

5 parts

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**Ferdas, Marc**

**From:** Richard Barkley  
**Sent:** Tuesday, April 28, 2009 6:56 PM  
**To:** Ronald Nimitz; John White  
**Cc:** Darrell Roberts; Peter Wilson; Marc Ferdas  
**Subject:** RE: Update, 4/28/09 (3:30 pm call) Status Call - Oyster Creek.

John,

In preparation for what I expect to be considerable public interest in this matter on May 28th, can we get a few diagrams to use in explaining the source(s) of this leak and the extent to which the tritium has likely spread, similar to what was used at Indian Point in the past?

Just two diagrams (one showing the piping and tank in question from above, and the other showing the CST, the monitoring wells, the water table and the distance to the discharge canal as a horizontal cross-section) would do a lot to explaining the leak source(s) and extent of migration from the tank's proximity as we best know it now.

We have a month to work with, but May 28th will come on us fast. If you get the diagrams, I'll be glad to make them into displays.

*Richard S. Barkley, PE*  
 Technical Communications Assistant, Region I  
 (610) 337-5065

(b)(6) (Cell) ] Ex 6

 Please consider the environment before printing this e-mail. Thank you.

**From:** Ronald Nimitz  
**Sent:** Tuesday, April 28, 2009 6:38 PM  
**To:** John White; Ronald Bellamy  
**Cc:** Darrell Roberts; Peter Wilson; David Lew; Marc Dapas; Sam Collins; James Clifford; Diane Screnci; Doug Tift; Nancy McNamara; Neil Sheehan; Richard Conte; Ed Miller; Scott Barber; Marc Ferdas; Timothy OHara; Richard Barkley; Stephen Campbell  
**Subject:** Update, 4/28/09 (3:30 pm call) Status Call - Oyster Creek.

Status call was held regarding on-going activities associated with tritium. There were several New Jersey DEP personnel on this particular call who actively participated.

- Jill Lipoti, Director, Division of Environmental Safety and Health
- Pat Mulligan, Manager, Bureau of Nuclear Engineering
- Karen Tuccillo, Supervisor, Nuclear Environmental Engineering Section
- Rich Pinney, Acting Supervisor, Nuclear Engineering Section
- Paul Schwartz, Nuclear Engineer

The State had been scheduled to have 10:00 am calls with the licensee however, the 10:00 am calls are being eliminated.

The following new information was obtained:

Information in this record was deleted  
 in accordance with the Freedom of Information  
 Act, exemptions b1, b5, b6  
 FOIA- 2109-0817

*Handwritten initials/signature*

## 1. Pipe inspections/removal

The licensee has cut out approximately 27 feet of the 8" carbon steel line to the hotwell. The licensee has quarantined the pipe and will be evaluating the flaws including the leak location as well as two indications detected by guided wave. Efforts are underway to replace the section. The licensee is also evaluating a residual, approximately 10 foot section, of remaining 8 inch pipe.

The licensee has completed inspection of the 6" condensate transfer line (A-4) as well as a 10 " condensate transfer line (CS-24) via wave guide. Indications by wave guide were UT inspected and found satisfactory.

The licensee has yet to inspect the 1" line (CS-38) associated with CRD min flow. The licensee has indicated it may not inspect the (CST 26 ) line to the condensate pump seals based on its limited use and expected condition.

## 2. CST

The licensee is staging to support inspection of the CST by robot by the end of the week. The robot is expected to be able to clean and inspect ~ 85% of tank bottom with diver completing remainder.

## 3, Well data

Daily samples of intake structure, discharge structure and canal at route 9 bridge continue to show no detectable activity. The licensee will have contractors on site tomorrow to support collection of well samples with analysis results expected by Thursday.

## 4. Dose calculation

Licensee has hydrology contractors arriving to walk-down area and measure ground water levels to improve bounding dose calculation based on mass flux analysis

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## 5. Public out reach

Licensee has had contacts with local stakeholders within 10 miles and has is drafting an updated press release to provide information since last release.. No date for this update release was given.

## 6. State of New Jersey

The State stressed the need for the licensee to provide an updated press release to inform the public of on-going activities/results since last press release. The state also had some questions on pipe testing techniques which were addressed by the licensee. State personnel have asked to discuss the pipe inspections with NRC. The State also indicated it would review the current situation relative to its enforcement criteria and guidance, associated with "waters of the State". The State indicated it would get back with the licensee.

## 7. NRC actions:

NRC staff continues to follow licensee actions including operational aspects, pipe inspections, leak detection and repair, and sampling and dose assessment. The next update is scheduled for 3:30 pm tomorrow.

