

October 27, 2005

MEMORANDUM TO: Herbert Berkow, Chairman
Petition Review Board

FROM: George F. Wunder /RA/
Petition Manager

SUBJECT: NRC STAFF'S RESPONSE TO COMMENTS ON PROPOSED
DIRECTOR'S DECISION RE: PETITION ON ALERT AND
NOTIFICATION SYSTEM

In a letter dated May 24, 2005, the Nuclear Regulatory Commission (NRC) staff solicited comments on its proposed Director's Decision (DD) from the New England Coalition (the Petitioner) regarding the alert and notification system at the Vermont Yankee Nuclear Power Station (Vermont Yankee). The Petitioner provided comments by letter dated June 25, 2005. This memorandum documents the NRC staff's response to the Petitioner's comments.

Petitioner's Comment

NRC does not quantify the number of EPZ residents who must rely on radios for notification. It is intimated in this Director's Decision that most of the EPZ area is covered by siren notification; when in fact only a few of the many towns in the EPZ are so alerted. Thus, what NRC paints (by omission and innuendo) as an adjunct warning system is more accurately, the primary system.

NRC Response

The comment is correct in that the number of residents who must rely on tone-alert radios is not quantified in the report. The comment is incorrect, however, in stating that tone-alert radios are characterized by the NRC as an adjunct warning system. As stated in Section II.b of this decision, the NRC recognizes that both sirens and tone-alert radios are relied upon as primary warning systems. While it is true that sirens do not cover the entire EPZ, anyone living inside the EPZ, regardless of their proximity to a siren, will be supplied with a tone alert radio on request. In making this Director's Decision the NRC considered the following facts: (1) sirens and tone-alert radios are used in the communities of Brattleboro and Vernon, Vermont; Hinsdale and Winchester, New Hampshire; and Bernardston and Northfield, Massachusetts; as the primary notification system; and (2) tone-alert radios are the sole primary notification system for the communities of Chesterfield and Richmond, New Hampshire; Dummerston, Guilford, and Halifax, Vermont; and Gill, Greenfield, Leyden, and Warwick, Massachusetts.

Petitioner's Comment

ENVY [Entergy Nuclear Vermont Yankee] was operating with no assurance of this system's functionality. NRC's citation is for some failure to maintain distribution records, but New England Coalition presented ample evidence that many of the radios simply didn't work.

NRC Response

The NRC inspection citation was for failure to meet the requirements of 10 CFR 50.47(b)(5) which mandates, in part, that licensees provide a means to assure early notification and clear instruction to the populace within the plume exposure pathway EPZ. As part of its method of meeting this requirement, the licensee was to supply and maintain tone-alert radios for people within the EPZ who desired them and who lived beyond the range of the sirens. Contrary to this requirement, the NRC found that there were people living within the EPZ and beyond the range of the sirens to whom the licensee had not offered tone-alert radios. As of March 31, 2005, the licensee had corrected this violation by distributing tone-alert radios.

With regard to your assertions about the functionality of the tone-alert radios, FEMA-REP-10, cited above, contains acceptance criteria for tone-alert radios used for alert and notification systems for nuclear power plants. These requirements and our conclusions regarding the licensee's compliance with them are detailed in section II.c above.

In addition to providing tone-alert radios, 10 CFR 50.47(b)(5) requires the licensee to maintain these radios. As a part of their corrective action for this violation, the licensee has implemented a program to ensure that replacement batteries are mailed annually to all those people who have received the tone-alert radios, and to ensure that all recipients of tone-alert radios are provided with instructions for their use and with a contact telephone number for repair or replacement.

Petitioner's Comment

NRC bases its refusal to take immediate enforcement action on (a) the licensee's assurance that towns have been notified to do route alerting and (b) an assumption that route alerting in the VY [Vermont Yankee] EPZ meets the applicable regulatory criteria because in a five-year-old FEMA exercise report, route alerting was accomplished within 45 minutes. There is no empiric or dose-based rationale for watering down the requirement under as stated in 10 CFR Part 50, Appendix E, that residents be given warning, "in about 15 minutes." Indeed, a 1995 site exercise at Connecticut Yankee produced a scenario reporting 6500 RADS at [the] site boundary from noble gas releases alone, within a relatively short time from the onset of [an] accident. A number of site-specific analyses conducted in the early 1980's showed that under certain accident scenarios (main steamline break and ramping open of feedwater valves, for example), containment design pressure could be reached within five to ten minutes. A recent Swiss study showed a 37-percent increase in available fission products (under accident conditions) as a result of [a] 14-percent uprate. [The] NRC is aware of these studies and more; even as it is aware that Vermont Yankee is a candidate for [a] twenty percent uprate.

