



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 2, 2010

LICENSEE: PSEG Nuclear, LLC
FACILITY: Hope Creek Generating Station
SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON
JUNE 21, 2010, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION
AND PSEG NUCLEAR, LLC, CONCERNING REPOSSES TO REQUESTS FOR
ADDITIONAL INFORMATION PERTAINING TO THE HOPE CREEK
GENERATING STATION LICENSE RENEWAL APPLICATION

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of PSEG Nuclear, LLC (PSEG or the applicant), and Exelon held a telephone conference call on June 21, 2010 to discuss and clarify PSEG's responses to the staff's requests for additional information (RAIs) concerning the Hope Creek Generating Station license renewal application. These responses were contained in a letter dated June 14, 2010, from Paul Davison to the NRC. The telephone conference call was useful in clarifying the responses to the staff's RAIs.

Enclosure 1 provides a listing of the participants and Enclosure 2 contains a listing of the RAI responses and the staff's questions with the applicant, including a brief description on the status of the items. Enclosure 3 contains drawings that were provided by the applicant to aid in the discussion.

The applicant had an opportunity to comment on this summary.

A handwritten signature in black ink that reads "Bennett M. Brady".

Bennett M. Brady, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-354

Enclosures:

1. List of Participants
2. List of Questions on Responses to RAIs
and discussion
3. Drawings provided by applicant

cc w/encls: Distribution via Listserv

TELEPHONE CONFERENCE CALL
HOPE CREEK GENERATING STATION
LICENSE RENEWAL APPLICATION

LIST OF PARTICIPANTS
June 21, 2010

PARTICIPANTS

Bennett Brady

Bo Pham

Abdul Sheikh

Bryce Lehman

Hans Ashar

Dan Naus

Barry Oland

George Seibold

Jim Stavely

Don Warfel

John Hufnagel

Mike Gallagher

Al Fulvio

Ahmed Ouaou

AFFILIATIONS

U.S. Nuclear Regulatory Commission (NRC)

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Oak Ridge National Laboratory (ORNL)

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PSEG Nuclear, LLC (PSEG)

PSEG

Exelon

Exelon

Exelon

Exelon

PSEG Consultant

MEETING ON RESPONSE TO NRC REQUESTS FOR ADDITIONAL INFORMATION
FOR HOPE CREEK GENERATING STATION LICENSE RENEWAL APPLICATION

JUNE 21, 2010

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of PSEG Nuclear, LLC held a telephone conference call on June 21, 2010, to discuss and clarify the following responses to NRC staff requests for additional information (RAIs) concerning the Hope Creek Generating Station (HCGS) license renewal application (LRA).

Response to RAI B2.1.28-1

Discussion:

The response is comprehensive. However, the NRC staff needs clarifications and possible revisions of commitments to ensure that aging effects are captured and managed properly.

Question 1:

The ultrasonic testing (UT) examination performed in 2009 was at selected locations at the bottom of the drywell and not anywhere near the penetration sleeve J13. How can the 2009 UT examination be used as a justification? The 2007 examination appears to be more comprehensive.

Response:

PSEG agreed that the 2007 examination was more comprehensive. The UT examination in 2009 was in response to industry operating experience (OE) with the drywell. These were proactive measures in preparation for license renewal to confirm the findings that the drywell was in good condition. More additional work will be done in the upcoming outage.

Question 2:

Enhancement 3 and 4 in the Commitment Table in Enclosure C will be conducted once prior to the period of extended operation (PEO) and one additional time during the first ten years of the PEO. The NRC feels that once before the PEO and another 10 years after the PEO are not enough, especially in view of leakage at penetration J13.

Response:

PSEG feels that their inspections have found that there is no debris that could clog the drains and there will not be any construction activity in the future. Thus, there is no way debris could clog the drains and no need for additional inspections.

Question 3:

Enhancement 5: What is the time frame for completing investigation?

Response:

This is an ongoing commitment and activity. Any leakage discovered will be investigated and assessed.

ENCLOSURE 2

Question 4:

Enhancement 6: What is the frequency for monitoring the drains?

Response:

PSEG indicated that this monitoring of the drains will be conducted daily during reactor cavity flood-up if leakage is detected. PSEG will modify the commitment to indicate this.

Question 5:

Enhancement 7: What is the frequency for monitoring?

