

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	)	
	)	April 26, 2007
AMERGEN ENERGY COMPANY, LLC	)	
	)	Docket No. 50-0219-LR
(License Renewal for the Oyster Creek	)	
Nuclear Generating Station)	)	
	)	

**CITIZENS' ANSWER OPPOSING AMERGEN'S MOTION FOR SUMMARY
DISPOSITION**

PRELIMINARY STATEMENT

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") oppose the summary disposition motion (the "Motion") filed by AmerGen Energy Co. LLC ("AmerGen") on legal and factual grounds.

The facts show that summary disposition is inappropriate. AmerGen seeks summary disposition even though its own analyses, despite some inconsistency, showed that margins are narrower than 0.064 inches and potential corrosion rates are greater than 0.017 inches per year. The combination of these two facts leads to a conclusion that a measurement frequency of every 4 years is too long, because corrosion in excess of the margin could occur in less than 4 years.

For the purposes of summary disposition, the facts must be construed in favor of Citizens. Thus, these two facts alone indicate that summary disposition is inappropriate at this time.

In addition, as a matter of law, summary disposition is also unavailable to AmerGen based on its pleadings. Where there is a clash of expert opinion, summary disposition is only possible where one expert's opinion is so flawed that it would be inadmissible at trial. Here, AmerGen has failed to show that the opinions of Citizens' expert are flawed. It has also proffered an affidavit regarding acceptance criteria and available margin that is contradicted by documents in the record that were written by the affiant. At this stage, AmerGen's testimony on these issues should therefore be disregarded as unreliable. Because AmerGen has failed to present any other testimony regarding the available margin, as a matter of law it has failed to meet its burden to show that there are no open issues for adjudication.

In fact, discovery in this proceeding has confirmed that there are currently four main open issues for adjudication: i) what are the acceptance criteria that must be met by the thickness results from the ultrasonic ("UT") testing in the sandbed region of the drywell shell at the Oyster Creek Nuclear Generating Station ("Oyster Creek") ii) when the results from the UT testing are compared to the acceptance criteria, what is the minimum margin iii) how fast could corrosion occur between inspections; and iv) what frequency of UT testing is required to ensure that required safety margins would be maintained during any extended license renewal period. AmerGen's inconsistent statements and methods mean that there are open issues concerning all of the above. In addition, the latest opinion from Citizens' expert shows that AmerGen has incorrectly claimed that a small number of measurements from the interior of the sandbed represent the behavior of the entire region. Careful analysis of the data actually shows that these

measurements actually tend to overestimate the average thickness of the sandbed region. Thus, margin calculations regarding the average thickness cannot use the interior measurements alone.

When Citizens proffered the contention, they alleged that the margin could be as low as 0.026 inches. AmerGen continues to allege that the margin is 0.064 inches. Citizens have now compared the latest results with the latest acceptance criteria for average thickness, the thickness of local areas that are less than 0.736 inches thick, and the thickness of very localized areas. For average thickness the known margin at 95% confidence is 0.044 inches or less, because the uncertainty in the mean thickness measurement is plus or minus 0.02 inches at 95% confidence and these measurements may overestimate the average thickness. Furthermore, using the latest external thickness measurements in Bay 11, Citizens currently estimate the minimum margin compared to the average thickness acceptance criterion is only 0.014 inches at 95% confidence. For small areas that are greater than around two inches in diameter, but less than 12 inches by 12 inches, the current margin is highly uncertain, but may already be less than zero. For very localized areas that are than around two inches in diameter or less, the known margin at 95% confidence may also be less than zero, depending the statistical approach taken to estimate the thinnest point on the drywell shell.

The potential future corrosion rate in case of corrosive conditions occurring is also poorly defined, but Citizens' expert estimated that it could be around 0.017 inches per year, while AmerGen's expert has assumed it could be as high as 0.039 inches per year. Thus, assuming that AmerGen can establish some margin, the appropriate monitoring frequency could be more than once per year. The current proposed monitoring frequency is once every four years. Thus, the contention alleging that monitoring frequency is inadequate cannot be dismissed summarily.

With regard to the corrosion rate, AmerGen states that the 2006 results show that corrosion at 0.017 inches per year has not been occurring. That is irrelevant because Citizens did not state that corrosion had been occurring at that rate. Instead, Citizens asserted that corrosive conditions could occur between inspections during any extended licensed period of operation because the protective coating is at or close to the end of its life and water could be present. AmerGen has neither denied that corrosive conditions could occur in the future, nor that corrosion could occur at a significant rate under such conditions. Thus, AmerGen has failed to show that the potential for significant future corrosion is not an issue.

The required monitoring frequency is a function of the available margin and the potential corrosion rate. The combination of open issues regarding the acceptance criteria, the available margins and the corrosion rate mean that the contention, which concerns appropriate monitoring frequency, cannot be dismissed through summary disposition. Instead these issues must be adjudicated through a hearing or, at minimum, clarified through further document disclosure and discussion between the parties.

STATEMENT OF FACTS

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, does not corrode 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 the inability to contain products from a nuclear accident and, under certain circumstances, could even initiate a nuclear accident.