NRC Response

The NRC did take enforcement action in that we enclosed a Notice of Violation with our February 2, 2005, letter. We concluded that the inspection finding regarding the tone-alert radios was of low-to-moderate safety significance. The NRC did not, however, order an immediate plant shutdown for the reasons set forth in of this Director's Decision. The NRC does not consider allowing 45 minutes for route alerting to be a "watering down" of the 10 CFR Appendix E requirements. The specific reasons for the acceptability of the 45 minute period are explained in detail in section II.a of this Director's Decision.

The NRC had determined that the use of fixed sirens and tone-alert radios, coupled with Vermont Yankee's compensatory measure of notifying affected communities to be prepared to do backup route alerting, provided a reasonable level of assurance that people in affected areas would be alerted in a reasonable time in the event of an emergency. The NRC determined, therefore, that an immediate shutdown of the plant was not warranted.

Petitioner's Comment

NRC is in error for [not] giving a preponderance of weight the testimony of New England Coalition and Nuclear Free Vermont witnesses, Ed Anthes and Judy Davidson, who told the PRB that recent VY EPZ local route alerting exercises did not work; failed to alert significant numbers of residents; and failed to complete notification within 45 minutes. Mr. Anthes and Mrs. Davidson are residents of the affected area and have, as they testified, followed closely the struggles of towns in the EPZ to effectuate the Vermont Yankee emergency plan. [The] NRC is in error to give more weight to the blandishments of the licensee than to the facts in hand and the protestations of affected and informed citizenry.

NRC Response

The NRC gave the views of Mr. Anthes and Mrs. Davidson full consideration. The NRC did not base its Director's Decision regarding route alerting on information obtained or provided by the licensee. The NRC based its decision on FEMA's earlier determination that the offsite authorities in the Vermont Yankee EPZ could implement backup route alerting during an emergency.

Petitioner's Comment

At the least, the representations of Mr. Anthes and Mrs. Davidson should have been entered into the formal NRC allegations process.

NRC Response

Mr. Anthes' and Mrs. Davidson's views were captured in this final 2.206 Director's Decision. The allegations process does not apply to assertions being covered by other formal NRC processes.

Petitioner's Comment

[The] NRC is in error for proceeding with issuance of a proposed director's decision in this matter when [the] NRC was fully aware of anticipated FEMA observed exercises that would provide valuable evidence as to the adequacy of the emergency notification system. [The] NRC is in error for proceeding with a proposed director's decision instead of withdrawing that decision in the face of recent FEMA findings that numerous deficiencies occurred during the May 24, 2005, Vermont Yankee Nuclear Power Station Exercise.

NRC Response

The NRC was aware of the pending biennial exercise at Vermont Yankee; however, the Commission's regulations require that a response to all petitions be provided within a reasonable period of time. Since FEMA had evaluated the performance of the offsite authorities in previous exercises and had concluded that public protective actions could be implemented, there was reason to presume that the results of the exercise would not change that assurance.

When FEMA initially informed the NRC of the deficiencies noted in the exercise, the NRC determined that these deficiencies were not likely to alter the proposed Director's Decision significantly; however, the NRC delayed issuing the final Director's Decision pending resolution of the deficiencies by the States' and FEMA's determination that the deficiencies have been resolved.

Petitioner's Comment

As NRC is well aware, in Vermont, FEMA identified five Deficiencies. According to FEMA, "Three Deficiencies were assessed against the State Emergency Operations Center regarding Direction and Control and Alert and Notification. The Towns of Vernon and Halifax were each assessed a Deficiency pertaining to Alert and Notification. In Massachusetts, a Deficiency was assessed against the Town of Colrain in the area of Alert and Notification, but was successfully re-demonstrated on June 1, 2005. In New Hampshire, a Deficiency was assessed against the Town of Richmond in the area of Alert and Notification. Subsequent to the issuance of the FEMA letter, we were informed by FEMA that the Town of Richmond successfully re-demonstrated Alert and Notification on June 10, 2005."

[We would note here that in ordinary evaluation space, one screw-up and one success are still averaged as a failure (50% success). Only NRC counts this sort of performance as adequate assurance that public safety is maintained." With all due respect, NRC errs on this count also.]

NRC Response

The exercise was conducted after the proposed Director's Decision was issued for comment; therefore, the exercise findings could not have been considered in the decision. This information is considered in this final Director's Decision.

