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J. WAYNE LEONARD
Chairman and
Chief Executive Officer

October 2, 2007

The Honorable Patrick J. Leahy
433 Russell Senate Office Building
Washington, D.C. 20510-4502

The Honorable Bernard Sanders
332 Dirksen Senate Office Building
Washington, D.C. 20510-4503

The Honorable Peter Welch
1404 Longworth House Office Building
Washington, D.C. 20515-4501

Dear Senators and Congressman:

Thank you for your letter of September 21, 2007 expressing concern about the recent structural failure of a cooling tower cell at Entergy's Vermont Yankee generating facility and the automatic plant shut down that occurred several days later. Please know that I understand your concern. We set the highest standards for all of our operations, and we expect to meet them. We are investigating the cause of the cooling tower cell failure and we will take all necessary measures to prevent future occurrences. Above all, I commit to you that our investigations will be open and transparent to the public.

To summarize the attached response to your inquiry, while we believe our inspection program for the cooling towers and our maintenance and repair processes exceed industry practice and any specific requirements under the law, in hindsight, they were clearly inadequate. Most disappointing is the fact they were inadequate in various aspects. I assure you this type of failure will not happen again.

Public trust is very important to us, and we commit to keeping you and your constituents informed about all aspects of our operations at Vermont Yankee. As you know, on September 13 we provided a full briefing on the cooling tower incident to local stakeholders and media. Several of your staff members attended that briefing either in person or by teleconference. We also held another teleconference for members of your Washington staff on September 17 to provide additional details and answer their questions.

In addition to learning from our failure and substantially upgrading our inspection/preventive maintenance procedures for non-safety related equipment, I hope that one positive consequence of this event is that we are able to establish an ongoing relationship based on trust, cooperation and open communication.

Entergy purchased Vermont Yankee in 2002, and we have made significant investments in the plant to help make it a world-class facility. The Vermont Yankee facility is a vital source of clean energy for the people of Vermont and New England. Entergy will continue to invest in this facility to assure that it is safe and reliable for decades to come.

For over a generation Vermont has been a leader in limiting carbon emissions thanks to a balanced energy portfolio, with a majority of the state's energy production coming from nuclear and hydro-electric generating facilities. Like Vermont, Entergy is a leader within the utility industry in limiting carbon emissions because we believe that we have a responsibility to leave a clean and healthy environment for future generations.

This company delivers on its promises and we welcome the opportunity to have a continuing dialogue with you on energy issues critical to the state. A detailed response to your letter follows. It was prepared by a multi-disciplinary team from our nuclear business and has been reviewed by our nuclear business leadership, the executive management of the Company, and the Chairman of the Nuclear Committee of the Board of Directors. I am available to answer any additional questions that you might have.