II. Specific Factual Issues Already Decided By The ASLB

Citizens already demonstrated a basis for their initial contention about the lack of adequate UT testing. As recognized by the ASLB in its decision admitting the initial contention, Citizens had ample basis for the following points:

- i) water could intrude into the sand bed region in the future, leading to corrosive conditions on the outside of the drywell shell, LBP-06-07 at 36;
- ii) the epoxy coating that was applied to protect the sand bed is now beyond its rated life and may be deteriorating, id. at 31, 36;
- iii) corrosion could occur even if the epoxy coating had not visibly deteriorated, id. at 36-37

In the decision admitting the current contention the Board reaffirmed its findings, stating that the existence of a corrosive environment was a possibility. LBP-06-22 at 15.

III. Factual Errors Made By AmerGen

In the Motion and the affidavits AmerGen makes a number of factual errors about the acceptance criteria, the remaining margins, and Citizens' statement about corrosion rates. This Section details these errors and thereby illustrates that many of the "facts" asserted by AmerGen are in dispute.

A. The Local Area Acceptance Criterion Is In Dispute

With regard to the acceptance criteria, AmerGen alleges that the "local area average thickness" criterion is 0.536 inches for a 1 square foot area, but the total area that can be thinner than 0.736 inches is *nine square feet*. Affidavit of Peter Tamburro, dated March 26, 2007 ("Tamburro Aff.") at ¶¶ 20, 22, 23 (emphasis added). However, NRC Staff in the Safety Evaluation Report ("SER") quote AmerGen stating that the local acceptance criterion "can be applied to small areas (less than 12" by 12") which are less than 0.736" thick so long as the small 12" by 12" area is at least 0.536 inches thick." Oyster Creek SER, 4-56 (March 2007)

(emphasis added). In March of 2006, Mr. Tamburro himself wrote that “the Local Wall Acceptance Criteria . . . is applicable for area up to 12 x 12.” Citizens’ Ex. ANC 8 at 2 (emphasis added). Furthermore, AmerGen also stated that areas corroded to less than 0.736 inches in thickness “could be contiguous, provided their total area did not exceed *one square foot*” and their average thickness was greater than 0.536 inches. E-mail to NRC Staff dated April 5, 2006, Ex. NC 1 at 10 (available at ML060960563) (emphasis added). Thus, in contrast to Mr. Tamburro’s Affidavit, AmerGen’s statements, and those of the affiant himself, directly contradict the proffered affidavit and state that the local acceptance criterion only applies to small areas that are less than one square feet in area.

Given these various statements, it is therefore hardly surprising that Dr. Hausler concluded that the local area acceptance criterion meant that contiguous areas that are thinner than 0.736 inches should be less than one square foot in area. This belief was buttressed by AmerGen documents which actually purported to show that the area thinner than 0.736 inches, but thicker than 0.536 inches, was 0.68 sq. ft, and thus less than one square foot. Citizens’ Ex. NC 1 at 10.

The latest calculations detailing how the UT measurements have been accepted show that since Citizens made their contention the local area acceptance criterion has become more stringent. In mid-2006, AmerGen applied a local thickness criterion of 0.636 inches to areas that are less than 12 inches square. AmerGen Ex. 3 attached to Answer dated March 5, 2006 (“1992 Acceptance Report”) at 5. Most recently, in December 2006, AmerGen applied the following local acceptance criterion: “if an area is thinner than 0.736” thick, then that area shall be greater than 0.693 inches thick and shall be no larger than 6” by 6” wide.” Calculation C-1302-187-E310-041, Ex. SJA 1, at 11. This is considerably more stringent than the criterion put forward

by Dr. Hausler (and used previously by AmerGen) at the time Citizens proffered the admitted contention. This more stringent formulation of the local acceptance criterion provides further support for the contention because the margins calculated using this more stringent criterion will inevitably be narrower than previously estimated.

Instead of discussing the various approaches that it has actually used to determine whether the 2006 UT results are acceptable, AmerGen has stated that the total allowable area that is thinner than 0.736 inches is nine square feet. Tamburro Aff. at ¶¶ 20-23. As shown above, AmerGen's own documents contradict this assertion. Further, even if AmerGen had actually used such a criterion, it could not be justified. A uniform thickness of 0.736 inches is believed by AmerGen to exactly satisfy the ASME criteria. Citizens' Ex. ANC 2 at 6-9; Tamburro Aff. at ¶ 17. In addition, as Mr. Tamburro himself noted, when a nine square foot area thinner than 0.736 inches was modeled by General Electric, the safety factor decreased by 9.5%. Citizens' Ex. ANC 8 at 2. Thus, AmerGen cannot show that a nine square foot area thinner than 0.736 inches would meet the ASME code, because when the average thickness is close to 0.736 inches, as is currently found, the localized thickness reduction could cause the shell to fail the ASME code requirements. This appears to have been one of Mr. Tamburro's concerns when he authored ANC 8 in March, 2006. From the timing, it appears that the local acceptance criterion has become more stringent over the last year in response to these concerns. It is therefore not surprising that Mr. Tamburro's affidavit fails to give any examples of actual use of the purported local area acceptance criterion of nine square feet thinner than 0.736 inches. This is because this purported criterion has never been applied in practice. Instead, this more lax version of the local area acceptance criterion appears to have been concocted solely for this litigation.

