~~TO BE WITHHELD FOR EXEMPTION 5~~

Oyster Creek License Renewal Inspection
NRC Discussions with NJ DEP Engineers

Summary

On Tuesday 11/18, John Richmond had a conversation with two NJ DEP engineers (Rich Pinney and Ron Zak). These engineers observed portions of the license renewal commitments inspection, and expressed concerns that the NRC PN, issued Monday 11/17, omitted some relevant (their words: "important and significant") information regarding the condition of the Oyster Creek drywell shell and related licensee activities. Additionally, the NJ DEP engineers felt that the MOU was effectively a 'gag order' preventing them from informing the public. John Richmond explained to the NJ DEP engineers that the purpose of the PN was an outreach to provide preliminary inspection information to the public prior to the inspection report being issued (mid Jan-2009). It was also explained to the NJ DEP engineers that the NRC had not come to a conclusion on the issues the NJ DEP engineers expressed, although we did conclude there are no immediate safety concerns to prevent restart. The PN was not intended to include a comprehensive listing of all of the items identified by either the licensee or the staff during the inspection. It was intended, however to document the staff's conclusions regarding restart. Any remaining conclusions regarding the license renewal commitments will be documented in our inspection report, scheduled for issuance in mid January.

Region 1 SLO's contacted Patrick Mulligan (NJ DEP engineers' supervisor) regarding the engineers' issues. Pat Mulligan expressed that he did not feel the engineers concerns were shared by NJDEP management, however he would discuss it with his supervisor Paul Baldauf and the Director, Jill Lipoti.

Pat Mulligan reported back to the SLO that Jill Lipoti had some concerns with the PN and with AmerGen's Commission Notification in that our PN did not include discussion of the disconnected tubing from the poly bottles and that the Commission Notification did not describe the extent of the delaminated strippable coating. Pat Mulligan relayed that he and Paul Baldauf intended to speak with Dr. Lipoti to provide context to these issues, and hopefully allay her concerns. He stated that NJDEP plans to observe the inspection exit, read the inspection report, and see how any of their remaining issues (the drywell coating inspection frequency and any remaining issues that Jill may have) are dispositioned. If NJDEP has any remaining disagreements, it will then document those in a letter. Pat Mulligan also expressed NJDEP management's understanding of the MOU agreement between NRC and the State, and the State's intent to remain within its bounds

We expressed to Pat Mulligan our desire to discuss any issues with them to hopefully provide sufficient information to preclude the need for a letter. Mulligan agreed that additional discussions may be beneficial, and stated that he will communicate to us any such requests. Continued communication with NJDEP on this matter remains an ongoing action for the staff.

NJ DEP Engineer Concerns

NJ DEP engineers' concerns, when placed in the appropriate context, are relatively low level issues which is why they were not mentioned in the PN. The NJ DEP concerns are listed below along with the additional information that puts them in the appropriate context.

1. NJ DEP Engineer's concern: Strippable coating de-lamination

- Additional Information: The strippable coating used to line the reactor refueling cavity did de-laminate, resulting in leakage into the cavity drain trough. Some water entering the cavity drain trough spilled over into a gap between the drywell shell and the concrete shield wall, resulting in water entry into 4 of 10 sand bed bays. Although this condition raises questions about the licensee's implementation of commitments associated with the license renewal application, there does not appear to be corrosion caused by the water intrusion into the sand bed bays making this a lower level issue. The Region will make a determination whether this commitment was met in the inspection report

2. NJ DEP Engineer's concern: Disconnected tubing from sand bed drain line poly bottles
   - Additional Information: During the outage, tygon tubing from two of five sand bed drain lines, to the poly bottles in the torus room, were found disconnected. The poly bottles are used to detect whether any water has leaked into the associated sand bed bay. The two affected sand bed bays had been visually inspected before and after the tubing was found disconnected. Although this condition raises questions about the licensee's implementation of commitments associated with the license renewal application, the two affected sand bed bays never had any moisture or water in them making this a lower level issue. The Region will make a determination whether this commitment was met in the inspection report.

3. NJ DEP Engineer's concern: 1/2 inch deep standing water in the sand bed bays
   - Additional Information: AmerGen identified water inside four of ten sand bed bays. This was initially characterized by the licensee as moisture, then as puddles, then as less than ½ inch deep puddles in the bay with the most water. When asked for clarification, AmerGen stated that there was no bay with standing water covering the entire floor. AmerGen did dry the bays prior to restart and did not identify any corrosion caused by the water.

4. NJ DEP Engineer's concern: No confidence in AmerGen's monitoring of sand bed drains, while the plant is on-line (e.g., water could enter a sand bed bay and go undetected)
   - Additional Information: During refueling, with reactor cavity flooded, there is a potential for water to leak into the sand bed bays. When the cavity is empty (plant at power), there is no realistic water source to leak into the sand bed bays. The NJ DEP engineers did not postulate a source of water, but kept saying that because AmerGen had problems monitoring sand bed drain lines during the outage, AmerGen could not be trusted to adequately monitor them while the plant was at power. The NRC's view is that the licensee is committed to daily monitoring of the sand bed drains during refueling outages.