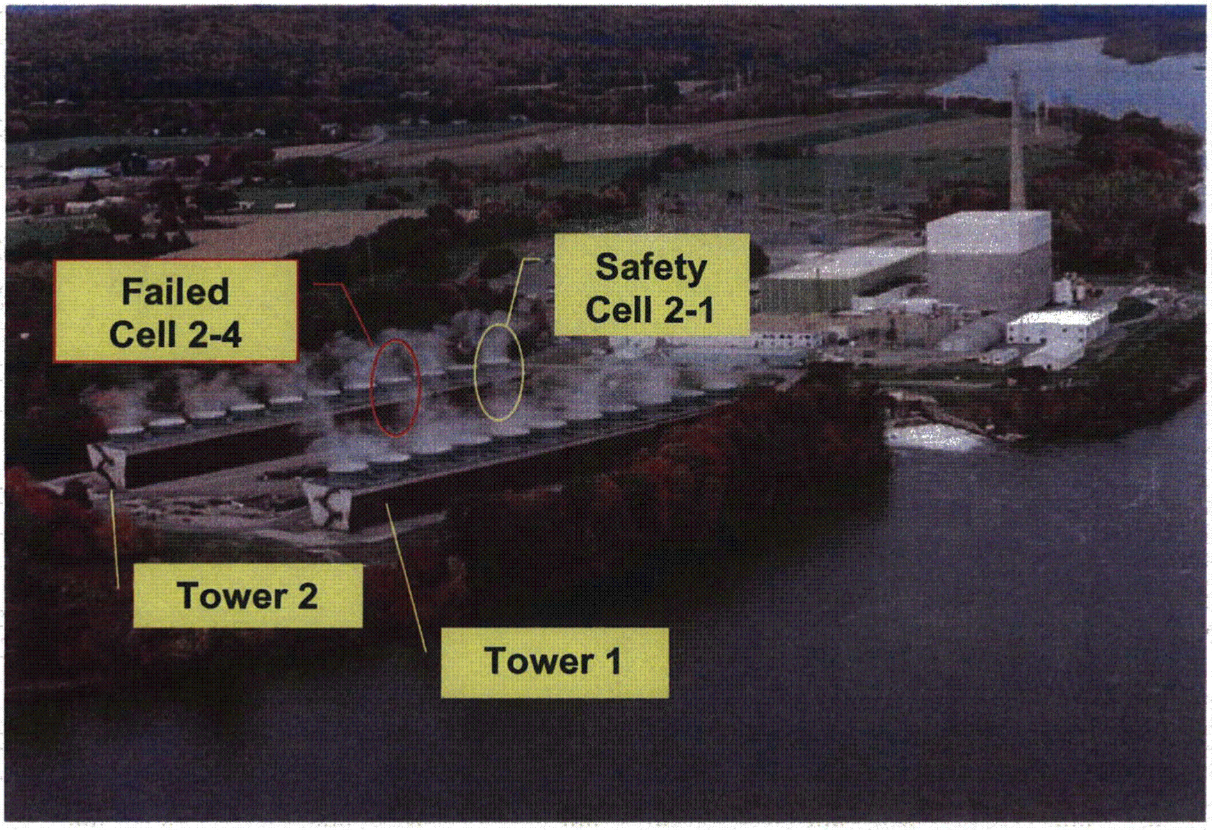
Sincerely,

J. Wayne Leonard

J. Wayne Leonard

cc: Governor James A. Douglas
Honorable Dale E. Klein, Chairman, NRC ✓
Honorable David O'Brien, Commissioner, Vermont Department of Public Service
Honorable James Volz, Chairman, Vermont Public Service Board
Mr. Michael Kansler, President and Chief Nuclear Officer, Entergy Nuclear
Mr. Ted Sullivan, Site Vice President Vermont Yankee

Response to the Vermont Congressional Delegation Letter Dated September 21, 2007



This is an aerial view of Vermont Yankee's two cooling towers. The plant is to the right. Cooling cell 2-4, which experienced the structural failure on August 21, 2007, is fourth from the right on the tower farthest from the river, tower 2. The safety-related cooling cell 2-1 is located at the right end of tower 2. Cooling tower 1 is in the foreground. A diagram showing the interior design of the cooling towers can be found on page 12.

1) Is Entergy required by state law or other permits to inspect all cooling towers on the site?

As part of our own operational standards, Entergy has had the towers professionally inspected twice a year. But after extensive research, to the best of our knowledge, there are no Vermont statutes or other permits requiring Vermont Yankee to inspect all cooling towers on the site.

A National Pollutant Discharge Elimination System (NPDES) permit issued to Vermont Yankee by the Vermont Agency of Natural Resources on September 28, 2004 regulating the discharge of cooling water into the Connecticut River does, however, contain a broad reference under "Operations and Maintenance" stipulating that holders of NPDES permits "shall, at all times, maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by permittee to achieve compliance with the terms and conditions of this permit..." but there is no specific mention of inspections of the cooling towers.

The primary function of Vermont Yankee's cooling towers is to ensure that cooling water is returned to the river at temperatures below the thermal limits imposed by this NPDES permit. It is important to note that at no time during or since the structural failure on August 21, 2007 have these NPDES thermal limits been exceeded.

a) How often are these cooling towers inspected and when was the last complete inspection conducted?

Vermont Yankee's two cooling towers operate spring to fall to ensure that the temperature of cooling water being returned to the Connecticut River meets state and federal environmental standards. The towers are inspected by contracted teams of cooling tower specialists under Vermont Yankee management supervision twice a year. The towers receive an additional inspection by these specialized teams every 18 months during scheduled refueling outages.