In summary, AmerGen's own documents indicate that Mr. Tamburro is incorrect in his assertions about the local area acceptance criterion. Although AmerGen claims that Dr. Hausler was mistaken about the local acceptance criterion, Tamburro Aff. at ¶¶ 21-22, some of AmerGen's documents indicate that Dr. Hausler was correct and others show that the applied criterion is now actually more stringent than before. Thus, one issue that requires adjudication or, at minimum, further document disclosure, is the proper statement of the local area acceptance criterion.

B. The Measurements For Evaluation Against The Acceptance Criteria Are In Dispute

In addition to the dispute about the correct local acceptance criterion to use, Citizens have raised many factual issues with the way in which the margins have been calculated. In evaluating the 1992 external results, instead of using the actual measurements, AmerGen used an adjusted result based on some casts that had been taken of the dimples in the external drywell surface. *E.g.* 1992 Acceptance Report at 33-39. At the thinnest location measured, this procedure changed the evaluation thickness from 0.618 inches, which is what was measured by UT, to 0.673 inches. *Id.* at 39. The report further stated that this thickness "could conservatively exist over an area of 6 x 6 inches." *Id.* at 36.

Dr. Hausler examined this procedure in detail in his memorandum dated June 23, 2006 ("Hausler June Memo"), which supported the contention. Dr. Hausler found the procedure to be "highly arbitrary" and opined that it masked the full extent of the corrosion. Hausler June Memo at 14. Indeed, even AmerGen appears to have realized that the procedure used by AmerGen for the 1992 results is not justified because the acceptance report for the 2006 results does not utilize the approach used in 1992. Calculation C-1302-187-E310-041.

Furthermore, AmerGen misreported the 2006 external measurements. AmerGen has stated that the areas that were not measured were thicker than the areas that were measured externally. Transcript from January 18, 2007 ACRS meeting at 201. Indeed, by design, the 1992 measurements were supposed to be taken at the thinnest points. Calculation C-1302-187-E310-041, Ex. SJA 1 at 48. Unfortunately, because the locations of the points measured in 1992 were not marked on the coating, the exact locations could not be repeated. Ex. SJA 1 at 48; *see also* Ex. SJA 2 Attachment 4 at 8 (some locations not found). However, the results for 2006, show that at some points in Bays 7, 15, 17 and 19 AmerGen scanned a 0.25 inch area around the nominal location of the point. Ex. SJA 2 Attachment 4 at 8, 16, 18, 20. Strikingly, in Bay 15, the reported results were actually the maximum readings obtained. In this Bay, the minimum readings were as much as 0.068 inches less than the recorded value. *Id.* at 16. Similarly, in Bay 19 the recorded results were up to 0.07 inches more than the minimum measured value. *Id.* at 20. AmerGen Ex. 4 at 5-1.

According to AmerGen's own consultant, scanning a small area around an uncertainly located point can help reduce locational uncertainty, if the minimum or average reading is systematically reported. AmerGen Ex. 4 at 5-1. In this case, because the objective was to find minimum values, AmerGen should have reported the minimum reading obtained in 2006 as the measurement for evaluation and marked that point as the baseline. Its failure to do so means that the statistical evaluation of whether ongoing corrosion was occurring was compromised, because the 2006 results were overstated. Furthermore, margin calculations based on the overstated results are incorrect.

C. Margins Are Less Than 0.021 Inches

AmerGen asserts that the minimum margin is 0.064 inches, calculated by subtracting the average of the measurements taken from the 6 inch by 6 inch grid in Bay 19 from the 0.736

inches acceptance criterion for the average thickness. Tamburro Aff. at 6. However, this statement is inconsistent with AmerGen's own documents. The minimum margin compared to the average thickness criterion evaluated by AmerGen to date was actually taken from the external results in Bay 11 in 1992. This showed a mean thickness of 0.792 inches, 1992 Acceptance Report at 5, 30, yielding a margin of 0.056 inches. Using the latest results taken in Bay 11, that average has now decreased to 0.783 inches. *See* Ex. SJA 2 Attachment 4 page 12. Thus, if AmerGen had determined the acceptability of the latest external results using the approach that it used in September of 2006 to evaluate the 1992 results, it would have found the minimum margin to be 0.047 inches. Furthermore, the mean of the minimum data measured at each point in Bay 15 is 0.768 inches, yielding a minimum margin of 0.032 inches. Thus, AmerGen has failed to accurately describe the results of its own calculations and has inconsistently applied the acceptance criteria to the external data.

In addition, these margin calculations above are overly simplistic, because they take no account of the uncertainty of the measurements. Looking first at the mean data gathered from the 49-point grids, AmerGen has admitted that it must take account of the variance of the means of these data, SER at 4-55, but it has failed to so do for the most part. One exception is that in taking account of the variability of the mean of the measured data in the trenches, AmerGen subtracted 0.02 inches before it compared the mean to the acceptance criterion. *See e.g.* Ex. SJA 2 at 8.