The exercise uncovered a deficiency in the capability to do backup route alerting in three communities: Halifax, Vermont; Richmond, New Hampshire; and Colrain, Massachusetts. The specific deficiencies that FEMA identified are described in detail in their September 9, 2005,

report on the Vermont Yankee exercise. A delay in completing a particular backup alerting route, albeit a concern, may not rise to a level that challenges FEMA's overall assessment. These deficiencies do not, individually or in sum, indicate that adequate protective actions could not be implemented in the event of an actual event. Furthermore, corrective actions for the identified deficiencies and demonstrations of acceptable route alerting were performed for Halifax, Vermont; Richmond, New Hampshire; and Colrain, Massachusetts; on July 26, June 10, and June 2, 2005, respectively.

The assertion that the reasonable assurance determination is based on numerical averaging is not correct. As specified in regulations, the NRC's determination of reasonable assurance is based on the NRC's evaluation of the onsite performance by the licensee and on a review of FEMA's evaluation of the offsite performance. The onsite and offsite determinations are based on a large number of preparedness standards. The NRC and FEMA's determination of reasonable assurance is based on an assessment of each deficiency's impact on the ability of the local authorities to implement appropriate protective actions for the population of the EPZ. The determination is not based on numerical averaging.

Petitioner's Comment

NRC errs on the non-conservative side in dismissing Vermont Yankee's egregious string of failures in Emergency Notification and in-house emergency exercise communications by viewing each incident in isolation. This is clearly, as evidenced by New England Coalition's petition and the individual NRC inspection reports cited, a systemic, managerial failure to take responsibility for emergency response seriously.

NRC Response

The NRC has not dismissed Vermont Yankee's performance deficiencies. The NRC identified the deficiency regarding the tone-alert radios in a scheduled routine program inspection. In response to this NRC finding, the licensee stated that they would request the offsite organizations to implement automatic backup route alerting as a interim compensatory measure. The NRC issued a notice of violation and a White finding. Consistent with its corrective action program, the licensee performed a root cause analysis, including an evaluation of whether or not the identified causes affected other programs. The NRC has performed a follow-up inspection in which we determined that the licensee's root cause analysis and extent of condition evaluations and the licensee's corrective actions were appropriate. The licensee's root cause analysis pointed to management oversight deficiencies and the licensee took corrective actions to improve management oversight, not only for the tone-alert radio program, but also for the larger Vermont Yankee emergency preparedness program.

With regard to onsite exercise deficiencies, the licensee self-identified these findings in its critique. The NRC inspection team observed the exercise from each of the licensee's emergency response facilities and determined that the licensee's exercise critique adequately identified the deficiencies observed by the inspection team. The NRC considers periodic drills and exercises to be means of enhancing emergency response organization proficiency and of identifying areas for improvement. A significant aspect of the NRC's Reactor Oversight Process is the evaluation of the licensee's ability to identify performance deficiencies and take appropriate corrective actions. The NRC exercise inspection team determined that the licensee adequately self-identified its deficiencies. In subsequent program inspections and exercises,

the NRC will evaluate whether the corrective actions were taken in future program inspections and will assess the effectiveness of those corrective actions in future biennial exercises.

Petitioner's Comment

By this proposed Director's Decision, [the] NRC has aligned itself with the licensee's egregious trivialization of the public's right to some reasonable protection in the event of a sudden and major release.

NRC Response

Through its Reactor Oversight Process, the NRC has evaluated licensee performance and, where appropriate, cited the licensee for violations of regulatory significance. The licensee has taken corrective action for deficiencies identified by the NRC. FEMA, through its program reviews, state certifications, and evaluation of periodic exercises has found that the offsite response organizations meet the emergency preparedness standards, and that there is reasonable assurance the appropriate response actions can and will be taken in the event of an emergency to protect the public. Based on its own determination onsite and on FEMA's continued reasonable assurance determination, the NRC finds with reasonable assurance that appropriate protective actions can and will be taken in the event of an emergency.

When the NRC determined that the licensee has not been in compliance with the Commission's regulations, appropriate enforcement actions have been taken. When FEMA identified deficiencies or areas requiring corrective actions, the offsite response organizations have taken appropriate corrective actions to resolve the deficiency.

Petitioner's Comment

New England Coalition herein respectfully request that [the] NRC reconsider this proposed Director's Decision and conform itself to the Atomic Energy Commission's social contract with the affected citizenry drawn when Vermont Yankee was sited and licensed; and with the Congress of the United States, as reaffirmed by NRC's many assurances to the Congress that adequate emergency response is in place, by using the NRC's enforcement discretion to assure realistic protections not obscured by nuclear industry influenced semantics and gamesmanship. It is plain as the face of your average housecat that most affected citizens will not be protected in the event of an accident at Vermont Yankee Nuclear Power Station.

NRC Response

This comment provides no new information. As detailed in the proposed Director's Decision, the NRC believes that there are emergency plans in place that provide reasonable assurance of protection of people within the EPZ in the event of a postulated accident at Vermont Yankee.

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DECISION

Dated: October 27, 2005

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