

AFFIRMATION ITEM

RESPONSE SHEET

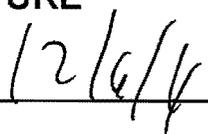
TO: Annette Vietti-Cook, Secretary
FROM: Chairman Gregory B. Jaczko
SUBJECT: SECY-11-0145 – FINAL RULE: AP1000 DESIGN
CERTIFICATION AMENDMENT

Approved X Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below ___ Attached X None ___



SIGNATURE


DATE

Entered on "STARS" Yes X No _____

**Chairman Jaczko's Comments on SECY-11-0145,
"Final Rule: AP1000 Design Certification Amendment"**

I approve publication in the *Federal Register* of the final rule for the AP1000 design certification amendment. I agree that the changes to comply with the Aircraft Impact Assessment Rule and the changes initiated by Westinghouse meet the finality provisions in 10 CFR 52.63. During my first year on the Commission in 2005, the initial AP1000 design certification rule (i.e., SECY-05-0227) was one of my first substantive votes concerning new reactors. It was clear then and it is clear now that the AP1000 design is one of the designs that seems to most fully meet the expectations of the Commission's Policy Statement on Advanced Reactors, which encourages designers to provide for enhanced margins of safety and to use simplified, inherent, passive, or other innovative means to accomplish a plant's safety and security functions. The AP1000 safety systems use natural driving forces such as pressurized gas, gravity flow, natural circulation flow, and convection rather than reliance on the use of active components (e.g., pumps, fans, or diesel generators) for preventing and mitigating accidents. Included in the certified design is a passive containment hydrogen control system to slow the long-term build up of hydrogen. As a defense-in-depth measure to the passive safety systems, the AP1000 design has active systems that are capable of preventing mitigating accidents (e.g., use of hydrogen igniters). The AP1000 design includes a number of severe accident capabilities such as in-vessel retention that retains core debris within the reactor vessel for a large number of severe accidents. The combination of passive safety, severe accident, and defense-in-depth features gives me confidence that the AP1000 design is sufficiently safe.

I agree with the Advisory Committee on Reactor Safeguards' conclusion that the AP1000 amendment maintains the robustness of the previous certified design. While the substantive changes initiated by Westinghouse either provide detailed design information or increase standardization of the certified information, several changes also further enhance the safety of the AP1000 design. The changes to the shield building design and the aircraft impact assessment ensures that the shield building can accommodate the impact from a large commercial aircraft. In 2007, I initiated a proposal to create aircraft impact requirements for new reactors. Specifically, I wanted new reactors to be designed and built to limit the damage an aircraft impact could cause and applicants to perform a realistic assessment that would demonstrate that the plant design will withstand an aircraft impact such that no significant release of radioactive materials would occur. Through this amendment, reactors referencing the AP1000 certified design will meet those requirements.

A containment cleanliness program was included in this amendment that helps resolve a long standing generic safety issue with operating reactors concerning the recirculation of cooling following a postulated loss-of-coolant accident (i.e., GSI-191). This program will help ensure that emergency cooling systems will function as expected, if needed to provide long-term cooling to the reactor core following a postulated loss-of-coolant accident. Changes were also made to the design of the passive core cooling system to address gas intrusion, another long standing and recurring issue at operating reactors, which is discussed by the staff in Information Notice 2011-17, "Calculation

Methodologies for Operability Determinations of Gas Voids in Nuclear Power Plant Piping.” One of my goals as Chairman is the closing out of long standing issues. The changes made to address both of these long standing issues should help prevent degraded or nonconforming conditions that could potentially render safety systems inoperable. This amendment also addressed the minimization of contamination. Changes were made in the design to comply with the requirement for new power reactors to minimize radiological contamination of the facility and environment. These changes will result in less complications and increased success of future decommissioning at the sites with reactors that reference the certified AP1000 design. Also, the elimination of underground radioactive tanks along with other changes should minimize the occurrence of inadvertent ground water contamination which is recurring and becoming another long standing issue at some operating reactors. New reactors referencing the AP1000 design offer enhanced margins of safety to the public and environment.

