



Public Service of New Hampshire

New Hampshire Yankee Division

George S. Thomas
Vice President-Nuclear Production

NYN-88042

April 1, 1988

United States Nuclear Regulatory Commission
Washington, DC 20555

Attention: Document Control Desk

- References:
- (a) Facility Operating License NPF-56, Construction Permit CPPR-136, Docket Nos. 50-443 and 50-444
 - (b) PSNH Letter (NYN-88025) dated February 26, 1988, "Seabrook Plan for Massachusetts Communities (SPMC); Request for Additional Information," G. S. Thomas to USNRC
 - (c) USNRC Letter, dated March 18, 1988, "Request for Additional Information - Seabrook Emergency Plan," Victor Nerses to R. J. Harrison

Subject: Response to Request for Additional Information on the Public Alert and Notification System

Gentlemen:

New Hampshire Yankee (NHY) submitted a description of the Public Alert and Notification System for the Massachusetts portion of the Emergency Planning Zone (EPZ) on February 26, 1988 [Reference (b)]. Since that time, work has continued on the design and implementation of the system.

On March 18, 1988, the Nuclear Regulatory Commission (NRC) informed New Hampshire Yankee that additional information and further revision to the Seabrook Station Radiological Emergency Plan (REP) would be required before concluding that the guidelines of NUREG-0654 Revision 1 are satisfied [Reference (c)]. The enclosure to Reference (c) contained two general requests and nine specific requests regarding the REP.

Enclosure 1 to this letter contains the responses to the two general requests. Enclosure 2 contains the responses to the nine specific requests.

Further, the NRC recommended that the Seabrook Station REP be revised to include the information contained in the Vehicular Alert and Notification System (VANS) design report. NHY is currently modifying the design report and will include this information in Appendix E to the Seabrook Station REP. In reviewing Section 11 of the Seabrook Plan, it was determined that no changes to that section are needed. A revision to the REP will be issued by April 30, 1988, and will include the changes to Appendix E as well as revisions to incorporate the NHY-ORO. As indicated in Reference (b), NHY will also submit the FEMA REP-10 design report prior to the upcoming graded exercise.

A-45 Oversight map to Reg Files

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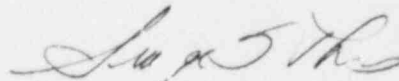
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NHY agrees that it would be beneficial to have a comprehensive discussion of the VANS. NHY is presently scheduling a test of the prototype VANS system by the end of April 1988. We propose that the NRC staff observe the test. We are prepared to discuss the VANS concept with the NRC staff at their convenience.

In accordance with previous NRC direction, one copy of the enclosed document will be sent to the FEMA/RAC Chairman for the SPMC.

Should you require any additional information, please contact Mr. Callendrello at (603) 474-9574, extension 2751.

Very truly yours,



George S. Thomas

Enclosures

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* Two copies

ENCLOSURE 1 TO NYN-88042

RESPONSE TO GENERAL COMMENTS

ENCLOSURE 1

RESPONSE TO GENERAL COMMENTS

COMMENT

The Seabrook Station Radiological Emergency Plan (Seabrook Plan) should be reviewed to identify the New Hampshire Yankee Offsite Response Organization (NHY-ORO) as part of the overall response organization for the Seabrook emergency planning zone.

RESPONSE

The Seabrook Station Radiological Emergency Plan is presently being revised to reflect the existence and operations of the NHY-ORO. These plan revisions will be issued on or before April 30, 1988.

COMMENT

In addition, in November 1987, the Seabrook plan was revised to reflect that tone alert radios would be distributed prior to full power station operation. However, since certain radios are an integral part of the primary Seabrook alert and notification system for specific isolated or hearing-impaired residents, as described in Appendix E to the Seabrook plan, it is required that these be distributed prior to issuance of a low power license. The Seabrook plan should be revised accordingly.

RESPONSE

Notification of the public in the plume exposure pathway Emergency Planning Zone (EPZ) is conducted primarily through the use of sirens where:

"The expected siren sound pressure level generally exceeds 70 dBC where the population density exceeds 2,000 persons per square mile and 60 dBC in other inhabited areas, or

the expected siren sound pressure level generally exceeds the average measured summer daytime ambient sound pressure levels by 10 dB (geographical areas with less than 2,000 persons per square mile)". (Reference 1)

If this criteria cannot be achieved, tone alert radios (or other notification means) will be utilized for those specific geographical areas not covered by sirens. These provisions will assure that "...the prompt public notification system shall have the capability to essentially complete the initial notification of the public within the plume exposure pathway EPZ..." (Reference 2). Tone alert radios used as part of the primary Public Alert and Notification System will be offered prior to issuance of the low power license.

