



DOCKETED
USNRC

August 19, 2011 (11:30 am)

Westinghouse Electric Company
Nuclear Power Plants
1000 Westinghouse Drive
Cranberry Township, Pennsylvania 16066
USA

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Ms. Annette L. Vietti-Cook
Secretary
U S Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

Direct tel: 412-374-2035
Direct fax: 724-940-8505
e-mail: ziesinrf@westinghouse.com

Your ref: Docket No. NRC-2010-131
Our ref: DCP_NRC_003187

August 15, 2011

Attention: Rulemakings and Adjudications Staff

Subject: "Petition to Terminate the Rulemaking on Design Certification of the AP1000
Reactor and Declare it Null and Void (Docket ID NRC-2010-131)"

Dear Ms. Vietti-Cook,

Westinghouse Electric Company is submitting the enclosed letter in response to the "Petition to Terminate the Rulemaking on Design Certification of the AP1000 Reactor and Declare it Null and Void (Docket ID NRC-2010-131)."

As more fully explained in the enclosure, Westinghouse believes that the termination of the Rulemaking on Design Certification of the AP1000 Reactor is legally unsupported, unnecessary, and undesirable. The Petition provides no legitimate factual or legal basis for the Commission to take such an extraordinary step. Westinghouse supports the current Commission approach to continue ongoing licensing proceedings and design certification reviews while conducting, in parallel, a comprehensive review of the Fukushima events in Japan. The positive approach of the Commission, both short term and long term, to evaluate the technical and policy issues related to those events, and identify what, if any, regulatory actions should be pursued by the Commission in light of that review and evaluation, is sound from both a technical and a regulatory standpoint.

Very truly yours,


R. F. Ziesing
Director, U.S. Licensing

Template = SECY-067

DS10

Enclosure

1. Westinghouse Response to Petition to Terminate the Rulemaking on Design Certification of the AP1000 Reactor and Declare it Null and Void (Docket ID NRC-2010-131)

Attachment

1. Detailed Responses to Petition Claims

ENCLOSURE 1

Westinghouse Response to Petition to Terminate the Rulemaking on
Design Certification of the AP1000 Reactor and
Declare it Null and Void (Docket ID NRC-2010-131)

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Commission

In the Matter of)	
)	NRC-2010-0131
AP1000 Design Certification Amendment)	RIN 3150-A181
)	
10 CFR Part 52)	

I. INTRODUCTION

Westinghouse Electric Company files these comments in the AP1000 Design Certification Amendment rulemaking docket (the “AP1000 Amendment Docket”) in response to a letter dated June 16, 2011 to Chairman Jaczko from Friends of the Earth (“FOE”), the N.C. Waste Awareness and Reduction Network (“NCWARN”), and the AP1000 Oversight Group (collectively, the “Petitioners”) entitled “Petition to Terminate the Rulemaking on Design Certification of the AP1000 Reactor and Declare it Null and Void (Docket ID NRC-2010-131)” (the “Letter”).

Westinghouse opposes any termination of the AP1000® design certification amendment rulemaking (the “AP1000 Amendment Rulemaking”) and any action declaring the amendment rulemaking to be null and void. The Petitioners’ Letter is without legal basis, provides no new information to call into question the current path forward for the AP1000 design certification amendment, and raises no legitimate factual basis for the Nuclear Regulatory Commission (“Commission” or “NRC”) to take the extraordinary step of terminating the rulemaking or declaring it null and void.

The Letter also is replete with misunderstandings of the NRC regulatory process, misunderstandings about the design of the AP1000, and misrepresentations about what has occurred to date in the AP1000 Amendment Rulemaking. Moreover, a number of statements and charges in the Letter on technical matters relating to the AP1000 and Commission actions in connection with the AP1000 are misleading or false. As discussed below, the charges are essentially the same charges made in numerous filings by the Petitioners over the past several months. Repeated assertion of such false charges does not make them true, valid, or acceptable.