Discussion:

PSEG indicated that this monitoring of the penetration sleeve J13 will be conducted daily during reactor cavity flood-up if leakage is detected. PSEG will modify the commitment to indicate this.

Question 6:

Enhancement 8: What is the frequency for monitoring?

Discussion:

PSEG indicated that this monitoring of the drains will be conducted daily during flood-up if leakage is detected. PSEG will modify the commitment to indicate this.

Question 7:

Enhancement 9: NRC stated that we need UT examination in 2010 and again during the following outage even if results during 2010 examination are OK.

Response:

In summary, the staff stated that it has no concerns or comments to enhancements Items 1, 2, 3, 4, 5 and 9 of the Commitment No. 28 in the PSEG Letter LR-N10-0190, Enclosure C.

In summary, the applicant stated that it will revise Commitments No. 6, 7, and 8 to monitor penetration sleeve J13, and drywell air gap drains daily when the reactor cavity is flooded if leakage is detected.

Question 8:

Enhancement 10: What is the schedule for completing the tasks?

Response:

As stated in the RAI response:

Hope Creek will continue to investigate the cause of reactor cavity water leakage and make repairs, if practical, to stop the leaks. If this cannot be achieved prior to the period of extended operation, applicable aging management activities recommended in the Final Interim Staff Guidance LR-ISG-2006-01 will be implemented to ensure loss of material in inaccessible areas of the drywell shell is effectively managed.

Question 9:

The Commitment 10.a states that:

Identify drywell surfaces requiring examination and implement augmented inspections for the period of extended operation in accordance with IWE-1240, as identified in Table IWE-2500-1, Examination Category E-C.

IWE-1241-a states that:

Surface areas likely to experience accelerated degradation and aging require the augmented examinations identified in Table IWE-2500-1, Examination Category E-C. Such areas include the following:

- (a) Interior and exterior containment surface areas that are subject to accelerated corrosion allowance with no or minimal corrosion allowance or areas where absence or repeated loss of protective coatings has resulted in potential corrosion and pitting. Typical locations of such areas are those exposed to standing water, repeated wetting and drying, persistent leakage, and those with geometries that permit water accumulation, condensation, and microbiological attack. Such areas may include penetration sleeves, stiffeners, surfaces wetted during refueling, -----."

The staff's understanding of the Commitment 10(a) based on the IWE-1241, as noted above, is that UT examination of 100 percent of the drywell area below penetration J13 will be performed after the one time examination in 2010 during each inspection period (3 times in 10 years) until the reactor cavity water leakage from penetration J13 is repaired. Repeated wetting and drying and persistent leakage from J13 can corrode the drywell. In addition, due to the geometry of the drywell, there is the potential for water being trapped below J13 even after the outages.

Also, please provide a drawing of the drywell area which shows different components for reference. This will help us understand the leakage flow path and will enable us to communicate better.

Response:

PSEG provided the three drawing that are shown in Attachment 3.

In an e-mail to B. Brady dated July 14, 2010, from John Hufnagel, Exelon, provided the following response to Question 9:

PSEG agrees with the staff that Commitment 10.a, requires performing additional UT thickness measurements from inside the drywell shell after the one time examination in 2010, if J13 leakage continues. UT inspections will be performed during each inspection period (3 times in 10 years) until the reactor cavity water leakage from penetration J13 is resolved. However, as shown in the mark up below of your clarification, the examination area below J13 is being clarified to reflect that it is not 100 percent of the area below

penetration sleeve J13 but the area down to penetration J37. The basis for the clarification is no leakage was observed coming from penetration J37 coincident with the leakage from J13, and the air gap drains below these penetrations had no leakage. Penetration J37 is approximately 7 inches directly below J13. The area between J13 and J37 is where the potential standing water could be trapped. Since there was no identified leakage from J37 or any other penetrations or the air gap drains, inspecting the area between penetration sleeves J13 and J37 will insure no drywell shell corrosion due to the potential of standing water associated with the J13 leakage.

The staff's understanding of the Commitment 10(a) based on the IWE-1241, as noted above, is that UT examination of drywell area below penetration J13 down to penetration J37 will be performed after the one time examination in 2010 during each inspection period (3 times in 10 years) until the reactor cavity water leakage from penetration J13 is repaired. Repeated wetting and drying and persistent leakage from J13 can corrode the drywell. In addition, due to the geometry of the drywell, there is the potential for water being trapped below J13 even after the outages.