Tone alert radios for institutions and the hearing-impaired residents which form part of the supplemental alerting system (Reference 3) will be distributed to support the issuance of the full-power license.

The Plan will be revised accordingly to correctly reflect the FEMA requirements.

REFERENCES

1. FEMA-REP-10, November 1985, Section E.6.2.2
2. 10CFR50, Appendix E, Section D.3
3. FEMA-REP-10, November 1985, Section E.6.2.4.2

ENCLOSURE 2 TO NYN-88042

RESPONSES TO SPECIFIC COMMENTS

ENCLOSURE 2

RESPONSES TO SPECIFIC COMMENTS

QUESTION NO. 1

Specific organizations or individuals, by title, who will be responsible for notifying response organizations and the affected population, and specific decision chains for rapid implementation of alerting and notification decisions.

RESPONSE TO NO. 1

In the event that Seabrook Station declares an immediate Site Area Emergency or General Emergency with a recommendation for sheltering or evacuation, the following actions will be taken:

The Seabrook Station Short-Term Emergency Director (STED) will notify the NHY Offsite Response EOC Contact and establish contact with officials of the Commonwealth of Massachusetts through the Massachusetts State Police with the recommendation and request for authorization to activate the Public Alert and Notification System.

The NHY Offsite Response EOC Contact will direct the dispatch of VANS and operators through communication with each VANS staging area.

Upon receiving authorization, the STED will activate the Massachusetts portion of the public alert and notification system through communication with and direction to the NHY Offsite Response EOC Contact.

The NHY Offsite Response EOC Contact will contact the lead EBS radio station and provide the authentication code. He will explain that there is an immediate Site Area Emergency (or General Emergency) and instruct the radio station operator on the appropriate EBS message to commence broadcast based on direction provided by the Seabrook Station Short Term Emergency Director.

The NHY Offsite Response EOC Contact will remotely activate the VANS sirens concurrent with the EBS message broadcast.

In the case of an escalating emergency, after the NHY Offsite Response Organization is activated the NHY Offsite Response Director will assume Public Alert and Notification System responsibility, including EBS activation, from the Seabrook Station Emergency Response Organization (ERO). Upon authorization of the officials of the Commonwealth of Massachusetts (as described in Implementing Procedure 2.14, Emergency Response Assessment), he will direct public notifications to be made using the Public Alert and Notification System. The Public Notification Coordinator will communicate with the State of New Hampshire and the Commonwealth of Massachusetts to coordinate EBS messages and timing of the Massachusetts siren system with that of New Hampshire. The lead EBS radio station will be provided with the approved EBS message(s) and instructed to commence broadcast. Concurrent with broadcast of the EBS message, the Communication Coordinator will activate the siren system which consists of a Vehicular Alert and Notification System (VANS) using the siren activation encoder in the NHY Offsite Response EOC. The VANS vehicles will be dispatched at the Alert or higher emergency classification. Additional backup methods will be available for public alerting, including activation of backup VANS,

and an airborne alert system which consists of a helicopter-mounted siren/public address system.

The NHY Offsite Response Director will verify the State of New Hampshire's initial notification to the U.S. Coast Guard and the Federal Aviation Administration. The U.S. Coast Guard is responsible for notification of transients in waters under their jurisdiction, and the FAA is responsible for notifying and restricting air traffic in the area. The NHY Offsite Response Organization also maintains the capability, as part of the supplemental alerting system, to notify public and private schools, day care centers, nursing homes, hospitals, medical facilities, and other special facilities, along with Route Guide door-to-door notification of the hearing-impaired population as coordinated by the Special Population Coordinator, and the School Coordinator as described in Seabrook Plan For Massachusetts Communities (SPMC) Implementing Procedure 2.1 (Notification of Emergency Response Personnel and Support Organizations), Implementing Procedure 2.7 (Special Population Coordinator/ Special Population Liaisons), and Implementing Procedure 1.9 (School Coordinator/School Liaisons).

Additional information regarding public notification is provided in SPMC Section 3.7, Implementing Procedure 2.12 (Public Information - News Releases and Rumor Control), Implementing Procedure 2.13 (Public Alert

and Notification System including EBS Activation), Implementing Procedure 2.14 (Emergency Response Assessment), Implementing Procedure 2.15 (Airborne Alert Activation), Implementing Procedure 2.16 (Vehicular Alert and Notification System).

This procedure assures rapid implementation of alerting and notification decisions and will be included as part of the FEMA-REP-10 submittal.

QUESTION NO. 2

Capability for 24 hour-per-day alerting and notification, including the locations of VANS staging areas.