On May 10, 2011, Westinghouse submitted comments filed in the AP1000 Amendment Docket. In those comments Westinghouse supported the current Commission approach to continue the ongoing AP1000 design certification amendment review. The positive approach of the Commission, both short term and long term, to evaluate the technical and policy issues related to the Fukushima events in Japan and identify what, if any, regulatory actions should be pursued by the Commission in light of that review and evaluation, is sound from both a technical and a regulatory standpoint. Activities underway at the NRC and within the nuclear industry will

ensure continued maintenance of public health and safety. The action requested in the Letter is unwarranted, given the sound path currently being taken by the Commission.

Termination of the AP1000 Amendment Rulemaking and declaring it null and void, as requested by the Petitioners, also would severely and adversely affect Westinghouse, as well as the nuclear and electric utility industries both in the U.S. where COL applicants already are committed to new AP1000 units and in international jurisdictions where selection of AP1000 technology is dependent in part on design certification by the NRC.

For all of these reasons, Westinghouse urges the Commission to deny Petitioners' requests in the Letter.

II. THE LETTER RAISES NO NEW FACTUAL ISSUES

The Letter of June 16, 2011 is not the first attempt by the Petitioners to try to scuttle the AP1000. In the two months prior to filing the Letter, Petitioners filed multiple repetitive documents raising the same issues that Petitioners raise in the Letter.

1. On April 6, 2011, the Petitioners, together with other anti-nuclear organizations, filed a 24 page document (plus attachments) entitled "Petition to Suspend the AP1000 Design Certification Rulemaking Pending Evaluation of Fukushima Accident Implications on Design and Operational Procedures and Request for Expedited Consideration."
2. On April 14-18, 2011 (corrected April 18, 2011, and amended April 19, 2011), Petitioners, together with other anti-nuclear organizations, filed a 36 page document (plus attachments) entitled "Emergency Petition to Suspend All Pending Reactor Licensing Decisions and Related Rulemaking Decisions Pending Investigation of Lessons Learned from Fukushima Daiichi Nuclear Power Station Accident." The AP1000 Amendment Rulemaking was one of the rulemakings referenced in the caption to this "emergency" petition.
3. On April 29, 2011, Petitioners filed comments on the AP1000 Rulemaking Docket opposing the amendments and the rulemaking. In addition, on April 29, 2011, Petitioners filed with the NRC a document entitled "Inquiry into the Status of Petition to Suspend AP1000 Design Certification Rulemaking."
4. On May 6- 9, 2011, Petitioners, together with other anti-nuclear organizations, responded to the responses to the "emergency" petition (Item 2 above) in a 26 page document entitled "Petitioners' Reply to Responses to Emergency Petition to Suspend All Pending Reactor Licensing Decisions and Related Rulemaking Decisions Pending Investigation of Lessons Learned from Fukushima Daiichi Nuclear Power Station Accident."
5. On May 10, 2011, FOE filed comments on AP1000 Rulemaking Docket opposing the amendments and the rulemaking.

6. On May 24, 2011, Petitioners filed a four page document (plus attachments) entitled “Additional Comments Supporting the Petition by the AP1000 Oversight Group et al. to Suspend AP1000 Design Certification Rulemaking Pending Evaluation of the Fukushima Accident Implications on Design and Operational Procedures and Request for Expedited Consideration.”

The Letter contains no additional information beyond that presented in the numerous pleadings previously filed by the same Petitioners, alone or with others. More importantly, like the previous filings, the Letter provides no factual basis which would warrant the drastic action requested by petitioners.

Petitioners base their request to terminate the AP1000 design certification amendment rulemaking and declaring it null and void “in light of” five alleged issues.¹ However, each of these five issues was raised previously in one or more of the Petitioners’ filings listed above. Although the wording has been changed, there is no new factual allegation and there are no new claims presented in the Letter that differ from the allegations and claims alleged in those prior filings of the Petitioners. (This must have been known to Petitioners prior to the filing of the Letter since, with the exception of the May 10, 2011 filing by FOE (Item 5 above), legal counsel for each of the listed filings is the same counsel who signed the letter. Further, the same counsel for the Petitioners sent a letter, dated April 21, 2011, to the Chairman of the Advisory Committee on Reactor Safeguards (“ACRS”) entitled “Petition to Initiate Special Investigation on Significant AP1000 Design Defects” in which the same allegations and claims were raised.) Thus, the NRC already has seen these allegations and claims on numerous occasions, and should not again entertain them when they are raised in a Letter that has no legitimate procedural status before the Commission.

