RAS 14072

RUTGERS ENVIRONMENTAL LAW CLINIC

123 Washington Street
Newark, NJ 07102-3094
Phone: (973) 353-5695

Rutgers, The State University of New Jersey
School of Law - Newark
Fax: (973) 353-5537

August 24, 2007

VIA E-MAIL and U.S. MAIL

Judge E. Roy Hawkens, Chair
Atomic Safety and Licensing Board Panel
Mail Stop – T-3 F23
United States Nuclear Regulatory Commission
Washington, DC 20555-0001

Transmits Confidential Information
Not for Public Disclosure pending release
pursuant to 10 C.F.R. §2.1207(a)(3)

Re: Submittal of Proposed Questions Pursuant to 10 C.F.R. § 2.1207(a)(3) Regarding AmerGen and NRC Staff Initial and Rebuttal Testimony and Filing of Cross Examination Plan and Motion To Cross-Examine And For An Extension; AmerGen Energy Company, LLC (License Renewal Proceeding for Oyster Creek Nuclear Generating Station) Docket No. 50-219

Dear Judge Hawkens:

In accordance with 10 C.F.R. § 2.1207(a)(3), Citizens are submitting the following confidential information:

1. the attached questions for the Board to consider asking AmerGen and NRC staff during the hearing in September. These questions are based on AmerGen and NRC staff initial and rebuttal testimony of July 20, and August 17, 2007, respectively.

2. Cross-examination plan for Peter Tamburro

Citizens are also filing a Motion to Cross-Examine and for An Extension and some minor corrections to the previously submitted rebuttal testimony.

Respectfully Submitted,

Richard Webster

cc: Service List (with copy of nonconfidential information only)

Carter H. Strickland, Jr., Esq.+
Staff Attorney
cstrickland@kinoy.rutgsers.edu

Julia L. Huff, Esq.*+
Staff Attorney
jhuff@kinoy.rutgers.edu

Kathleen J. Shrekgast, Esq.#
Staff Attorney
kshrekgast@kinoy.rutgers.edu

Richard Webster, Esq.+
Staff Attorney
rwebster@kinoy.rutgers.edu

* Admitted in New Jersey Pursuant to 1:21-3(c)
+ Also admitted in New York
# Also admitted in Pennsylvania

Template=SECY-041

SECY-02

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)	)	August 24, 2007
	)	

CERTIFICATE OF SERVICE

I, Richard Webster, of full age, certify as follows:

I hereby certify that on August 24, 2007, I caused Submittal of Proposed Questions Pursuant to 10 C.F.R. § 2.1207(a)(3) Regarding AmerGen and NRC Staff Initial and Rebuttal Testimony and Filing of Cross Examination Plan and Motion To Cross-Examine And For An Extension to be served via email and U.S. Postal Service (as indicated) on the following:

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
E-mail: 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
E-mail: 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
E-mail: 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
E-mail: DAW1@nrc.gov

MOTION ONLY
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
E-mail: HEARINGDOCKET@NRC.GOV

Office of General Counsel (Email and U.S. Postal Service)
United States Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: 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
E-mail: apolonsky@morganlewis.com

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

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

J. Bradley Fewell (Email and U.S. Postal Service)
Exelon Corporation
200 Exelon Way, Suite 200
Kennett Square, PA 19348
E-mail: 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)
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)
c/o Nuclear Information and Resource Service
6930 Carroll Ave., Suite 340
Takoma Park, MD 20912-4446
E-mail: paul@beyondnuclear.org

Edith Gbur (Email)
Jersey Shore Nuclear Watch, Inc.

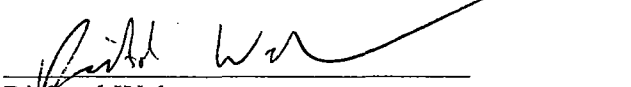
364 Costa Mesa Drive. Toms River, New Jersey 08757
E-mail: gburl@comcast.net

Paula Gotsch (Email)
GRAMMIES
205 6th Avenue
Normandy Beach, New Jersey 08723
E-mail: paulagotsch@verizon.net

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

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

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

Signed: 
Richard Webster

Dated: August 24, 2007

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	)	
	)	August 24, 2007

MOTION TO CROSS-EXAMINE PETER TAMBURRO AND FOR AN EXTENSION OF TIME REGARDING NRC'S ERRATA

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") are filing this motion because the documents authored by Mr. Tamburro are inconsistent with each other and unclear. Furthermore much of a sworn affidavit submitted by Mr. Tamburro on behalf of AmerGen Energy Co. ("AmerGen") was inconsistent with other testimony filed by AmerGen and a document generated by Mr. Tamburro on the same day that he swore the affidavit.

Despite his previously expressed concerns about many issues relating to the safety of the drywell, Mr. Tamburro's inconsistent affidavit enabled AmerGen to use arguments that were, at minimum, misleading in an attempt to induce the Atomic Safety and Licensing Board (the "Board") to

grant summary disposition before it was in possession of critical new information authored by Mr. Tamburro. The critical new information authored by Mr. Tamburro shows that there is a reasonable technical justification for Citizens' position that the margins for the drywell shell are, at best, much smaller than AmerGen has claimed to date. Mr. Tamburro is the crucial fact witness in this case, and it is therefore critical that Citizens be granted an opportunity to learn the truth about his actions and assessments of the drywell. Unless Citizens are able to cross-examine Mr. Tamburro individually, rather than in a panel, it will be impossible to make him explain the inconsistencies. Without individual cross examination, Citizens will be unable to learn whether Mr. Tamburro is actually sure that the drywell shell meets the safety requirements. Thus, Citizens are moving to cross-examine AmerGen's expert, Peter Tamburro under 10 C.F.R. § 2.310(b)(3) in this case.