5. NJ DEP Engineer's concern: Brightly rust colored water found in bay 17, on Friday 11/14 [in other bays, the water was not described as brightly rust colored] The NJ DEP engineers were concerned because this water was described as "brightly colored" where as water in other bays was not. They stated this water must have come from a different source than the water in the other bays. They also said the color may be indicative of significant unidentified corrosion.
   - Additional Information: Based on the Region 1 inspectors direct visual inspections, inside 2 ½ bays, the differences in water color (from mostly clear to rust colored) is consistent with direct observations of conditions in the bays.

6. NJ DEP Engineer's concern: No proof that there is not large [entire surface] areas of rust under the epoxy coating (e.g., the issue may have been mischaracterized as only a small area of one identified blister, versus significant corrosion that has not been evaluated)
    - Additional Information: The epoxy coating was applied to arrest corrosion (prevent moisture contact on the steel). In one small area, in one bay, the epoxy coating had four small blisters, with surface corrosion under each blister. 100% visual examination determined the epoxy coating was tightly adhered, with no other blisters identified. UT data results indicate there is no statistically significant on-going corrosion.

7. NJ DEP Engineer's concern: Corrosion rate of steel shell, in a broken blister, would be the same as uncoated steel, and will be significantly higher than the predicted corrosion rate of the same steel inside an unbroken blister, because in the past, the sand bed region experienced the loss of at least 1/2 inch of steel due to corrosion
    - Additional Information: Corrosion rates of steel are well known. OC did experience high corrosion rates, with ~½ inch of thickness wasted during the 1980s, before the sand was removed from the sand bed bays. Wet sand directly against the steel significantly accelerated the corrosion rate. The current configuration, no sand and epoxy coated steel, is not conducive to such a high rate of corrosion. The broken blister, identified and repaired this outage, was determined to have existed prior to the 2006 outage, because the rust stain below it showed up in a video made at the end of the 2006 outage. Based on laboratory analysis of that blister, the calculated corrosion rate is very small. The actual broke blister existed at least 2 years, with no significant adverse effect. Therefore, it is reasonable to conclude that if another blister did form, and broke, the predicted surface corrosion would not significantly reduce the thickness margin of the steel shell, before the broken blister would be reasonable identified and repaired.

Immediate Safety Concern

Both the NRC and NJ DEP are in agreement that there is no immediate safety concern.

Preliminary NRC Conclusions

The onsite inspection is complete, however the NRC has not yet reached any final conclusions regarding the licensee's implementation of commitments. The inspection exit by telephone is currently scheduled for 12/3. The NRC is still assessing two specific license renewal commitments to determine whether AmerGen adequately implemented those commitments and has requested some additional information from the licensee to make that decision. The commitments are:

1. SER Commitment 27, ASME Section XI, Subsection IWE. Item (2), A strippable coating will be applied to the reactor cavity liner to prevent water intrusion into the gap between the drywell shield wall and the drywell shell during periods when the reactor cavity is flooded.

AmerGen was asked to provide the following information:

- Performance of the strippable coating during the two previous outages (2006 & 2004)

- Any condition reports (CRs), issue reports (IRs), or action requests (ARs) associated with the strippable coating from the 2006 outage

2. SER Commitment 27, ASME Section XI, Subsection IWE. Item (3), The sand bed region drains will be monitored daily during refueling outages.

AmerGen was asked to provide their basis to conclude this commitment had been adequately satisfied, in light of the following:

- Sand bed drains were monitored by checking poly bottles, attached to the drain lines by tygon tubing. The drain lines could not be directly observed.
- After the cavity was drained, 2 of 5 tygon tubes were found to be disconnected and laying on the floor.
- Sand bed Bay 11 drain line poly bottle was empty during each daily check until Nov 15 (cavity was drained on Nov 12), when it was found full (> 4 gallons). Bay 11 was entered, visually inspected, and found dry. AmerGen believes that the 4+ gallons had been held up in the catch funnel (not directly observable). This implies that the Bay 11 drain line had not been draining into the poly bottle for some period of time.

Completed Actions

- Provided John's summary of the NJ DEP engineer's comments to Karl Farrar.
- SLO's reached out to NJ DEP to determine NJ DEP management's view on the State inspectors concerns.
- Provided a status update to Regional management at the 11/19 8:45 meeting.

Next Steps

1. Make internal stakeholders aware of any follow-up communication from Pat Mulligan, NJDEP, resulting from his discussion today with Jill Lipoti.

Owner	McLaughlin
Date	11/19/08, or later as applicable

2. Maintain communications with NJDEP regarding this inspection and respond to any requests for further discussion.

Owners	SLOs & DRS
Date	Ongoing

3. Conduct inspection exit meeting.

Owners	EB1
Date	Tentatively scheduled for 12/3

4. Issue inspection report.

Owners	EB1
Date	Mid January

5. Respond to communications from external stakeholders.

Owners	EB1/SLO/PAO
Date	As necessary