

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
OFFICE OF THE SECRETARY

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:
E. Roy Hawkens, Chair
Dr. Paul B. Abramson
Dr. Anthony J. Baratta

In the Matter of)
) March 13, 2007
AMERGEN ENERGY COMPANY, LLC)
) Docket No. 50-0219-LR
(License Renewal for the Oyster Creek)
Nuclear Generating Station))
)

**CITIZENS' COMBINED REPLY TO AMERGEN'S AND NRC STAFF'S ANSWER TO
THEIR PETITION TO ADD A NEW CONTENTION**

PRELIMINARY STATEMENT

In their Answers to the Petition to Add A New Contention, dated February 6, 2007 (the "Petition") filed by Nuclear Information and Resource Service, Jersey Shore Nuclear Watch, Inc., Grandmothers, Mothers and More for Energy Safety, New Jersey Public Interest Research Group, New Jersey Sierra Club, and New Jersey Environmental Federation (collectively "Citizens" or "Petitioners"), AmerGen Energy Co. LLC ("AmerGen") and the Staff of the Nuclear Regulatory Commission ("Staff") complain that Citizens' new contention is not based on materially different new information. However, there is no dispute that the report by Sandia National Laboratories, dated January 2007 (the "Sandia Report"), upon which the contention is based, is new. It is also materially different from information that was previously available because it states that, in contrast to positions taken by AmerGen and the Staff, Sandia cannot

justify the current approach to acceptance. In fact, the difference between Citizens' view of the ASME code, supported by the Sandia Report, and the view taken by AmerGen and the Staff, is highly significant because it would require AmerGen to considerably change its acceptance criteria for any extended licensed period of operation. Thus, the material dispute Citizens seek to raise concerns the conflict between the Sandia Report's view of the ASME code, which Citizens contend takes the correct approach, and the approach taken by AmerGen and the Staff. This is a genuine safety-significant issue that requires adjudication in this proceeding before the Atomic Safety and Licensing Board ("ASLB" or "Board").

To avoid this logic, both AmerGen and the Staff point to similarities between previous contentions and the contention at issue. However, Citizens have been careful to craft a contention whose primary basis is the new information in the Sandia Report. Thus, there is little doubt that the contention is "based upon" the new information. Furthermore, the previous contentions about the acceptance criteria did not allege that the modeling underlying the acceptance criteria took advantage of a factor that was not justified by the ASME code. Thus, the Board's decisions not to admit the previous contentions regarding the acceptance criteria are not directly relevant to the issue at hand. In any event, even if this is a late-filed contention Citizens have demonstrated good cause for the late filing and have shown that adding the contention will aid in the development of the record.

Finally, AmerGen seeks to suggest that the dispute raised by the contention has been resolved by the deliberations of the Advisory Committee on Reactor Safeguards ("ACRS"), because the ACRS agreed with AmerGen and the Staff to some extent at its February 1, 2007 meeting. This is incorrect because the findings of the ACRS are not dispositive for this proceeding. There is nothing to prevent Citizens from disagreeing with the ACRS, provided

there is a basis for the disagreement. Here, although the Staff and AmerGen disagreed with Sandia's view of the ASME code at the February 1, 2007 ACRS meeting, Sandia did not change its view. In fact, on February 9, 2006, Sandia reiterated that it could not justify use of an enhanced capacity reduction factor. As appears undisputed by Staff and AmerGen, the Sandia Report therefore continues to provide Citizens with a basis for the contention. Thus, the contention is not precluded by the findings of the ACRS.

ARGUMENT

I. Undisputed Issues

This proceeding concerns AmerGen's ability to ensure that the drywell shell, which forms the primary containment system at the Oyster Creek Nuclear Power Plant ("Plant"), does not decay below acceptable safety margins during any extended period of licensed operation beyond April 2009, when the Plant is currently scheduled to close. The containment system is a safety critical component whose failure could lead to an inability to contain products from a nuclear accident and under certain circumstances could even initiate a nuclear accident. There is also no dispute that the aging management regime for the drywell shell is within the scope of the proceeding, that Citizens have standing, that the contention was properly stated, and it has an adequate basis.