In addition, Citizens are requesting an extension of the deadline to file motions and questions related to the NRC errata, which was filed after 5 pm on August 23, 2007 (yesterday). Because Citizens' counsel is going on vacation at 4 am tomorrow until Labor Day, Citizens request that the deadline to submit questions and motions relating to the NRC errata be extended to the deadline for the submission of questions and motions regarding sur-rebuttal (September 18, 2007).[1]

ARGUMENT

I. Legal Standard For Granting Cross-Examination

10 C.F.R. § 2.1204(b) authorizes the Board to allow any party to cross-examine a witness when "it is necessary for the development of [an] adequate record for a sound decision or is required for a full and true disclosure of the facts." *In the Matter of Entergy Nuclear Vermont Yankee LLC (Vermont Yankee Nuclear Power Station)*, 60 N.R.C. 686, 689 (2004). The basis for granting a motion to cross-

[1] Citizens have contacted AmerGen and NRC Staff about these motions. Citizens understand that AmerGen objects to the Motion for Cross Examination, but does not object to the motion for an extension. NRC Staff would only agree to an

examine experts "is not restricted to those situations described in 10 C.F.R. § 2.310(d)" relating to credibility of witnesses. *Id.* at 690. Instead, cross-examination under Subpart L is broader and "can encompass any issue that is relevant to the findings of fact that a Board or presiding officer must make in order to render a decision." *Id.* The breadth of this ability to cross-examine witnesses arises out of the fact that the opportunity for cross-examination under Subpart L has been judicially determined to be equivalent to that same opportunity under 5 U.S.C. § 556(d). *See id.* at 710 (citing *CAN v. United States*, No. 04-1145, 2004 WL 2827697 (1st Cir. 2004). In particular, the Board has recognized the appropriateness of supplemental cross-examination in instances where decisions hinge on "expert opinions, technical and scientific facts," recognizing that the Board "is not experts in all disciplines nor as well versed in the nuances of some issues as some of the litigats." *Id.* at 711.

Finally, Commission proceedings are governed by a cardinal rule of fairness that each side must be heard. *Houston Lighting & Power Co.* (Allens Creek Nuclear Gnerating Station, Unit 1), ALAB-565, 10 N.R.C. 521, 524 (1976). It would be unfair to Citizens if AmerGen were able to support its position with a grossly inconsistent witness and effectively deny Citizens the ability to find out why he has been so inconsistent by breaking up questioning on his testimony into a number of witness panels.

II. Peter Tamburro's Documents and Testimony Are Inconsistent With Each Other

AmerGen Ex. 16, authored by Mr. Tamburro in March 2007, but only provided to Citizens on June 1, 2007, revealed that AmerGen's own assessment shows that there is, at minimum, a reasonable technical argument that the assured remaining margin in the drywell is 0.022 inches or less. This directly contradicts an affidavit sworn by Mr. Tamburro, which was submitted by AmerGen in support of summary disposition. In addition, Citizens Ex. 3, also authored by Mr. Tamburro, shows that he had

---

extension to August 31, which not have allowed Citizens' counsel to deal with the matter. Thus NRC Staff object to the motion for an extension, but expressed no position on the motion for cross-examination.

serious concerns about the safety justification for the drywell shell, which he subsequently decided to overlook. Because Citizens and the Board need to understand the motivation behind Mr. Tamburro's changes in position and inconsistent testimony, and such understanding will be impossible to obtain if Mr. Tamburro provides his evidence as a member of a number of witness panels, Citizens respectfully request the opportunity to cross-examine Peter Tamburro individually pursuant to 10 C.F.R. § 2.1204(b).

A. Mr. Tamburro's Assessment Of 2006 External Results Supported Citizens' Arguments That Margins Were Less Than 0.021 Inches

On June 1, 2007, Citizens received from AmerGen a copy of C-1302-187-5320-24 revision 2, AmerGen Ex. 16. Mr. Tamburro prepared this document on March 26, 2007. This document assesses whether the external UT results taken in October 2006 comply with the current licensing basis of the plant. On page 5 it contains a helpful summary table which shows the various acceptance criteria and the actual thickness for each bay. For the local buckling criterion, the table shows that in Bay 13, Mr. Tamburro assessed the limiting local thickness as 0.658 inches, compared to an acceptance criterion of 0.636 inches. *Id.* at 5. Thus, the derived margin was, at least arguably, 0.022 inches. Similarly, in Bay 17, Mr. Tamburro found the limiting local thickness to be 0.663 inches, *id.*, yielding a margin of 0.027 inches.

Considering the document in greater detail, it states that the local wall criteria for buckling requires that the 12 inch by 12 inch center of a 36 inch by 36 inch evaluation area must be 0.636 inches thick or greater. *Id.* at 10. It also requires that the area within the evaluation area surrounding the center square must be "on average thicker than the transition from 0.636" to 0.736." " *Id.*

The evaluation of the surrounding area for Bay 1, illustrated graphically that the margins are extremely narrow. *Id.* at Figure 1-5. Reading from the graph, the margin shown is of the order of

0.005 inches to 0.01 inches. *Id.* The text also confirms that the thinnest 12 inch by 12 inch area in Bay 13 is 0.658 inches, *id.* at 61, and the thinnest 12 inch by 12 inch area in Bay 17 is 0.663 inches. *Id.* at 83. Thus, the document provides technical support for an argument that the most limiting margins derived from the external results taken in 2006 are between 0.005 inches and 0.027 inches.

B. Mr. Tamburro's Affidavit Contradicts Mr. Tamburro's Assessment Of The 2006 External Results

On the same day that Mr. Tamburro completed his draft of the evaluation of the 2006 external UT results, he also swore an affidavit, which AmerGen submitted as part of its Motion for Summary Disposition. Directly contradicting his evaluation discussed above, Mr. Tabmurro swore that the local acceptance criterion includes a one square foot area that must be greater than 0.536 inches. Affidavit of Peter Tamburro, dated March 26, 2006 ("Tamburro Aff.") at ¶¶ 20, 22, 24. In fact, as discussed above, in the draft evaluation Mr. Tamburro used 0.636 inches as the correct local area acceptance criterion.

