

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)	
)	Docket No. 50-0219-LR
AMERGEN ENERGY COMPANY, LLC)	
)	ASLB No. 06-844-01-LR
(License Renewal for the Oyster Creek)	
Nuclear Generating Station))	May 27, 2008

**CITIZENS' RESPONSE TO BOARD ORDER AND MOTION TO SUPPLEMENT THE
BASIS OF THEIR CONTENTION**

PRELIMINARY STATEMENT

This brief is filed on behalf of 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"). On May 21, 2008, the Atomic Safety and Licensing Board (the "Board") ordered the parties to brief the legal effect of a letter dated May 5, 2008 from counsel for AmerGen Energy Co. LLC ("AmerGen") to the Commission enclosing AmerGen's May 1, 2008 response to the NRC Staff's request for additional information (the "Response").

Because pleading by letter is not permitted in NRC proceedings, the letter can have no direct effect upon this proceeding. AmerGen affirmatively decided not to make a motion based upon the revised analysis that is summarized in the Response. Therefore, if AmerGen suggests in its response to the Board's most recent Order that the Response shows that the pending

contention should not be admitted, the Board should then allow Citizens a full and fair opportunity to respond. In addition, the Response has the secondary effect of supplementing the basis of Citizens' contention, confirming that there is an ongoing material dispute to be adjudicated, and confirming that the contention raises a significant safety issue. Thus, the Board should admit the contention and allow the adjudicatory process to determine whether the original fatigue analysis for the recirculation outlet nozzle at Oyster Creek, upon which AmerGen seeks to rely, is sufficiently conservative.

ARGUMENT

I. Response To The Board's Question

A. AmerGen Should Derive No Benefit From The Letter In This Proceeding

In general, if a party wishes an adjudicatory body to take action it must file a motion. Outside of motions, authorized pleadings are limited to petitions and responding to other parties. As the Board has observed, the May 5, 2008 letter from AmerGen to the Commission (the "Letter") "neglected to explain the relevance" of the enclosed Response. Board Order, dated May 21, 2008. Motions are required to state with particularity the grounds and relief sought. 10 C.F.R. § 2.323(b). In addition, counsel must consult with opposing parties before making a motion. *Id.* Thus, the Letter was not a motion.

AmerGen filed its answer to Citizens' motion to reopen and petition to add a contention on April 28, 2006, one week before the Letter was submitted. Thus, the Letter was not a late-filed answer. By a process of elimination, Citizens therefore conclude that the Letter was not an authorized pleading and therefore AmerGen should not be permitted to gain any advantage from it. AmerGen is represented by very experienced practitioners before the Board and the Commission who have amply demonstrated their ability to make affirmative motions during this

proceeding. Thus, if AmerGen is to gain any advantage from the new information, it should be required to follow the pleading rules and file a timely motion, which would then allow Citizens an opportunity to respond. The Board should therefore not allow AmerGen to gain an advantage by mere submission of the Letter.

The Board should also note that the Response is an unsworn statement by AmerGen that has not been reviewed by the NRC Staff. Furthermore, Citizens' ability to litigate about the effect of the statements contained in the Response is severely limited by their vagueness and AmerGen's refusal to provide Citizens with copies of the underlying analyses and the documents that support the analyses.¹ The Board may not, therefore, assume that the assertions in the Response that benefit AmerGen are correct.² Furthermore, because AmerGen has deliberately limited Citizens' knowledge of the matter under adjudication, the Board should not allow AmerGen to exploit that informational asymmetry to its advantage.

B. The Board Should Preserve Citizens' Right To Be Heard

Citizens' right to be heard would be unreasonably curtailed if the Board allows AmerGen to gain an advantage from the Letter or the briefing concerning the Letter. Citizens did not respond to the Letter because any response would have been procedurally irregular. Citizens assumed, erroneously, that the Commission and the Board would ignore such a procedurally deficient submission. A deprivation of Citizens' right to be heard could now occur if AmerGen uses its response to the Board's May 21, 2008 Order to bolster its position. For example, if AmerGen has an expert swear to and further explain the Response, Citizens could not reply

¹ Citizens' request for the first fatigue calculations was rejected by AmerGen on April 11, 2008. E-mail from A. Polonsky to R. Webster, dated April 11, 2008. Citizens requested the revised analysis on May 21, 2008. E-mail from R. Webster to A. Polonsky, dated May 21, 2008. AmerGen rejected that request on May 22, 2008. E-mail from A. Polonsky to R. Webster, dated May 22, 2008.