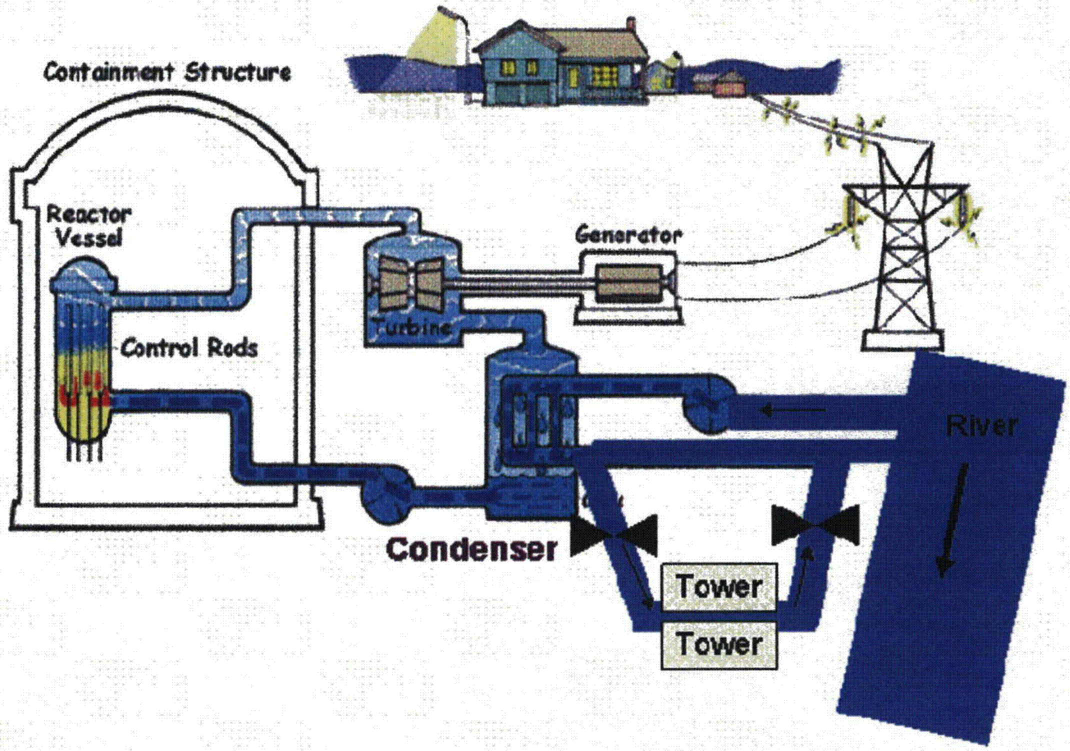
As can be seen in the photo, each of Vermont Yankee's two cooling towers is a wooden structure 42 feet high, 40 feet wide and 550 feet long, walled off into 11 separate units called cooling cells. Each cooling cell has an individual water distribution system that is designed to disburse the warm water returning from the plant's condenser into droplets so that the 200 hp fan on the roof of each cell can draw outside air through the water to cool it to meet environmental standards before it can be returned to the river. A diagram of this process can be found on page 12.

Cooling Tower 2, the site of the August 21 event, sits atop a deep concrete storage basin that contains a 1.45 million-gallon reserve of backup cooling water for the plant. This basin is drained, cleaned and inspected during every third refueling outage, or once every 4.5 years.

Both of Vermont Yankee's cooling towers received the annual spring inspection in April, 2007, and they were inspected a second time during the May 2007 refueling outage, and a third "extent of condition" inspection following the August 21 structural failure of cooling cell 2-4.

b) What were the results of the last three inspections of the cooling towers?

The last 3 inspections consisted of a) the extent of condition review that was performed during August and September 2007 after CT2-4 cell failure to determine if other cells might be vulnerable, b) the deep basin inspection that was performed during the May 2007 outage to examine the deep basin supports and c) the Spring 2007 readiness inspection that is used to finalize maintenance and repair before summertime operations. The following summarizes the results of each of these inspections:



This diagram illustrates how river water circulates through the plant's condenser to cool steam and then goes through the plant's cooling towers before being returned to the river. At no time during or since the August 21 event did Vermont Yankee violate any environmental thermal limits in returning water to the river.

August 2007-- Extent of Condition Review - Our initial root cause results indicates that the remote visual examination method that we were using to monitor water distribution supports, although superior to typical industry practice, did not reveal important column damage. As a result, we decided to use a direct physical inspection which assessed key support members for surface hardness, internal integrity and general integrity (e.g. straightness, closed grain) for Cooling Tower 2. We removed cooling tower fill (splash bar) to get access to these key members and examined companion members for any additional damage. In addition, we drained the deep basin which allowed us to inspect both the underwater support system as well as the alignment of supports in the above-water superstructure.

We found that our underwater supports were in excellent shape with no major degradation in part due to refurbishment work done during our last refueling outage. Our structural engineers found that approximately 60 of the 516 structural column members in cells CT2-3 through CT2-11 had degradation in the above water-level locations and required repair/replacement. Additionally, the associated interfacing lateral members to these columns were repaired to original design, if required. Although cells CT2-1 and CT2-2 showed some normal wear, they had no significant degradation that would prevent normal or emergency operation.