Even more seriously, the entire first part of Mr. Tamburro's opinion is that "Citizens Allegation of 0.026" Remaining Margin Is Technically Unsupportable." Tamburro Aff. at 4. Further Mr. Tamburro specifically stated that "Citizens' assertion that the margin above the acceptance criteria is as low as 0.026 inches, therefore, is not supported by the data." *Id.* at ¶ 25. As demonstrated above, Mr. Tamburro's contemporaneous evaluation of the 2006 UT results showed precisely the opposite. There is a technically supportable argument that the data actually showed that the margin above the acceptance criteria was in some instances even lower than 0.026 inches. Far from being technically unsupportable, Citizens' allegation was in fact supported by a document authored by Mr. Tamburro, that was not then in Citizens' possession.

C. Mr. Tamburro Expressed Concerns That He Subsequently Disregarded

In March 2006 Mr. Tamburro authored a memorandum that pointed out many deficiencies in C-1302-187-5320-24 rev. 0, which was "the only safety related calculation that demonstrates that the 1992 as left Drywell Vessel Thicknesses in the former sandbed meets design basis." Citizens' Ex. 3 at 1.

As Citizens pointed out in their initial statement of position, Mr. Tamburro saw the need to either justify that the full cut out trays modeled by GE could be use as a local area acceptance criterion, or revise the acceptance criteria to a more stringent requirement. Citzens' Initial Statement at 6-7. The subsequent revisions to C-1302-187-5320-24 took the route of using more stringent acceptance criteria rather than justifying the 9.5% reduction in buckling strength that the full cut out would cause. *Id.* However, in his testimony to the Board, Mr. Tamburro has stated that the local area acceptance criterion is based on the full cut out, not the revised criteria used in the subsequent revisions to C-1302-187-5320-24. Similarly, Citizens wish to examine Mr. Tabmurro about his concerns relating to other items, including the correction applied to the 1992 external data, and how to decide whether Bays with more than one area that is thinner than 0.736 inches are acceptable.

D. Mr. Tamburro's Assessment Of The 2006 External Data Shows That The Drywell Violates The Acceptance Criteria

Calculation C-1302-187-5320-24 Rev 2, authored by Mr. Tamburro, shows that the acceptance criteria are probably being violated. Citizens Rebuttal Statement at 16. Mr. Tamburro chose to ignore that fact when he authored the document and has continued to maintain that the drywell meets the acceptance criteria. Because the data presentation in calculation C-1302-187-5320-24 Rev 2 is unclear and at times misleading, counsel for Citizens has spent considerable time annotating the document and trying to understand how various figures relate to the underlying data. Citizens respectfully maintain

that the Board would find it very difficult to ask probing questions about this document, simply because it is so unclear. Instead of allowing AmerGen to take advantage of the hinderence produced by Mr. Tamburro's opaque presentation of the data, the Board should allow counsel for Citizens to cross examine Mr. Tamburro on this aspect of his testimony.

III. Cross Examination By Citizens Should Be Permitted

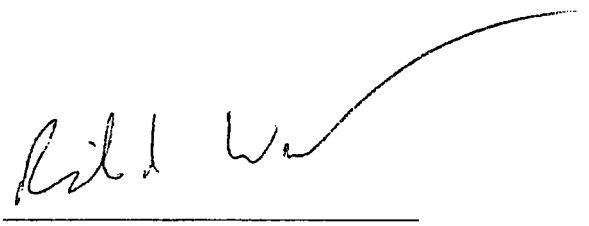
In the case of the testimony of Mr. Tamburro, supplemental cross-examination by Citizens should be allowed, because the inconsistencies in his testimony and the lack of clarity in the documents he has authored do not allow Citizens to offer to the Board a full and complete cross-examination plan that the Board could reasonably be expected to follow. In addition, cross-examination of Mr. Tamburro on the various inconsistencies requires a nuanced understanding of a myriad of documents in the record. Moreover, in the absence of this motion being granted, Citizens' questions for Mr. Tamburro would be divided among three panels. This has two adverse consequences. First, questions about a single document, such as Citizens Ex. 3, would have to be spaced out in time, reducing the intensity of the focus on the document. Second, other witnesses on the panels may seek to prevent Mr. Tamburro from fully expressing his views. For example, Michel Gallagher, who is on panel two with Mr. Tamburro is a vice president of Exelon, while Mr. Tamburro is a senior engineer at Oyster Creek. Thus, because Mr. Gallagher outranks Mr. Tamburro, Mr. Tamburro may feel obliged to follow Mr. Gallagher's lead in responding to certain questions. Thus, without individual cross-examination of Mr. Tamburro by Citizens' counsel, it is unlikely the Board will be able to identify the inconsistencies in Mr. Tamburro's work and effectively probe into Mr. Tamburro's motivation for allowing those inconsistencies to develop and persist. Therefore, in order to develop an adequate record for decision

in this case, Citizens respectfully request that the Board grant this motion to allow Citizens to cross-examine Mr. Tamburro.

CONCLUSION

For all of the forgoing reasons, the ASLB should grant Citizens' motion to cross-examine Mr. Tamburro pursuant to 10 C.F.R. § 2.310(b). In addition, the Board should grant Citizens request that the deadline to submit questions and motions relating to the NRC errata be extended to the deadline for the submission of question sur-rebuttal (September 18, 2007). Furthermore, this Board may grant such further relief as it sees fit.