II. The New Contentions Is Timely

At long last, Citizens and AmerGen are in broad agreement on the legal standard to be applied to timeliness. As correctly stated by AmerGen, Citizens may submit a new contention based upon materially different new information in accordance with 10 C.F.R. §2.309(f)(2)(i)-(iii). AmerGen Ans. at 6. Alternatively, if Citizens cannot meet that timeliness standard, they may also file a "non-timely" contention, if they meet the requirements of 10 C.F.R. §2.309(c)(1).

Id. Here, Citizens argue that they meet the requirements of 10 C.F.R. §2.309(f)(2)(i)-(iii) and, in the alternative, 10 C.F.R. §2.309(c)(1). Petition at 11-14.

A. Critical Findings of the Sandia Report

To minimize the impact of the Sandia Report, the Staff misstates its findings. Although the Staff alleges that Sandia “did not have access to the justification” for an enhanced capacity reduction factor, Staff Ans. at 13, that is not correct. Sandia examined Article 1500 of code case N-284 and the academic papers that GE used to justify the use of an enhanced capacity reduction factor. Sandia Report at 67. It found that the references provided by GE did not adequately justify what had been done. Id. Sandia concluded that “the lack of an internal pressure prevents the justified use of an increased capacity reduction factor.” Sandia Report at 77. It further found that “since the refueling case does not include any internal pressure, the increase in buckling capacity used by GE for cases with circumferential (hoop) tension was not appropriate.” Id. at 82.

At the January 18, 2007 ACRS meeting, Jason Petti from Sandia Laboratories, the author of the Sandia Report, stated that “from our reading of the N-284 ASME code the enhanced capacity reduction factor is justified when there is internal pressure.” Transcript of ACRS Meeting on January 18, 2007 (“T1”) at 284:4-8. Mr Ashar of the Staff further confirmed that “we did not have the basis for doing it [using the enhanced capacity reduction factor].” Id. at 289:12-17.

Citizens concede that if Sandia had come to the subsequent February 1, 2007 meeting of the ACRS and stated that, having heard the additional justifications provided by AmerGen, it had decided to modify its Report, then the new contention would have insufficient basis. However, that is not what happened. No Sandia representatives were present at the February 1, 2007 meeting of the ACRS and the Sandia Report was not withdrawn or modified. In fact, on

February 9, 2007, Michael Hesseimer, the supervisor of the Sandia Report, stated that Sandia's view "differ[s] somewhat from the opinions presented by the licensee and the Staff" at the ACRS meeting on February 1, 2007. E-mail from Hesseimer to D. Ashley, NRC, dated February 9, 2007 available at ML070430292. The e-mail further stated that "we do not agree that the application of the increased capacity reduction factor to our analysis . . . to determine the minimum uniform thickness in the sandbed region is correct."

Furthermore, Sandia presented draft results of its study at the October 3, 2006 ACRS meeting. It did not finalize the study until January 2007. Thus, there was ample time for AmerGen to provide to Sandia and Staff the justification for the use of the enhanced capacity reduction factor before the January 18, 2007 meeting. The record shows that in the end, for reasons that remain obscure, Staff changed their minds in the two weeks between the January 18, 2007 meeting and the February 1, 2007 meeting, but Sandia did not change its opinion. Staff's counsel has also confirmed that AmerGen did not submit any testimony from Dr. Miller to Staff in advance of the February 1, 2007 meeting. Thus, Citizens are seeking to raise the issue of whether Sandia's view of the appropriate capacity reduction factor (supported by Staff at the January 18, 2007 meeting) is correct.