Taking a more rigorous account of the variance of the means requires explicit consideration of the number of measurements available. For the data from the interior grid at location 19A, which AmerGen used to claim that the margin is 0.064 inches, the standard deviation is around 0.06 inches, SJA 1 at 50, giving rise to a standard deviation in the mean of

around 0.01 inches, because 49 points were used to calculate the mean. Thus, even if the grids were representative of the surface of each bay, which close analysis shows they are not, around 0.02 inches should be subtracted from any margin obtained to take account of the uncertainty in the determination of the mean thickness based on so few points. Thus, at best, the Bay 19 grid data quoted by AmerGen as the basis for its estimate of minimum margin could only show that the margin in that Bay is greater 0.044 inches at 95% confidence.

Unfortunately, as Dr. Hausler shows comprehensively, the grids measured from the interior are not representative of the mean surface and may overestimate the mean thickness. Hausler Aff. at 3-5. Therefore, it is essential to look at the external data in addition to the grids. For the external data, provided a genuine effort is used to find the points of minimum thickness and use those as the basis for the analysis, using the lower 95th percentile of the minimum points is very conservative. However, no such effort was made in 2006. Therefore, Dr Hausler believes that it is prudent to consider the 95th percentile intervals of the means of the external data. Hausler Aff. at 5. Applying this method requires derivation of the uncertainty in the means of the external data. In Bay 11, the standard deviation of the data is 0.048 inches. Because eight points were measured, the standard deviation of the mean is 0.017 inches. Therefore, the lower 95% confidence limit for the mean thickness is 0.750 inches. Thus, the 2006 external UT data show that the average thickness margin in Bay 11 is 0.014 inches with 95% confidence. More dramatically, in Bay 15, the lower 95th percentile of the mean of the corrected data is 0.731 inches, which is below the acceptable limit of 0.736 inches.

Turning to the local area criterion, the most recent formulation requires areas that are thinner than 0.736 inches to be thicker than 0.693 inches and smaller than 6 inches by 6 inches. In 1992, the thinnest area measured was 0.618 inches, which AmerGen stated could extend over

a 6 inch by 6 inch area. AmerGen Ex. 3 at 36. Even the “corrected” result, which was evaluated against the old local area criterion, was given as 0.673 inches. *Id.* Thus, if AmerGen compared the 1992 results to the current local area criterion, it appears that it would be violated.

The 2006 results are even worse. The thickness in the same location measured in 1992 as 0.618 inches was measured in 2006 as 0.602 inches. Ex. SJA 2, Attachment 4 at 14. However, it appears that in contrast to the approach taken in September of 2006 with regard to the acceptance of the external results from 1992, AmerGen did not compare the 2006 external results with the local area acceptance criterion. *Compare* AmerGen Ex. 3 at 16-17, 35-36 *with* SJA 1 at 48-49. Citizens are unaware of any justification for this omission.

In addition, the latest results indicate that an area of around 4 square feet in Bay 13 may be thinner than 0.736 inches. Hausler Aff. at 8. This also appears to violate the local acceptance criterion stated in Calculation C-1302-187-E310-041. Ex. SJA 1 at 11. Once again, it remains unclear how AmerGen decided to accept these results.

Similarly, in Bay 1 AmerGen previously calculated that a 4 inch by 4 inch area had an average thickness of 0.692 inches. AmerGen Ex. 3 at 17; Ex. NC 3 at 9. Depending on the thickness of the 2 inch strip surrounding this 4 by 4 area, this zone may just have met the latest statement of the local area acceptance criterion in 1992. However, the 2006 results were around 0.02 inches thinner on average than the 1996 results. *See* Ex. SJA 2, Attachment 4 at 2. Thus, it is quite possible that this area has already expanded to 6 inches by 6 inches or larger. While the exact margin is unknown, it is clear that the margin compared to the local acceptance criterion must be at best extremely narrow, but that it has not been estimated by AmerGen.

In summary, since Citizens filed their contention, the local area acceptance criterion has become more stringent, while the measured thickness has decreased. Thus, the latest reports and

results confirm that, at best, margins are razor thin and are less than the 0.021 inches which Citizens calculated when they proffered the contention. In contrast, AmerGen has not produced any new justification for its long disputed assertion that the margin is actually 0.064 inches.

D. There Is Potential For Significant Future Corrosion

AmerGen is being inconsistent about the potential for future corrosion. In the latest acceptance report for the 2006 external data, AmerGen compared the points measured in 1992 with those measured in 2006. It found that the largest apparent corrosion rate was 0.034 inches per year. Ex. SJA 1 at 49. It then calculated that at this rate the thinnest measured point would be 0.515 inches thick in 2008. *Id.* It therefore decided to take another round of external measurements in 2008.¹ *Id.*

In contrast, solely for the purpose of this litigation, AmerGen has alleged that a corrosion rate of 0.017 inches could not occur in the future. Tamburro Aff. at ¶ 38. However, this is inconsistent with the recommendation of Mr. Tamburro in Calculation C-1302-187-E310-041 which stated that another round of external UT measurements is prudent within 2 years to “provide additional data.” Ex. SJA 1 at 49.