Respectfully submitted,



Richard Webster, Esq.
RUTGERS ENVIRONMENTAL LAW CLINIC
Attorneys for Citizens

Dated: August 24, 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)	)	August 24, 2007
	)	

CERTIFICATE OF SERVICE

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

I hereby certify that on August 24, 2007, I caused a revised exhibit list, revised exhibit 47, new exhibit 52 and renumbered Hausler testimony to be served via email and U.S. Postal Service (as indicated) 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
E-mail: 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
E-mail: 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
E-mail: 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
E-mail: 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
E-mail: DAW1@nrc.gov

Office of General Counsel (Email and U.S. Postal Service)
United States Nuclear Regulatory Commission
Washington, DC 20555-0001
E-mail: 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
E-mail: apolonsky@morganlewis.com

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

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

J. Bradley Fewell (Email and U.S. Postal Service)
Exelon Corporation
200 Exelon Way, Suite 200
Kennett Square, PA 19348
E-mail: 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)
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)
c/o Nuclear Information and Resource Service
6930 Carroll Ave., Suite 340
Takoma Park, MD 20912-4446
E-mail: paul@beyondnuclear.org

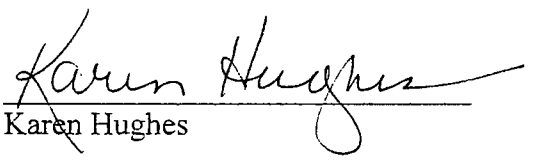
Edith Gbur (Email)
Jersey Shore Nuclear Watch, Inc.
364 Costa Mesa Drive. Toms River, New Jersey 08757
E-mail: gburl@comcast.net

Paula Gotsch (Email)
GRAMMIES
205 6th Avenue
Normandy Beach, New Jersey 08723
E-mail: paulagotsch@verizon.net

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

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

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

Signed: 
Karen Hughes

Dated: August 24, 2007

Renumbered Hausler Rebuttal Testimony

thinner point than 0.49 inches would have been observed. Thus, I believe that there is a significant chance that the drywell shell Bay 13 currently fails the very local area acceptance criterion in.

Q18. To take account of the alleged bias in the external UT measurements, AmerGen has applied a correction technique to some of the measurements. Do you believe this correction technique is appropriate?

Deleted: 9

A18. No, it is inappropriate for a number of reasons. First, it was derived using only measurements in Bay 13. Because the visual inspection shows that Bay 13 is atypical, even if this technique were appropriate for Bay 13, it would not be appropriate for the other Bays. Second, the technique is not even appropriate for Bay 13, because it is not based on any viable physical or statistical theory. Instead, the operator appears to have selected a correction factor that is larger than the average surface roughness.

Deleted: 8

Q19. Since submitting your initial testimony have you refined your assumptions about the interior corrosion rate?

Deleted: 8

A19. Yes. NRC Staff have confirmed that UT data taken in the trenches have show that a corrosion rate of approximately 0.002 inches per year occurred between 1986 and 2006. The interpretation of these results is very difficult. AmerGen's explanation that the thinning is caused by exterior corrosion seems unlikely, because Bays 5 and 17 are the least corroded Bays and the estimated corrosion rate in Bay 17 was not significant or was very small (no corrosion rate was even estimated for Bay 5). AmerGen Ex. 23. Indications are that corrosion on the interior could occur at outages or when water flows to the interior during operation. Thus, it is likely that the 2 mils per year average represents a situation where interior corrosion occurred in fits and starts over the years. Considerably higher short term corrosion rates have probably occurred. In the absence of any good information on this issue, I believe it would be prudent to allow for an interior corrosion rate that is a multiple of 0.002 inches per year, if new water is introduced onto the interior floor by repairs to control rod drives, use of the containment spray, or other sources.

Q20. Has AmerGen or NRC Staff shown that water cannot be present in the exterior of the drywell shell?

Deleted: 19

Deleted: 19

A20. No. At various times in the past there has been leakage onto the exterior of the drywell shell because the drywell cavity liner leaks and the trough that was provided to catch general leakage is very shallow, has only one drain, and was damaged. Citizens' Ex. 15 at 134-35; Citizens' Ex. 24 at 222-23; AmerGen Testimony Part 1 at A.20; AmerGen Testimony Part 3 at A.5. More recently, during the 1994 and 1996 refueling outages, the committed mitigation measures were not used and water leaked into the exterior sandbed region. AmerGen Testimony Part 4 at A.8-9; AmerGen Testimony Part 5 at A.14. Therefore, water could flow onto the exterior of the drywell shell in the sandbed region if a forced outage occurred that required the reactor cavity to be flooded without having the leakage mitigation measures applied. In addition, AmerGen has acknowledged that it has been unable to devise a means of stemming the leakage from the reactor cavity during refueling. Citizens' Ex. 24 at 219-21. In the 2006 outage around one gallon per minute of leakage was observed even after the required tape and strippable coating were applied to the fuel cavity liner. AmerGen Testimony Part 4 at A.9. However, the trough is still subject to high temperatures that could cause the concrete to deteriorate and the condition of the trough was seen to be far from ideal in the most recent outage. Citizens' Exs. 48-49. In addition, quite serious leaks have been observed in the past even after taping and strip coating. Citizens' Ex. 50. Furthermore, the intended function of the trough is to act as a backup for other components. Citizens' Ex. 24 at 220. Thus, if the trough degraded further, mitigating measures were not as effective as in 2006, or leakage was observed in other components, water could enter the drywell again, even without a forced outage. Finally, AmerGen acknowledges that use of the drywell chillers, which are used during refueling and other outages when access to the drywell is needed, could lead to condensation. AmerGen Testimony Part 4 at A.15. The potential for condensation is apparently confirmed by an analysis of water that had drained from the exterior of the sandbed region before March 2006, which showed no activity. Citizens' Ex. 23. This is consistent with the source being condensation.

Q21. Is there a chance that some of the exterior of the drywell shell is not covered by a protective epoxy coat?

Deleted: 18

A21. Yes. Internal documents we have received from AmerGen indicate that areas of the shell in the sandbed region were not coated with epoxy because they are inaccessible. Citizens' Exs. 40-41.