Further, the allegations and claims made by Petitioners in the Letter echo claims previously made by Petitioners in their prior filings concerning alleged deficiencies in the AP1000 design certification process. Thus the letter challenges the “competence and credibility of the design certification process,” and claims that both Westinghouse and the NRC have made “serious omissions and mistakes” – the same claims made in prior filings of the Petitioners.

III. THE LETTER IS REplete WITH INACCURACIES

In the comments submitted on May 10, 2011 by Westinghouse on the AP1000 Amendment Docket in response to Petitioners’ prior petition to suspend the AP1000 Amendment Rulemaking

¹ The issues alleged are:

- (a) The subsequent and significant changes in design and design calculations leading to yet another revision of the AP1000 reactor design and operational procedures;
- (b) The lack of resolution of unresolved issues relating to reactor design and operational procedures;
- (c) The failure to release the unredacted version of the Nonconurrence (sic) by Dr. John Ma;
- (d) The NRC staff’s failure to apply “lessons learned” from the Fukushima disaster in its review of the AP1000 reactors; and
- (e) The failure to establish a meaningful and transparent review process which allows the public time to review design changes and an ample period in which to comment on the final design and procedures used in reviewing the design.

(Item 1 above), Westinghouse responded to the multiple misleading, inaccurate, and untrue statements and claims made in the Petitioners' prior petitions and filings. These same statements and claims by Petitioners are now repeated in the Letter. Set forth in Attachment 1 to this Westinghouse response are specific comments on some of misleading, inaccurate, and untrue statements and claims contained in the Letter.

Running through the various filings by the Petitioners, including the Letter, is a claim that the NRC Staff review process for the AP1000 Amendment Rulemaking has not been transparent and has not afforded members of the public the opportunity to have their comments solicited and reviewed. The record of the AP1000 Amendment Rulemaking does not support this claim, which has no factual basis.

The amendment proposed by Westinghouse to the AP1000 certified design has been under review by the NRC Staff for four years. During that period, the changes proposed in the amendment have been thoroughly reviewed by the NRC Staff. That review has included a review of all technical issues raised by the Petitioners in their various filings and in the Letter. In support of the NRC technical and safety evaluation of the AP1000 design certification amendment application, Westinghouse has participated in more than 45 noticed public NRC Staff meetings and 24 public meetings of the ACRS and its subcommittees. Because of this intense scrutiny, open to the public, any claim that the review process has not been thorough or transparent cannot be supported.

As stated in the Westinghouse May, 10 2011 comments filing, the NRC Staff and the ACRS carefully reviewed the application for amendment to the AP1000 certified design, including the technical issues raised by the Petitioners, before concluding that the proposed amendment meets the requirements of the law and NRC regulations.

IV. THE LETTER PROVIDES NO JUSTIFICATION FOR THE DRASTIC ACTION REQUESTED

The relief requested in the Letter – that the NRC “terminate the rulemaking on the design certification of the Westinghouse-Toshiba AP1000 reactor, Docket ID NRC-2010-0131, and declare it **null and void**” (emphasis in the Letter) – is not authorized under the law or under NRC regulations. The criteria for issuance of a standard design certification (and hence for an amendment to such certification) are set forth in 10 CFR 52.54. Under that regulation, the Commission may issue a standard design certification rule if the Commission makes certain determinations set forth in that section. In addition, 10 CFR 52.63 sets forth the requirements for modification or amendment of a design certification rule.

The Commission may deny design certification or an amendment to a design certification rule if the requirements of Commission regulations are not met (a situation which is not present with respect to the AP1000 amendment request). However, there is no provision in NRC regulations for declaring “null and void” a rulemaking seeking such an amendment. Nowhere in the law or in Commission regulations do the words “null and void” appear, and research has not disclosed any case where there has been a declaration that a rulemaking is null and void.