The staff has identified a number of changes that need to be made to further improve safety of nuclear power plants in the United States based on the lessons learned to date from the Fukushima Dai-ichi accident. These changes are documented in SECY-11-0137, SECY-11-0124, and SECY-11-0093. Some of the changes are applicable to new reactor designs, and the staff has stated that the changes can be applied to new reactors prior to or after approval. In my votes on each of those SECYs, I have fully supported the staff’s recommendations. As noted in SECY-11-0145, the AP1000 design has many design features and attributes necessary to address the recommendations. Because the AP1000 already has design features that address many of the Near-Term Task Force recommendations, the staff in SECY-11-0093 recommended that the AP1000 design certification rulemaking should proceed and that combined license applicants referencing the design should address the preplanning and prestaging of offsite resources to support extended coping under conditions involving significant degradation of the offsite transportation infrastructure.

I continue to fully support the staff’s recommendations in the Near-Term Task Force report, including proceeding with this rulemaking. Consistent with that recommendation, the staff should include a license condition or ITAAC (i.e., inspection, tests, analyses, and acceptance criteria), whichever is more appropriate, in each combined license that references the AP1000 design to address all applicable lessons learned recommendations identified by the staff that have been approved by the Commission until the AP1000 design certification rule has been modified to address those recommendations. Also, the staff should revise the *Federal Register* to more clearly list the recommendations that are applicable to the AP1000 design and identify those recommendations that are addressed by features in the certified design, including this amendment.

It is clear that the staff and Commission are taking the steps needed to improve safety of nuclear power plants. In this review of the AP1000 amendment, the staff has repeatedly ensured emergent concerns were sufficiently addressed. As noted in SECY-11-0002 and SECY-11-0145, the staff ensured concerns with the load combinations for

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Approved X Disapproved Abstain

Not Participating

COMMENTS: Below X Attached X None

The attached comments supplement my vote dated 12/06/11.

/RA/
SIGNATURE

12/06/2011
DATE

Entered on "STARS" Yes X No

**Chairman Jaczko's Supplemental Comments on
SECY-11-0145, "Final Rule: AP1000 Design Certification Amendment"**

The Vogtle Electric Generating Plant, Units 3 and 4 applicant, Southern Nuclear Operating Company (SNC), is facing an unanticipated delay in the design certification rule (DCR) process for the referenced design, the AP1000. Therefore, SNC, on the eve of completion of the DCR, has asked the Commission to exercise its discretion for early issuance of the combined license (COL) for Vogtle. Our rulemaking process, as prescribed by statutory requirements in the Administrative Procedure Act (APA) and our regulations in 10 C.F.R. § 2.807, requires a 30-day period between publication and the effective date to give persons interested in the regulation reasonable time to take any actions prompted by the new rule. The only exception to this requirement is for "good cause," a determination the agency must make, describe in a public notice, and allow an opportunity for public comment. But these required regulatory steps have not been taken. The DCR - which is the underpinning of the Vogtle application - does not become legally binding or enforceable until it is effective. It is a necessary prerequisite to issuing a combined license or work authorization.

As a preliminary matter, I look with disfavor upon requests for the Commission to depart from established regulatory processes to alleviate the consequences of a business risk assumed by an applicant. Indeed, this very possibility was anticipated by the Commission when proposing a Draft Policy Statement on the Conduct of New Reactor Licensing Proceedings. Accordingly, we advised applicants of the need to coordinate with design vendors to ensure that decisions on design certification applications do not impede decisions on COL applications in developing our policy on how to conduct new reactor licensing proceedings. As we recognized then and as we have indicated in our regulations (i.e., 10 C.F.R. § 52.55(c)), applicants relying on a DCR must accept the risk of potential delays in the rulemaking process. We further noted that applicants could choose to mitigate the risk of a delay in the rulemaking process by requesting that the entire application be treated as a "custom" design. In those circumstances, we said that the design would be subject to litigation in hearings by an application-specific licensing board. SNC did not choose that option, deciding instead to reference the DCR for the AP1000 in its application of March 2008

In its letter dated July 20, 2011, SNC has asked the Commission to exercise discretion, as a policy matter, to forego both (1) the time between affirmation and publication and (2) the 30-day time between publication and the effective date. But the Commission cannot simply decide, as a matter of policy, to disregard the requirements of the APA. The APA provides no provisions for making a rule effective before publication. Absent good cause to justify an exception, we cannot legally issue the COL until 30 days after publication of the rule in the *Federal Register*.

With regards to the merits of good cause in this particular case, I will refrain from offering an opinion at this time. I believe the applicant should be afforded the opportunity to provide its basis for "good cause" to the staff for review. The staff should resume the normal and public exchange of information with the applicant consistent with established NRC regulatory practices. Then a publicly available recommendation should be provided to the Commission for our consideration.

IRA
Gregory B. Jaczko

12/09/2011
Date