Deleted: 18

Q22. Do you believe that AmerGen has used valid methods to evaluate the potential for external corrosion?

Deleted: 19

Deleted: 19

A22. No. AmerGen makes a number of critical errors in its approach to estimating exterior corrosion. Most obviously, Mr. Gordon fails to consider the situation where the plant is forced to fill the drywell cavity in a forced outage. AmerGen Testimony Part 5 at A.13. Mr. Gordon also fails to allow for other forced outages, which could lead to condensation on the exterior of the drywell surface. In addition, Mr. Gordon has not used a reasonable approach to estimate the time in which any water on the exterior of the shell would evaporate, because he has used an equation which applies to pools or open ponds. Id. at A.19. Thus, the equation inherently assumes that the evaporation of the water does not affect the air into which it is evaporating (steady state equation). This assumption is invalid for the exterior of the sandbed region which has very limited air exchange. It is therefore likely that in the event of water leakage into the region, the air in the sandbed region would become fully saturated during the outage (transient phenomenon). It would then have very limited capacity to absorb moisture as the temperature increased with plant start up. Then, after the air becomes saturated at the operating temperature, it would not absorb more moisture unless air is being exchanged with the outside. The ability of new air to reach the sand pocket has been reduced by the placement of tubes leading to polysterene bottles in the sandbed drains. Thus, it is likely that any moisture on the exterior of the shell would evaporate slowly. I do not have access to sufficient information to provide a quantitative estimate of the rate of evaporation.

Q23. In summary, are you convinced that the drywell will meet safety requirements during any extended period of operation?

Deleted: 0

Deleted: 0

A23. No. NRC Staff and AmerGen have created a miasma of uncertainty, which makes it difficult to show what the current situation is or how it could change in the future. However, I believe that the contour plots coupled with the visual observations show that it is likely that the corrosion goes beyond the envelope of the shapes modeled by GE. Furthermore, based on my

statistical analyses I believe there is a significant chance that the thinnest area of the drywell is thinner than the required amount (0.49 inches). In addition, the lower 95% confidence intervals of the external data are close to or below the criterion for mean thickness (0.736 inches). For example, based on raw UT data, I believe that Bay 15 could have a mean thickness of less than 0.736 inches at the lower 95% confidence limit and the lower 95% confidence limit of the mean thickness of Bay 13 in 1992 was 0.741 inches, a mere 0.006 inches above the requirement. There is also tremendous uncertainty in the potential corrosion rates for both interior and exterior corrosion. Thus, I believe the Board should not allow the proposed relicensing because AmerGen cannot demonstrate with any certainty that the drywell shell in the sandbed region can meet the ASME code at the start of any period of extended operation. If the Board decides to grant the license, it should ensure that AmerGen has provided an estimate of the thickness margin above each acceptance criterion that is reasonably certain. The UT monitoring frequency should be based on the smallest margin available. That frequency would be considerably less than once every four years because available margins are, at best, razor thin and such margins could be reduced to nothing in a matter of months.

Q24. Have you now completed your rebuttal testimony?

Deleted: 1

A24. Yes.

Deleted: 1

CITIZENS' EXHIBIT LIST

No.	Exhibit	Other Reference
1	GPU Nuclear, Drywell Steel Shell Plate Thickness Reduction (July 21, 1995).	Citizen's Exhibit NC 8
2	Partial Cross Section of Drywell and Torus.	Citizen's Exhibit NC 10
3	Memorandum from Peter Tamburro on the Unclear Documentation of Calculation C-1302-187-5320-024 (AR 00461639 Report) (Mar. 30, 2006).	Exhibit ANC 8
4*	Exelon Nuclear, Calculation C-1302-187-5320-024 Revision 1: O.C. Drywell Ext. UT Evaluation in Sandbed (Jan. 12, 1993).	AmerGen's Exhibit 3
5*	Exelon Nuclear, Calculation C-1302-187-E310-041 Revision 0: Statistical Analysis of Drywell Vessel Sandbed Thickness Data 1992, 1994, 1996, and 2006 (Dec. 12, 2006).	Exhibit SJA 1
6	Affidavit of Peter Tamburro, Mar. 26, 2007.	
7	AmerGen, NRC Information Request: Audit Question Numbers AMP-141, 210, 356 (Apr. 5, 2006).	Citizen's Exhibit NC 1
8*	AmerGen, Passport 00546049 07 (AR A2152754 E09): Water Found in Drywell Trench 5 - UT Data Evaluation (Nov. 7, 2006).	Exhibit SJA 2

* Citizens understand that these exhibits marked with a * will be provided by AmerGen, however, if AmerGen fails to submit these exhibits as anticipated they will be submitted by the Citizens at a later date.

9	Structural Integrity Associates, Inc., Statistical Analysis of Oyster Creek Drywell Thickness Data (Jan. 4, 2007).	AmerGen's Exhibit 4
10	AmerGen, NRC Information Request: Audit Question Numbers AMP-357, 356, 210 (Jan. 24, 2006 and Feb. 16, 2006).	Citizen's Exhibit NC 2
11	Email from Peter Tamburro to Ahmed Ouaou (June 6, 2006, 14:03 EST).	OCLR00013624-13625
12	Memorandum from Dr. Rudolf Hausler, Apr. 25, 2007 (Redacted).	
13	Memorandum from Dr. Rudolf Hausler, July 19, 2007.	
14	AmerGen, Reference Material to the ACRS: Photograph of the Sand Bed Region (1992).	Exhibit SJA 3
15	Transcript of Nuclear Regulatory Commission Proceedings, Advisory Committee on Reactor Safeguards Subcommittee on Plant License Renewal Oyster Creek Generating Station (Jan. 18, 2007) (Excerpted Pages: p.1-10, p.132-144, p.207-224, p. 353-358).	
16	Transcript of Nuclear Regulatory Commission Proceedings, Advisory Committee on Reactor Safeguards Meeting of Plant License Renewal Subcommittee (Oct. 3, 2006) (Excerpted Pages: p.1-8, p.59-63).	
17	Email from Steven Hutchins to John Hufnagel Jr., with Drywell White Papers attachment (Sept. 18, 2006, 16:51 EST).	OCLR00013714 - 13734
18	Affidavit of Jon R. Cavallo, Mar. 26, 2007.	

