

**Sarah Rich**

---

**From:** Richard Conte, *RI*  
**Sent:** Monday, January 05, 2009 3:10 PM  
**To:** John Richmond; Neil OKeefe; George Hopper; Rajender Auluck; Jerry Dozier; AnnMarie Stone; David Wrona; Jeffrey Rikhoff; David Pelton; Doug Tift; Glenn Meyer; Ross Telson  
**Cc:** Caudle Julian; Glenn Meyer; Michael Modes; Stuart Sheldon; Greg Pick; Louis Lake; Doug Tift; Suresh Chaudhary; Alan Dahbur; Heather Jones; Samson Lee; Brian Holian; Suresh Chaudhary; Heather Jones; Joseph Schoppy; Timothy Kobetz; Darrell Roberts; Paul Bonnett  
**Subject:** OYSTER CREEK 71003 - LEARNING DOCUMENTS  
**Attachments:** OC Exit Meeting\_Inspection LsnsLrnd.doc; OC LRI 2008-07\_Exit Notes\_rev-10A.doc; NJ&NRC\_PerfectTogether-Rev 2A.doc; OC Exit Meeting RESULTS on Next Steps.doc; PNO-I-08-012 - Oyster Creek.doc

Well 2008 was a hellava year! Learning points to several challenges for 2009.

Attached is a compilation of what was prepared as a result of the OC 71003 outage inspeciton Phase I. It is for your review and perusal.

(b)(5)

First file is of particular interest and focused on lessons learned. I and my staff will start to work on solution for Cpart conf. later this month but decision makers will need to address issues: DLR (71003 objectives in various phases along with techniques/expectations) and DIRS (owners of the Inspection Manual Chapters, need to deal with results depending on the phase).

EX-15

2/16

Received: from R1CLSTR01.nrc.gov ([148.184.99.7]) by R1MS01.nrc.gov  
([148.184.99.10]) with mapi; Mon, 5 Jan 2009 15:09:48 -0500  
Content-Type: application/ms-tnef; name="winmail.dat"  
Content-Transfer-Encoding: binary  
From: Richard Conte <Richard.Conte@nrc.gov>  
To: John Richmond <John.Richmond@nrc.gov>, Neil OKeefe <Neil.Keefe@nrc.gov>,  
George Hopper <George.Hopper@nrc.gov>, Rajender Auluck  
<Rajender.Auluck@nrc.gov>, Jerry Dozier <Jerry.Dozier@nrc.gov>, AnnMarie  
Stone <AnnMarie.Stone@nrc.gov>, David Wrona <David.Wrona@nrc.gov>, Jeffrey  
Rikhoff <Jeffrey.Rikhoff@nrc.gov>, David Pelton <David.Pelton@nrc.gov>, Doug  
Tift <Doug.Tift@nrc.gov>, Glenn Meyer <Glenn.Meyer@nrc.gov>, Ross Telson  
<Ross.Telson@nrc.gov>  
CC: Caudle Julian <Caudle.Julian@nrc.gov>, Glenn Meyer <Glenn.Meyer@nrc.gov>,  
Michael Modes <Michael.Modes@nrc.gov>, Stuart Sheldon  
<Stuart.Sheldon@nrc.gov>, Greg Pick <Greg.Pick@nrc.gov>, Louis Lake  
<Louis.Lake@nrc.gov>, Doug Tift <Doug.Tift@nrc.gov>, Suresh Chaudhary  
<Suresh.Chaudhary@nrc.gov>, Alan Dahbur <Alan.Dahbur@nrc.gov>, Heather  
Jones  
<Heather.Jones@nrc.gov>, Samson Lee <Samson.Lee@nrc.gov>, Brian Holian  
<Brian.Holian@nrc.gov>, Suresh Chaudhary <Suresh.Chaudhary@nrc.gov>,  
Heather  
Jones <Heather.Jones@nrc.gov>, Joseph Schoppy <Joseph.Schoppy@nrc.gov>,  
Timothy Kobetz <Timothy.Kobetz@nrc.gov>, Darrell Roberts  
<Darrell.Roberts@nrc.gov>, Paul Bonnett <Paul.Bonnett@nrc.gov>  
Date: Mon, 5 Jan 2009 15:09:46 -0500  
Subject: OYSTER CREEK 71003 - LEARNING DOCUMENTS  
Thread-Topic: OYSTER CREEK 71003 - LEARNING DOCUMENTS  
Thread-Index:  
AckNA778qgpdLnESRFSFEowPdIvL9wCcD/kAFTF4S+AAYMsdwAJhdrpg  
Message-ID:  
<2856BC46F6A308418F033D973BB0EE72AA6110A8A9@R1CLSTR01.nrc.gov>  
References:  
<2856BC46F6A308418F033D973BB0EE72841E572A0B@R1CLSTR01.nrc.gov>  
<2856BC46F6A308418F033D973BB0EE72841EA20DB4@R1CLSTR01.nrc.gov>  
<2856BC46F6A308418F033D973BB0EE72AA5D208A21@R1CLSTR01.nrc.gov>  
<2856BC46F6A308418F033D973BB0EE72AA5CDD1B05@R1CLSTR01.nrc.gov>  
In-Reply-To:  
<2856BC46F6A308418F033D973BB0EE72AA5CDD1B05@R1CLSTR01.nrc.gov>  
Accept-Language: en-US  
Content-Language: en-US  
X-MS-Has-Attach: yes  
X-MS-Exchange-Organization-SCL: -1  
X-MS-TNEF-Correlator:  
<2856BC46F6A308418F033D973BB0EE72AA6110A8A9@R1CLSTR01.nrc.gov>  
MIME-Version: 1.0

**OYSTER CREEK COMMITMENT INSPECTION**  
**Per IP 71003 – App. C MC 2515, Infrequent Procedures**  
**LESSONS LEARNED AND KEY QUESTIONS DEVELOPED**  
**(As of 12/30/08)**

**Discussion:**

Because of a lack of consensus among key NRC staff stakeholders on the exit notes for the subject inspection, the Deputy Division Director of DRS assigned EB 1 action in order to build consensus in this area by developing and implementing an action plan. From the review a number of lessons were learned and there is a need to address a number of procedure issues.