While AmerGen’s experts reasonably show that corrosion at a rate of 0.017 inches per year has not occurred over large areas of the drywell shell between 1992 and 2006, they do not state that such a rate could not occur if the protective coating fails. They also fail to mention that NRC staff has admitted that it is possible that some corrosion could occur from the inside. SER

¹ In fact, inspection of the results shows that the thinnest measurement at this location was 0.663 inches, not the 0.681 inches reported. Using the thinnest point measured at this location, as was apparently done in 1992, would therefore yield a corrosion rate of 0.04 inches per year. Applying this rate and a single point uncertainty of 0.04 inches to the thinnest measured result in Bay 13 of 0.602 inches would mean that the very acceptance criterion for areas of less than 2 inches in diameter could be violated in just under 2 years.

at 4-51. Indeed, it was this possibility that led AmerGen to commit to further external UT monitoring in 2008. *Id.* at 3-138.

To illustrate the potential for corrosion from the outside, using a set of assumptions that included a corrosion rate of 0.039 inches per year, Mr. Gordon estimated that if the coating failed and moisture got to the metal surface, metal loss could be up to 0.042 inches in the 56 weeks following an outage. Affidavit of Barry Gordon, dated March 26 2007 at ¶ 18. Thus, Mr. Gordon appears to believe that additional corrosion at an appreciable rate could occur if the coating fails and wet conditions are present. This concurs with Citizens' belief. The difference is that because Citizens believe that the margins are, at best, less than 0.042 inches, Citizens conclude that a monitoring frequency of every 4 years is too long. Indeed, even if Mr. Tamburro were correct that the minimum margin is 0.064 inches, a possibility that 0.042 inches could be lost each outage if coating decay commences would still indicate that monitoring should be undertaken every outage.

Mr. Cavallo in his affidavit does not dispute that deterioration of the coating could occur, indeed he admits that it is possible that repair of the coating might be necessary at some point. Affidavit of Jon R. Cavallo, dated March 26, 2007 at ¶ 22. He also states that the inspection frequency is once every four years. *Id.* at ¶ 20. In addition, Citizens have previously alleged that enough moisture to cause corrosion could be present at the surface of the drywell shell without water running in the drains. Finally, AmerGen has never been able to definitively trace the source of all the water in the drywell to the refueling cavity and has admitted that it has not yet been able devise a way to ensure that the refueling cavity does not leak. Transcript from ACRS Meeting on Feb. 1, 2007 at 217-222. In addition to the refueling cavity, water on the exterior of

the drywell could come from condensation during an outage and from the equipment pool. Thus, AmerGen has not ruled out the possibility of corrosion developing between inspections.

ARGUMENT

I. Legal Standards For Summary Disposition

Summary disposition is only possible “if the filings in the proceeding, depositions, answers to interrogatories and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and the moving party is entitled to a decision as a matter of law.” 10 C.F.R. §§ 2.1205(c), 2.710(d)(2). Prior NRC opinion has held that summary disposition motions under 10 C.F.R. § 2.749 (the equivalent rule prior to the revision of 2004) should be evaluated under the same standards as motions made under Federal Rules of Civil Procedure, Rule 56. *Advanced Med. Sys., Inc.*, CLI-93-22, 38 N.R.C. 98, 102 (1993).

Under this rule, the moving party bears the burden of proving the absence of a genuine issue of material fact. *Adickes v. Kress & Co.*, 398 U.S. 144, 157 (1970). Because the burden of proof is on the movant, the evidence submitted “must be viewed in the light most favorable to the opposing party.” *Id.* Where a moving party shows a lack of a material dispute, the party opposing summary disposition must respond by setting forth specific facts showing there is a genuine issue. 10 C.F.R. § 2.710(b). A genuine issue is one in which “the factual record, considered in its entirety, must be enough in doubt so that there is a reason to hold a hearing to resolve the issue.” *Cleveland Elec. Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), LBP-83-46, 18 N.R.C. 218, 223 (1983).

Generally, under Rule 56, summary dispositions may not rest on credibility determinations. *Leonard v. Dixie Well Service and Supply, Inc.*, 828 F. 2d 291, 294 (5th Cir. 1987). Thus, conflicting opinions from experts generally preclude summary disposition.

However, such a conflict may be illusory, if the opinion of one expert would not be admissible at trial. Therefore, if the opinions of two experts appear to conflict with each other and there is no dispute that could be raised without the expert testimony, Federal Rule of Evidence 702 may be used to help decide whether summary disposition is appropriate. *Duke Cogema Stone & Webster (Savanna River Mixed Oxide Fuel Fabrication Facility)*, LBP-05-04, 61 N.R.C. 71, 80-81, (2005) (“DCS”). This rule permits a witness, qualified as an expert, to testify to assist the trier of fact to understand the evidence if 1) the testimony is based upon sufficient facts or data, 2) the testimony is the product of reliable principles and methods, and 3) the witness has applied the principles and methods reliably to the facts of the case. Fed. R. Evid. 702.

Generally, testimony that is based on a “reliable foundation and is relevant to the task at hand” will be admitted. *Daubert v. Merrill Dow Pharm.*, 509 U.S. 579, 597 (1973). Evidence based upon “scientifically valid principles” will meet this burden. *Id.* Federal courts have applied Rule 702 liberally, favoring the admission of expert testimony to assist the trier of fact. DCS at 15, citing *Kannankeril v. Terminix Int’l*, 128 F. 3d 802, 806 (3rd Cir. 1997).