B. The New Contention Is Based Upon The Sandia Report

AmerGen complains the contention "does not even reference the Sandia Report." AmerGen Ans. at 18. While not explicitly stated, this could be construed as an allegation that the contention is not based upon the Sandia Report. Close examination of the contention reveals that this allegation is without merit. It specifically references the uniform thickness of 0.844 inches derived in the Sandia Report and the thinnest small area modeled by Sandia, 0.618 inches. Thus, but for the Sandia Report, the contention would have insufficient basis. Therefore, as

stated in the Petition, the contention is based squarely upon the Sandia Study and comments on the Sandia Study made at the January 18, 2007 meeting of the ACRS. Petition at 7.¹

C. The Sandia Report Is Materially Different New Information

AmerGen and Staff suggest that Citizens could have independently derived the basis for the new contention in 2005, because the modeling upon which the acceptance criteria are based was publicly available. AmerGen Ans. at 12-14, Staff Ans. at 12-13. However, the only way in which Citizens could have made the contention proposed here is if they had commissioned Sandia Laboratories or another specialist consulting firm to undertake three dimensional finite element modeling of the drywell shell prior to the start of this proceeding. In the absence of such an analysis, Citizens would have been unable to specifically state the revised acceptance criteria provided in the contention.

If this Board used AmerGen and Staff's reasoning to find that the Sandia Report is not materially different new information, it would raise the barriers to entry into relicensing proceedings far beyond the requirement for "minimal factual" foundation required by the Commission. It is unreasonable to expect that Citizens groups would be able to pay for tens of thousands of dollars worth of confirmatory analysis to check the calculations of licensees. Here, Staff correctly decided to commission a confirmatory analysis because the modeling carried out by General Electric ("GE") was outdated and simplistic. For the purposes of this proceeding,

¹ Incidentally, both AmerGen and Staff suggest that Citizens should have discussed the deliberations of the ACRS on February 1, 2007. Citizens do not believe this was necessary, because staff from Sandia did not make any remarks before the ACRS on that date. Citizens readily concede that at the later ACRS meeting Staff and AmerGen attempted to refute Sandia's findings and that, in part, the ACRS accepted those explanations. However, far from suggesting that the new contention has any defect, the February 1, 2007 ACRS meeting merely illustrates further that there is a material dispute between Citizens, based upon the Sandia Report, and Staff and AmerGen. Indeed, the latest e-mail from Sandia merely amplifies that the February 1, 2007 meeting did not resolve the issue that Citizens seek to raise.

Citizens are not disputing that, as Staff has stated, the Sandia Report raised no current safety issues and confirmed the 1992 licensing basis.² AmerGen Ans. at 13. However, the Sandia Report raised significant questions about the current acceptance criteria, in part because Sandia was unable to agree with GE that an enhanced capacity reduction factor should be applied.

As an aside, Staff's argument that the Sandia Report is like a Request for Additional Information ("RAI") is incorrect. Staff Ans. at 15. As discussed above, Sandia examined the justification for the enhanced capacity reduction factor provided by GE and rejected it. As AmerGen has noted, it is confirmation that the 1992 drywell thicknesses do not definitively violate the ASME code and Staff view it as a confirmatory analysis. AmerGen Ans. at 13. Thus, the Sandia Report is simply not analogous to an RAI.

While AmerGen states that Dr. Miller, the author of the code case at issue, justified the use of the enhanced capacity factor, AmerGen Ans. at 14-15, the supervisor of the Sandia study was also part of the ASME code committee. T1 at 278:4-8. Thus, questions remain about the justification for the enhanced capacity reduction factor. Furthermore, even if the enhanced capacity reduction factor can be justified, questions remain about the acceptance criteria. Indeed, those questions are sufficiently serious that AmerGen has stated to the ACRS that it will undertake its own three dimensional modeling study. Transcript of ACRS Meeting on February 1, 2007 ("T2") at 217:17-20. This promise of further study of the acceptance criteria was one of the reasons that that ACRS decided to conditionally allow the relicensing to proceed. This promise of new modeling also provides AmerGen with an opportunity to adopt the most accurate and realistic method suggested by Stress Engineering: measure the shape of the vessel and then

² Staff and AmerGen make inconsistent arguments in this regard. For example, Staff argue that Citizens are using the Sandia Report to attack the current licensing basis, Staff Ans. at 12, 15, while simultaneously maintaining that the Sandia Study confirms the current licensing basis.

model the actual shape of the vessel in addition to its thickness. If AmerGen adopted that method and undertook to modify the acceptance criteria accordingly, the new contention would become moot, because there would be no need to use a capacity reduction factor.