**Summary:**

EX 5

(b)(5)

Page 4 redacted for the following reason:

-----

(b)(5)

**DETAILS**  
**(As of 12/23/08)**

**LESSONS LEARNED (LL):**

(b)(5)

EXIS

(b)(5)

EX. 5

**INSPECTION PROCEDURE ISSUES:**

The questionable areas surrounding the results of the OC commitments inspection were listed below. Consideration should be given to obtaining additional stakeholder input in the form of

OE, for views on commitments and deviations, and DRIS, for views on assessment of commitments.

1. Is IP 71003 an ROP tool (2515 and reference to 0612) or is it a part of a licensing action (2516).
2. If 71003 is a 2516 tool, then what is the related documentation process to be used?
3. If 71003 is a 2516 tool, then what is the related assessment process to be used?
4. Isn't the real purpose of doing the 71003 before the PEO in order for the agency to assess a licensee's readiness for the Period of Extended Operations (PEO). If true, then why isn't it listed as an objective with guidance on how to do the assessment, quantitative (tasks done and remain tasks or actions open along with schedule) vs. qualitative (assessing procedure adequacy).
5. If IP 71003 is an ROP tool, does the standard objective statement "to verify implementation" (section 01.01) mean to very adequate or proper implementation for which performance deficiencies can be formulated.
6. With respect to 4, and, if it is true that adequacy is to be verified (on a sampling basis) or we are to verify that the AMP has been implemented (section 02.a (1)), then to what level of detail is this to be done?

NOTE: When the majority of 71003 is to be completed shortly before the period of extended operations, very little is in effect nor are there requirements for Aging Management Program (AMP) implementing procedures to be implemented until after the PEO.

- a. Is having the procedure issued without a reasonable NRC review for adequacy sufficient to say the commitment was met or the program is ready to be implemented?
  - b. If a. is not true, then how much of a sample and review for adequacy of implementing procedures is enough to say the program is ready to implemented?
  - c. On a team leader's status check, is it ok for more than 30% of the implementing procedures for any one program to be in some form of review and approval in order for the team to conclude the AMP is ready for the PEO? If 30% is not the right number then what is?
  - d. Should all the new programs being reviewed to the standard determined above?
  - e. How many modified programs need to be reviewed?
7. With respect to 4, and, if the answer is to NOT verify adequacy or proper implementation, then how does one reconcile that situation with sections 03.01.b 1 and 03.01.b.3?
    - a. 03.01.b.1 says to review supporting documentation to determine if the licensee has taken appropriate actions, including corrective action, to satisfy a particular license condition or commitment. Appropriate technical expertise should be sought if needed.
    - b. 03.01.b.3 says to evaluate those commitments not met for NRC enforcement action using MC 0308 Reactor Oversight Process Basis Document and IMC 0609 significance Determination Process (implied is the use of 0612 which makes 0308 and 0609 jell including deviations from standards). The premise for evaluation and assessment is the determination that something was inadequately done.

8. With respect to 6.b above, section 03.01.b.3 implies that even commitments listed in the SER are enforceable. Its this true?
9. Also with respect to 7, how do we reconcile the marked difference between two types of standard license conditions for future activities noted between Ginna and NMP licenses. One says to implement the future activities of the USAR update required by another standard license condition (we don't expect the SER commitments to be listed in the updated USAR among all such licensees); the other says to implement the future activities as listed in the applicable NUREG SER (clearly enforceable if not done on time, adequately, or if not properly changed).
10. Does the following question need to be addressed by the 71003 team; and, if so, why isn't it an objective of the procedure: Were the commitments implemented such that there is REASONABLE ASSURANCE the affects of aging are managed?
  - a. Is this too high a level as an objective of the IP 71003?
  - b. Is the more important question for the 71003 team as follows: Is the licensee ready for the period of extended operations.
11. Is it true that there is no standard in license renewal rule called "adequate" or "inadequate"?
12. Is there a difference between NRC's treatment of regulatory commitments made as a part of Part 50 correspondence vs. Part 54 correspondence? Can you formulate performance deficiencies on failure to meet commitments if they are not enforceable?
13. How do we determine failures to implement license renewal commitments in light of the endorsed definitions and above noted standards? The agency endorsed reference is:

NEI 99-04 (endorsed by RIS 2000-17, dated September 21, 2000):

"A Regulatory Commitment means an explicit statement to take a specific action agreed to, or volunteered by, a licensee and submitted in writing on the docket to the NRC. Licensees frequently communicate their intent to take certain actions to restore compliance with Obligations, to define a certain method of meeting Obligations, to correct or preclude the recurrence of adverse conditions, or to make improvements to the plant or plant processes. A Regulatory Commitment is an Intentional undertaking by a licensee to (1) restore compliance with regulatory requirements, or (2) complete a specific action to address an NRC issue or concern (e.g., generic letter, bulletin, order, etc.). With respect to corrective actions identified in a NOV response or LER, the specific method(s) used by licensee to restore compliance with an obligation are not normally considered a Regulatory Commitment. The regulatory commitment in this instance is the promise to restore compliance with the violated obligation."