19	AmerGen, Action Request: Determine the Proper Sealant for Drywell Sandbed Floor Voids (Oct. 23, 2006).	Exhibit ANC 5
20	Letter from Richard J. Conte, Chief Engineering Branch 1, Nuclear Regulatory Commission, to Richard Webster, Esq., Rutgers Environmental Law Clinic (Nov. 9, 2006).	Exhibit ANC 6
21	Letter from J.C. Devine, Jr., Vice President of Technical Functions, GPU Nuclear, to the Nuclear Regulatory Commission (Dec. 5, 1990) (Attachment 3; GPUN Detailed Summary Addressing Water Intrusion and Leakage Effects Related to the Oyster Creek Drywell).	OCLR00029270-29283
22	GPU Nuclear, Clearing of the Oyster Creek Drywell Sand Bed Drains (Feb. 15, 1989).	OCLR00028912-28918
23	AmerGen, Disclosed Document Relating to Drywell Leakage.	OCLR00013354
24	Transcript of Nuclear Regulatory Commission Proceedings, Advisory Committee on Reactor Safeguards 539th Meeting (Feb. 1, 2007) (Excerpted Pages: p.1-3, p. 172-177, p. 217-224).	
25	Letter from the Nuclear Regulatory Commission to C. Crane (Jan. 17, 2007) ("Inspection Report").	ML070170396
26	Email from Steven Dunsmuir, FIN/Operations RO, Exelon Corp., to Howie Ray, et al. (Oct. 22, 2006, 04:52 EST).	OCLR00014454-14455
27	Email from Tom Quintenz to Kevin Muggleston, et al. (Feb. 1, 2006, 17:02 EST).	OCLR00013629
28	GPU Nuclear, Evaluation of February 1990 Drywell UT Examination Data (Mar. 8, 1990).	Citizen's Exhibit NC 9

29	Affidavit of Gordon, Mar. 26, 2007.	
30	Letter from Jill Lipoti, Director Division of Environmental Safety and Health, New Jersey Dept. of Environmental Protection, to Dr. Pao-Tsin Kuo, Director Division of License Renewal, U.S. Nuclear Regulatory Commission (Apr. 26, 2007).	
31*	AmerGen, Calculation Sheet C-1302-187-5300-01.	
32*	GPU Nuclear, Calculation Sheet C-1302-187-5320-024 Revision 0: Oyster Creek Drywell Exterior Evaluation in Sandbed (1993).	Citizen's Exhibit NC 3
33*	Exelon Nuclear, Calculation C-1302-187-5320-024 Revision 2: O.C. Drywell Ext. UT Evaluation in Sandbed (Mar. 18, 2007).	
34*	ACRS Information Packet (Dec. 2006).	Exhibit ANC 2
35	Letter from AmerGen to the NRC (2103-06-20426) (Dec. 3, 2006) (Excerpted Pages: Dec. 3, 2006 Letter, p.1-3, p. 9-15, p. 17-24).	Exhibit ANC 1
36	Email from Caroline Schlaseman, MPR Associates, Inc., to Howie Ray (Nov. 2, 2006, 12:09 EST).	OCLR00015433-15434
37	Background and Statement of Facts	Attachment 5 to Hausler Initial Testimony
38	Memorandum from Dr. Rudolf Hausler, Subject: Response To The Questions About Statistics (Aug. 16, 2007).	

39 Memorandum from Dr. Rudolf Hausler, Subject: Further Discussion of the Nature of the Corroded Surfaces and The Residual Wall Thickness of the Oyster Creek Dry Well (Aug. 16, 2007).

40. Email from William Russell to Frederick Polaski, et al., Subject: Challenge Board #1 additional comment (Nov. 30, 2006, 9:48 EST), attached to email from John Hufnagel Jr. to Ahmed Ouaou, et al. (Nov. 30, 2006 10:41 EST).

41. GPU Nuclear, Technical Functions Safety/Environmental Determination and 50.59 Review (Jan. 5, 1993).

42. Email from Peter Tamburro to Ahmed Ouaou, Cc Howie Ray, et al., Subject: Surface Are (sic) of the Drywell in the sand bed (Apr. 3, 2006 3:24 PM).

43. Email from John O'Rourke to Michael Gallagher, et al., Subject: External Inspections of DW in Sandbed Region (Oct. 10, 2006 8:08 AM), attached to email from John Hufnagel to John O'Rourke (Oct. 10, 2006 8:10 AM).

44. Memorandum, GPU Nuclear from K. L. Whitmore, Civil/Structural Mgr. to J. C. Flynn, Manager, Special Projects, Engineering Projects, Subject: Inspection of drywell sand bed region and access holes (Jan. 28, 1993).

45. AmerGen Technical Evaluation 330592-27-27 (Apr. 20, 2007).

46. Email from John O'Rourke to Marcos Herrera, Cc Michael Gallagher et al., Subject: Oyster Creek Drywell Thickness to be Used for Base Case Analysis, with OYSTER CREEK DRYWELL THICKNESSES, Rev2.doc attachment (Feb. 28, 2007 7:20 PM).

47. Issue # 00557180, Exelon Nuclear Issue - Statement of Confirmation, Originator: Kathy Barnes (Nov. 13, 2006).

48. Email from Tom Quintenz to John O'Rourke, Subject: Notes of video inspection results of trough area with Video Inspection of Concrete Trough Notes November 1996 with attachment (Oct. 10, 2006 2:26 PM).