D. The Contention is Otherwise Timely

Even if the ASLB rules that the Sandia Report is not material new information as required by 10 C.F.R. § 2.309(f)(i)-(ii), it is timely in accordance with 10 C.F.R. § 2.309(c)(1). Most importantly, even if the Sandia Report does not contain materially different new information because Citizens could in theory have done their own modeling study soon after AmerGen committed to taking more UT measurements, such a study would have been prohibitively expensive. Thus, Citizens were forced to wait for the final Sandia Report instead of conducting their own analysis. This provides good cause for admitting the contention now rather than at the start of the proceeding when the Sandia Report was unavailable.

Secondly, the record here requires further development. On January 18, 2007, neither Staff nor Sandia Laboratories were prepared to endorse the use of the enhanced capacity reduction factor. *Supra* at 3-4. Two weeks later on February 1, 2007, Staff had an about-face and agreed with the use of the enhanced factor, but Sandia staff did not present at the meeting. It has now become clear though the February 9, 2007 e-mail, that Sandia does not agree with Staff's presentation at the February 1, 2007 ACRS meeting. It is not known why Staff changed their position so abruptly. It appears unlikely that new science was developed in that two weeks. It would also be surprising if Staff had not already reviewed the literature and past decisions about the capacity reduction factor before the January 18, 2007 meeting.

AmerGen boldly claims that "AmerGen and Staff address all of the relevant issues from the January 18, 2007 subcommittee meeting in detail before the full ACRS and counsel for Citizens on February 1, 2007." AmerGen Ans. at 18-19 (emphasis in original). This is entirely

incorrect, because there is no ready explanation for Staff's about-face and Sandia continues to disagree about the appropriate capacity reduction factor. Thus, there is a need to develop a record to ensure that the decision-making on this vital safety issue is of the highest quality. To allow this record to be developed and to boost public confidence in the NRC's decision-making process, the ASLB should admit this contention so that the record on why the Staff changed position and what is the appropriate modeling methodology can be fully examined. Furthermore, Citizens have not had the chance to explore how Dr. Miller reached his conclusions about the enhanced capacity reduction factor presented at the February 1, 2007 meeting. If this contention is admitted, Citizens will provide further expert testimony on this issue and will assist the NRC to develop a sound record.

Of the remaining factors in 10 C.F.R. § 2.309(c)(1), AmerGen does not dispute that all but one favor Citizens. AmerGen Ans. at 18. AmerGen suggests that admitting the contention "would unreasonably broaden the issue and delay the proceeding." *Id.* This is once again incorrect. The contention raises a narrow issue that is related to the contention that is already admitted. Because the frequency of measurement generally increases as the safety margin available decreases, and the margin available is directly dependent on the acceptance criteria, the mandatory disclosures should have already covered the derivation of the acceptance criteria. Thus, there should not be a delay due to the need for further disclosure. Furthermore, at this juncture, the Safety Evaluation Report has not even been issued. Citizens therefore believe that admitting the new contention should not cause any delay.

Of course, admitting any new contention broadens the issues to some extent. Here, however, the broadening is minor, but important. If the acceptance criteria for the license renewal period are based on modeling that inappropriately used an enhanced capacity reduction

factor there is a danger that the drywell shell will start to fail code requirements without that failure being detected. Admitting the contention would enable the Board to ensure that this will not happen. Thus, at most half of one of the eight factors is in favor of rejecting the contention, while seven and one-half of the eight factors favor admitting the contention. The minor broadening of the proceeding is outweighed by the good cause for any late filing, the need to develop a sound record on the capacity reduction factor issue, the lack of delay, and Citizens strong standing interests.