This is not to be confused with a license condition or other requirement which is officially defined as an "obligation" as follows:

"Obligation refers to any condition or action that is a legally binding requirement imposed on licensees through applicable rules, regulations, orders and licenses (including technical specifications and license conditions). These conditions (also referred to as regulatory requirements) generally require formal NRC approval as part of the change-control process. Also included in the category of obligations are those regulations and license conditions that define change-control processes and reporting requirements for licensing basis documents such as the updated FSAR, quality assurance program, emergency plan, security plan, fire protection program, etc."

NOTE: Nothing in the above reference addresses whether the commitments were relied on or made within the current licensing bases but they may be in effect by the very nature of the commitment at the time of the 71003 team just before the PEO.

14. What types of minor performance deficiencies should be document in the interest of public trust? With respect to Licensee identified vs. NRC identified/self revealing, this practice would appear to be contrary to MC 0612?

- a. Is there agreement that a commitment is a standard for which any licensee had reasonable control?
- b. Can we call them performance deficiencies with or without a renewed license?

IMC 0612 Section 03, Definitions, for Performance Deficiency states:

"An issue that is the result of a licensee not meeting a requirement or standard where the cause was reasonably within the licensee's ability to foresee and correct, and that should have been prevented. A performance deficiency can exist if a licensee fails to meet a self-imposed standard or a standard required by regulation." ... it goes on to discuss that cross cutting aspects in and of themselves are not performance deficiencies... mostly causal attribute information.

**NOTE:** Nothing in the above reference addresses whether the commitments were relied on or made within the current licensing bases

- c. Why document these issues if they are minor?

IMC 0612 Section 05 as an exception in a box:

**EXCEPTION:** "A minor violation or finding may be documented when it is necessary to close a licensee event report or to close an unresolved item, or if related to an issue of agency wide concern (e.g., in documenting the results of a temporary instruction). If it is necessary to document a minor violation, then it is done in accordance with the guidance contained in the Enforcement Manual."

15. If a license is not renewed and IP 71003 is conducted, how can you formulate performance deficiencies since the licensing action has not been taken on these commitments?

- a. Should we be only discussing factual based observations without context of meeting or not meeting the commitment and with no assessment of significance – how would this look and how receptive would the public be to the issue being written up without context, assessment, or action by NRC staff?
- b. How can we proclaim a finding if we are still deciding over wording in an SER listing of commitments – Should we not be waiting for a renewed license and waiting until they enter the period of extended operation before you can proclaim it a "finding".
- c. Until we know what is acceptable, should the issue be written as Unresolved – see definition of URI in MC 0612 (information needed in order to determine acceptability, violation or deviation)?

IMC 0612 Section 03 definitions for an Unresolved Item:

"An issue about which more information is required to determine if it is acceptable, if it is a finding, or if it constitutes a deviation or violation. Such a matter may require additional information from the licensee or cannot be resolved without additional guidance or clarification/interpretation of the existing guidance (e.g., performance indication reporting guidance).

16. Don't the resident inspectors and region based inspectors implementing the ROP at a plant with a renewed license and into the period of extended operations need special training and procedures in order to guide them through problems noted during the course of ROP implementation?
17. Should a TI be developed in order to keep track of time for future budgeting use, and provide that guidance commensurate with a reasonable amount of training (guidance would include when other ROP activities can be replaced by a review of aging managing issues both from a planned or reactive effort)?

18. Based on the results of 17, should a separate procedure (7100X) be developed for the IMC 2515 Program (App. C) or as a 2515 other planned activity? Impact on Budget?
19. What are examples of violations of 54.29, the standards for issuing a renewed license and how would we judge the level of significance based upon applicant agreement that actions have been identified or actions have been taken or will be taken to manage the effects of aging?
- a. In general, program adequacy vs. implementation (activities within the scope of license renewal will continue to be conducted IAW commission rules and regulations)
  - b. Undetected aging effects related to passive components due to inadequate conduct of activities (human performance, frequency, procedural, program)
  - c. Undetected aging effects on the functionality of passive components without effect on active safety related or other important structures or components due to the inadequate conduct of activities (same as above).
  - d. Functionality issues resulting in operability issues for safety related or other important components and structures (can PRA inform a deterministic method for determining significance) due to the inadequate conduct of activities (same as above).
  - e. Can this rule stand alone or does the specific license need to be invoked (compatibility issues).
20. Others based on consensus building ???

Handwritten signature or initials, possibly "S. J. X. J.", written in black ink.

1  
PREDECISIONAL INSPECTION INFORMATION – DO NOT DISCLOSE

TO BE WITHHELD FOR EXEMPTION 6

ISSUE FROM STATE OF NEW JERSEY  
ON NRC EXIT/MEETING INFORMATION/NOTES

Purpose: To communicate on options and decision related to State of New Jersey concern on gap information (from 71003 inspection at Oyster Creek in October 2008).

Success: Understanding of intricacies of PROS and CONS for four cases of early release of gap information before the inspection report is issued and agreement on decision/action to address the concern.

Agenda:

1. Statement of Problem
2. Background
3. Gap Information
4. AMP Program Adequacy vs. Implementation
5. Analysis on Actions to Address Concern:
  - a. Required Board Notification
  - b. Board Notification for information purposes
  - c. Exit Notes to Public Domain in ADAMS
  - d. Inspection Report to be Issued mid January
  - e. Stay the Course – issue report Jan. 31 about a week earlier than due – offer help to NJ on what is in the public domain
6. Viable Options Considered
7. Recommendation
8. Decision

*[Handwritten signature]*

2.  
~~PREDECISIONAL INSPECTION INFORMATION - DO NOT DISCLOSE~~

Statement of the Problem

A representative of the State of New Jersey indicated on December 23, 2008 after the exit meeting with Amergen on the 71003 inspections the following concerns:

1. State raised concern that there was more information (gap information) conveyed in the exit (related to all of the observations made during the outage) than what had been conveyed in either our PN or board notification (BN) (or the licensee's) back in November. Dr. Lipoti was concerned that these are "relevant and material" to the current licensing proceedings and that parties have a right to know.
2. Further, the State of New Jersey would like to comment on those matters formally, but they believe they agreed not to do so prior to issuance of the NRC's inspection report in the memorandum of understanding between New Jersey and the NRC staff.