PSEG will revise Commitments No. 6, 7, and 8 for IWE to monitor penetration sleeve J13, and drywell air gap drains daily. A supplement to RAI B2.1.28-1 response will include the revised commitments.

These commitments were formalized in a letter dated August 9, 2010, from Robert Braun, PSEG, to NRC.

The NRC staff found the response to be acceptable in principle. However, the staff asked for the following additional clarification/information:

1. Thickness and corrosion allowance of the drywell (both thicker and thinner plate sections)
2. The email from John Hufnagel states that penetration J37 is approximately 7 inches directly below J13. However, the attached sketch shows that J13 is located 2 feet above J37. This sketch was previously provided b

In an e-mail dated July 13, 2010, to B. Brady from J. Hufnagel, PSEG replied to the above two questions:

1. The thickness of the drywell shell in the region of the J13 penetration is 1.5 inches thick as noted on LRA Page 3.5- 24 for the Lower Sphere Location. The local thickness used at the reinforcing area at the penetrations is 3.0 inches. The corrosion allowance is .063 inches.
2. The centerline distance between penetrations J13 and J37 is 24 inches. The penetration nozzles are 12.75 in outside diameter, therefore distance between the edges of the nozzle is approximately 11 inches and not 7 inches as stated.

RESPONSE TO RAIs B2.1.28-02

Question:

NRC staff needs to ask the applicant how often they inspect the underwater surface of the torus since the LRA states that it was last inspected in 2004. ASME IWE Table 2500 allows deferral of inspection to the end of the 10 year interval. There is a possibility of not using the deferral option and inspecting underwater more frequently.

Discussion:

Hope Creek has a ten year inspection interval.

RESPONSE TO RAI B2.1.29-01

Question:

What is the magnitude (stress) of the preload on the reactor vessel component support bolts?

Discussion:

105 ksi tensile stress as indicated in the Bolting Integrity Program on Page B-66 of the LRA.

RESPONSE TO RAI B.2.1.33-01

No additional questions

RESPONSE TO RAI B.2.1.32-01

Question 1:

Has there been any additional groundwater water sampling results since 2008?

Response:

Water sampling was conducted six months apart in 2008

Question 2:

Has there been any change in the type of salt used for deicing the roads to reduce chlorides?

Response:

No change in the type of salt used.

Question 3:

We may have one or two additional items for clarifications for this RAI during the conference call.

Response:

No additional items were discussed.