² The assertions that are against AmerGen's interests may be accorded greater significance, because a party is highly unlikely to submit incorrect statements that are detrimental to its interest directly to the Commission.

meaningfully both because AmerGen has not granted them access to any underlying documents that may support the facts in the Response, and the Board has not made provision for replies to the pleadings it has requested. It would be manifestly unfair to allow AmerGen to derive benefit from the results of the new analysis, without allowing Citizens an opportunity to respond meaningfully. As the NRC practice guide states, the cardinal rule of fairness in pre-hearing matters requires that both parties have a full and fair opportunity to respond to the other:

Prior to entertaining any suggestion that a contention not be admitted, the proponent of the contention must be given some chance to be heard in response. The petitioners cannot be required to have anticipated in the contentions themselves the possible arguments their opponents might raise as grounds for denying admission of those proffered contentions. *Houston Lighting & Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-565, 10 NRC 521, 525 (1979); *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 83 n. 17 (1996); rev'd in part on other grounds, CLI-96-7, 43 NRC 235.

Although the Rules of Practice do not explicitly provide for the filing of either objections to contentions or motions to dismiss them, each presiding board must fashion a fair procedure for dealing with such objections to contentions as are filed. The cardinal rule of fairness is that each side must be heard. *Allens Creek, supra*, 10 NRC at 524.

NRC Staff Practice and Procedure Digest at Pre 89.

Thus, if AmerGen suggests in its response to the Board's May 21, 2008 order that the pending contention should not be admitted because of the outcome of the new analysis, the Board should then allow Citizens a full and fair opportunity to respond. In such circumstances, Citizens could only respond fully if they are able to review the fatigue analyses at issue and any documents that were referenced by those analyses to support their assumptions. Thus, if necessary, prior to allowing Citizens to respond, the Board should order AmerGen to provide the critical documents to Citizens and allow Citizens a reasonable time to review the documents.

C. Even If The Board Considers The Letter It Fails To Undermine The Pending Contention

AmerGen's experienced counsel has had ample time to make a motion based upon the Response, but has failed to do so. This may be because the Letter fails to undermine the basis of the current contention. The Response states that AmerGen continues to rely upon the original analysis to show that fatigue will be managed in accordance with the regulations. Response at 4. In addition, the Response is merely an unsworn submission to the NRC Staff and should not be given similar weight to sworn testimony. The Response also fails to clearly state the effect of changing from the simplified analysis to the ASME-compliant analysis. Response at 3. Although it states that the "CUF [cumulative use factor] is lower," it fails to state the basis of that comparison. *Id.* In particular, it fails to state whether this comparison is based on two simulations where the only difference was the change in the calculation method with no other changes in assumptions. Thus, the Response does not refute the original basis of the contention, which was based upon the NRC Board notification and the experience at Vermont Yankee that the simplified calculations were not conservative.

In fact, far from refuting the contention, the Response adds to its basis. To be certain that an analysis is conservative, the analyst should ensure that each assumption going into the analysis is justified by the actual conditions. Second Declaration by Dr. Joram Hopenfeld, dated May 23, 2008 ("Second Hopenfeld Decl.") at ¶ 4, attached as Exhibit MFC-2. The Response confirms that the original analysis, on which AmerGen seeks to rely, Response at 4, is not conservative with respect to the correction factor used for each transient, which is related to the overall environmental correction factor ("Fen"). The originally predicted environmentally corrected CUF ("CUF_{EN}") was 0.9781 with an overall Fen of 5.34. Response at Table 1. The reanalysis increased the overall Fen from 5.34 to 6.60, indicating that the original analysis did

not use conservative environmental correction factors for each transient. As AmerGen acknowledged, this overall increase occurred because the environmental correction factors for each transient were calculated more conservatively in the revised analysis. Response at 3.

