

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
OFFICE OF THE SECRETARY
BEFORE THE COMMISSION

_____)	
In the Matter of)	Docket No. 50-0219-LR
AMERGEN ENERGY COMPANY, LLC)	
)	
(License Renewal for the Oyster Creek)	January 29, 2008
Nuclear Generating Station))	
_____)	

**CITIZENS' CONSOLIDATED REPLY REGARDING PETITION FOR REVIEW OF LBP-07-17
AND THE INTERLOCUTORY DECISIONS IN THE OYSTER CREEK PROCEEDING**

I. INTRODUCTION

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") hereby reply to the Answers of the NRC Staff and AmerGen Energy Co. LLC ("AmerGen") regarding the appeal of Atomic Safety and Licensing Board ("ASLB" or "Board") Initial Decision: LBP-07-17¹ and the many interlocutory decisions in this proceeding.

II. Key Issues In This Proceeding

Because of the very tight page limit Citizens confine this reply to a few of the key issues raised in this proceeding. These issues are: i) the application of the reasonable assurance standard; ii) the Board's failure to require AmerGen to carry the burden of proof; and iii) the procedural errors the Board made on the timing of new contentions. For all other issues, Citizens rely upon their initial briefing.

¹ Initial Decision, In the Matter Of AmerGen Energy Co, LLC (License Renewal for Oyster Creek Nuclear Generating Station, LBP-07-17 (December 18, 2007) (the "Decision")

A. Application Of The Reasonable Assurance Standard

All parties agree that the reasonable assurance standard depends on the context. *E.g.* AmerGen Ans. at 6. However, AmerGen attempts to cast aspersions on Citizens' argument that reasonable assurance in the current context requires at least 95% certainty by taking comments offered by the Commission regarding the Yucca Mountain waste disposal repository out of context. *Id.* at 7-8. In fact, those comments were offered in response to an EPA comment that use of a reasonable assurance standard that selects "worst case" values for input parameters could be appropriate for the "nuclear power plant licensing program" but not for Yucca Mountain licensing, "where projections of performance have inherently large ranges of uncertainty." *Disposal of High-Level Radioactive Wastes in a Proposed Geologic Repository at Yucca Mountain, NV*, 66 Fed. Reg. 55,732, 55,739 (Nov. 2, 2001). In addition, the required performance factors were "extreme." *Id.* at 55,740. In that context, the Commission rejected the use of the 95th percentile of the dose prediction. *Id.* The NRC Staff relies upon the same discussion. NRC Staff Ans. at 4-5. As the EPA comment suggests, this discussion is not apposite because the Yucca Mountain dose predictions are the output of models run over very long time scales using inherently uncertain input parameters. In contrast, the margins at Oyster Creek are derived from inputs whose uncertainty is determined by the monitoring regime, which is within the control of the licensee.

Furthermore, although AmerGen attempts to draw support from *North Anna Env'tl. Coalition v. NRC*, 533 F.2d 655 (D.C. Cir. 1976), that case only decided that the reasonable assurance standard did not require proof of compliance beyond a reasonable doubt. *Id.* at 658. Thus, none of the precedents cited by AmerGen or the NRC Staff sheds any light on the appropriate level of conservatism to be used in the current context. However, there is little doubt that the reasonable assurance standard involves use of a "reasonably conservative range of values of input parameters." *In the Matter of Atlas Corporation*, DD-99-02 (January 20, 1999).

This issue of what is reasonably conservative in the context of predicting whether the drywell shell meets safety requirements is best approached by analyzing past practice. The NRC Staff admit they have used 95% confidence to assess future corrosion of the Oyster Creek drywell. NRC Staff Ans. at 5;

NRC Staff Ex. 1 at 4-60. If the Staff require 95% certainty that the shell will not corrode beyond the accepted requirements in the future, it is logical that the Staff would also require 95% certainty that the shell is not already beyond those limits. Reinforcing this view, in the Safety Evaluation Report the Staff quoted AmerGen stating that the “mean [thickness] *and the variance* of the mean are compared to the relevant acceptance criteria.” NRC Staff Ex. 1 at 4-55 (emphasis added). The Commission should therefore instruct the Staff to be consistent and require AmerGen to assess current margins based on the 95% confidence intervals of the relevant parameters.

As an illustration of the degree to which certainty of compliance with the ASME code has declined, the drywell shell is now more than 44% weaker than when the plant was built, and is at best marginally compliant with the ASME code. Citizens’ Petition For Review at 11-12. Like Citizens, Judge Baratta believes that further assessment is needed to establish reasonable assurance of compliance with the ASME code. Decision, Additional Statement of Judge Baratta at 1. Although AmerGen has stated it will carry out such an analysis, it has not yet done so. AmerGen Ans. at 9. The Commission cannot now find reasonable assurance based on a non-existent analysis. *See* Citizens Proposed Findings of Fact and Conclusions of Law at 80-84. Thus, even if the Commission is reluctant to hold AmerGen to a requirement that it must establish all margins to 95% certainty, it should at least require a conservative analysis of the current situation prior to any decision on relicensing.