Deleted: apparently are restricted from  
Deleted: ing  
Deleted: because of

Decision

NOTE:

Based on attached details and conference with NRC office representatives on December 30, 2008 - Region I: Marsha Gamberoni, Richard Conte, Nancy McNamara; Karl Farrar, Chris Newport, Heather Jones; DLR: David Pelton; OGC: May Baty

Communicate to Dr. Lipoti in a conference call as soon as possible after discussions with ORA the below listed talking points - since New Jersey is a litigant in a license renewal matter, regional counsel or a representative from OGC should be present in addition to Director DRS, EB 1 Branch Chief and SLO:

1. We reviewed all the matter found as a result of the 71003 inspection and we find that no additional board notification is needed,

[ (b)(5) ]

Deleted: - the conditions found in the inspection are as expected; or, if off-normal, they were placed in the corrective action process

2. We are prepared to discuss any "gap" in information that is important to New Jersey with respect to the difference between the exit notes as communicated in the exit meeting of Dec. 23, 2008 and that which is in the public domain via the Staff's and AmerGen's November 6, 2008 notifications, the Staff's PNO, and AmerGen's November 17, 2008 follow-up notification.

[ (b)(5) ]

3. We understand the issue of the report being generated while a decision is being made and we are attempting to move the report issue date up.

EX-5  
EX-5  
EX-5

~~PREDECISIONAL INSPECTION INFORMATION - DO NOT DISCLOSE~~

3

[

(b)(5)

]

EX-15

4. If they are not satisfied; and, if they ask what are their options, we can offer to them that they consult with their legal department.

[

(b)(5)

]

EX-15

EX-15

Page Numbers 4-6 redacted for the following reasons:

-----

(b)(5)

PREDECISIONAL INSPECTION INFORMATION - DO NOT DISCLOSE

- a. AmerGen's characterization of cause of strippable coating de-lamination.
- b. Increase monitoring frequency

5. Others:

- a. Part 50 vs. Part 54 infrastructure information and the need for an unresolved item with respect to monitoring drain activity along with the effectiveness of the strippable coating.
- b. All details on cavity trough drain line found isolated or poly bottles being disconnected - the issue of water getting into the gap area where it is not wanted is well known in the public domain.
- c. Details of drain flow monitoring plan and design flow for water to not spill into gap - the issue of water getting into the gap area where it is not wanted is well known in the public domain.

(b)(5)

Aging Management Program Adequacy vs. Implementation

The GALL lists ten key criteria for an AMP. They are listed here for convenience: 1) Scope of Program; 2) Preventive Actions; 3) Parameters monitored; 4) Detection of Aging Effects; 5) Monitoring and Trending; 6) Acceptance Criteria; 7) Corrective Actions; 8) Confirmation Process; 9) Administrative Controls; and, 10) Operating Experience. Applicants, as an alternative, can produce another methodologies acceptable to staff; but, as far as we know, all, including Amergen for Oyster Creek, adopted the ten criteria. The appropriate elements for this discussion related to implementation are No. 4 on Detection of Aging Effects and No. 7 on Corrective Actions. For element No. 4 the goal is the detection of aging effects before there is a loss of any structure or component function and for element No. 7, the goal is corrective action that include root cause determination and prevention of recurrence.

(b)(5)

EP.5

EP.5

EP.5

Pages numbers 8-12 redacted for the following reasons :

-----

(b)(5)

~~PREDECISIONAL INSPECTION INFORMATION - DO NOT DISCLOSE~~

c. Others ???

Viable Options:

In a conference call for December 29, 2008, EB 1 BC lead a discussion of the pros and cons of each of the four areas above.

Recommendations:

[ (b)(5) ]

Parties agreed no Board Notification is warranted. If the representatives of New Jersey are still concerned they should be asked as to what the gap information is and how important is it to them. We can respond to indicating what issues vs. inspection details are in the public domain.

Discussions focused on keeping the talking points to New Jersey simple and avoid any assessment on significance since we will not be discussing that in the report.

Decision/Final Action:

See above.

EX. 5

EX. 5

# Oyster Creek License Renewal Commitments Inspection Exit Meeting - Dec 23, 2008 at 9 am

Essentially reported information in the public domain BNS and PNO 1-08-012

Information in public domain for which a question or issue can be raised or it wasn't exactly stated that way but the issue remains the same as being in the public domain

Originally in yellow per inspector notes in rev. 10 - this file is 10A

## Introductions

- NRC Region 1
- NRC HQ
- NRC Residents
- AmerGen
- NJ DEP (Observers)

## Excellent Overall Cooperation

from everybody

>>> use of the Certrec Internet Database was quite helpful

- Special Thanks**
- Pete Tamburro (LR Program Owner)
  - Chris Hawkins (NDE Level-III)
  - Cal Taylor & Jhansi Kandasamy

## Inspection Schedule Slippage

- LR outage schedule slipped due to unexpected issues
  - Some NDE UTs re-scheduled, due to unanticipated physical interference issues
  - Bay 1 Coating Blisters
  - Bay 3 Moisture Barrier Seal Problem
  - Cavity Leakage and Water Infiltration into 4 Bays
- As a result, our inspection ran into a 2nd on-site week and a 3rd in-office week

