

Elizabeth Keighley

From: John Richmond, *RI*
Sent: Monday, November 17, 2008 4:13 PM
To: Stephen Pindale; Jeffrey Kulp; Justin Heinly; David Pelton; Mary Baty
Cc: Richard Conte; Doug Tift
Subject: FYI: Oyster Creek PNO and Comm Plan is attached
Attachments: PNO-I-08-012 - Oyster Creek.doc; OC 2008 Outage Comm Plan_rev-2.doc

FYI -- Oyster Creek Preliminary Notification & Comm Plan are attached for your use.

John Richmond

Received: from R1CLSTR01.nrc.gov ([148.184.99.7]) by R1MS01.nrc.gov
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From: John Richmond <John.Richmond@nrc.gov>
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CC: Richard Conte <Richard.Conte@nrc.gov>, Doug Tiff <Doug.Tiff@nrc.gov>
Date: Mon, 17 Nov 2008 16:12:54 -0500
Subject: FYI: Oyster Creek PNO and Comm Plan is attached
Thread-Topic: FYI: Oyster Creek PNO and Comm Plan is attached
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PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE PNO-1-08-012**Facility****Licensee Emergency Classification**

AmerGen Energy Company, LLC
 Oyster Creek
 Forked River, New Jersey
 Docket: 50-219

Notification of Unusual Event
 Alert
 Site Area Emergency
 General Emergency
 Not Applicable

Subject: RESULTS OF IMPLEMENTATION OF OYSTER CREEK LICENSE RENEWAL
 COMMITMENTS RELATED TO THE DRYWELL PRIMARY CONTAINMENT

The NRC staff is performing an inspection of AmerGen's actions related to license renewal commitments, some of which were implemented during the 2008 refueling outage at the Oyster Creek Nuclear Generating Station (OCNGS). The NRC staff completed its on-site portion of a multi-week inspection of AmerGen's three aging management programs associated with the drywell primary containment: containment metallic liner inservice inspection; structures monitoring program; and protective coating monitoring and maintenance program. In accordance with the NRC's agreement with the State of New Jersey, State Engineers observed portions of the NRC staff review. Based on the results of the NRC's inspection activities to date, the NRC staff concluded there were no safety significant conditions with respect to the drywell containment that would prohibit plant startup.

In the mid-1980s, GPU Nuclear (previous licensee) identified corrosion of the drywell containment steel shell, in the sand bed region. Initial licensee actions were not effective in stopping the corrosion. In 1992, all sand was removed from the sand bed region and the accessible exterior surfaces of the drywell shell were cleaned and coated with epoxy. Ultrasonic test (UT) thickness measurements of the drywell shell taken in 1992 and 1996 indicated the corrosion had been effectively halted. This information was confirmed by UT measurements in 2006, during a refueling outage.

On October 24, 2008, OCNGS shut down for a scheduled refueling and maintenance outage. Outage work included implementation of various license renewal aging management programs.

During the 2008 refueling outage, the NRC's drywell shell inspection focused on:

1. Results of drywell shell UT thickness measurements, taken during the 2008 refueling outage.
2. Direct observation of drywell shell conditions both inside the drywell, including the floor trenches, and outside the drywell, in the sand bed regions.
3. Condition and integrity of the drywell shell epoxy coating, including AmerGen's activities to evaluate and repair one small broken blister (with a small rust stain) and three small unbroken blisters (initially described as surface bumps) found in Bay 11, during the outage.
4. Condition and integrity of the drywell shell moisture barrier seal between the shell and the sand bed floor, including AmerGen's activities to evaluate and repair small cracks in moisture barrier seals in multiple sand bed bays, and a small seal crack in Bay 3 which also exhibited small rust stains. The purpose of the seal is to prevent water from entering a gap below the floor in the sand bed region.
5. AmerGen's activities to monitor, evaluate, and mitigate water leakage from the reactor refueling cavity onto the external surface of the drywell shell and into the sand bed regions.

