

October 16, 1998

Ms. Deborah B. Katz, President  
Citizens Awareness Network, Inc.  
P.O. Box 83  
Shelburne Falls, MA 01370

Dear Ms. Katz:

I am responding to the September 17, 1998 letter from the Citizens Awareness Network, Inc., which you presented to the U.S. Nuclear Regulatory Commission (NRC) during the Vermont Yankee SALP meeting at the Vernon Town Hall. In the letter, CAN questioned the validity of the NRC's SALP ratings for Vermont Yankee.

As you know, the SALP process was used to develop the NRC's conclusions regarding a licensee's safety performance. As was discussed with you following the SALP meeting, the NRC has suspended its SALP program for an interim period until the NRC staff completes a review of its nuclear power plant performance assessment process. At the end of this review, the NRC will decide whether to resume the SALP program or substitute something regarded as more effective. This decision to suspend SALP is part of an integrated plan to improve NRC's regulatory effectiveness.

Relative to your concerns, the SALP report documents the NRC's observations and insights on a licensee's performance and communicates the results to both the licensee and the public. In addition, it provides a vehicle for dialogue with the licensee that focuses on plant performance. The SALP report includes selected examples of observations to illustrate the key assessments. As such, the SALP report is not intended to provide an exhaustive listing of all the NRC inspection findings that were reviewed to determine the assessment.

Vermont Yankee performance was assessed in four functional areas and was assigned a Category 2 rating in each. A Category 2 rating is characterized by normally well-focused operations in the functional area that resulted in an overall good level of safety performance. This rating is not intended to imply that plant performance was error free. The definition contained in NRC Management Directive 8.6 states that some deficiencies or problems may have existed, that some issues may have escaped self-identification, and that some corrective actions may not be completed. I have enclosed Management Directive 8.6 for your review.

The NRC has reviewed the information provided by CAN. We verified that this information was based on recent NRC inspection findings and observations made at the Vermont Yankee site, and had been included in the data package developed for this recent SALP assessment. As such, the SALP Board considered this information along with other relevant findings when implementing the SALP process for Vermont Yankee.

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Ms. D. Katz

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The SALP Board considered information about the plant's safety performance including inspection findings, licensee event reports, enforcement actions, the results of management meetings with the licensee, and the results of periodic plant performance reviews. In contrast to inspection reports that focus heavily upon identified problems, the SALP report ratings were a composite rating of performance based on the Board's balanced perspective of the issues and their safety significance.

In closing, I want to assure you that the issues that CAN raised regarding performance problems at Vermont Yankee were appropriately considered during the SALP process. Further, we continue to believe that the functional area assessments accurately reflect Vermont Yankee's safety performance.

Thank you for informing us of your opinion regarding Vermont Yankee's performance. We appreciate comment on our assessment processes and feel that such dialogue improves our understanding of the public's concerns and serves to better our reactor oversight activities. Should you have any additional questions, or if I can be of further assistance in this matter, please call me at (610) 337-5233.

Sincerely,

**Original Signed By:**

Curtis J. Cowgill, Chief  
Projects Branch 5  
Division of Reactor Projects

Docket No. 50-271

Enclosure: Management Directive 8.6

Ms. D. Katz

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# CITIZENS AWARENESS NETWORK

## QUESTIONS AND COMMENTS TO THE NRC DURING THE SALP EVALUATION 9/16/98 Vernon Town Hall, Vernon VT

CAN is concerned about the results of NRC's SALP evaluation of Vermont Yankee (VY) nuclear power station's performance. CAN strongly believes that the agency's 1997-1998 inspection reports point to serious weaknesses in Vermont Yankee's operation. Although NRC downgraded VY giving the reactor only a "good" rating, many of the weaknesses and inadequacies documented in NRC special inspections are serious and jeopardize the health and safety of Vermont Yankee's workforce and the public, and raise concerns about the protection of the site itself.

In April 15, 1998 NRC staff proposed a fine of \$55,000 against VY for 3 of 12 violations found during an inspection. Between September 29 and November 20<sup>th</sup>, NRC conducted a special inspection to follow-up on findings of a Stone and Webster architect/ engineer team inspection in Spring, 1997. The team reviewed the reactor's design and configuration for safety systems as well as conformance with the utility's safety analysis report. (a document which outlines measures taken to maintain the facility at an adequate safety level). Given VY's violations and potential fine, the fact that these issues, as well as the inadequacy of VY design basis documentation, were omitted from the SALP is confounding.