Further, as stated by the NRC Staff in its May 2, 2011 response to one of the Petitioners' previous filings (Item5 above), "NRC Staff Answer to Emergency Petition to Suspend All Pending Reactor Licensing Decisions and Related Rulemaking Decisions Pending Investigations of Lessons Learned from Fukushima Daiichi Nuclear Power Station Accident":

"The Commission considers suspension of proceedings a 'drastic action' that is not warranted in the absence of 'immediate threats to public health and safety.' *AmerGen Energy Company, LLC* (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 NRC 484 (2008)" (Answer, p. 9)

The NRC Staff answer further stated:

"Absent some immediate threat to public health and safety, the Commission is reluctant to suspend proceedings in light of the 'substantial public interest in efficient and expeditious administrative proceedings.' *Duke Energy Corp.* (Oconee Nuclear Station Units 1, 2, & 3), CLI-99-11, 49 NRC 328, 339 (1999)." (Answer, pp. 9-10)

There is no threat or jeopardy, immediate or otherwise, to the public health and safety from moving forward with the AP1000 Amendment Rulemaking. Underlying the complaints expressed by Petitioners in the Letter (and in the prior filings of Petitioners referenced above) are allegations of lack of resolution of unresolved issues (including any issues that may arise out of the Fukushima accident) and failures of the NRC Staff review process. Even assuming these allegations were accurate (which Westinghouse denies), they clearly do not rise to the level of a threat to the public health and safety so as to warrant termination of the AP1000 Amendment Rulemaking or the more drastic action of declaring the rulemaking null and void.

V. CONCLUSION

Westinghouse believes that the approach currently being taken by the Commission in its review of the proposed AP1000 design certification amendment is the proper approach. Such approach can be expected to result in a revised AP1000 design certification rule that provides the assurance of public health and safety required under the law and NRC regulations. In contrast, there is no basis whatsoever for the Commission to terminate the rulemaking on the amendment or declare the rulemaking "null and void." Thus, the Commission should deny the request for such actions made in the Letter of the Petitioners and reject the Letter in its entirety.

ATTACHMENT 1

Detailed Responses to Petition Claims

**ATTACHMENT to ENCLOSURE
Detailed Responses to Petition Claims**

- 1) **Petition: Although our experts and analysts have not had access to review Revision 19 and its supporting technical supplements.**

Response: Revision 19 to the DCD is available to the public on the NRC ADAMS information system.

- 2) **Petition: Dr. Susan Sterrett of the lack of due diligence in analyzing the unexpected consequences of power increases from the AP600 to the AP1000, and explaining calculations and components based on the AP600 design.**

Response: Westinghouse does not base the details of the AP1000 design on the AP600 design. There have been many audits of the detailed AP1000 design by the NRC, international regulators and our utility customers. The AP1000 detailed design is independent of the AP600 design.

- 3) **Petition: Serious concerns about the impact of solar thermal heating that could diminish the effectiveness of the containment and the passive cooling system.**

Response: The containment is shielded from the sun by the shield building. Therefore, there is no solar heating of the containment vessel. The thermal loads on the shield building are much smaller than seismic loads. Currently there are no NRC concerns regarding the shield building thermal loads.

- 4) **Petition: Post accident radiation doses to the public could be several orders of magnitude higher (one hundred to one thousand times higher).**

Response: Mr. Gunderson's assessment assumes that there is a simultaneous severe accident combined with a containment vessel failure. The AP1000 PRA calculates the probability of such an event to be less than $8E-9$. The AP1000 doses to the public are reported in the Design Control Document for various events. These dose analyses are performed in accordance with all NRC regulations and have been reviewed and accepted by the NRC staff.