Preliminary Notification

With respect to AmerGen's implementation of license renewal commitments, the NRC staff has concluded:

1. All drywell shell UT thickness measurements satisfied AmerGen's acceptance criteria to ensure current licensing basis design requirements, for the thickness of the steel plate are satisfied.
2. There were no identified significant conditions affecting the drywell shell structural integrity.
3. AmerGen's inspection of the as-found condition of the external drywell shell epoxy coating, in the sand bed regions, was acceptable. In Bay 11, four small blisters (three of which were initially identified as bumps) on the coating, including a small amount of surface rust under the blisters, were identified and repaired. AmerGen reported that some blistering was expected, and would be identified during routine visual examinations. The NRC staff will review AmerGen's apparent cause evaluation after it is completed.
4. AmerGen's inspection of the as-found condition of the external drywell shell moisture barrier seal, between the shell and the sand bed floor, was acceptable. Surface cracks, which did not appear to completely penetrate the seal, were identified in multiple bays, and were adequately repaired. During one crack repair in Bay 3, some drywell shell surface corrosion was also identified and repaired.
5. AmerGen's activities to monitor and mitigate water leakage from the reactor refueling cavity onto the external surface of the drywell shell and into the sand bed regions are still under evaluation.

During the outage, water leakage from the reactor refueling cavity into the cavity drain trough, as monitored in the trough's drain line, increased from less than 1 gallon per minute (gpm) to approximately 4 to 6 gpm. Some of the water in the cavity drain trough spilled into the gap between the steel shell and the concrete shield wall, and ultimately into the sand bed regions. AmerGen enhanced its leakage monitoring and performed visual inspections to detect any water entry. Small water puddles were identified in several sand bed bays. After the cavity was drained, AmerGen performed direct inspections of the sand bed bays, and no significant adverse conditions were identified.

AmerGen identified and fixed the problems found in sand beds Bay 3 and Bay 11, as part of its aging management program implementation. The drywell shell epoxy coating and the moisture barrier seal, both in the sand bed region, are barrier systems used to protect the drywell shell from corrosion. The problems identified with these barriers had a minimal impact on the drywell steel shell and the projected shell corrosion rate remains very small, as confirmed by NRC staff review of UT data.

Based on a review of the technical information, the NRC staff determined AmerGen has provided an adequate basis to conclude the drywell primary containment will remain operable during the period until the next scheduled examination, in the 2012 refueling outage. An NRC inspection report will be issued after the inspection is finished.

The information presented herein has been discussed with AmerGen and is current as of November 17, at 2:00 p.m.

The State of New Jersey has been notified. Region I Public Affairs is prepared to respond to media inquiries.

This Preliminary Notification is being issued for information only and will not be updated.

ADAMS Accession Number: ML083220240

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Preliminary Notification

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Licensee: AmerGen Energy Company, LLC
Oyster Creek Nuclear Power Station

SUNSI Review Complete: JER (Reviewer's Initials)

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DATE	11/17/08	11/17/08	11/17/08	11/17/08

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DATE	11/17/08	11/17/08

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Communications Plan and Notification Sequence Preliminary Results of Licensee Renewal Commitment Inspection for Oyster Creek Drywell Containment Shell

Goal

To effectively communicate the preliminary results of the NRC staff's inspection of AmerGen's activities to implement license renewal commitments for the Oyster Creek drywell primary containment shell, during the recent refueling outage.

To informing stakeholders of the preliminary notification issued by the staff during the on-going license renewal inspection process.

Key Messages

Region I completed the on-site portion of a multi-week inspection of AmerGen's aging management programs associated with the drywell primary containment:

- Containment Metallic Liner Inservice Inspection
- Structures Monitoring Program
- Protective Coating Monitoring and Maintenance Program

NRC staff continue to evaluate AmerGen's actions and assessments regarding water leakage onto the external surface of the drywell shell.

The State of New Jersey State Engineers observed portions of the NRC staff review.

The NRC staff determined AmerGen has provided an adequate basis to conclude the drywell primary containment will remain operable during the period until the next scheduled examination.