In the June 4<sup>th</sup> Inspection Report 50-271/98-04 NRC inspectors found problems in radiological protection at the reactor. NRC states that "a senior radiation protection technician was providing essentially all of the coordination and control for activities involving initiation of cutting of torus downcomers on March 31 1998." The inspector stated that the cutting of the torus downcomers was a major task, which involved a "significant challenge to radiological controls". The technician was not provided with defined responsibilities or authorities for performing the function.

The inspector observed "**weaknesses in radiological control briefings, inter- and intra-departmental communications, and the recognition and resolution of industrial safety issues.....**" The inspector found "**insufficient radiation protection personnel available to provide sufficient job coverage ...**".

The inspector concluded that the licensee was "**ineffective in establishing sufficient and positive radiological control technician coverage** of significant work involving torus modifications as evidenced by **deficient briefing of affected personnel**, and insufficient technician resources to cover significant radiological work in progress. Additionally industrial safety issues .....were not immediately recognized and addressed by licensee", until the inspector brought it to VY's attention.

## **THE EXPERIMENT IS OVER**

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The report states that "*accrued person-rem was approximately twice that originally estimated and the man-hours were approximately four times that originally planned for preparation work.*" There were problems with ALARA:

- The shielding for the drywell was not effective. There was *open, unshielded locations where on-going work was to occur.*
- ALARA recommendations from previous outages were not tracked or incorporated. Staff didn't know if previous recommendations were implemented.
- The ALARA group was provided with outage man-hour estimates only about a month before refueling. *There was little time for determining the expected cost of the outage relative to personnel exposure or to re assess exposure reduction initiatives.*
- The inspector-observed that "workers had been directed to suit up in protective clothing to wait entry into the torus. ... this potentially created heat stress problems for workers. Subsequently the licensee determined that this practice was inconsistent with the lessons learned from previous heat stress events." (underline added)

In the June 24<sup>th</sup> 1998 NRC Inspection Report 50-271-04 NRC notes "two violations...the first violation involved a short circuit of one of the main station batteries during a test evolution that was in part, a result of inadequate oversight of that activity by station personnel." In addition, NRC found "*problems with control of contractors during the torus project...*" The second violation involved a "*vital area access control problem identified by the NRC.*" More clearly, this violation involved 5 out of 7 NRC inspectors compromising VY's perimeter and entering the compound undetected. One inspector was carrying a mock gun. Will NRC take further enforcement action against VY for this serious breach of security?

In a July 16<sup>th</sup> 1998, Special Inspection Report 50-271/98-80 Notice of Violation and Exercise of Enforcement Discretion, NRC found 5 violations including inadequate safety evaluation, inadequate corrective action for a design deficiency, inadequate design control for failing to control Design Basis Document changes, reducing commitments contained in the NRC Quality Assurance program with out prior NRC approval. A civil penalty was not authorized because among others "the violation was not reasonably linked to current performance". Did the NRC consider the weaknesses in radiological control evidenced in the last refueling outage (only four months prior to the Inspection) in its assessment to penalize VY?. NRC halted Vermont Yankee activities during the rehab of the torus in order to require VY to re-asses its radiological control activities and ALARA commitments. Is this action by NRC insignificant?

David Lochbaum of the Union of Concerned Scientist raises in a separate document concerns about the above average number of scrams at VY. The "loose screw" scram in which certain valves wouldn't open, then valves wouldn't close, an emergency generator turned on, power was lost, a fuel rod didn't insert properly, and first there was too much water in containment then too little. NRC monitored Vermont Yankee struggling to gain control of the reactor. A team of NRC special inspectors was sent to analyze the conditions that led to the accident before VY could return to operation. Although each malfunction in and of itself many be innocuous, the fact that all these errors occurred in succession during one incident is troubling. It raises serious questions about Vermont Yankee's competence. NRC itself raised in Inspection Report that the problems Vermont Yankee faced during the scram were systemic to the system. Had VY practiced a defense in depth approach to reactor operations, as is required by NRC, it could have anticipated many of the problems it incurred and dealt with them in a more effective and timely manner.