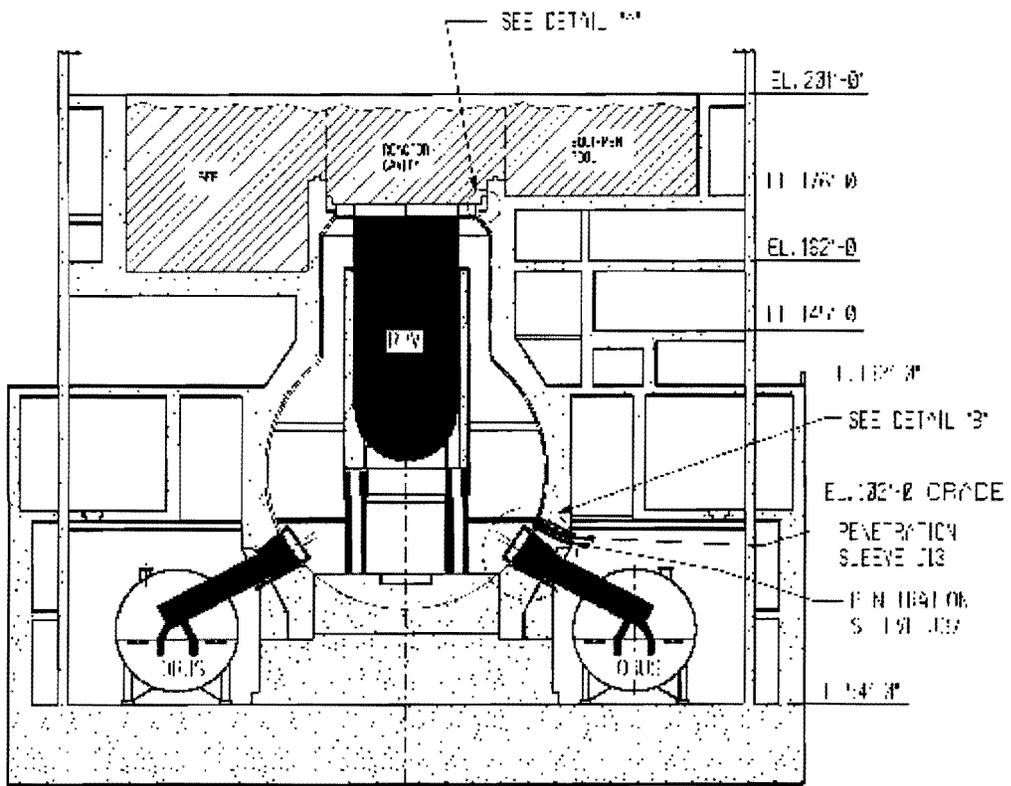
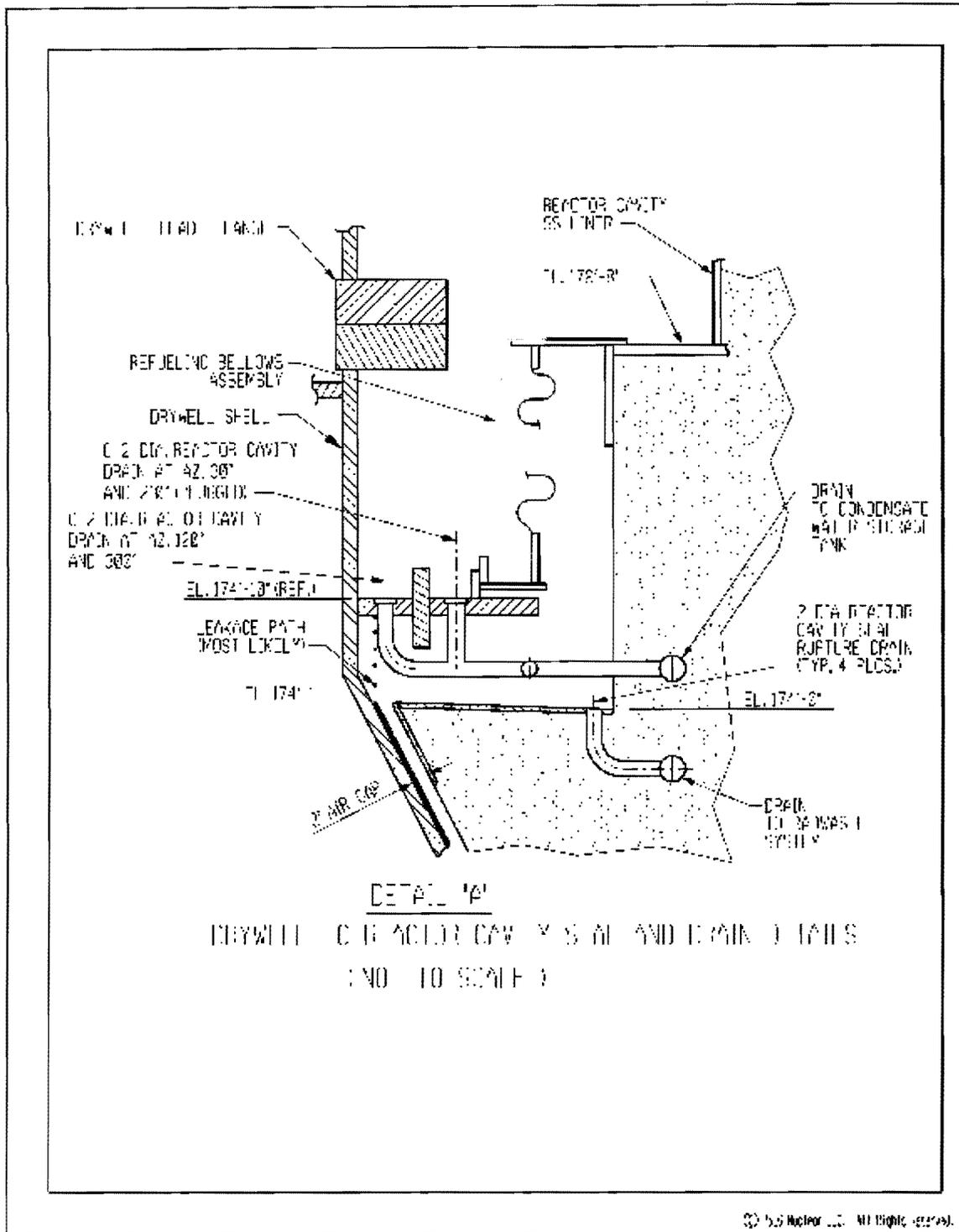
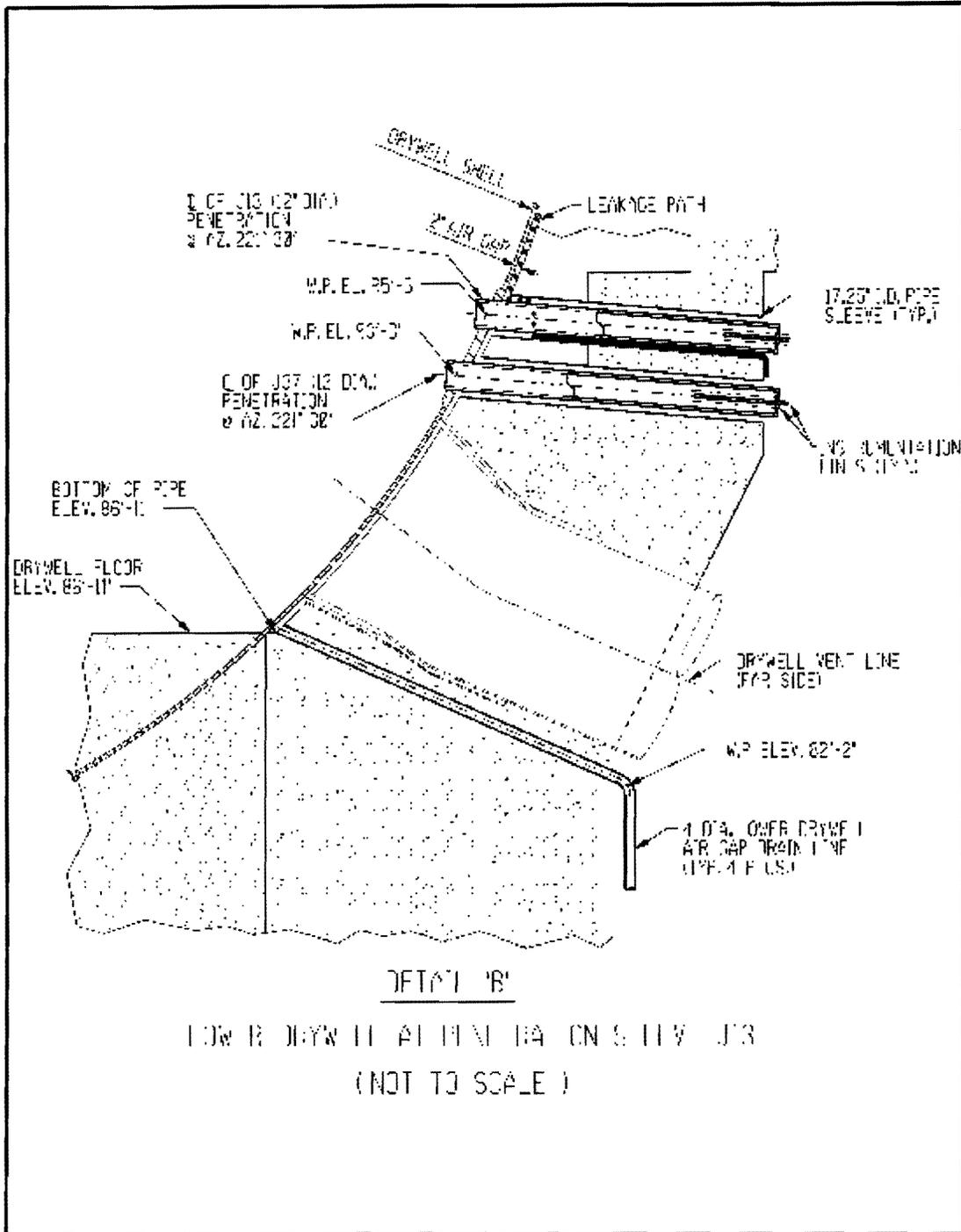


FIG. 1 - REACTOR BUILDING AND PRIMARY CONTAINMENT CROSS SECTION DURING FULL SCALE CUTTING.





September 2, 2010

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FACILITY: Hope Creek Generating Station

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/RA/

Bennett M. Brady, Project Manager
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Memorandum to PSEG Nuclear, LLC from B. Brady, dated September 2, 2010

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