## Documentation

Team Report 45 days after the Exit Meeting (early Feb)

## Review of Regulatory Framework

[Darrell Roberts]

Existing Part 50 -- Current Licensing Basis

Pending Part 54 Decision on License Renewal and License Obligations

19/12

## Exec Summary of Inspection Results

- Observed actions to evaluate primary containment structural integrity
- Observed selected activities described in SER Appendix A "Commitments for LR"

- Because the application for a Renewed License remains under Commission review for final decision -- With respect to proposed SER commitments:
  - No assessment of implementation or effectiveness will be documented
  - Factual Based Observations of activities will be documented
- Inspection observations were considered, in light of:
  - Part 50 existing requirements (e.g., CLB)
  - Pending Part 54 commitments
  - Programmatic performance under on-going implementation of Part 50 requirements
- The conclusions of PNO-1-08-012 remain unchanged
- Reviewed 2 change packages for proposed activities described in SER App-A
  - A summary of the change will be documented
  - The Exelon commitment management program is an existing CLB program. The implementation of this existing program provided adequate administrative controls.

### Unresolved Item

- An Unresolved Item (URI) will be opened to evaluate whether existing current licensing basis commitments were adequately performed and, if necessary, assess the safety significance for any related performance deficiency.
- The issues for follow-up include the strippable coating de-lamination, reactor cavity trough drain monitoring, and sand bed drain monitoring.
- The commitment tracking, implementation, and work control processes will be reviewed, based on corrective actions resulting from AmerGen's review of deficiencies and operating experience, as a Part 50 activity.

## Key Inspection Observations

### Six Key observations will be Documented

#### For the Six Key Observations:

- Regarding AmerGen's activities to perform proposed LR commitments, the NRC will review AmerGen's operating experience review and corrective actions, as appropriate, as part of the scheduled March 2009 IP 71003 Inspection.

(1) 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.

Proposed SER App A Item 27, ASME Section XI, Subsection IWE, Part 2)

#### Strippable Coating De-lamination

- From Oct 29 to Nov 6, the strippable coating limited leakage into the cavity trough drain at < 1 gpm
- On Nov 6, the observed leakage rate in the cavity trough drain took a step change to 4 to 6 gpm
- Water puddles were subsequently identified in 4 sand bed bays
- AmerGen identified several likely or contributing causes
  - A portable water filtration unit was improperly placed in the reactor cavity, which resulted in flow discharged directly on the strippable coating
  - An oil spill into the cavity may have affected the coating integrity
  - No post installation inspection of the coating had been performed
- AmerGen stated follow-up UTs will re-evaluate the drywell shell next outage

(2) Reactor cavity seal leakage through drains and the drywell sand bed region drains will be monitored for leakage. Periodically

Proposed SER App A Item 27, ASME Section XI, Subsection IWE, Part 3)

#### Cavity Trough Drain Line Found Isolated

- On Oct 27, the drain line was isolated to install a tygon hose to allow drain flow to be monitored
- On Oct 28, the reactor cavity was filled
- Drain line flow was monitored frequently during cavity flood-up, and daily thereafter
- On Oct 29, a boroscope examination identified the drain line isolation valve had been left closed
- When the drain line isolation valve was opened, about 3 gallons of water drained out, then the drain flow subsided to about an 1/8 inch stream (< 1 gpm)

#### Drain Flow Monitoring Plan

- AmerGen stated a calculation determined cavity trough drain flow of less than 60 gpm would not result in trough overflow into the gap between the drywell shield wall and the drywell shell
- AmerGen had a pre-approved Action Plan for monitoring cavity & sand bed drains
- Per the Action Plan --
  - If drain flow > 5 gpm, then monitor every 8 hours
  - If drain flow > 12 gpm, then monitor sand bed poly bottles every 4 hours
  - If drain flow > 12 gpm and water found in sand bed poly bottles, then enter & inspect sand beds

Water Found in Sand Bed Bays

- On Nov 6, the stripable coating started to de-laminate
- Trough drain flow took a step change from ~ 1 gpm to approx 4 to 6 gpm
- Increased monitoring of trough drain to 2-hr and sand bed poly bottles to 4-hr (not req'd by Action Plan)
- On Nov 8, workers inside sand bed bay 11 identified dripping water
- Subsequently, water puddles were identified in 4 sand bed bays
- After cavity was drained, inspected all sand bed bays. No deficiencies identified
- Sand bed bays were originally scheduled to have been closed by Nov 2
- On Nov 15, after cavity was drained, water was found in sand bed bay 11 poly bottle

3) Sand bed region drains will be monitored daily during refueling outages  
Proposed SER App-A Item 27, ASME Section XI, Subsection IWE, Part (a)

Sand Bed Drain Poly Bottles Not Connected

- Sand bed drains were remotely monitored by checking poly bottles, attached via tygon tubing to funnels hanging below the drain lines
- The drains were not directly observed
- After the reactor cavity was drained, 2 of the 5 tygon tubes were found disconnected, laying on the floor
- Sand Bed Bay 11 drain 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.