- 5) **Petition: The shield building failed physical tests for ductility. The computer simulation results contained "numerous confusing, misleading or erroneous statements".**

Response: There have been no instances in which test specimens based on the current AP1000 shield building design have failed physical tests for ductility performed at Purdue University. There has been an extensive review of the shield building analysis by the NRC staff and their consultants. Westinghouse has revised the Shield Building design report to the satisfaction of the NRC staff.

ATTACHMENT to ENCLOSURE
Detailed Responses to Petition Claims

- 6) **Petition: It is questionable whether there would be adequate circulation of cooling water at an AP1000 reactor if debris from an explosion, Loss of coolant Accident or other causes were to clog the long-term recirculation cooling systems.**

Response: The containment vessel is an excellent shield for debris that is created outside of the containment. For debris created inside the containment, Westinghouse has demonstrated to the NRC staff and to the ACRS that the cooling water flow is sufficient to maintain core cooling. There are large screens provided in both the containment sump and in the In-Containment Refueling Water Storage Tank. These screens filter any debris that might be in the containment.

- 7) **Petition: Computations submitted by Westinghouse, the manufacturer of the new AP1000 reactor, about the building's design appeared to be wrong and "had led to more questions". He said the company had not used a range of possible temperatures for calculating potential seismic stresses on the shield building in the event of an earthquake.**

Response: The initial calculations for the shield building used an engineering judgment to address loads from ambient temperatures. Additional calculations for the AP1000 shield building have been updated to explicitly include the effects of a range of possible ambient temperatures. The results confirmed that the original design was acceptable.

- 8) **Petition: To date, there has been no finality to the AP1000 reactor design and operational procedures OR if it has, the freeze-point remains a fluid concept, changing with the latest DCD revision. This is contrary to final Interim Staff Guidance on Finalizing Licensing Basis Information, DC/COL-1SG-011.**

Response: Westinghouse established a freeze point for the purpose of licensing at the time Revision 17 of the DCD was submitted to the NRC staff. Since then we have assessed all design changes based on ISG-11 process. The NRC staff has been notified of those few changes which were determined to meet the notification criteria of ISG-11. These changes were included in Revision 18 of the Design Control Document.

- 9) **Petition: The pressure calculations for the steel containment are of primary importance to determine if the AP1000 reactors can safely operate.**

Response: The pressure calculations for the containment are important to AP1000 safety. The current calculations have been reviewed by the NRC staff and the calculations indicate acceptable AP1000 containment performance.

- 10) **Petition: Given the lack of a final design and operational procedures, there cannot be a reasonable assurance the standard design conforms with statutes and regulations.**

Response: The AP1000 design finalization and the creation of operation procedures meet the NRC standards for Design Certification. The NRC staff has documented their acceptance of the design in their Safety Evaluation Report.

ATTACHMENT to ENCLOSURE
Detailed Responses to Petition Claims

- 11) **Petition: Modules, such as the containment building, are currently being fabricated by the Shaw Modular Systems, based on a potentially misguided assumption the containment structure will not change.**

Response: The structural modules such as those included in the containment building have begun to be fabricated at the Shaw module factory. There are no design changes to these structural modules that prevent their fabrication at the Shaw module factory. There were no changes identified to the containment or the shield building in revision 19 of the DCD.

- 12) **Petition: Failure of Westinghouse-Toshiba to demonstrate that the thin containment steel can survive anticipated peak pressure during an accident.**

Response: The NRC staff has reviewed the Westinghouse calculations which show that the calculated pressure is less than the design pressure for the containment. The containment steel is 1.75 inches thick and is designed in accordance to the requirements of the ASME Code.

- 13) **Petition: The expected changes to the reactor design in Revision 19, and the potential Revision 20, could lead to extensive re-engineering during construction, causing delays, costs increases and the risk of project failure.**

Response: There were no AP1000 design changes included in Revision 19 to the DCD. There is no current plan for Revision 20.

- 14) **Petition: The public must be allowed, under NRC regulations, to comment on the actual design to be built.**

Response: The public has commented on the AP1000 design. No changes to the AP1000 design were included in the recent Revision 19 to the AP1000 DCD. The Revision 18 description of the plant design has not been impacted by Revision 19.