In addition, the revised analysis was made more conservative with regard to the treatment of emergency condenser transients. *Id.* This was to “assure that peak stress is captured after the downward shock and address all possible scenarios of event severity for future plant operation.” *Id.* Unsurprisingly, this change resulted in an increase in the CUF. *Id.* Thus, the reanalysis shows the original analysis was not sufficiently conservative in two additional respects.

Overall, in an attempt to show that the original calculation was conservative, the Response presents an analysis that is more conservative in terms of the environmental correction factors and the emergency condenser transients but *less* conservative in another critical aspect and gets a lower result for the CUF_{EN}. Although AmerGen claims that this shows that the original calculation was conservative, Response at 4, that conclusion is based on a logical fallacy. The reanalysis actually shows that the metal fatigue calculation is highly sensitive to the assumptions used by the analyst. It also shows that AmerGen has been inconsistent about which assumptions are appropriate, but has failed to show which assumptions are actually justified by the operating experience and design of this specific reactor. *See* Second Hopenfeld Decl. at ¶ 10 (no reactor-specific justification for the less conservative assumption).

In particular, in the original analysis, the nozzle cladding was taken into account, Response at 3, while in the reanalysis it was neglected. *Id.* This change appears to be the main cause of the decrease in the calculated CUF. Second Hopenfeld Decl. at ¶ 8. The revised analysis would have been much easier to compare to the original if the nozzle cladding had been treated the same in both. It is therefore highly likely that the analyst changed this critical assumption because without such a change, the recalculated CUF_{EN} would exceed 1.0. Second

Hopenfeld Decl. at ¶ 9. At minimum, the Response acknowledges that this change in assumption caused a significant contribution to the reduction in the predicted CUF. Response at 3. Thus, even if AmerGen were seeking to replace the original analysis with the reanalysis, one critical issue would be whether this change in assumption is justified. The justification for this change in assumption is particularly critical because this is an area where the judgment of the analyst plays a large role. Second Hopenfeld Decl. at ¶ 7. The key assumptions must therefore be carefully justified to prevent the CUF_{EN} analysis becoming an outcome-driven exercise. *Id.*

Unfortunately, the Response fails to address this issue adequately. The original analyst obviously decided that to be conservative the nozzle cladding should not be neglected. The Response merely states that the change in assumption regarding nozzle cladding is permitted by the ASME Code under certain circumstances, Response at 3, but fails to address whether the operating experience with the recirculation outlet nozzle at Oyster Creek would permit such a change. Because the Response contains no reactor-specific justification for the use of the less conservative assumption in the reanalysis, it fails to show that the reanalysis is conservative. Second Hopenfeld Decl. at ¶ 10. Logically, therefore, the result of the reanalysis cannot show that the original analysis was sufficiently conservative.

II. Briefing In Support Of Motion To Supplement

Citizens contacted both AmerGen and the NRC Staff to consult about this Motion on May 23, 2008. AmerGen and Citizens discussed the change in assumptions regarding the environmental factors, but had different views on its significance. Citizens therefore expect AmerGen to oppose this Motion. NRC Staff stated that they will formulate their response to this Motion after it is filed.

A. The Letter Confirms That The Original Fatigue Calculation Was Not Conservative In Two Further Respects

The original calculation resulted in an overall environmental factor of 5.34. Response at Table 1. The reanalysis increased this factor to 6.60. *Id.* This increase was a result of the use of a more conservative approach to estimating the environmental correction factors for each transient pair. *Id.* at 3. The reanalysis therefore confirms that the original analysis was not conservative in terms of calculation of the environmental correction factors. Second Hopensfeld Decl. at ¶ 6.

Similarly, the revised analysis was made more conservative with regard to the treatment of emergency condenser transients. Response at 3. This was to “assure that peak stress is captured after the downward shock and address all possible scenarios of event severity for future plant operation.” *Id.* Unsurprisingly, this change resulted in an increase in the CUF. *Id.* The reanalysis therefore shows that the original analysis was also not sufficiently conservative in terms of the treatment of emergency condenser transients.