4) Perform visual inspections of epoxy coating on the drywell external surfaces in the sand bed bays. Proposed SER App-A Item 27, ASME Section XI, Subsection IWE, Part (a)

- Directly observed conditions of the drywell shell epoxy coating in selected sand bed bays
- NRC reviewed VT-1 examination records for each sand bed bay, and directly inspected 7 bays
- Observed AmerGen's activities to evaluate the epoxy coating

Sand Bed Bay 11 Blisters

- Observed activities to evaluate and repair blisters found in Bay 11
  - 1 small 1/4 inch broken blister identified with a crack seal
  - Another initially referred to as bumps, unbroken blisters were identified by the NRC, during initial investigation
    - All 4 blisters were within a 1-2 inches square area, and all were evaluated and fixed
- For extent of condition, 4 bays re-inspected by different NDE level-II
  - -- AmerGen reported that No deficiencies were identified ??
- AmerGen estimated corrosion of ~ 3 mils had occurred over about a 16 year period

Sand Bed Bay 9 Coating Deficiency

- AmerGen identified and fixed a area approximately 8" x 8" that appeared to NOT have had all 3 layers of the epoxy coating applied.

2006 Inspection Did Not Identify the Bay 11 Rust Stain or the Bay 9 Coating Deficiency

- AmerGen reviewed a 2006 video and identified the same rust stain in the 2006 video of Bay 11
- CR 844815 stated the Bay 9 coating deficiency was most probably an original 1992 installation issue
- During the 2006 coating inspection, these 2 deficiencies were not identified

SRMS

5) The external drywell shell moisture barrier seal, between the shell and the sand bed floor, will be inspected when the epoxy coating is inspected. [REDACTED]  
Proposed SER App A Item 27, ASME Section XI, Subsection IWE, Part (12)

- Directly observed conditions of the drywell shell moisture barrier in selected sand bed bays
- NRC reviewed VT-1 examination records for each sand bed bay, and directly inspected 7 bays
- Observed AmerGen's activities to evaluate the moisture barrier
- AmerGen identified deficiencies in 7 of the 10 sand bed bays, including
  - Surface cracks
  - Partial separation of the seal from the shell or the floor
- AmerGen determined the moisture barrier function was not impaired, because no cracks or separation fully penetrated the seal. All deficiencies were repaired.

#### Sand Bed Bay 3 Seal Crack and Rust Stain

- Observed activities to evaluate and repair the moisture barrier seal in Bay 3
- The seal had rust stains on the surface, below the identified crack
- When the seal was excavated, some drywell shell surface corrosion was identified
- Seal crack and surface rust were repaired
- Laboratory analysis determined there was inadequate epoxy cure, an original 1992 installation issue

#### 2006 Inspection Did Not Identify Any Seal Cracks

- During 2006 seal inspections, no deficiencies were identified

6) Drywell In-service Inspection - Ultrasonic Thickness Measurements  
Proposed SER App A Item 27, ASME Section XI, Subsection IWE, [REDACTED]

- Observed AmerGen perform drywell shell UT thickness measurements
- Observed AmerGen evaluate the UT data (2000 separate UT readings)
- NRC reviewed all UT examination records and AmerGen's Technical Evaluations of the UT data
- AmerGen determined that all of the UT data satisfied acceptance criteria based on current design basis design requirements for the thickness of the steel plate [REDACTED]
- AmerGen did not identify any significant conditions affecting the drywell shell structural integrity
- AmerGen did not identify any on-going corrosion or corrosion trend, based on the UT examinations
- AmerGen did not identify any statistically significant deviations from 2006 UT data values

#### As a Reminder -- For these Six Key Observations

- Regarding AmerGen's activities to perform proposed LR commitments, the NRC will review AmerGen's operating experience review and corrective actions, as appropriate, as part of the scheduled March 2009 IP 71003 Inspection.

CS  
2/23

## No Noteworthy Observations

### **Protective Coating Monitoring and Maintenance Program**

- D/W Interior Service Level I Coating

### **Electrical Cables and Connections**

- Drywell Cable Inspections

### **Inaccessible Medium Voltage Cables**

- Cable Test - as part of the Doble Test on Auxiliary Transformer (bank 4)

### **Buried Piping**

- ESW Pipe Replacement and Tie-in

### **Structures Monitoring Program**

- Intake tunnel and expansion joints

### **One-Time Inspection Program**

- Isolation Condenser Inspection and UT below the water line

### **Periodic Inspection Program**

- Condensate System expansion joint inspection
- Fire barrier inspection inside a switchgear

### **Metal Fatigue Program**

- No changes to the high cumulative usage factor components list

6/2/08

## Looking Forward -- Next Steps -- Closing Comments

[Rich Conte]

**ANY QUESTIONS for US**

OYSTER CREEK COMMITMENT INSPECTION  
Per IP 71003 – App. C MC 2515, Infrequent Procedures  
STATUS AND NEXT STEPS  
(As of 12/18/08)

**DISCUSSION:**

Because of a lack of consensus among key NRC staff stakeholders on the exit notes for the subject inspection, the Deputy Division Director of DRS assigned EB 1 action in order to build consensus in this area by developing and implementing an action plan.

**ISSUES:**

1. SER App. A No. 27 item (2) (p20): "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."
  - a. The strippable coating initially limited leakage into the cavity drain trough at < 1 gpm.
  - b. On Nov 7, the leakage rate took a step change to 4 to 6 gpm. Water was subsequently identified in 4 sand bed bays (the sand bed bays are air connected to the area between the drywell shield wall and the drywell shell itself).
  - c. This is viewed by the inspector as self revealing.
  - d. NEW INFORMATION:
    - i. Action leakrate calc. did not consider channeling of all flow in one area of the trough causing spill over (~60gpm) as what apparently did occur.
    - ii. Plausible cause – a filtration system was placed in the pool and care was not made to ensure discharge of pump was not aimed at the area where the strippable coating first gave way.
    - iii. In reviewing multiple sections of the SER, it is clear the staff suspected that the strippable coating would NOT prevent leakage AND water WOULD get into the gap for varying reasons, so additional measures were asked for and obtained for additional coating and UT inspections should water in the gap occurred.
    - iv. It is not clear why the statement of future action survived as a lone item on the App. A list of the SER.
    - v. The inspector remains firm that the item was NOT met with minimal to no impact on safety.
  