The numerous issues raised in special inspections by NRC contradict the SALP's finding of "good". The report appears to exclude Stone and Websters analyses, NRC confirmation of non-compliance with NRC regulations, the systemic mismanagement involved in the engineering analyses that control the operation of the reactor, the serious weaknesses in radiological control and compromised security (to name a few). Given the inspection reports, how can NRC justify its "good" rating for Vermont Yankee?



Subject: Coments on Vermont Yankee SALP

Author: DaveL

Date: 9/4/98 12:23 PM

Debby:

I reviewed the Vermont Yankee SALP report issued by the NRC on Augsut 28, 1998, and have the following comments:

1. In the transmittal letter, the NRC commended VY for senior management involvement that resulted in improvements to plant performance. According to NRC, "Particularly noteworthy was management's implementation of the Configuration Management Improvement Project, which improved identification of design and licensing issues."

In reality, this apparent postive is a negative. Had management at VY been doing its job all along, there would not have been such a dire need for improvement at the facility.

Additionally, this NRC summary curiously omits several key facts. For example, on October 9, 1996, the NRC sent VY a letter demanding that VY review the adequacy and availability of design information. VY responded under oath or affirmation in early 1997 that it had everything under control. In summer 1997, an NRC design inspection team found significant problems with the residual heat removal system at VY and concluded that VY would have not been able to find these design problems. It was only after the enforcement conference to discuss these violations that VY accelerated the pace of its configuration management improvement project. Thus, VY's management is reactive rather than pro-active. Pro-active management is good. Reactive management is not so good.

2. Section II of the SALP report rated the Operations Area at VY as 2. The NRC stated that "Operators performance in response to abnormal conditions and plant transients was also very good with few exceptions."

The SALP report stated that "operator followup actions complicated the recovery" from a reactor scram in June 1998. In addition, "Placing two 'down-scale' average power range monitors (APRMs) in service, and poor coordination of switchyard activities are two examples of human performance errors that led to reactor scrams."

According to the NRC's NUREG-1272 Vol. 9 No. 1, the average BWR plant experienced 1.81 reactor scrams in 1991, 1.78 in 1992, 1.62 in 1993, 1.41 in 1994, and 1.46 in 1995. Roughly one-third of these reactor scrams were manually initiated for planned outages.

VY had at least two (2) reactor scrams caused by operator error during this SALP period and another reactor scram was complicated by operator error. VY had more reactor scrams casued by operator error than the average BWR plant had caused by all reasons.

In addition, the NRC stated that VY operations took 14 days to make a 4-hour report of a problem to the NRC. This is not performance that is "very good with few exceptions."

3. Section IV of the SALP report rated the Engineering Area as 2. The NRC stated that "engineering personnel were knowledgeable."

By letter dated August 27, 1997, the NRC staff transmitted Design Inspection Report 50-271/97-201 to Vermont Yankee. The transmittal letter stated that "the team concluded that it was unlikely that [Vermont Yankee personnel] would have uncovered some of the issues identified in this report."

That design inspection report documented serious design problems with the residual heat removal system. Given that the NRC thought that VY staff could not uncover serious design problems, it is not apparent that a 2 rating is justified.

4. Section V of the SALP report rated the Plant Support Area as 2.

The NRC reported they found "ineffective radiological oversight of work," "insufficient radiation protection staffing," "notable performance deficiencies," and "radiological briefings of workers conducted prior to the start of work were ineffective."

The NRC reported that "senior licensee management suspended work" during the recent refueling outage after the NRC identified numerous radiation protection problems to them.

After resuming work, the NRC reported that poor planning and execution "caused some airborne radioactive materials to be exhausted into the reactor building."

If these misadventures represent "Good" performance, what would be "bad" performance. The NRC had to step in and force VY management to correct serious problems during the outage. That is NOT good performance on VY's part.

The NRC must have graded VY using a very generous curve. I cannot understand operators can cause more reactor scrams than the industry experiences and get a "Good" rating or how Engineering can be incapable of finding design problems and get a "Good" rating or how Plant Support cannot self-identify radiation protection problems and get a "Good" rating. Using the same grading system, I'd assess NRC's performance on this SALP report as "Good."

Dave Lochbaum  
Union of Concerned Scientists