Thus, where there are material disputes based on sound expert opinion summary disposition is unavailable as the Commission has stated:

Where there is disagreement among competing experts over material facts, summary judgment may not be appropriate if it would require the trier of fact to untangle the expert affidavits and decide which experts are more correct. In that case, a hearing, if permitted by the applicable procedures, is the appropriate forum for the trier of fact to weigh the competing expert opinions on material facts.

DCS at 15; *see also Schering Corp v. Geneva Pharm.* 339 F. 3d 1373, 1377 (Fed. Cir. 2003) *citing Continental Can v. Monsanto*, 948 F. 2d 1264, 1269 (Fed. Cir. 1991) (resolution of disputed fact requiring expert opinion is improper on summary judgment); *Spirit Airlines v. Northwest*, 431 F. 3d 917, 931 (6th Cir. 2005) (“Our precedents hold that if the opposing party’s

expert provides a reliable and reasonable opinion with factual support, summary judgment is inappropriate.”); *Scharf v. U.S. Atty Gen.*, 597 F. 2d 1240, 1243 (9th Cir. 1979) (“The affidavit in support of this theory was hardly convincing, but it required the court to resolve an issue of fact based on conflicting expert testimony. This is not the court’s function on summary judgment.”); *Sierra v. El Paso Gold Mines*, 421 F. 3d 1133, 1150 (10th Cir. 2005) (“There is a genuine issue of material fact regarding the source of pollutants discharged at the portal, and summary judgment was not appropriate.”)

As discussed in more detail below, summary disposition at this stage is inappropriate because AmerGen’s motion for summary disposition does not meet the movant’s burden to show that there are no material issues in dispute. Moreover, the contention was supported by the record and by Dr. Rudolf Hausler’s affidavit, which was based upon the facts in the record and use scientifically valid methods to assess the evidence available. Since the contention was admitted, the evidence showing that the contention raised multiple genuine disputes of material fact has only increased.

II. Summary Disposition Is Inappropriate As A Matter Of Law

AmerGen, as the moving party, bears the burden of proving that there is no genuine issue of material fact, even when the facts are viewed in the light most favorable to Citizens. *Adickes v. Kress & Co.*, 398 U.S. 144, 157 (1970). It has failed to do so. This contention was admitted by the ALSB because sufficiently reliable evidence was presented in the form of references to the record and an expert affidavit to prove that genuine disputes of material facts existed. *Memorandum and Order*, ASLB, LBP-06-07, Feb. 27, 2006 and *Memorandum and Order*, ASLB, LBP-06-22, Oct. 10, 2006. Although AmerGen attempted to proffer new facts concerning the local area acceptance criterion and the potential for future corrosion, its assertions about the formed are contradicted by the record, while its critical assertion about the latter was

made by someone who is not qualified to provide an expert opinion on the issue, was unsupported by the record, and contradicted AmerGen's other experts. Thus, AmerGen's current motion does not contain sufficient new information to eliminate the need for a hearing and to allow the contention to be adjudicated by summary disposition.

In particular, AmerGen relies upon the affidavit of Mr. Peter Tamburro to attempt to show that there is no material dispute regarding the current margin available. However, his affidavit is inadequate for this purpose because, as shown in detail in the Statement of Facts, pp 5-7, Mr. Tamburro's testimony regarding the local area acceptance criterion is contradicted by the record.

Furthermore, AmerGen relies upon Mr. Tamburro's affidavit to assert that a corrosion rate of 0.017 inches could not occur in the future, Tamburro Aff. at ¶ 38, but Mr. Tamburro's opinion regarding future corrosion rates is not admissible because AmerGen has failed to show that Mr. Tamburro is a corrosion expert. He cannot therefore offer hypothetical opinions about future corrosion. Moreover, Mr. Tamburro's opinion in this regard is inconsistent with the documents he has prepared that are in the record. While he denies that a corrosion rate of 0.017 inches is possible, he asserts that another round of external UT measurements would be prudent within two years to "provide additional data," because he calculated that the maximum localized historic corrosion rate was 0.0335 inches per year. Ex. SJA 1 at 49.

In contrast to Mr. Tamburro, AmerGen's corrosion experts, Mr. Barry Gordon and Mr. Jon R. Cavallo, fail to foreclose the potential for future corrosion. Mr. Gordon estimated that if the external coating failed and moisture reached the metal surface, metal loss could be up to 0.042 inches in 56 weeks. Affidavit of Barry Gordon, dated Mar. 26, 2007 at ¶ 18. Thus, Mr. Gordon's opinion admits the possibility of additional corrosion at an appreciable rate.

Mr. Cavallo also admits that deterioration of the outer coating could occur and that repair of the coating might be required in the future. Affidavit of Jon R. Cavallo, dated Mar. 26, 2007 at ¶ 22. Mr. Cavallo also admits that the current inspection frequency is once every four years. Id. at ¶ 20.

In conclusion, summary disposition is inappropriate as a matter of law. Even without any new opinion from Dr. Hausler, summary disposition would be inappropriate because the Board has already decided that Citizens have properly raised the contention and AmerGen has not shown that Dr. Hausler's opinion in support of the contention is no longer supported by the record. Thus, AmerGen's argument for summary disposition does not even properly allege that there are no genuine material issues to be adjudicated.