Thus, in addition to the issue Citizens raised with the simplified calculation, Citizens’ are now supplementing the basis of their contention to include AmerGen’s tacit admissions that the environmental correction factors used by the original calculation and the treatment of emergency condenser transients in that calculation were not conservative.

B. The Letter Confirms That The Contention Raises A Material Dispute

The reanalysis was designed to show that the original analysis was conservative. AmerGen suggests that it succeeds in doing that and can continue to rely upon the original analysis to support its license renewal application. Response at 4. However, as discussed above, the logic behind this suggestion is fatally flawed. The reason that the reanalysis gets a lower CUF is because its assumptions regarding the nozzle cladding is *less* conservative than the

original analysis and this change has a major effect on the result. Second Hopenfeld Decl. at ¶ 8. Thus, all the reanalysis shows is that certain assumptions are critical and the analysis will yield a lower CUF if those assumptions are made less conservative, as would be expected. However, the Response says nothing at all about whether the original analysis was sufficiently conservative or whether changing the assumption about the nozzle cladding in the reanalysis was justified. *Id.* at ¶ 10-11. The Response therefore confirms that Citizens' contention raises a material dispute. Namely, AmerGen believes that it has shown that the original analysis was conservative, but Citizens' expert has concluded that it has not. Second Hopenfeld Decl. at ¶ 11. In particular, to ensure the analysis of record is conservative, it should not contain non-conservative assumptions or use analytical methods that do not comply with the ASME Code. *Id.* at ¶¶ 4-5. Moreover, AmerGen has failed to justify the critical assumption in the reanalysis that the nozzle cladding may be neglected. *Id.* at ¶ 10.

C. The Letter Confirms That The Contention Raises A Significant Safety Issue

The regulations allow AmerGen various options with regard to time limited aging analysis ("TLAA"). To meet the requirements for TLAA, AmerGen attempted to show the CUF_{EN} would meet the CLB throughout any period of extended operation. *See* 10 C.F.R. 54.21(c)(1)(ii). The Current Licensing Basis ("CLB") is that the CUF_{EN} should be less than 1.0. Oyster Creek SER at 3-170 to 3-172; Oyster Creek LRA at 4-45 to 4-36. At present AmerGen is seeking to rely upon the original analysis to show compliance with the CLB and the regulations. Response at 4. This is not permissible because that analysis is known to be non-conservative in some respects and non-compliant with the ASME code.

As far as Citizens can tell, the reanalysis shows that if the nozzle cladding is not neglected, an appropriately conservative analysis would show that the CUF_{EN} would be greater

than allowable by the CLB at some point during any extended period of operation. Second Hopensfeld Decl. at ¶ 9. This shows that the problems with the metal fatigue calculations raise significant safety issues, because if they go uncorrected, a violation of the CLB could occur and the regulations regarding TLAA would be violated.

Furthermore, AmerGen may not rely on the revised analysis to suggest that the issue is of minor safety significance. AmerGen is currently relying on the original analysis, not the revised analysis, to support its license renewal application. Response at 4. Furthermore, AmerGen has not shown that the revised analysis is conservative given the conditions at Oyster Creek. Second Hopensfeld Decl. at ¶ 10. Thus, the existence of the revised analysis can have no detrimental effect on the pending contention unless and until AmerGen makes a reactor-specific showing that the revised analysis is sufficiently conservative, seeks to replace the flawed original analysis with the revised analysis for the purposes of the NRC Staff's safety evaluation, and then makes a motion for the appropriate relief.

CONCLUSION

For the foregoing reasons, the Board should not permit AmerGen to gain any advantage from its failure to submit an authorized pleading concerning the revised analysis. In addition, the Board should admit the pending condition with the supplementary basis provided with this Motion.

Respectfully submitted,

/s

Richard Webster, Esq
Eastern Environmental Law Center
Attorneys for Citizens

Dated: May 27, 2008