RESPONSE TO NO. 2

The VANS vehicles are dispatched at the Alert or higher emergency classification. The Seabrook Station Short-Term Emergency Director (STED) notifies the NHY Offsite Response EOC Contact, who in turn will dispatch the VANS by notifying the VANS operators at the staging areas. The NHY Offsite Response EOC and the VANS staging areas are each continuously staffed for 24-hour-per-day operations. Each VANS staging area will be staffed with sufficient VANS operators to deploy the VANS vehicles.

Once an operator assumes the responsibility of a VANS vehicle, routine surveillance checks will be performed, by procedure, to ensure the operability of the vehicle, siren, lift mechanism, and other supporting equipment (e.g., radios, etc.). VANS vehicles will be rotated to Seabrook Station every thirty days for surveillance, maintenance, and operability testing. Since NHY will maintain reserve vehicles, the quantity of VANS vehicles required for public alert and notification will not be diminished during these surveillance and maintenance periods.

Preliminary selection has been made of the VANS staging areas. The VANS staging area location and layout will enable prompt dispatch of each vehicle to its predesignated acoustical location. Specific locations in or near the Massachusetts portion of the EPZ will be provided in the FEMA REP-10 Report.

QUESTION NO. 3

Provisions for a coordinated activation of the New Hampshire siren system and the VANS. This description should include the methods that will be used to ensure that the sirens in New Hampshire that are relied upon for partial acoustical coverage in the Massachusetts EPZ are sounded in concert with the VANS to those same relative locations.

RESPONSE TO NO. 3

The current concept of operation utilizes sirens activated under the SPMC. While there is an inherent acoustical overlap on the MA/NH border, each state utilizes a system for alerting that does not rely on the other's system. Also, see the response to Question No. 1 for a description of the provisions for a coordinated activation of the New Hampshire siren system and the Massachusetts siren system.

QUESTION NO. 4

The times required for notification of vehicle drivers, drivers' response, preparation of vehicles for dispatch and travel of vehicles from staging areas to predesignated locations.

RESPONSE TO NO. 4

The VANS is designed to accomplish the alert function "within about 15 minutes". To accomplish the alert function the VANS vehicles must be dispatched, travel the predetermined route, and be setup in the operable position. At this point the VANS are fully deployed for remote operation. The siren activation time meets the guidelines set in FEMA-REP-1 and FEMA-REP-10. For VANS design purposes the 15 minute time interval is composed of deployment time and siren activation time. Each of these is discussed below.

DEPLOYMENT TIME

Deployment time is the combination of the time to dispatch the VANS vehicles (dispatch time), travel the predetermined routes (transit time), and raise the siren at the acoustic location (setup time). A deployment time of twelve minutes or less is used in the VANS design.

The dispatch time is the time required to alert the VANS operators and to dispatch the vehicles. The dispatch time in the Seabrook Station VANS design will be determined based on training and drills conducted to verify the dispatch time.

The transit time is the time required for the VANS vehicle to travel the predetermined route from the VANS staging area to the

acoustic location. The transit time is based on traveling the route within the posted speed limits and observing traffic laws. Final transit times will be determined using vehicles of the same weight and frame class as the VANS vehicle. The route transit times will be developed using a Seabrook Station procedure that will require traveling and timing each route at various time periods of the day on weekdays and weekends for a two-week period.

The setup time is the time required to setup the VANS vehicle and siren at the acoustic location. The setup time includes parking the vehicle, deploying the vehicle outriggers, and utilizing the aerial lift to raise the siren to the operable position. The final setup time will be verified by conducting a verification test on a VANS prototype vehicle. The setup time qualification will be maintained by operator training and periodic drills and requalification.

SIREN ACTIVATION TIME

The design basis siren activation time is three minutes based on the guidelines in FEMA-REP-1 and FEMA-REP-10.

Preliminary estimates of deployment times and siren activation times are included in Table 4-1.

TABLE 4-1

SEABROOK STATION
 MASSACHUSETTS PUBLIC ALERT & NOTIFICATION SYSTEM
 PRELIMINARY VANS SIREN LOCATIONS, ACOUSTIC LOCATIONS & ACTIVATION TIMES
 (ALL TIMES ARE IN MINUTES)

STAGING AREA	ACOUSTIC LOCATION	DEPLOYMENT TIME	SIREN ACTIVATION TIME	TOTAL TIME
S1	P1	10.5	3.0	13.5
S2	P4	3.0	3.0	6.0
	P3	10.2	3.0	13.2
	P2	8.0	3.0	11.0
S3	P7	9.5	3.0	12.5
	P12	8.3	3.0	11.3
	P13	11.0	3.0	14.0
S4	P5	3.0	3.0	6.0
	P9	12.0	3.0	15.0
	P8	10.3	3.0	13.3
S5	P6	6.2	3.0	9.2
S6	P10	9.4	3.0	12.4
	P11	10.5	3.0	13.5
	P14	6.7	3.0	9.7

QUESTION NO. 5

Methods to be employed to ensure availability of VANS (or backup alerting system) under adverse weather conditions, such as ice storms, heavy snows and floods.