In particular, AmerGen has failed to produce any admissible testimony to explain why it has selected the current monitoring frequency of every four years and AmerGen has also failed to properly address the issues of the local acceptance criterion and the potential corrosion rate. Instead of clarifying the inconsistencies in the record concerning the local area acceptance criterion, AmerGen has actually added to the dispute by proffering a version of this criterion that is contradicted by the record. Without resolving this dispute, it is impossible to calculate the current margin.

Furthermore, while only one of AmerGen's affiants, Mr. Tamburro, attempted to raise a dispute with Dr. Hausler regarding the potential future corrosion rate under corrosive conditions, his opinion on this issue failed to provide any support and was outside the scope of his expertise. In contrast, Mr. Gordon and Mr. Cavallo, AmerGen's other experts, failed to foreclose the possibility that significant corrosion could occur between inspections. Indeed, AmerGen's decision to put in place an ongoing monitoring program illustrates that it also believes that future

corrosion could occur. Thus, as a matter of law, AmerGen has failed to meet its burden to show that corrosion to beyond safety requirements could not occur within the 4 year interval between inspections. Therefore, the Atomic Safety and Licensing Board ("ASLB" or "Board") should dismiss AmerGen's motion for summary disposition as inadequate as a matter of law.

III. The Contention Continues To Be Soundly Based On The Record And The Opinions of Dr. Hausler

Having shown that AmerGen has failed even properly allege a lack of material dispute, this Section shows that the evidence supporting the contention has in fact strengthened during this proceeding. Thus, even if AmerGen had met its burden of properly alleging a lack of material dispute, AmerGen's motion for summary disposition would still need to be dismissed because the material disputes that the Board identified when it admitted the contention have not been resolved. Citizens' assertions about the disputed issues continue to be soundly based on the record in this proceeding and on the opinions of Dr. Rudolf H. Hausler.

The ASLB in its opinions admitting the contention currently in dispute and the previous admitted contention, accepted Dr. Hausler as a qualified expert. (See *Memorandum and Order*, ASLB, LBP-06-07, p. 44, FN 33, Feb. 27, 2006 and *Memorandum and Order*, ASLB, LBP-06-22, p. 21, FN 14, Oct. 10, 2006). In admitting the contentions, the Board found Dr. Hausler's opinions to be sufficiently reliable and supported by the record. Thus, there is now no question about his qualifications and it is clear that his memoranda were based squarely on the record.

The only way in which AmerGen could obtain summary judgment at this time would be to show that further discovery has shown that the factual support previously offered for the contention has become inadequate. This Answer and Dr. Hausler's new opinion provide specific citations to the record illustrating that far from contradicting the opinions contained in Dr. Hausler's June 23, 2006, Memorandum, the additional discovery shows that that opinion was

entirely reasonable and reliable, and the contention continues to be fully supported by the record and Dr. Hausler's opinion.

In fact, as discussed on pp 5-12 above, far from weakening the factual foundations of the contention, further discovery has actually strengthened its basis. Since Citizens filed their motion to add the current contention, AmerGen has made the local area acceptance criterion more stringent. In addition, the latest results, taken in October 2006, show that the drywell shell is now thinner than the 1992 measurements indicated. Thus, margins are now even narrower than they were when Citizens filed the contention.

AmerGen's motion for summary disposition actually reads more like an attack on the basis of the contention, which is somewhat quixotic, because that basis has already been accepted by the Board and is therefore *res judicata*. The only way that such an approach could be successful is if record evidence had emerged after the contention was admitted that eliminated the original basis. Here, this approach must fail, because the opposite has happened. As the Statement of Facts shows, the record evidence is now even more favorable to Citizens than it was when the contention was admitted. Thus, to be consistent with its prior decision to admit the contention, this Board must dismiss the Motion for Summary Disposition.

IV. Summary Disposition Is Inappropriate Because Many Material Issues Are In Dispute

The Statement of Facts illustrated that many material issues are in dispute. Strangely, instead of showing a lack of material disputes, through its Motion for Summary Disposition AmerGen has actually attempted to create a material dispute about the local area acceptance criterion that must be met by the thickness results from the UT testing in the sandbed region of the drywell. Furthermore, the minimum margin available when the UT testing results are compared to the acceptance criteria remains in dispute, as does the potential extent and rate of

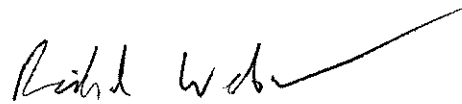
future corrosion. As a consequence, the frequency of UT testing to ensure that the thickness of the drywell does not fall below safety requirements during any extended license renewal period is in dispute. Adding together the potential for corrosion to occur in the future from both the outside and the inside, Citizens continue to assert that a four year interval between UT measurements is too long. If and when Citizens are able to ascertain how AmerGen has computed the margins for all the areas that are thinner than 0.736 inches, but larger than 2 inches in diameter, they will be able to provide a more accurate estimate of the appropriate monitoring frequency.

As the Board has already found, and this pleading further illustrates, Citizens' arguments about these disputes are soundly based upon the record and admissible scientific testimony. On a motion for summary disposition, the Board should view the facts in the light that is most favorable for Citizens. Therefore, as a matter of fact, because there are genuine disputes about many material issues, summary disposition is inappropriate.

CONCLUSION

For the foregoing reasons, the ASLB should dismiss AmerGen's Motion for Summary Disposition.