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**From:** John White

**Sent:** Monday, April 27, 2009 5:59 PM

**To:** Timothy OHara; Ronald Nimitz; Ronald Bellamy

**Cc:** Darrell Roberts; Peter Wilson; David Lew; Marc Dapas; Sam Collins; James Clifford; Diane Screnci; Doug Tift; Nancy McNamara; Nell Sheehan; Richard Conte; Ed Miller; Scott Barber; Marc Ferdas

**Subject:** Update, 4/27/09 (3:30 pm call) Status Call - Oyster Creek.

Representatives from NJ-DEP participated in the Status Call

**Investigation and Repair:**

Licensee has identified small hole in 8" carbon steel pipe (CS-25, line from Hotwell). Progressing to replace a 10' section of the pipe. Expected to have welding completed by 9:00 am 4/28. Exelon is also continuing excavations to more fully examine and UT the A-4 pipe (6" Aluminum line from Cond xfer pumps to Turbine Bldg); and CS-24 (10" Aluminum Hotwell system piping). Also capped floor drain line from condensate transfer bldg, due to suspected potential for leakage. Condensate transfer is OOS currently to allow work.

Mobilization and preparation for robotic interior examination of CST is in progress. No definite schedule identified, but action is not expected to be completed during current outage.

**Environmental:**

Daily samples continue to indicate no additional anomalous results, i.e., no indication of any detectable material being discharged to the off-site environment by effluent or groundwater.

Refinement of bounding dose calculation in progress. Previous bounding calc use conservative assumptions indicated that liquid effluent doses would be maintained well within regulatory limits.

Increased sample of affected Monitoring Wells is being planned to determine if H-3 is being attenuated due to leak repair activities.

**Public/Stakeholder Outreach:**

Exelon Public Affairs has had telephone discussions with principal government stakeholders. Is considering another possible press release to update on current progress and conditions.

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**From:** Timothy OHara

**Sent:** Friday, April 24, 2009 8:45 AM

**To:** Ronald Nimitz; John White; Ronald Bellamy

**Cc:** Darrell Roberts; Peter Wilson; David Lew; Marc Dapas; Sam Collins; James Clifford; Diane Screnci; Doug Tift; Nancy McNamara; Nell Sheehan; Richard Conte; Ed Miller; Scott Barber; Marc Ferdas; Timothy OHara

**Subject:** RE: update for 4/23/09 (3:30 pm call) Status Call - Oyster Creek.

Good Morning Everyone,

I heard from Ron Nimitz this morning. The licensee has informed him via phone that they have completed a preliminary bounding dose calculation for the leak situation at Oyster Creek. (b)(5)

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The licensee will be working on refining these very preliminary results.

Tim OHara

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**From:** Ronald Nimitz

**Sent:** Thursday, April 23, 2009 4:51 PM

**To:** John White; Ronald Bellamy

**Cc:** Darrell Roberts; Peter Wilson; David Lew; Marc Dapas; Sam Collins; James Clifford; Diane Screnci; Doug Tiff; Nancy McNamara; Neil Sheehan; Richard Conte; Ed Miller; Scott Barber; Marc Ferdas; Timothy OHara

**Subject:** update for 4/23/09 (3:30 pm call) Status Call - Oyster Creek.

An update call (White, Nimitz, Ferdas, Tiff) was held with the licensee. NJ State DEP personnel actively participated in the call. The following new information was obtained:

1. Wells.

The licensee will be installing two additional wells (MW-52 and MW 53) to assist in location of source and characterization of ground water tritium concentrations. These wells will be between the CST and intake and discharge structures. They are expected to be installed today with samples available by tomorrow.

2. Work Plan/Source identification

The licensee will commence round the clock excavation starting tomorrow at 7:00 am of the area under the Condensate Transfer building to provide for visual inspection of 3 potential sources (the 6" transfer line, a 1" condensate seal line, and the floor drain). A 100% visual is to be completed. The licensee will delay inspection of the 1" CRD line because it is not likely a source and it would delay inspection of the three more likely sources under the Transfer Building. The licensee is mobilizing a dive team to provide inspection of the CST. The dive is estimated to occur on May 11.

3. Bounding dose calculations

The licensee is developing preliminary bounding dose calculations and will present them tomorrow morning.

4. Public out reach

The licensee has been keeping the State of New Jersey informed of on-going activities. The licensee indicated it does not plan to issue a new press release at this time.

5. NRC actions.

NRC staff specialists and resident staff continue to follow closely. An NRC staff radiation specialist held discussions today with NJ DEP personnel (Karen Tuccillo, Supervisor, Nuclear Environmental Engineering Section; Paul Schwartz, Nuclear Engineer). There were no significant immediate concerns raised by the State but there was interest in the installation of the new wells as well as licensee bounding dose calculations. As indicated above, the NJ DEP personnel subsequently sat in on the call.

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**From:** Marc Ferdas

**Sent:** Thursday, April 23, 2009 10:45 AM

**To:** Ronald Nimitz; John White; Ronald Bellamy

**Cc:** Darrell Roberts; Peter Wilson; David Lew; Marc Dapas; Sam Collins; James Clifford; Diane Screnci; Doug Tiff; Nancy McNamara; Neil Sheehan; Richard Conte; Ed Miller; Scott Barber

**Subject:** RE: update for 4/23/09 Status Call - Oyster Creek.

**\*\*FOR INTERNAL NRC USE ONLY\*\***

Additional updates include:

1. Moving up the CST inspection. Could happen within the next couple of days, they are still working thru some of the logistics.
2. Looks like excavating under the condensate transfer bldg is going to happen. It could start as early as today. They are working thru some of the logistics on this as well.
3. The Tmod to install a jumper on the 6" condensate transfer line has taken a lower priority based on the above activities planned.