We subsequently performed sampling inspections of Cooling Tower 1 using both hands-on, direct visual, and remote visual methods and found no major damage precursors (such as deck sag, or degraded splices) that would lead to partial cell failure. Cooling Tower 1 is more accessible for inspection since it utilizes a shallow (versus deep) basin.

May 2007—Deep Basin Inspection - Once every 3 refueling outages, Vermont Yankee drains the deep basin to remove river silt and to inspect underwater superstructure. This inspection revealed that 13 support columns required repair/replacement with one lateral support replacement. VY completed this work.

April 2007 - Spring Readiness Inspection – The spring readiness inspection focuses on ensuring that Priority 1 (must-do) work is completed before the cooling towers are placed back in operation. Priority 2 and 3 work is identified and categorized by our inspectors, and monitored for future inspections. For Spring 2007, Priority 1 work focused on the 13 support columns mentioned above. The Priority 2 and 3 work list consisted of items for both cooling towers associated with braces, bolts and the monitoring of minor timber cracks.

c) When was the last time that the other bank of cooling towers, Tower 1, was inspected?

Cooling Tower 1 was inspected during September 2007 as part of the "extent of condition" review following the August 21 structural failure of cooling cell 2-4. Cooling Tower 1 underwent its last routine inspection in April 2007, prior to the beginning of this summer's cooling season, and was inspected again during the May, 2007 refueling outage.

2) What structural similarities exist between the collapsed cooling tower cell and other safety-related cells of the plant?

The cooling towers have similar column support for fan units and water distribution systems. However, Cooling cells 2-1 and 2-2 have additional supports and lateral members to provide more structural stability and all components go through a rigorous safety related procurement and receipt process to verify quality specifications.

The only safety-related cooling tower cell at Vermont Yankee is cell 2-1. This specialized cell is located at the north end of cooling tower 2, and is designed to provide backup cooling water to the plant by circulating water from the 1.45 million-gallon safety reserve basin located under cooling tower 2 if the Connecticut River becomes unavailable for any reason. This is one of the many redundant safety systems included in the plant's design.

Cell 2-1 is a "Seismic Class I" installation, i.e., it is designed to withstand earthquakes and winds as factored into the design basis of the plant. Cooling cell 2-2, the cell adjacent to 2-1, is also built to "Seismic Class I" standards and serves as a buffer between 2-1 and the rest of the cooling tower, although it has no safety-related function.

Both cells 2-1 and 2-2 are constructed from high quality timber and use stainless steel hardware for the bolted connections. The structural columns were refurbished during 1985/1986, with subsequent end wall refurbishment between 2002 and 2007. As required for activities associated with any safety-related and seismic Class I structures, systems and components (SSCs), the inspections and repairs on cooling tower cells 2-1 and 2-2 receive additional oversight by Site Engineering, Maintenance, and Quality Assurance (QA) groups

a) **Might the similarities in cells be indicative of problems in the safety-related cell?**

No. Although they might be similar in appearance, there are significant differences between these two types of cooling cells. For example, the safety related tower has had more intrusive inspection for the interior support columns. We do use similar materials; however, their construction is stiffer and stronger. The materials for the tower go through a receipt inspection review when they arrive on site that includes specific safety-related inspection acceptance criteria. This additional rigor, plus additional seismic and other structural enhancements made on cooling cell 2-1 (e.g. full installation of stainless steel bolts/column replacement in the mid 1980's, partition and end wall replacement), provides the necessary assurance of the integrity of a safety related cell.

b) **Please describe the work being performed on cell 2-1, the safety related cell, during the tour of the plant on September 12.**

Workers were taking structural measurements (on the entire tower) as a baseline for future measurements and trending, as well as attaching a lightning ground wire. Our records indicate that the tour took place on September 13.

3) **Describe the mid-1980s upgrade of the safety-related cell and the upgrade of the other cooling tower cells. What did the contractor recommend be done to strengthen and improve these cells? What did the previous owner of Vermont Yankee actually do to strengthen the towers and cell 2-4 in particular?**

Vermont Yankee's cooling towers were built as part of the original construction of the plant and began operation in 1972.

During the early 1980s, Custodis-Ecodyne, the original manufacturer of the VY cooling tower, recommended that a companion post to the line of "C" Columns that run the 300-foot length of each cooling tower, be added along with various bracing members throughout both towers. Vermont Yankee's owners made the recommended improvements. Later in the mid-1980s, the manufacturer recommended adding bracing members to safety related cell 2-1. This was also completed at the time.

All the improvements to both cooling towers recommended by the manufacturer were implemented by Vermont Yankee's previous owners, including cell 2-4 and safety-related cell 2-1.