49. GPU Nuclear, Material Nonconformance Report (Oct. 27, 1986).

50. Memorandum, GPU Nuclear from R. Miranda, Engineer, Technical Functions to Distribution, Subject: 14R Reactor Cavity Leak Detection Effort (Feb. 1, 1993).

51. Sketches showing ultrasonic and "Echo to Echo" techniques, and explanations of sketches.

52. E-mail from Tom Quintenz to Ahmed Ouaou & John Hufnagel, Jr. (September 20, 2006 2:02 EST) OCLR00013796
AR 00547236 Report OCLR00013846

Exhibit 47

Create another New Issue | Create another Issue from '00557180' | Print | Close window

AS REQUIRED, PRINT ISSUE REPORT AND PROVIDE TO YOUR SUPERVISOR
Note: This is your only notice. You will not have an opportunity to print this confirmation later.

Exelon Nuclear Issue - Statement of Confirmation

Issue #: 00557180 **Originator:** KATHY BARNES **Submit Date:** November 13, 2006

Basic Information

Affected Facility:	Oyster Creek
Dscv Date:	11/07/2006 11:00
How Discovered Code:	H02
Event Date:	11/07/2006 11:00
Affected Unit:	NA
Affected Sys:	--
Subject:	COMMITMENTS MADE FOR GL 87-05 ARE NOT IN THE RA DATABASE

Required Information

Condition Description:

Commitments were made as a result of the GL 87-05 as well as other correspondence, meetings, etc. concerning our Drywell Corrosion Monitoring and Water Intrusion mitigation plans. The correspondence covers the time period of 1986 through present. A check of the Lotus Notes database presently used for commitment tracking did not indicate any commitments have been made. Based on limited research an SER was issued with subsequent correspondence, which committed us to a corrosion monitoring activities and leakage monitoring activities for the Drywell. The correspondence was used to formulate what is thought to be the present commitments for leakage monitoring. That information was utilized as an input to the outage leakage monitoring activities to determine the steps necessary to meet the present commitments and the License Renewal commitments for leakage monitoring. The documents were annotated with reference to the correspondence for the present commitments and to Passport commitment tracking numbers for the License Renewal commitments.

Subsequent research determined other correspondence exists which indicated we initiated "preventive maintenance to clear the sand bed drains periodically". There were no preventive maintenance activities prior to this outage to clear the sand bed drains. It is not known at this time whether this is a commitment by virtue of it being in our correspondence with the NRC. IR 547236 documents the existence of debris in the sand bed drains, when performing the first known formalized maintenance activity to inspect the drains. Although the debris did not affect the capability to monitor the leakage from the sand bed drains, there is a question of where did the debris came from and when should be the next time we inspect the drains, and on what frequency. An ACIT was issued to address these concerns. No

	frequency is presented in the previous correspondence found, but there may be other correspondence, which did make commitments to a frequency, or removed this activity. Without having a commitment tracking system for these historical commitments renders the site to potential repeat occurrences of missed commitments from a current license basis perspective.
Immediate actions taken:	License renewal assembled a partial list of documents retrieved from the correspondence database that had been assembled to support the License Renewal Project. Correspondence was discovered relevant to the water intrusion measures including the monitoring of the sand bed drains. Regulatory Assurance was notified of the finding. This IR was submitted.
Recommendation for action:	1. Perform a complete review of all correspondence relative to the GL 87-05, and the drywell corrosion monitoring and water intrusion mitigation plan for legitimate commitments. Review these commitments for confirmation of implementation. For commitments that are determined to no longer be appropriate, disposition those commitments in accordance with the corporate commitment management procedures. Assure documents are annotated properly for commitments, which will be retained. Enter those commitments into the commitment tracking system with cross-references to the implementing documents for retrieval purposes. This is required to answer an existing question for the NRC Inspection 2006-13 Report, which is ongoing. 2. Considering the risks associated with missing commitments (examples being: failure to perform leakage monitoring for the sand bed drains, potentially failure to perform periodic clearing of the sand bed drains, etc.) evaluate the need to initiate efforts to retrieve historical commitments, and confirm formal implementation mechanisms exist for those items determined to be legitimate commitments, and that they are being tracked and annotated in accordance with corporate commitment tracking requirements. This would be a significant manpower effort and probably require outside support. 3. Develop and expand the correspondence data base similar to the one which was provided to regulatory assurance from the license renewal project for easy retrieval of the basis documents which provide an input to our Current License Basis (CLB). This would also be beneficial for those performing 50.59 evaluations, which rely on the determination of our CLB.
Supervisor Verbally Contacted	J. Kandasamy

Optional Additional Information

What activities, processes, or procedures were involved?	During 1R21, NRC Inspections of the drywell water intrusion activities prompted a more extensive search for related correspondence.
Why did the condition happen?	The age of OC has resulted in an enormous volume of regulatory correspondence that had not

	been reviewed in searching for prior commitments. Commitments were not tracked in a database for all teh years of OC operation. Changes of ownership and changes in definition of what constitutes a commitment has resulted in inadequate understanding of what this older correspondence requires.
What are the consequences?	Without having a commitment tracking system or proper disposition of these historical commitments renders the site to potential repeat occurrences of missed commitments from a current license basis perspective.
Any procedural requirements impacted?	LS-AA-110 provides requirements for managing commitments in current regulatory correspondence. This issue report is related to historical commitments made by GPUN.
Identify any adverse physical conditions:	There was no PM established to periodically clear the sand bed drains of clogs.
List of Knowledgeable individuals:	T.Quintenz, H.Ray, P.Tamburro, J.Huffnagel, J.Kandasamy, D.Helker
Is this a repeat or similar condition?	Yes. There have been other recent examples of missed commitments from "old" correspondence that had not been captured in the OC commitment tracking database. IR 348545 (Tell-tale Drains - Poly bottles not having a PM to monitor DW leakage)

Routing

Owed To Group:	ACAPALL
Routed to Group:	CR-OSC

Exhibit 52

From: Quintenz, Tom <Tom.Quintenz@exeloncorp.com>
Sent: Wednesday, September 20, 2006 2:02 PM
To: Ouaou, Ahmed <u999ao2@ucm.com>; Hufnagel Jr, John G <u000jgh@ucm.com>
Cc: Tamburro, Peter <u777p0t@ucm.com>; Warfel Sr, Donald B <u001dbw@ucm.com>; O'Rourke, John F. <t925jfo@ucm.com>
Subject: RE: Inspection of Sand Bed Drain Lines

I am responding to my action item from Dave Ryan that this is not a commitment, but must remain in scope for the outage.

