necessary, and that with implementation of these commitments, the public health and safety are reasonably assured. In view of the foregoing, I have determined that public health and safety require that such commitments be confirmed by this Order and Demand. The Licensee has agreed to this action. Pursuant to 10 CFR 2.202, I have also determined, based on the Licensee's commitment and on the significance of the concerns regarding the adequacy of the Licensee's small-break LOCA and containment analyses supporting operations described above, that the public health and safety require that this Order be immediately effective.

VII

Accordingly, pursuant to sections 103, 161b, 161i, 161o, 182 and 186 of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR 2.202 and 10 CFR Part 50, IT IS HEREBY ORDERED, EFFECTIVE IMMEDIATELY, THAT:

1. Authority to operate Maine Yankee at 2700 MWt maximum power is suspended and Maine Yankee shall limit power to 2440 MWt, until

the NRC has reviewed and approved the SBLOCA analysis described in Section IX, item 5, below.

2. Authority to operate Maine Yankee at maximum internal containment pressure at 3 psig is suspended and Maine Yankee shall limit containment pressure to 2 psig, until the NRC has reviewed and approved the DBA analysis of containment pressure response required by Section IX, item 6, below.

The Director, Office of Nuclear Reactor Regulation, may relax or rescind, in writing, any provisions of this Confirmatory Order upon a showing by the Licensee of good cause.

VIII

Any person adversely affected by this Confirmatory Order, other than the Licensee, may request a hearing within 20 days of its issuance. Where good cause is shown, consideration will be given to extending the time to request a hearing. A request for extension of time must be made in writing to the Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission Washington, DC 20555, and include a statement of good cause for the extension. Any request for a hearing shall be submitted to the Secretary, U.S. Nuclear Regulatory Commission, ATTN: Chief, Docketing and Service Section, Washington, DC 20555. Copies of the hearing request shall also be sent to the Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555, to the Assistant General Counsel

for Hearings and Enforcement at the same address, to the Regional Administrator, NRC Region I, 475 Allendale Road, King of Prussia, PA 19406-1415, and to the Licensee. If such a person requests a hearing, that person shall set forth with particularity the manner in which his/her interest is adversely affected by this Order and shall address the criteria set forth in 10 CFR 2.714(d).

If the hearing is requested by a person whose interest is adversely affected, the Commission will issue an Order designating the time and place of any hearing. If a hearing is held, the issue to be considered at such hearing shall be whether this Confirmatory Order should be sustained.

Pursuant to 10 CFR 2.202(c)(2)(i), any person other than the Licensee adversely affected by this Order, may, in addition to demanding a hearing, at the time the answer is filed or sooner, move the presiding officer to set aside the immediate effectiveness of the Order on the ground that the Order, including the need for immediate effectiveness, is not based on adequate evidence but on mere suspicion, unfounded allegations, or error.

In the absence of any request for hearing, or written approval of an extension of time in which to request a hearing, the provisions specified in Section VII above shall be final 20 days from the date of this Order without further order or proceedings. If an extension of time for requesting a hearing has been approved, the provisions specified in Section VII shall be final when the

extension expires if a hearing request has not been received. AN ANSWER OR A REQUEST FOR HEARING SHALL NOT STAY THE IMMEDIATE EFFECTIVENESS OF THIS ORDER.

IX

Additionally, further information is needed to determine whether the Commission can continue to have reasonable assurance that the Licensee is conducting its activities in accordance with the Commission's requirements.

Accordingly, pursuant to sections 161c, 161o, 182 and 186 of the Atomic Energy Act of 1954. as amended, and the Commission's regulations in 10 CFR 2.204 and 10 CFR 50.54(f), in order for the Commission to determine whether your license should be modified, suspended or revoked, or other enforcement action taken to ensure compliance with NRC regulatory requirements, you are required to submit to the Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555, the following information, in writing and under oath or affirmation, in the form and according to the schedule indicated below:

1. A description of evaluations that have been completed that provide justification for the use of Cycle 15 operating limits, as established in the Cycle 15 Core Operating Limits Report, using methods approved for Maine Yankee and without reliance on the RELAP5YA computer code for SBLOCA analysis and assuming a reactor thermal rating of 2440 MWt. Details related to analyses

performed, significant assumptions, and conclusions drawn shall be provided;

