

From: Mark King
To: Stuart Richards
Date: 10/02/2007 4:02:09 PM
Subject: Updated attachment for the VY Cooling Tower Collapse Followup Response Info

Stu,

As requested **attached** is the updated response info regarding agency actions / response to the VY Cooling Tower Collapse issue.

I provided you the hard copies of the supporting documents for each of the nine briefing points, following our discussion on this subject today, 10/2/07.

Also attached is an e-mail from License Renewal (Jonathan Rowling) that gives the latest information on why this issue does not impact the Vermont Yankee license renewal process, (as expected).

If you have any questions - please reply or give me a call.

Thanks,
Mark

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CC: James Kim; Jerry Dozier; John Thorp; Jonathan Rowley; Lisa Regner; Mary Jane Ross-Lee

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Subject: Updated attachment for the VY Cooling Tower Collapse Followup
Response Info
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From: Mark King
Created By: MSK1@nrc.gov

Recipients

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 JXD CC (Jerry Dozier)

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 JSK CC (James Kim)

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TWGWPO02.HQGWDO01
 JET3 CC (John Thorp)

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Vermont Yankee Senate Staffer

VY Cooling Tower Collapse Followup.doc

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Vermont Yankee Senate Staffer VY Cooling Tower Collapse Follow-up Response Information

- 1.) NRC has responded to Vermont Senator Patrick Leahy in a letter dated September 25, 2007. This letter indicates only one VY cooling tower cell is safety-related and it has been independently inspected by the resident inspectors, as well a structural expert from headquarters. The NRC concluded that this cell and the adjacent one are in good condition. The NRC has independently verified the continued ability of cell 2-1 to perform its safety-related function.
- 2.) The NRC has reviewed all other nuclear plants in the U.S. and determined no other plants have wooden cooling towers that are safety-related. Therefore, from a safety perspective the NRC's Reactor Oversight Process currently in place is sufficient to protect the other US nuclear plants in this review area. Due to the low nuclear safety significance and limited generic applicability of this VY issue the NRC currently sees no need for additional actions (such as a generic communication) on this issue.
- 3.) The NRC has communicated necessary information to the public in PNO-I-07-008, "Restoration of West Cooling Tower" issued on September 14, 2007.
- 4.) The NRC does have performance indicators (PI's) such as the Unplanned Power Changes greater than 20% power, and Reactor Scrams that monitor on a risk basis these types of events and requires increased supplemental inspection when these predetermined PI thresholds are crossed. An example of one of these supplemental inspections is provided in Farley Nuclear Plant Inspection Report 2002-12 for a White PI in the Initiating Events Cornerstone for the Farley site Unit 1 Unplanned Power Changes (due in part to four cooling tower issues). Refer to Farley site 50-348 and 50-364, Inspection Report 2000-12.
- 5.) We do issue necessary NRC generic communications that may involve non-safety related components affecting safety-related components. An example of this related to cooling towers is NRC Information Notice (IN) 2007-01 "Recent Operating Experience Concerning Hydrostatic Barriers." This IN discusses an event at the Catawba Power Station involving its mechanical draft cooling towers overflowing due to silt clogging the cooling tower screens.
- 6.) The Institute of Nuclear Power Operations (INPO) also communicates relevant operating experience from both the US and international nuclear industry events. An example of this is Significant Event Report (SER) 6-03 issued December 18, 2003 titled: "Cooling Water System Debris Intrusion." This SER does cover relevant cooling tower related issued due to debris and intake blockage events. This non-public document communicated to the US nuclear industry relevant operating experience related to intake blockage events that although not significant from a nuclear safety standpoint, have resulted in reactor scrams, forced shutdowns and numerous power reductions. These initiating events are tracked and monitored by the NRC Reactor Oversight Process (ROP) and it does include predetermined Performance Indicator thresholds directing supplemental inspections. While not required by the NRC, Vermont Yankee may

also communicate these issues related to the cooling tower collapse to the US industry via the INPO Operating Experience Network.

- 7.) Internally the NRC has communicated this issue on August 22, 2007 via the OpE Screening summary which has a broad range of Headquarter and Regional management distribution.
- 8.) License renewal impacts from this event are still under review, [however, no significant impacts are expected due to this item, although still waiting to confirm this with DRL. The DRL contact point is: Jonathan Rowley, 301-415-4053.
- 9.) This event has also had a broad range of coverage in the media since it occurred on August 20, 2007 and continues to have coverage as of October 2, 2007. Today's 10/2/2007, NRC daily news summary included the following:

NRC Urged To Ignore Cooling Tower When Weighing Vermont Yankee Relicensing. Under the headline, "Vt. Yankee Tries To Limit NRC Review," the *Rutland Herald* (10/1, Smallheer) reported, "Despite last month's dramatic collapse of a portion of one of its two cooling towers, Entergy Nuclear has repeated its claim that the cooling towers and their problems should not be part of the federal review on whether Vermont Yankee's operating license should be extended 20 years." In a "letter and engineering report dated Thursday sent to the Nuclear Regulatory Commission, Entergy Nuclear said that because the cooling towers are not strictly considered 'safety' equipment at the nuclear reactor, they are outside the scope of federal review and should continue to be so." NRC PAO "Neil Sheehan said Friday that the NRC would be studying the Entergy response and determine whether additional information was needed." According to the Herald, Entergy attributed "the collapse" to "'iron salt attack' from iron-based hardware which 'attacks' the lumber, which makes up the frame of the cells, and a 'fungal attack' made worse by the moist environment, as well as the wetting and drying cycles inherent in the operation of the cooling towers."

Bottom Line:

- NRC has inspected this issue.
- NRC has concluded the safety-related portion remained and is operable.
- NRC has confirmed other sites do not have safety-related wooden cooling towers, (i.e., very limited generic applicability).
- NRC has concluded no need for further action at this time on this issue, (i.e. no generic communication planned) and ROP is sufficient to inspect this type of issue at other sites).
- NRC has informed the public via a Preliminary Notification regarding this issue.
- NRC is currently still reviewing impacts (if any) on the VY license renewal process.
- NRC has responded in writing to concerns raised by Senator Patrick Leahy.

From: Jonathan Rowley
To: Jerry Dozier; Mark King; Stuart Richards
Date: 10/02/2007 3:53:28 PM
Subject: VY cooling tower info

At the request of Mark King, I have attached a brief summary of DLR's role as it relates to the VY cooling towers.

As part of license renewal, the NRC performed a scoping and screening inspection to determine if the cooling towers at Vermont Yankee are within the scope. Cooling Tower No. 2 Cell No. 1 (CT 2-1) and the adjacent Cooling Tower No. 2 Cell No. 2 (CT 2-2) are within the scope of the License Renewal inspection. CT 2-3 through CT 2-11 are not safety-related and were not within the scope of the inspection.

As part of the NRC Inspection Program, the NRC inspectors have periodically performed visual inspections of the cooling towers. Following the collapse, the NRC inspectors have independently verified the continued operability of CT 2-1.

Notes:

CT 2-1 is safety-related and seismically qualified. In scope of license renewal in accordance with 10 CFR 54.4(a)(1).

CT 2-2 is non-safety related and seismically qualified. In scope of license renewal in accordance with 10 CFR 54.4(a)(2).