----Original Message----
From: Ouaou, Ahmed
Sent: Wednesday, September 20, 2006 1:36 PM
To: Quintenz, Tom; Hufnagel Jr, John G
Cc: Tamburro, Peter; Warfel Sr, Donald B; O'Rourke, John F.
Subject: RE: Inspection of Sand Bed Drain Lines

I'll discuss with Don and John O' during turn over. I also think it is a good idea to look at the drains and sandbed floor for debris that could get into the drains when the coating in the bays with drains is inspected. It is not a commitment to check the drains; but we would not look good if we flood the sandbed because the drains are plugged

----Original Message----
From: Quintenz, Tom
Sent: Friday, September 15, 2006 5:36 PM
To: Hufnagel Jr, John G
Cc: Ouaou, Ahmed; Tamburro, Peter
Subject: RE: Inspection of Sand Bed Drain Lines

With regard to the suggested check of the configuration, suggest that we agree on the change and have the KS program engineer issue a revision to the appropriate recurring task(s) to implement the requirement.

----Original Message----
From: Hufnagel Jr, John G
Sent: Friday, September 15, 2006 5:03 PM
To: Quintenz, Tom
Cc: Ouaou, Ahmed; Tamburro, Peter
Subject: RE: Inspection of Sand Bed Drain Lines

I agree with your assessment. I also reviewed the June 20, 2006 letter which responded to NRC concerns outlined in the June 1 Public meeting, and as expected, found no commitment to inspect the sand bed drain lines for blockage.

As a separate but related point, do we have a recurring task to ensure that the tubing that goes from the sand bed drain to the poly bottles is intact? It seems we should verify the integrity of this configuration on some regular interval, even if it is not a commitment.

- John.

---Original Message----

From: Quintenz, Tom

Sent: Friday, September 15, 2006 4:29 PM

To: Hufnagel Jr, John G

Cc: Ouaou, Ahmed; Tamburro, Peter

Subject: Inspection of Sand Bed Drain Lines

John, Please confirm the following conclusion relative to the sand bed drain line inspection. This is needed to satisfy an action item I received from an outage planning meeting this week. Thanks.

Conclusion: It appears the inspection of the sand bed drain lines for blockage is not currently a commitment. This is based on my review of the current A.5 table of commitments, review of the July 7, 2006 letter to the NRC, and discussions with Ahmed Ouaou. Examination of the trough drain for blockage is a commitment and is contained in our table of commitments and is specifically listed in the July 7, 2006 letter. I have attached a copy of the letter for your reference if needed.

<< File: 2130-06-20358 Additional Appendix A Clarifications - 7-7-06.pdf >>

AR 00547236 Report

Aff Fac:	Oyster Creek	**AR Type:**	CR	**Status:**	APPROVED
Aff Unit:	NA	**Owed To:**	ACAPALL	**Due Date:**	11/20/2006
Aff System:	187			**Event Date:**	10/21/2006
CR Level/Class:	/			**Disc Date:**	10/21/2006
How Discovered:	H02			**Orig Date:**	10/21/2006
WR/PIMS AR:		**Component #:**			

Action Request Details

Subject: DEBRIS LOCATED IN BAYS 7 AND 11 SANDBED DRAIN LINES

Description:

Originator: PETER TAMBURRO Supv Contacted: Howie Ray

Condition Description:
Inspection of the Sandbed Drain Lines in accordance with Specification IS-328227-004 Rev. 13 showed that the drain line in bay 7 has debris, which could cause blockage of this line. The debris looks like loose concrete. This does not meet the acceptance criteria in the specification per section 3.2.5.2.

In addition the inspection of the drain line in bay 11 shows some loose debris in the bottom of the line directly downstream of the first elbow. However the line is not blocked and meets the acceptance criteria.

Operability

The purpose of the drain lines is to route water in the sandbed from the drywell vessel. At this time the remaining 4 lines are capable of performing this function. In addition since the line in bay 7 is not completely blocked it too would partially perform its function by draining the sandbed. So far in 1R21 no water has entered the sandbed.

Engineering has inspected the 5 bottles every day since the beginning of the outage (R2088495). To date no water has been found in any of the bottles or on the floor outside the sandbed bays.

Also Engineering and/or NDE have inspected all 10 Drywell Sandbed bays. To date no water or moisture has been observed in these bays and the coating is in good condition..

Engineering will continue to monitor (on a daily basis) the trough drain line for changes in flow rate and the five polyvinyl bottles for water.

Immediate actions taken:
Informed Howie Ray and the Engineering Control Center

Recommended Actions:

1) Continue to monitor the five poly bottles and trough drain line daily per our commitments

2) Recommend cleaning the drain lines in bays 7 and 11.

Operable Basis:

Reportable Basis:

Assignments

Assign #:	01	**Assigned To:**		**Status:**	AWAIT/C
Aff Fac:	Oyster Creek	**Prim Grp:**	ACAPALL	**Due Date:**	10/26/2006
Assign Type:	TRKG	**Sec Grp:**		**Orig Due Date:**	µµ/µµ/µµµµ
Priority:					
Schedule Ref:					
Unit Condition:					
Subject/Description:	DEBRIS LOCATED IN BAYS 7 AND 11 SANDBED DRAIN LINES				