2. SER App. A No. 27 item (3) (p20): "The ... drywell sand bed drains will be monitored (daily during refueling outages) ... if leakage is detected, procedures will be in place to determine the source of leakage and investigate and address the impact of leakage on the drywell shell including verification of the condition of the drywell shell coating and moisture barrier (seal) in the sand bed region and performance of UT examinations of the shell in the upper regions...."
  - a. Daily, the sand bed drains were remotely monitored by checking poly bottles, attached via tygon tubing to funnels hanging below the drain lines.
  - b. The drain lines were not directly observed and in fact, 2 of the 5 tygon tubing became disconnected from the funnels for a period of time which include the leakage period in which the strippable coating started to come loose. The drains to funnel to tygon tubing interface were not readily visible to those monitoring the poly bottles.
  - c. This is viewed by the inspector as licensee identified.
  - d. NEW INFORMATION:

515

- i. None - The inspector remains firm that the item was NOT met with minimal to no impact on safety.
3. SER App. A No. 27 item (3) (p20): "The reactor cavity seal leakage trough drains .... will be monitored for leakage (periodically)." ... it then continues with same statement above on "if leakage is detected..."
- a. The drain line for the trough drain was found isolated during a boroscope examination to verify no line blockage.
  - b. When the drain line was monitored at certain times in the outage, the valve was shut. When the strippable coating started to give way, the drain line had been clear with the valve open in order to perform its function and it was being periodically monitored satisfactory.
  - c. NEW INFORMATION:
    - i. When they choose to monitor (periodically), the path was not clear at a certain time in the outage (it is by happenstance that the strippable coating had not broken through during the problem).
    - ii. The completed boroscope was done a second time after the cavity had been filled since first boroscope was not completed fully (jam in the last bend) – the frequency for boroscoping is once a refueling cycle, so frequency was met but poorly implemented.
    - iii. This is viewed by the inspector as licensee identified ??? (the boroscope method will always identify the issue of the closed valve albeit an inefficient method to identify)??? Not based on timing of when the scoping is done.

**NEW INFORMATION APPLICABLE TO ALL THREE ABOVE ISSUES:**

The cavity fill procedure using core spray was obtained from the resident inspectors. None of the above conditions are listed in the procedure.

[

(b)(5)

]

**LEVEL OF CONSENSUS:**

[

(b)(5)

]

EX-5

3

(b)(5)



EX 5

## Attachment 3A/B/C – Consensus Building Survey for Issue Nos. 1/2/3

1. The purpose of the 71003 is to:
    - a. To verify that license renewal commitments, and license renewal commitments revised after the renewed license was granted, are implemented in accordance with 10 CFR 54; and,
    - b. Commitments that are not implemented by the licensee, except those the NRC previously agreed could be delayed, deferred, or eliminated, after the extended period of operation commences will be evaluated for NRC enforcement action using Inspection Manual Chapter (IMC) 0308 "Reactor Oversight Process Basis Document", IMC 609 "Significance Determination Process", in keeping with the NRC's "General Statement of Policy and Procedure for NRC Enforcement Actions - Enforcement Policy,"
    - c. Implied in the above is the need to assess adequacy or effectiveness of implementation.
    - d. CONSENSUS BUILDING INFORMATION:
      - i. The purpose of the 71003 for Oyster Creek was in retrospect to ensure SER statements were implemented or met properly.
      - ii. Since a licensing action has not been taken on the statements of future action in the SER, DIRS cautions about using Performance Deficiency terminology and related four-factor formula terminology unless the statement can be correlated to Part 50 CLB.
      - iii. Based of the precedent of the Ginna inspection, the overarching standards for the inspector are:
        1. No finding of significance were identified; and, if not true, document them.
        2. No instances of inadequate implementation were noted; and if not true, document them.
      - iv. LSN LRND NO. 1 - Item ii above is not clear in IMC 0612. It is not even clearly stated that a standard for which the licensee can reasonably control is a regulatory commitment.
      - v. LSN LRND NO. 2 – the definition of a regulatory commitment in IMC 2516 does not comprehensive capture that endorsed by RIS 2000-17 and the related NEI document (99-04).
- S  
A  
F
2. The process we are in [2516 (license renewal) vs 2515 (reactor oversight process)] is irrelevant since both processes are relying on IMC 0612, "Power Reactor Inspection Reports" and its connection to 0609, "Significance Determination Process" and the enforcement process. [Officially the IP 71003 was authorized to be done by the ORA in accordance with IM 2515 App. C, Infrequent Procedures.]
    - a. CONSENSUS BUILDING INFORMATION:
      - i. 2515 App. C was used in the last MOC to authorize the inspection by the RA.
      - ii. For budget purposes the time was put in 2516 so as to not overspend the plant specific area of 2515 on a unique case – Oyster Creek.
      - iii. LSN LRND NO. 3 – Special care was needed and not fully recognized that the SER statements could not be relied on as regulatory commitments for Oyster Creek (OGC guidance not written down).
      - iv. LSN LRND NO. 4 Generically, 2516 provides no guidance on how to document license renewal commitment inspections nor how to assess inspection results (0612 process is implied – App G. is still draft) – a potential root cause on why we needed to build consensus.