The NRC staff concluded there were no safety significant conditions affecting the drywell shell.

Time Sequence	ACTION	Responsible Organization/Individual
T= 0 Hour	PN approved by Regional Management and e-mailed to Oyster Creek	RI – Tiff / Richmond
T = 0.5 Hour	Call Site VP and Communicate Key Messages	RI – Roberts / Gamberoni
T = 1.5 Hour	E-mail PN and communicate key messages to New Jersey	RI – McLaughlin
T = 1.5 Hour	E-mail PN and communicate key messages to Local Officials, if any, as determined by DRP BC	RI – Bellamy/Alternate
T= 2 Hour	E-mail PN and communicate key messages to NJ Congressional Offices	OCA – Dacus
T= 24 Hour +	Respond to Media Inquiries – see developed Q&As attached	RI – Screnci / Sheehan

Audience / Stakeholders

AmerGen (Oyster Creek Nuclear Generating Station)

Senators' DC Offices (Senators Lautenberg & Menendez)

House of Representatives for NJ (Rep. Saxton, Smith, Andrews, Holt, Pallone & Pascrell)

New Jersey Dept. of Environmental Protection

Local officials ?

Communication Team

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Diane Screnci	Senior Public Affairs Officer	610.337.5330
Neil Sheehan	Public Affairs Officer	610.337.5331

Drywell Shell Background

In the mid-1980s; GPU Nuclear (previous licensee) identified corrosion of the drywell containment steel shell, in the sand bed region. Initial licensee actions were not effective in arresting the corrosion. In 1992, all sand was removed from the sand bed region and the accessible exterior surfaces of the drywell shell were cleaned and coated with epoxy. Ultrasonic test (UT) thickness measurements of the drywell shell taken in 1992 and 1996 indicated the corrosion had been effectively arrested. This information was confirmed by UT measurements in 2006, during a refueling outage.

License Renewal Background

AmerGen submitted a License Renewal Application (LRA) for Oyster Creek on July 22, 2005. The license renewal team inspection occurred in March 2006. Inspection Report 50-219/2006-007 dated September 21, 2006, documented the inspection results. Among many other areas, the LRA addressed the management of aging effects for primary containment and, including drywell shell corrosion in the sand bed region.

The Atomic Safety and Licensing Board (ASLB) held a hearing on a contention regarding the frequency of planned drywell shell UT inspections. In December 2007, the ASLB ruled in AmerGen's favor. Citizens (intervener) appealed this decision to the Commission on January 14, 2008. In May 2008, the Commission requested the ASLB to resolve concerns related to planned 3 dimensional (3-D) finite analysis of the drywell shell. The ASLB held oral arguments on September 18, 2008, and responded in a memorandum to the Commission on October 29, 2008.

Citizens had another appeal to the Commission related to a July 2008 ASLB decision to deny admitting a new contention on metal fatigue and the issue is under Commission review.

Future Actions

Region I license renewal outage commitments inspection is on-going. The inspection report number will be 50-219/2008-007.

NRC Commissioners decide on two ASLB appeals related to renewed license - ?

Region I will perform a non-outage license renewal inspection – planned for March 9 - 27, 2008.

The current operating license for Oyster Creek expires on April 9, 2009.