2. A description of all other applications where RELAP5YA is relied on for Cycle 15 operation identifying the details of the application, and conclusions drawn with respect to any facility modification or procedure changes. For each application, document the determination that operability, as defined in Maine Yankee Technical Specifications, of affected structures, systems and components is maintained. For plant procedures required by Maine Yankee Technical Specifications that rely on RELAP5YA analysis for operator action, document the determination as to why the affected operator action continues to be appropriate or, if necessary, evaluate the affected procedures in accordance with 10 CFR Section 50.59 and provide a summary of that evaluation. If any procedures are changed, confirm that appropriate training has been provided;

3. A description of measures taken to limit reactor operation to a maximum thermal power of 2440 MWt (90.37% of 2700 MWt);

4. A description of measures taken to limit containment internal operating pressure to a maximum of 2 psig;

5. A SBLOCA analysis that is specific to Maine Yankee for operation at power levels up to 2700 MWt. The analysis must meet the requirements of 10 CFR Section 50.46, "Acceptance criteria for emergency core cooling systems for light water nuclear power reactors," and NUREG-0737, "Clarification of TMI Action Plan Requirements," Items II.K.3.30 and 31, "SBLOCA Methods" and "Plant-specific Analysis," respectively, and NUREG-0737, Item II.K.3.5, "Automatic Trip of Reactor Coolant Pumps During LOCA;"

6. An integrated containment analysis, accounting for relevant changes to the facility (e.g., spray system changes, power uprates, and containment maximum temperature and pressure changes), during a DBA that demonstrates the maximum calculated DBA containment pressure meets the design basis pressure for Maine Yankee (55 psig). Assumptions used for these analyses that are different from those specified in NUREG-0800, the NRC Standard Review Plan, Section 6.2.1.1.A, shall be described.

Information required by items 1, 2, 3, and 4, above, shall be documented and submitted to the NRC prior to criticality. Detailed files and supporting computer analyses shall be available on site or at the corporate office.

A schedule for producing the information required by items 5 and 6 above, shall be provided to the NRC within 30 days of the date of the Demand for Information.

Copies of the response regarding items 1, 2, 3, and 4, and the schedule for producing the information required by items 5 and 6, shall also be sent to the Assistant General Counsel for Hearings and Enforcement at the same address, and to the Regional Administrator, NRC Region I, 475 Allendale Road, King of Prussia, PA 19406-1415.

After reviewing your response, the NRC will determine whether further action is necessary to ensure compliance with regulatory requirements.

FOR THE NUCLEAR REGULATORY COMMISSION

William T. Russell, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 3rd day of January 1996.

cc: Thadani

ACTION

EDO Principal Correspondence Control

FROM: DUE: 03/10/97

EDO CONTROL: G970129
DOC DT: 02/24/97
FINAL REPLY:

Charles Pratt
Mary Metcalf
Jane Doughty
The Seacoast Anti-Pollution League

TO:

Chairman Jackson

FOR SIGNATURE OF : ** PRI ** CRC NO: 97-0191

Office Director

DESC:

MAINE YANKEE

ROUTING:

Callan
Jordan
Thompson
Norry
Blaha
Miller, RI

DATE: 02/27/97

ASSIGNED TO: CONTACT:

NRR Collins

SPECIAL INSTRUCTIONS OR REMARKS:

Put EDO and Chairman on for concurrence.
Chairman's office to review response prior to dispatch. (Ref. G970050)

NRR RECEIVED: FEBRUARY 27, 1997
NRR ACTION: DRPE:VARGA

NRR ROUTING:
COLLINS
MIRAGLIA
THADANI
ZIMMERMAN
MARTIN
TRAVERS
BOHRER

ACTION

DUE TO NRR DIRECTOR'S OFFICE

BY March 5, '97

OFFICE OF THE SECRETARY
CORRESPONDENCE CONTROL TICKET

PAPER NUMBER: CRC-97-0191 LOGGING DATE: Feb 26 17

ACTION OFFICE: EDO

AUTHOR: CHARLES PRATT/MARY METCAL
AFFILIATION: NEW HAMPSHIRE

ADDRESSEE: CHAIRMAN JACKSON

LETTER DATE: Feb 24 97 FILE CODE: ID&R 5 MAINE YANKEE

SUBJECT: MAINE YANKEE

ACTION: Direct Reply

DISTRIBUTION: CHAIRMAN, COMRS.

SPECIAL HANDLING: ~~NONE~~ SECY TO ACK

CONSTITUENT:

NOTES:

DATE DUE: Mar 12 97

SIGNATURE: . DATE SIGNED:
AFFILIATION:

CHAIRMAN SHOULD REVIEW RESPONSE PRIOR TO DISPATCH.....