

Franke, Mark

From: Franke, Mark *RM*
Sent: Wednesday, October 21, 2009 6:42 AM
To: Wert, Leonard
Subject: RE: INFO: Crystal River Containment Wall

Thanks Len. (had it few weeks ago.: maybe making full circle)

From: Wert, Leonard *RM*
Sent: Wednesday, October 21, 2009 6:35 AM
To: Franke, Mark
Cc: Kennedy, Kriss
Subject: FW: INFO: Crystal River Containment Wall

FYI, involves a dome issue but may have some good info...

From: Plisco, Loren *RM*
Sent: Tuesday, October 20, 2009 2:25 PM
To: Munday, Joel; Wert, Leonard
Subject: FW: INFO: Crystal River Containment Wall

assuming you guys have already seen this attached paper about a similar problem in Japan - but just in case....

From: Tabatabai, Omid *NLO*
Sent: Friday, October 09, 2009 12:43 PM
To: Snodderly, Michael; Thomas, Brian
Cc: Dudes, Laura; Bergman, Thomas; Plisco, Loren; Tappert, John
Subject: INFO: Crystal River Containment Wall

Just fyi, keeping you all updated on the subject. We are following up the issue and will be processing the info per our ConE program.

Status: The plant is in mode 6, green risk. Reactor head is removed and the water level is 158 feet (23 feet above RV flange) and 99F. Fuel in vessel with time to boil at 404 minutes. The equipment hatch is open. Defueling started last night and thirty assemblies have been removed. Offload is scheduled to be completed by 23:00 on 10/9.

Containment Hydro-demolition of concrete was completed. Licensee is planning to perform a modification to support an outside lift system as a result of cracks identified in concrete. A root cause investigation is in progress. Sargent and Lundy is involved with the investigation and corrective actions. The concrete around the containment liner is nominally 42 inches thick. [CR Containment Pic1 10-8.jpg](#); [CR Containment Pic 2 10-8.jpg](#); [CR Containment Pic 3 10-8.jpg](#) - **treat these pictures as Official Use Only** are located in the area of the horizontal tendons, leaving at least 30 inches of concrete between the containment liner and the crack. The licensee analysis is continuing with the assumption that the crack is around the entire 360 degree circumference, and the full height of the structure is affected.

Region has determined that the designer of the CR containment (Gilbert Associates) also designed the containments at VC Summer, Perry, TMI and Ginna. Region II has confirmed that VC Summer has been in contact with CR to discuss this issue. Region II has alerted Regions I and III. (NOTE: VC Summer confirmed that they did NOT have to cut a hole in containment to perform a steam generator replacement in the past. Ginna performed a SG replacement in the 1990s where containment was cut, and TMI has an upcoming

F-17

refueling outage where SGs will be replaced.) The region plans on performing a special inspection at Crystal River, regarding the containment crack, tentatively starting on Monday, October 12, 2009.

Excerpts from Crystal River FSAR:

The design and construction of the reactor building has been given a thorough re-evaluation subsequent to the discovery on April 14, 1976, of a delaminated condition in the dome. The upper part (approximately 12 inches thick) of the 3 feet design concrete thickness separated from the lower part of the dome structure parallel to the membrane over an approximate diameter of 105 inches. Extensive analytical and field investigations were conducted to establish an acceptable repair program. This repair program included removal of the upper part of the dome, placement of non-prestressed reinforcing steel mats, installation of radial reinforcement, and placement of concrete to restore the dome to a thickness of 3 feet. Details of the delaminated condition of the dome, reevaluations of the dome, and the dome repair program are described in the report: "Final Report - Reactor Building Dome Delamination", December 10, 1976.

The Reactor Building is similar in design to the containment buildings for the Three Mile Island Nuclear Station Unit 1 (Docket No. 50-289), the Turkey Point Plant (Docket Nos. 50-250 and 251), the Palisades Plant (Docket No. 50-255), the Point Beach Plant (Docket No. 50-226), and the Oconee Nuclear Station (Docket Nos. 50-269, 50-270, and 50-287).

NOTE: Crystal River - License Renewal Application received by the NRC on December 18, 2008. Click on the link to view the status.

The licensee was contacted by the State of Florida DEP Coordinator and asked whether they were in an unusual event due to contaminated water leaking from a crack in containment. The licensee corrected the misinformation and MAY contact the local press to inform them of the RB crack issue to preclude any further misunderstandings.

*****NOTE: THIS SUMMARY IS OFFICIAL USE ONLY -- MAY CONTAIN SENSITIVE INTERNAL INFORMATION****
DO NOT FORWARD ANY PORTIONS OUTSIDE OF NRC WITHOUT FIRST OBTAINING PERMISSION FROM ORIGINATOR