3. Assuming the three issues are addressed by the right agency process as minor, the issues must be documented in the inspection report as minor or a set of observation not assessed for significance because:
- a. The agency's reasonable assurance determination has, had or will have been made based on the compendium of commitments (some of which may reach license condition status based on safety significance) involve public trust that they will get done as written OR the credibility of the agency is at stake if we don't hold the licensee/applicant accountable (in distinction to enforceable) to that which is written (agency wide interest); OR,
  - b. The agency committed to the industry to provided them results of the 71003 inspections at the RIC 2008 at least in terms of subsequent revision based on operating experience and lessons learned (industry wide concern); OR,
  - c. The objective of the procedure is to verify commitments and we found that they weren't fully implemented and the procedure later says we would put the observations in context of assessment; OR,
  - d. The inspection plan said we would assess results; it is consistent with 71003; and it can be subject to public scrutiny.
  - e. All of the above
  - f. CONSENSUS BUILDING INFORMATION:
    - i. See item 1.d.iii.1 and 2 above on inspector overarching standards – the standards are appropriate for now because we are still judging effectiveness of the revised IP 71003. Unfortunately it dictates the documentation of licensee identified and NRC identified/self revealing minor issues for a plant with a renewed license (OC needs to be treated separately as discussed above)
    - ii. LSN LRND NO. 5 – we should enhance guidance of draft App. G for IMC 0612 to give credit for licensee identified issues of minor significance and not document them. The NRC identified and self revealing minor reflect a loss of control that is contrary to public trust and can be a form of holding licensees accountable for the special circumstances of license renewal regulatory commitments, again, with respect to public trust.
4. For each of the three issues in question, the issue is:
- a. a failure to meet a written commitment (not necessarily a regulatory commitment).
  - b. a failure to meet a regulatory commitment as defined by NEI and endorsed by agency.
  - c. an apparent failure to meet a regulatory commitment as defined by NEI and endorsed by the agency. [The term "apparent" is used in the context of when we issue violations that are potentially escalated enforcement actions because we want to get things started, get licensee perspective on whether it is or is not a violation (including performance deficiency), and their perspective on significance (including minor or not).] Agreement or disagreement for this item can be based on Webster's dictionary of the word "apparent."
  - d. CONSENSUS BUILDING INFORMATION:
    - i. For Oyster Creek situation avoid the term commitment or regulatory commitment due to the license being in a pending status and we are not officially relying on those statements of future action.

15  
1/15

5. For Oyster Creek and for each issue, the issue, as a license renewal commitment, can NOT be distinguished from Part 50 commitments even if they are one and the same.
  - a. CONSENSUS BUILDING INFORMATION:
    - i. For Oyster Creek situation, avoid the term commitment or regulatory commitment due to the license being in a pending status and we are not officially relying on those statements of future action.
    - ii. DIRS sees a certain level of vulnerability for not doing the necessary research to identify the roots of the license renewal statements of future action in the Part 50 CLB. If the statement in Part 50 can be found, they support the use of the Performance Deficiency terminology. They understand the minor aspect and the amount of time that has already been spent on these issues of minor significance.
  
6. For each issue and on the assumption that you agree that there is a failure to meet a written commitment:
  - a. There is sufficient overlap with Part 50 commitments for this issue to say they are essentially the same, we should still NOT be calling the issue a performance deficiency as defined in IMC 0612 (ROP Process).
  - b. It is not worth the effort in light of the purpose of 71003 (which is focused on license renewal commitments) to fully understand the roots of the commitment in Part 50 correspondence and process the issues as performance deficiencies.
  - c. On the assumption that the Oyster Creek License had been renewed and for each issue, the issue is a performance deficiency as defined in IMC 0612 (ROP Process).
  - d. CONSENSUS BUILDING INFORMATION:
    - i. See 5 above
  
7. In addressing the matter in the report:
  - a. The issue is an example of a matter that needs more information in order to determine if it is acceptable and therefore it is an unresolved item. [Types of information needed are: 1) is the commitment in the SER as written preserved in the final agency decision and the renewed license CLB; 2) after review of current operating experience is the applicant going to change the commitment during the commission decision making process; 3) Amergen review of the facts in the report to be sure we have them right.] What is in [ ] brackets is not a part of the agreement or disagreement statement but provided to give only context and examples, others may be offered.
  - b. The issue will be documented as one of three examples of an unresolved item pending further action by Amergen and NRC staff. [If you strongly agree provided what those actions should be.]
  - c. The issue will be documented as one of three examples of performance deficiencies found but each with minor consequences. [If you strongly disagree provided details on the problems this creates for your organization.]
  - d. CONSENSUS BUILDING INFORMATION:
    - i. See 5 above – all three technical issues may be 3 examples of one unresolved item if NRR can NOT complete its review in order to support issuing the report late January or early February 2009.

Handwritten initials: SK

8. Do NOT connect this 71003 outage inspection report with the winter 71003 team just before the period of extended operations even with the decision on renewal pending.
  - a. CONSENSUS BUILDING INFORMATION:
    - i. The team leader and manager support this – they both want to move on and document in the public interest and stop procrastinating a decision on issues that have minimal to no impact on safety.
    - ii. DIRS suggests connecting the two inspections as a possibility to give more time for part 50 research and/or follow-up to see what they did with the issue
    - iii. LRE supports connecting the two inspections
    - iv. OGC ?
    - v. DLR ?
    - vi. PB6 ?
  
9. Provide other areas that need to be discussed in the interest of agreeing to move on.
  - a. CONSENSUS BUILDING INFORMATION:
    - i. NONE
  
10. Why do you feel we needed to build consensus on this matter from the preliminary exit meeting on December 2, 2008?
  - a. CONSENSUS BUILDING INFORMATION:
    - i. NOT fully discussed, lack of guidance or clear guidance in 2515 or 2516 appears to be at the root of the need to build consensus.
    - ii. The unique situation of Oyster Creek seems to be another factor