4) **What other parts of the Vermont Yankee plant are not considered safety-related and thus, not inspected by the NRC?**

The entire Vermont Yankee plant is subject to inspection by the NRC at any time.

Safety-related Structures, Systems and Components (SSCs) are those that are used to shut down the reactor, maintain it during shut down and mitigate design basis accidents. The NRC oversight process does not limit inspection activities to safety-related SSCs.

Many NRC inspection activities are specifically designed to inspect areas of the plant operation that are outside of this scope. Examples include radwaste and security inspections where the majority of inspected SSCs are not safety-related. Other NRC inspection activities such as maintenance rule inspections and component design basis engineering inspections are "risk based" and the inspection scope is determined by system's risk significance. These inspections allow for inspection of safety-related and non-safety related SSCs and programs.

The daily activities of the resident inspectors are not limited to safety related activities and the NRC Inspection Manual allows for findings in areas where there is a performance deficiency identified with any SSC regardless of whether it is safety-related or not.

5) **What is now and what has been the schedule for periodic replacement of wooden structures exposed to hot water and other elements?**

The periodic replacement of wooden structures is based on the twice-a-year exams by cooling tower specialists during the fall and spring inspections, including a draining and detailed inspection of the deep basin once every third refueling outage, approximately every 4.5 years. Once inspections are completed, the recommended work is prioritized, and Priority 1 work is completed. Priority 2 and 3 work is either performed as soon as possible or deferred/monitored until the next repair period. Based on the results of the recently-completed root cause analysis of the August 21 event, and a planned inspection of the towers after the cooling tower season ends later this fall, Vermont Yankee's inspection and preventive maintenance programs will be thoroughly reviewed and enhanced.

a) **Do other materials, for example steel, cements or composites, last longer or provide greater structural integrity as compared to these wooden structures, based on manufacturers' guarantees and practical experience?**

There are a variety of building materials that are being used successfully in cooling towers around the country. However, each carries its own set of maintenance criteria and has its own specific benefits and challenges, which must be balanced for best performance. Issues like aesthetics, climate, geography and infrastructure must be taken into account. There is no one "silver bullet" that will be best in every situation.

For example, carbon steel rusts in a water environment and would not necessarily be ideal. As we have seen in recent weeks, wood construction has its own set of strengths and weaknesses. Fiber reinforced plastic (FRP) cooling towers have been constructed and do not corrode in the presence of water. However, their individual components can be challenging to fabricate and properly install in the field and need to be closely monitored for fatigue failure. While concrete is commonly used in southern climates, it is not the best choice in extreme northern climates where degradation is common from freeze/thaw cycles.

There are several structural technologies being used successfully in cooling towers at power plants and industrial facilities in places similar to Vermont, and some may prove to be useful at Vermont Yankee. Our engineering and maintenance experts will be examining the various options going forward.

b) What will the future replacement schedule be, if different?

Vermont Yankee has formed a multi-disciplined project team to determine and develop specific inspection plans for the future cooling tower inspection and maintenance strategy to be implemented this fall. Substantive changes to inspection scope, inspection techniques and associated corrective actions will be made based on the results of the team's work. Entergy fleet, industry operating experience, as well as industry best practices will be used to improve inspection techniques.

6) How often is the pool of water located below the cooling towers drained for inspection of the timbers that sit in this water?

The 1.45 million-gallon reserve cooling water basin is drained and inspected during every third refueling outage. Outages occur every 18 months, so these drain-down inspections occur approximately every 4.5 years. An underwater inspection is performed every 18 months during regular refueling outages on support timbers that stand in the water.

a) Prior to the accident, when was the last time the pools were drained for inspection of the condition of the beams sitting in the water?

The deep basin was last completely drained, cleaned and inspected in May, 2007.

7) What effect could the additional weight and additional vibration from the larger fans installed as part of the power uprate have had on the structural integrity of the cooling towers?

During the Vermont Public Service Board's (PSB) approval process for Vermont Yankee's 20 per cent power uprate, aesthetic concerns were raised about the mist plumes coming from the cooling towers during the summer months. As part of the 2006 uprate agreement, the PSB ordered that 21 of Vermont Yankee's 22 cooling tower fan motors be increased from 125 hp to 200 hp to help disburse the mist. Prior to the uprate, architect engineers conducted an analysis of the larger fans specifically focusing on structural loading, vibration and other elements.

After a thorough investigation following the August 21 structural failure of cooling cell 2-4, there is no evidence that the 75hp upgrade in the power of Vermont Yankee's cooling tower fans in any way compromised the structural integrity of the cooling towers or played any role in the failure of cooling cell 2-4.