Respectfully submitted



Richard Webster, Esq
RUTGERS ENVIRONMENTAL LAW
CLINIC
Attorneys for Citizens

Dated: April 26, 2007

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

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)	)	April 26, 2007
	)	

CERTIFICATE OF SERVICE

I, Karen Hughes, of full age, certify as follows:

1. I am a paralegal at the Rutgers Environmental Law Center (RELC). The RELC represents Citizens in this matter.

2. I hereby certify that on April 26, 2007, I caused Citizens response to a summary disposition to be served via email and U.S. Postal Service on the following:

Secretary of the Commission (Email and original and 2 copies via U.S Postal Service)
United States Nuclear Regulatory Commission
Washington, DC 20555-0001
Attention: Rulemaking and Adjudications Staff
Email: HEARINGDOCKET@NRC.GOV

Administrative Judge
E. Roy Hawkens, Chair (Email and U.S. Postal Service)
Atomic Safety and Licensing Board Panel
Mail Stop – T-3 F23
United States Nuclear Regulatory Commission
Washington, DC 20555-0001
Email: erh@nrc.gov

Administrative Judge
Dr. Paul B. Abramson (Email and U.S. Postal Service)
Atomic Safety and Licensing Board Panel
Mail Stop – T-3 F23
United States Nuclear Regulatory Commission
Washington, DC 20555-0001
Email: pba@nrc.gov

Administrative Judge
Dr. Anthony J. Baratta (Email and U.S. Postal Service)
Atomic Safety and Licensing Board Panel
Mail Stop – T-3 F23
United States Nuclear Regulatory Commission
Washington, DC 20555-0001
Email: ajb5@nrc.gov

Law Clerk
Debra Wolf (Email and U.S. Postal Service)
Atomic Safety & Licensing Board Panel
Mail Stop – T-3 F23
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
DAW1@nrc.gov

Office of General Counsel (Email and U.S. Postal Service)
United States Nuclear Regulatory Commission
Washington, DC 20555-0001
Email : OGCMAILCENTER@NRC.GOV

Mitzi Young (Email and U.S. Postal Service)
U.S. Nuclear Regulatory Commission
Office of the General Counsel
Mail Stop: O-15 D21
Washington, DC 20555-0001
E-mail: may@nrc.gov

Mary C. Batty (Email and U.S. Postal Service)
U.S. Nuclear Regulatory Commission
Office of the General Counsel
Mail Stop: O-15 D21
Washington, DC 20555-0001
E-mail: mcb1@nrc.gov

Alex S. Polonsky, Esq. (Email and U.S. Postal Service)
Morgan, Lewis, & Bockius LLP
1111 Pennsylvania Avenue, NW
Washington, DC 20004
Email: apolonsky@morganlewis.com

Kathryn M. Sutton, Esq. (Email and U.S. Postal Service)
Morgan, Lewis, & Bockius LLP
1111 Pennsylvania Avenue, NW
Washington, DC 20004
Email: ksutton@morganlewis.com

Donald Silverman, Esq. (Email and U.S. Postal Service)
Morgan, Lewis, & Bockius LLP
1111 Pennsylvania Avenue, NW
Washington, DC 20004
Email: dsilverman@morganlewis.com

J. Bradley Fewell (Email and U.S. Postal Service)
Exelon Corporation
200 Exelon Way, Suite 200
Kennett Square, PA 19348
bradley.fewell@exeloncorp.com

John Covino, DAG (Email and U.S. Postal Service)
State of New Jersey
Department of Law and Public Safety
Office of the Attorney General
Hughes Justice Complex
25 West Market Street
P.O. Box 093
Trenton, NJ 08625
E-mail: john.corvino@dol.lps.state.nj.us

Valerie Gray (Email and U.S. Postal Service)
State of New Jersey
Department of Law and Public Safety
Office of the Attorney General
Hughes Justice Complex
25 West Market Street
P.O. Box 093
Trenton, NJ 08625
E-mail: valerie.gray@dol.lps.state.nj.us

Paul Gunter (Email and U.S. Postal Service)
Nuclear Information and Resource Service
6930 Carroll Ave., Suite 340
Takoma Park, MD 20912-4446
Email: pgunter@nirs.org

Edith Gbur (Email)
Jersey Shore Nuclear Watch, Inc.
364 Costa Mesa Drive. Toms River, New Jersey 08757
Email: gburl@comcast.net

Paula Gotsch (Email)
GRAMMIES
205 6th Avenue
Normandy Beach, New Jersey 08723

paulagotsch@verizon.net

Jeff Tittel (Email)
New Jersey Sierra Club
139 West Hanover Street
Trenton New Jersey 08618
Email: Jeff.Tittel@sierraclub.org

Adam Garber (Email)
New Jersey Public Interest Research Group
11 N. Willow St,
Trenton, NJ 08608.
Email: agarber@njpirg.org

Peggy Sturmfels (Email)
New Jersey Environmental Federation
1002 Ocean Avenue
Belmar, New Jersey 07319
Email: psturmfels@cleanwater.org

Michele Donato, Esq. (Email)
PO Box 145
Lavalette, NJ 08735
Email: mdonato@micheledonatoesq.com

Signed: 
Karen Hughes

Dated: April 26, 2007