B. The Board Shifted The Burden Of Proof To Citizens On Key Issues

In response to Citizens’ allegation that there was no probative evidence of bias due to grinding of exterior points, AmerGen once again points to depth micrometer measurements made in two small areas after they had been ground. AmerGen Ans. at 12 n. 49 *citing* AmerGen Ex. 16 at 101-02. As Citizens have repeatedly pointed out, these measurements merely show that the surface is rough, they show nothing at all about whether grinding removed any additional material. AmerGen has found one document stating that *some* spots were ground 0.03 to 0.1 inches thinner. AmerGen Ex. 27 at 17. Thus, AmerGen’s Answer actually shows that AmerGen’s oral testimony regarding a larger bias lacked foundation. It also shows that the Board’s conclusion that grinding caused a bias of 0.1 to 0.2 inches in

the external measurements is clearly erroneous. This conclusion is reinforced by evidence that the external measurements agree with the internal measurements in many Bays. *See* Citizens' Proposed Findings of Fact and Conclusions of Law at 10.

AmerGen also takes issue with Citizens argument that there was data suggesting that that areas larger than 18 inches by 18 inches were degraded to less than 0.800 inches thick. AmerGen Ans. at 10. However, AmerGen's attempt to refute its own Exhibit relies on an unfounded assumption that the exterior measurements are biased thin by greater than 0.1 inches. *Id.* Furthermore, the Board's phraseology that there was "no data" showing a problem vividly illustrates its error. In the absence of useful data to compare with the local area acceptance criteria, the Board should have found that reasonable assurance of compliance was lacking. Instead, it erroneously failed to make any finding of such compliance. Decision at 27-28.² To the extent that the Board decided that if the shell complied with the mean acceptance criterion, there was no need for it to comply with the local area criterion, Decision at 25-26, this is clearly erroneous based on the history of the CLB and AmerGen's practice. *See* Citizens' Proposed Findings of Fact and Conclusions of Law at 61-62 (NRC Staff required external inspections to show that severely corroded areas were "highly localized"); AmerGen Ex. 16 at 10-11 (if a 36 inch by 36 inch area has average thickness of less than 0.736 inches, it must be evaluated using the local area criterion).

In response to Citizens' showing that the Board failed to note that AmerGen's own finding that the internal grid measurements are not representative of the corrosion in the worst bays, AmerGen erroneously suggests that this issue is outside the scope of the contention. AmerGen Ans. at 11. This is patently incorrect because if the Board were correct concerning the bias in the external measurements, there would be insufficient data to determine compliance with the acceptance criteria or the AMSE code.

² The Board could not find compliance with the local area acceptance criteria from the interior grid measurements because those measurements cover too small an area to allow meaningful comparison with the local area acceptance criteria. *See* Tr. at 633 (external measurements are compared to the local acceptance criteria).

C. The Procedural Errors Were Prejudicial

NRC Staff claim that the procedural errors were not prejudicial. NRC Staff Ans. at 21-22. This is incorrect. For example, Citizens' proposed contention regarding the need for realistic three-dimensional modeling of the drywell shell was excluded on timing alone. Board Memorandum at Order, dated April 10, 2007. During the rest of the proceeding, Citizens were not permitted to raise the issue concerning the over-optimistic capacity reduction factor used in the modeling of the drywell shell or further challenge the acceptance criteria. Thus, the Board's error regarding timing was prejudicial with regard to at least these issues.

Finally, where, as here, an application totally misses a potential aging mechanism, the aging management regime must be enhanced but Citizens receive no notice of the aging mechanism in the application. It would be grossly unfair to exclude contentions based on such an enhancement, as Staff argues is appropriate. NRC Staff Ans. at 16 n. 19. The Board, therefore, should not have excluded as untimely Citizens' contention regarding the scope of the measurements, which was based upon AmerGen's belated identification of corrosion on the interior of the drywell as an aging mechanism. Board Memorandum and Order dated February 9, 2007 at 3-5, 8. Once again this error was prejudicial because Citizens were not permitted to make any arguments about the scope of the measurements.

III. CONCLUSION

For the foregoing reasons, the Commission should review the Decision and either deny the license renewal application or remand the matter to the Board for further proceedings after the Commission has corrected the many legal and factual errors contained in the Decision.

Respectfully submitted,



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EASTERN ENVIRONMENTAL LAW CENTER

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