There are several facts to support this finding.

The 54-inch pipe that carries Connecticut River water from the Vermont Yankee plant into the cooling towers begins the cooling process by uniformly discharging the warm river water into a large wooden distribution deck located just below the pipe at the very top of the cooling tower structure, just under the roof. The water in just the section of the pipe across the top of cooling cell 2-4, the one that experienced the structural failure, weighs about 50,000 pounds. The water in the distribution deck at the top of cell 2-4 weighs about 25,000 pounds. This means the support structure of cooling cell 2-4 was designed to carry at least 75,000 pounds of water.

The entire weight of each fan motor, including the motor on cooling cell 2-4, increased by less than 1,000 pounds as a result of the 75 hp upgrade. This means cell 2-4 carried approximately 75,000 pounds of water and less than 1000 additional pounds of fan. The size of each fan was increased from 8 to 10 blades, fabricated of a lightweight fiberglass material. There was no history of excessive or inordinate vibration from any of the 21 newly-installed fans, including the one in cooling cell 2-4 at any time during their two years of operation prior to August 21. In fact, the fan blades in cell 2-4 were not in service (not rotating) at the time of the structural failure.

The entire weight of all the new motors and the electrical cables that served the fans was borne by the structure supporting the row of cooling cells on the west side of cooling tower 2. The failure was on the east side of cooling cell 4-2

8) To the best of your knowledge, what caused the collapse of cooling tower 2-4?

Our root cause evaluation identified the sequence of the failure as starting with the failure of one of the 4X4 vertical timber columns (see diagram on page 12) designed to support a 54-inch distribution pipe (see blue pipe in diagram) and a distribution deck (located just beneath pipe in diagram). This failure caused the water distribution deck to sag creating a partial separation of one of the joints in the distribution header pipe at the top of the structure. The increased water loads on the distribution deck excessively stressed other internal support columns that subsequently failed. Our evaluation identified several areas contributing to the root cause. The vertical support beams that failed initially may have been stressed by iron salt attack, fungal attack and/or over-tightened bolts at spliced connections that caused splitting of the wood that was the cause of the structural failure. Also, while the cooling tower design allowed a certain level of visual inspection of the interior supporting columns, the plastic fill material made it difficult to assure a full 100 percent inspection. Although the VY inspection program had been developed and improved over the years to exceed the manufacturer's recommended program, our evaluation has identified that the cooling tower inspection program needs improvements in method and schedule of inspections.

a) Is the kind of wooden structure in cell 2-4 common in the industry?

Yes, the type of wooden cooling tower at Vermont Yankee is common in the industry.

b) **And if so, what warning is warranted for other facilities with similar structures?**

One of the key lessons learned at Vermont Yankee is the need for more thorough inspection techniques. Our initial root cause indicates that the remote visual examination method that we were using to monitor water distribution supports, although better than typical industry practice, did not reveal all column degradation. We identified the need to use a direct hands-on approach which examines key support members for surface hardness, internal integrity and general integrity (e.g. straightness, closed grain) for cooling tower inspections. We identified the need to remove the perforated plastic strips known as cooling tower "fill" to get access to these key members and examine companion members for any additional damage. This information will be shared with the nuclear industry through our formalized Operating Experience program.

c) **Does Entergy own or operate plants with similar wooden structures and if yes, in what states?**

Yes. Entergy Nuclear owns the Palisades plant located in Michigan, with a similar wooden cooling tower.

d) **After the August 21 collapse of cooling tower cell 2-4, what level of inspection was conducted?**

As was previously discussed in question 1b, an "extent of condition" inspection was performed. Our initial root cause indicates that the remote visual examination method that we were using to monitor water distribution supports, although better than typical industry practice, did not reveal all column damage. We decided to use a direct hands-on approach that looked at key support members for surface hardness, internal integrity and general integrity (e.g. straightness, closed grain) for Cooling Tower 2. We removed cooling tower fill to get access to these key members and examined companion members for any additional damage. We additionally drained the deep basin which allowed us to inspect both the underwater support system as well as the alignment of supports in the above-water superstructure. The safety related and seismic cells were also thoroughly inspected.

e) **Was that inspection of the same scope and detail as is annually conducted at the beginning and ending of the hot season, i.e. May 15 and November 15?**

No, the "extent of condition" inspection following the August 21 event was more comprehensive, detailed and intrusive to check internal structural members.