We will have a better sense on the status of these at 3:30 pm as they work thru their decision making and planning process.

*Marc S. Ferdas*

Senior Resident Inspector, Oyster Creek

Marc.Ferdas@nrc.gov

609-693-0702

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**From:** Ronald Nimitz

**Sent:** Thursday, April 23, 2009 10:08 AM

**To:** John White; Marc Ferdas; Ronald Bellamy

**Cc:** Darrell Roberts; Peter Wilson; David Lew; Marc Dapas; Sam Collins; James Clifford; Diane Screnci; Doug Tiff; Nancy McNamara; Neil Sheehan; Richard Conte; Ed Miller

**Subject:** update for 4/23/09 Status Call - Oyster Creek.

A call was held 7:30 am with the licensee's Issue Management Team (IMT) (discussed previously). The following updates are provided.

a. Likely Sources:

The IMT established a Failure Mode Tree based on prioritization and review of the likely source of the tritium. Currently 5 potential sources (as discussed previously-see below) are being reviewed.

- 1) The licensee is continuing with planning for the hot tap of the 6" line.
- 2) The licensee has been attempting to pressure test the 1" flow line to the condensate pumps. This is continuing.
- 3) The licensee has bore scoped the floor drain in the CST Transfer Building and identified an apparent leak into the pipe of ground water. This line was last used in November 2008 and is being looked at as a possible source considering migration time of water to the well locations. The licensee had checked the sump in the building with no indication of leakage.

b. Well Data

The licensee has drilled an additional well (MW-51) in close proximity to the CST tank (to the south west) That result has shown 6 million pCi/l (April 22, sample). There are now three wells that show elevated activity.

These are generally located in an area to southwest of the Condensate Transfer Building and the CST:

- MW-15k- 1A - 4.5 million pCi/l (in south west)
- MW- 50 - closer to CST and Condensate Transfer Building also in southwest (5 million pCi/l)
- MW- 51 - near CST also in south west - 6 million pCi/l

Other well samples, and samples of the canal discharge continue to indicate minimum detectable activity.

c. Work plans

In light of the latest well results on the new well MW-51, the licensee is re-evaluating the plan to hot-tap the 6" aluminum condensate line as a potential leak source. Rather, the licensee is considering excavating under the Condensate Transfer Building to visually inspect the area.

d. Public out reach

The licensee does not plan an update news release at this time but this will be discussed during its 1:00pm communications team meeting. We will be updated on this at the 3:30 pm call.

e. Dose assessment

Notwithstanding minimum detectable activity in canal discharge (both gamma and tritium analysis), licensee is developing mass flow analysis of ground water to perform bounding dose calculations.

d. NRC actions

NRC reviewing and following developments. Reviewing/updating, as applicable, MC-309 review, updating white paper and communications plan, including implications for aging management. In addition, communications with State of New Jersey in review.

Next call 3:30pm

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**From:** John White

**Sent:** Wednesday, April 22, 2009 4:31 PM

**To:** Marc Ferdas; Ronald Nimitz; Ronald Bellamy

**Cc:** Darrell Roberts; Peter Wilson; David Lew; Marc Dapas; Sam Collins; James Clifford; Diane Screnci; Doug Tiff; Nancy McNamara; Neil Sheehan

**Subject:** Daily Briefing and Status Calls, Oyster Creek.

Until there is more resolution and determination of the source of the H-3 contamination at Oyster Creek, the licensee will be conducting two daily briefings with NRC at 0730 and 1530. The bridge number for both calls, starting 4/23 is 888-233-4221, [passcode] . The NJ-DEP may also participate in these calls.

4/23, 1530, Status Update: Exelon has established an Issue Management Team with 5 sub-groups:

Communications  
Environmental Monitoring  
Regulatory Affairs  
Troubleshooting  
Root Cause

Each team will report out on each NRC Daily Briefing call.

Current:

MW-50 has been completed (well located SW of CST). Sampled, result confirmed as 5,020,000 pCi/l, H-3.

MW-51 is in progress (SW of CST, in closer proximity). Expect completion and preliminary sample collection tonight.

Other potential Monitoring Wells are being considered to enhance detection of leak source. Permits have been obtained from the NJ-DEP.

Troubleshooting actions:

Work progressing on hot tapping of A-4 (6" Aluminum line from condensate transfer pumps to Turb. Bldg. Fabrication and preparation in progress, actual tap initiation is not expected to occur on 4/24...preparations still in progress.

CS-26, 1" line from Hotwell lever control system to the Condensate Pump seals...potential source, further examination being considered.

CS-38, 1" line from CRD pumps to CST minimum recirc line...line remains buried, potential source, further examination being considered.

Condensate transfer building floor drain, potential source, boroscope examination today, data is being evaluated.

Condensate Storage Tank, Monitoring Wells in progress, as previously reported.

Next call, 0730 on 4/24. Ron Nimitz attending.