RESPONSE TO NO. 5

The VANS vehicles will be located at outdoor and indoor staging areas. At indoor VANS staging areas the driveway access and facility will be maintained in a condition suitable for prompt VANS deployment. At outdoor VANS staging areas, the vehicles will employ block heaters to maintain the reliability of the vehicles.

A different VANS vehicle has been selected from that described in our February 26, 1988 letter. The VANS vehicle is a commercially available, truck-mounted telescoping crane, complete with outriggers. The crane is mounted on a 26,500 lbs. GVW heavy-duty construction grade truck. The truck has a high-ground clearance and will be equipped with snow tires suitable for its intended use. The VANS truck is similar to those used for other services under adverse weather conditions. No significant delays attributable to the VANS vehicle traversing their routes under adverse weather conditions are anticipated based on the choice of the vehicles and operator training. All routes are hard-surfaced roads and consist of at least two lanes that will allow the truck to pass stalled vehicles, if required.

For most acoustic locations (See Table 4-1) there is margin in the total time available for public alert and notification to accommodate additional route transit time due to adverse weather or abnormal route

conditions. The early dispatch of the VANS vehicles at the Alert stage will provide further margin.

In addition, backup VANS will be available at or near Seabrook Station to provide acoustic coverage for a primary VANS vehicle failure. Helicopter alerting is also available as a backup and is delineated in the response to Question 9.

QUESTION NO. 6

Comparison of locations of VANS (approximately 22 vehicles) and prior pole mounted sirens (approximately 46), showing how the coverage on the two systems matches up. (Map submitted on 02/26/88 is not sufficiently readable). Alternatively, provide detailed information specified in NUREG-C654, Appendix 3, Section C.3 for VANS with or without field survey, as appropriate.

RESPONSE " 10. 6

The original sirens in Massachusetts were various models rated no higher than 123 dBC at 100 feet; the VANS utilizes a dual Whelen Model WS-4000 siren system rated at 134 dBC at 100 feet. The increased siren rating allows substantially greater coverage, thus reducing the number of sirens required. Fourteen (14) acoustic locations were optimized after the Whelen siren system was field-tested by Wyle Laboratories to verify siren rating. Wyle Laboratories utilized the data from the field test in a computerized sound propagation model to calculate the 70 dBC and 60 dBC contours for the acoustic locations selected. See Figure 6-1 for the preliminary results. If some areas require enhanced coverage, an assessment will be made as to the most effective way to provide the needed coverage. This could include additional sirens or tone alert radios. Acoustic measurements may be recorded in the areas to determine if ambient background sound levels are covered by at least 10 dBC dissonant.

QUESTION NO. 7

The means for conforming with guidance criteria regarding a siren signal of 3-5 minutes and capable of repetition. For the beach areas, include description of the capability for a voice message in addition to the tone signal.

RESPONSE TO NO. 7

The VANS design incorporates a dual Whelen Model WS-4000 siren system that is capable of repetitive remote or manual activation for 3-5 minutes. The sirens are powered by batteries and an onboard generator which will allow the sirens to be capable of repetitive activation as necessary in response to a Station emergency. The siren system is capable of remote "voice message" operation.

The scope of voice operation for the beach areas will be consistent with the concept of operations described in the SPMC.

QUESTION NO. 8

A siren testing frequency that is consistent with NUREG-0654 and Volume 6 of the New Hampshire Radiological Emergency Response Plan, "Final Design Report on the Seabrook Public ANS".

RESPONSE TO NO. 8

The VANS sirens will be tested at the same interval as the New Hampshire pole-mounted sirens which is consistent with guidelines provided in FEMA-REP-1 (see Reference below).

REFERENCE

NUREG-0654/FEMA-REP-1, Rev. 1, November 1980, Appendix 3, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Stations".

QUESTION NO. 9

The conditions and procedures for the use of the helicopter alerting system as a backup to the VANS.

RESPONSE TO NO. 9

The airborne alerting system consists of a helicopter based and staffed 24 hours a day at Seabrook Station. This alerting system will be used as a secondary backup to the VANS.

At the Alert emergency classification or higher, the VANS vehicles are dispatched to their acoustical locations and the helicopter is placed on standby.

If any VANS primary vehicle fails, a backup VANS vehicle will be dispatched to the acoustic location. However, if a backup VANS vehicle fails to reach the specific acoustic location, the helicopter will be launched to provide required acoustic coverage for that area. The SPMC will contain the implementing procedure for activating the helicopter alerting system portion of the VANS.