9) **VY General Plant Manager Bill Maguire issued a Red Memo dated August 28 which concluded that there was a "near miss of serious injury" to plant personnel that were inspecting the tower cell 2-4 on the day before the collapse. The personnel were walking on top of the cell that later collapsed. Since safety is your #1 priority, as mentioned in the memo, what procedure should Vermont Yankee have followed to make sure all personnel were safe and why was that procedure not followed?**

A review of the sequence of events on August 20 shows that the safety procedures at Vermont Yankee were followed at all times.

Vermont Yankee is a learning organization; therefore all employees are encouraged to be constantly vigilant to capture any potentially significant safety incident to elevate the site's commitment to a safe and healthful work environment. The goal is to make everyone aware of the paramount importance of industrial, and nuclear safety at all times. This means every attempt is made to billboard safety to the entire organization, to set an example by accepting responsibility for promoting a culture of safety and to "own" the problem.

Bill Maguire was doing exactly the correct thing in openly acknowledging that there had been a "near miss" situation and driving home the importance of everyone learning from it. In the power generation business where safety is the highest priority; this is considered as the only course of action for a responsible manager to take.

The Near Miss Bulletin, also called a Red Memo, is covered by Vermont Yankee policies and procedures (EN-IS-113 Reporting and Investigating Occupational Injuries/Illnesses and Near Misses). A near miss is defined as an undesired event that under slightly different circumstances could have resulted in personal harm.

In accordance with procedure EN-IS-111 General Industrial Safety Requirements 4.1[3], employees made safe decisions on initial evaluation of the top east side of cooling tower 2, recognized and communicated the potential for unsafe conditions to management and immediately prevented access to the top of the cooling tower. Preventing access was done by using procedure EN-IS-111 5.2 [2] (a) danger flagging identifying an immediate hazard requiring permission from the Operations Shift Manager to cross the flagged boundary.

Employees performing the initial inspections were never exposed to a fall of greater than 6 feet. In the event an employee would be exposed to a fall of great than 6 feet, EN-IS-114 Fall Protection procedures would be implemented. The area in and around cooling towers by definition is considered to be an industrial area where any employee or visitor shall wear the appropriate personal protective equipment covered in procedure EN-IS-121 Personal Protective Equipment.

10) During the August 30 event, workers took steps to fix a turbine stop valve that was stuck in the closed position. Describe the steps taken to get the valve to open and the associated procedural controls for those efforts.

On August 29, 2007, during routine quarterly testing of the valves in Vermont Yankee's four main turbine steam lines, VY maintenance technicians discovered a malfunction in one of the valves. It was sticking in the closed position. Once the condition was identified, a work order was written to investigate the cause and make repairs.

This type of maintenance work is called "troubleshooting," and is conducted under Entergy Fleet Procedure EN-MA-125, "Trouble Shooting Control of Maintenance Activities". The stated purpose of this procedure is "to provide controls for the development, performance and documentation of troubleshooting/repair activities by:

a) establishing data collection to support cause analysis

b) providing guidance to define the level of risk with the troubleshooting activity
c) establishing management approval requirements based on risk
d) providing guidance to define a multi-discipline approach for investigating significant failures to determine causes.

The Vermont Yankee Maintenance Department assembled a work team that included teleconferencing with Entergy turbine experts from other plants in the fleet, and four control system experts from General Electric, the designer and manufacturer of Vermont Yankee's turbine. Members of this team developed and executed the step-by-step troubleshooting plan.

Key steps taken are outlined below:

- On 8/29/07, Vermont Yankee Maintenance personnel took detailed photos of the malfunctioning valve linkage assembly for study by the team.

- An attempt to free the number 2 stop valve by operating the bypass valve motor had no effect on the position of the number 2 stop valve, which failed to open.

- When these actions did not correct the condition, the team decided to cease troubleshooting efforts until the next day when a GE Field Engineer would be on site to provide direct support.