III. The Contention Raises A Material Dispute

In trying to argue that the contention presents no material dispute, AmerGen misstates the record. For example, AmerGen states that the Sandia Report did not challenge whether AmerGen's techniques were code compliant. AmerGen Ans. at 20-21. Thus is incorrect because Sandia stated that GE's justification for using the enhanced capacity reduction factor was insufficient. Sandia Report at 67. In any event, Citizens are using the Sandia Report as the basis for a contention that alleges that AmerGen's techniques for deriving the acceptance criteria for any extended licensing period are not code compliant and must be modified. Neither Staff nor AmerGen has argued that the contention lacks basis. E.g. Staff Ans. at 15 ("although Citizens state a basis for the contention . . ."). Thus, a genuine material dispute exists.

While suggesting that the current acceptance criteria are incorrect and overly optimistic, Citizens are not alleging in this proceeding that the drywell shell is not currently code compliant and are not seeking to challenge the current licensing basis. Instead, for the purposes of this proceeding, Citizens are taking at face value Staff's statements that the Sandia Report is consistent with the current licensing basis and confirms that the drywell shell currently meets code requirements. E.g. T2 at 244:15-16. Furthermore, Citizens are only seeking to litigate what the acceptance criteria should be during any period of operation beyond the current license.

Thus, the dispute in this proceeding is not about current safety and is not even about the current acceptance criteria, it is about the age management regime for any extended period of operation. It is therefore within the scope of this proceeding. Confirming this view, 10 C.F.R. § 54.29(a) explicitly authorizes the Commission to make changes to the plant's CLB during relicensing to provide a reasonable assurance of safety regarding management of the effects of aging during the period of extended operation on the functionality of structures that are within the scope of license renewal proceedings. Thus, there is no prohibition on raising a contention concerning aging that tangentially touches on the CLB, provided the contention is otherwise in scope. Nothing in the Turkey Point decision cited by AmerGen suggests otherwise. CLI-01-17, 54 N.R.C. 3 (2001). Furthermore, Staff correctly states that 10 C.F.R. § 54.30 rules current safety issues out of scope, but that is irrelevant to the current contention, which is not about current safety.

The material dispute raised is simply whether the use of the enhanced capacity reduction factor is appropriate to derive the acceptance criteria for any extended licensing period. AmerGen and Staff believe it is, but Citizens, supported by the Sandia Report, contend it is not. More broadly, AmerGen believes that it has provided the required reasonable assurance that the drywell shell will not fall below safety requirements if the plant operates beyond the currently licensed operating period. In contrast, Citizens do not, because the acceptance criteria that AmerGen proposes to use during any extended operating period are overly optimistic. Through the proposed contention, Citizens seek to show that the proposed drywell shell monitoring regime is not adequate to provide reasonable assurance that safety requirements would be met throughout any extended period of operation as required by 10 C.F.R. § 54.29. Thus, the issue raised by the contention is highly material to the decision of whether to relicense the plant.

CONCLUSION

For the foregoing reasons, the ASLB should admit the proposed new contention and grant Citizens a hearing on the issues raised.

Respectfully submitted

A handwritten signature in black ink, appearing to read "Richard Webster", with a long horizontal flourish extending to the right.

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Dated: March 13, 2007

UNITED STATES OF AMERICA
BEFORE THE NUCLEAR REGULATORY COMMISSION
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CERTIFICATE OF SERVICE

I hereby certify that I caused the foregoing reply to be sent this 6th day of February, 2007 via email and U.S. Postal Service, as designated below, to each of the following:

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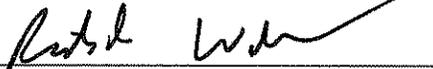
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Dated: March 13, 2007