Anticipated Questions and Answers

- Q1: Why issue this document with only preliminary results of an inspection?
- A1: Given the continuing interest in the drywell shell, particularly, in the review of the Oyster Creek license renewal application, and the Atomic Safety and Licensing Board (ASLB) hearing and oral argument on this subject, the timely public disclosure of the results of this inspection was determined to be desirable. Also, on November 6, 2008, AmerGen and NRC staff made separate ASLB board notifications related to problems found during the implementation of certain drywell shell aging management programs.
- Q2: When will the inspection results be final?
- A2: The inspection results will be final when issued in Inspection Report 50-219/2008-007. An exit meeting is tentatively planned for the week of December 1, 2008. The report will be issued within 45 days from that date of the exit meeting.
- Q3: What prompted the inspection?
- A3: This was a regularly scheduled inspection, in accordance with the license renewal process, and used Inspection Procedure 71003. Generally, the inspection is intended to provide NRC staff observe a licensee's implementation of license renewal commitment activities, which occur during the refueling outage just prior to the period of extended operations. NRC inspectors focus on equipment which would be inaccessible during reactor operation, such as the drywell.
- Q4: How do the preliminary inspection results affect the license renewal process?
- A4: They confirm the implementation of commitments made by the licensee during the course of the application review and approval process, as documented in the NRC staff's safety evaluation report (SER).
- Q5: What are the long term next steps following the inspection, and what is done with the inspection results?
- A5: Preliminarily, there were no findings, as defined in our inspection process (NRC Inspection Manual Chapter 0612). A number of observations may be documented in the inspection report, as a result of this inspection.
- Q6: Why is the reactor safe to operate with these observations?
- A6: There were no identified significant conditions affecting the drywell primary containment structural integrity.

Q7: What does this mean for license renewal?

A7: The problems found were identified by AmerGen through the implementation of several aging management programs which were in place to manage the effects of aging - sand bed region of the drywell shell – this means the programs are effective in identifying important problems before they become more serious.

Commitment 27 in the OCNGS License Renewal Application describes the program for conducting the inspections of the epoxy coating in the sand bed region of the drywell shell. There will be a 100 percent inspection of the coating in the sand bed region every other refueling outage. The NRC staff has concluded in its SER that the programs in place will provide reasonable assurance that any aging effects will be detected before significant damage occurs to the drywell shell in the sand bed region.

Q8: Why was the coating inspected during this outage?

Q8: As stated above, AmerGen committed to do this inspection in the LRA during this outage, which is the last outage prior to entering the period of extended operation.

Q9: When will the coating in the sand bed region of the drywell shell be inspected again?

A9: The next visual inspection of the coating in the sand bed region of the drywell shell is currently scheduled for every other refueling outage or four years. AmerGen reports that this frequency will be reviewed and evaluated as a result of observing the blisters during the current inspection.

Q10: What has the NRC done in response to these observations?

A10: The NRC Region I staff was on site conducting the license renewal commitment inspection and had been closely following the licensee's investigation, including performing an independent inspection of the blisters and observation of the removal of the blisters. The Region I staff had been in contact with the state of New Jersey and the NRC Headquarters staff. The NRC staff will continue to follow the licensee's investigation.

Q11: We understand there was a challenge to keep water out of the sand bed region. What can you say about that?

A11: On November 7, 2008, AmerGen reported an apparent de-lamination of the strippable coating applied to the liner of the reactor refueling cavity. It was visually evident over the ensuing weekend, that water overflowed the reactor cavity drain trough and into the sand bed region (evidence of moisture was observed in several sand bed bays). There was also increased cavity trough drain leakage estimated at 4 to 6 gallons per minute.

After the reactor cavity was drained, there was a final inspection of all 10 sand bed bays, and no adverse effects were identified. AmerGen confirmed there was a substantial margin in the drywell shell thickness, in the upper drywell elevations where some water may have impinged on the uncoated drywell shell surface.

- Q12: Will the UT data collected during this outage regarding the drywell liner will be used as an input for the 3-D finite element analysis AmerGen must perform prior to entering a period of license renewal?
- A12: During this outage, AmerGen is taking ultrasonic thickness (UT) measurements of the drywell shell in numerous locations, as required by license renewal commitments. AmerGen has stated that those UT data values will be used as inputs for the 3-D analysis.
- Q13) What are the results of the UT data that was taken in 2008?
- A13) The NRC inspection staff independently reviewed the technical evaluation reports on the UT data. Based on a review of approved UT data sheets, the measurements were within AmerGen's established acceptance criteria. The NRC staff also confirmed that the acceptance criteria conformed to the requirements in the current licensing basis. The 3-D analysis will confirm margins reflected in the current licensing basis, but it is not required to replace the current licensing basis calculations.

The UT measurements were independent of the on-going coating and moisture barrier seal re-work.