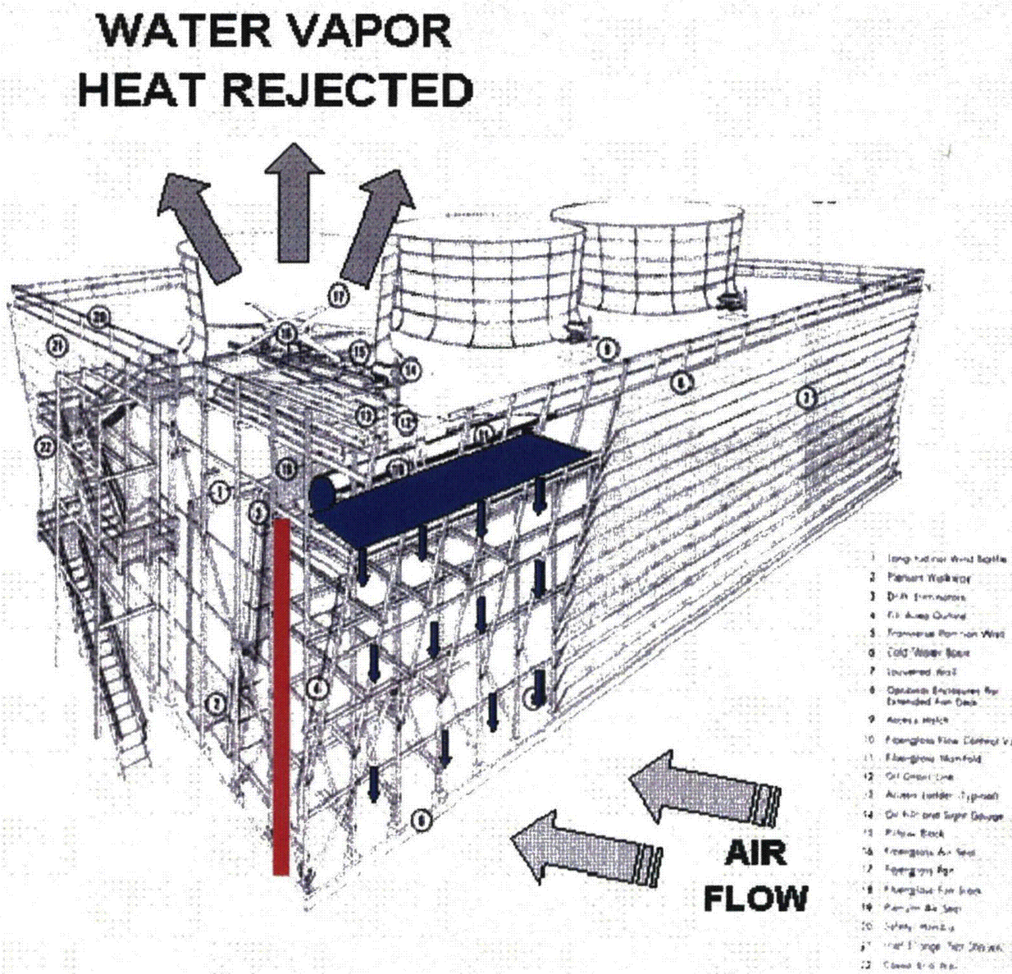
- On 8/30/07, a team consisting of System Engineering, Maintenance Technicians, the Turbine Outage Manager and a GE Field Engineer assembled to further develop the troubleshooting plan. Permission to proceed was given by the Senior Station Management in accordance with procedure EN-MA-125. This activity resulted in the number 2 stop valve opening as designed.

- A second test using a test switch in the control room was performed but again the valve failed to open. The troubleshooting team then made the decision to lubricate the valve control linkage to prevent it from sticking the next time the test was performed. They added grease to existing fittings on the linkage and sprayed oil on the linkage pivot points.

- The linkage was repositioned manually and the stop valve re-opened. When the linkage was repositioned a second time, the stop valve opened very quickly reducing hydraulic pressure to the other three valves, which caused the plant's automatic safety system to operate as intended and shut down the reactor.

11) Were the steps workers took to repair the stuck valve in conformance with NRC's regulations and expectations?

Yes. NRC regulations require that plant activities be performed in accordance with approved plant procedures. Procedural controls required by fleet Procedure EN-MA-125 were followed during activities to repair the stuck valve. The risk of causing an automatic plant shutdown was evaluated and permission was received from Senior Station Management at appropriate steps prior to actual field performance in accordance with procedure EN-MA-125.



<u>*How it Works*</u>

This diagram represents the internal structure a typical cooling cell in Vermont Yankee's cooling towers. The columns and supports are 4X4 pressure treated Douglas fir beams.

The blue pipe at the top of the cell carries river water that has been warmed by cooling the plant's steam condenser. Warm water is released into the distribution deck (also blue) located just under the pipe and drips down through a series of perforated plastic strips (downward blue arrows) called "fill", which turn it into droplets.

The pipe and deck are supported by three rows of vertical timber support columns, designated as "A", "B" and "C". The red line indicates the "B" row, which is where the first structural failure occurred on August 21, 2007.

A 200 hp. fan on the roof of each cooling cell draws air through the louvered outside walls, cooling the water drops, which fall into the "cold water basin" at the bottom of the tower. The water is then either recycled through the plant's condenser or returned to the Connecticut River.