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September 26, 1988

Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

ATTENTION: Docketing and Service Branch

Re: Public Service Company of New Hampshire, et al.
Docket Nos. 50-443-OL-1 & 50-444-OL-1

Dear Sir:

It has come to our attention that the even numbered pages to Attachment E of the Affidavit of Sebastian N. Caruso filed by the Applicants on September 17, 1988, were missing. Please find herewith a complete Attachment E and two conformed copies.

In addition, please find corrected copies of the professional qualifications of Lawrence M. Jacobson and Edward B. Lieberman (Attachment A to their respective affidavits) also filed under date of September 17, 1988, and two conformed copies.

Very truly yours,

Jeffrey P. Trout

Jeffrey P. Trout

JPT:las
Enclosures

D503

SEABROOK PLAN FOR MASSACHUSETTS COMMUNITIES IMPLEMENTING PROCEDURE

IP Number 2.16

Title Vehicular Alert and Notification System

Prepared by: Pasquale Caporale Date: 5/19/88

Approved by: R. Michael Hawkins Date: 5-19-88
New Hampshire Yankee
Manager of Plans and Procedures

Revision 0

Amendment 5

Effective Date 05/23/88

CONTENTS AND REVISION STATUS

VEHICULAR ALERT AND NOTIFICATION SYSTEM

1.0 PURPOSE

This procedure details the actions necessary to deploy and activate the Vehicular Alert and Notification System (VANS) to accomplish public alerting in the Massachusetts portion of the Plume Exposure EPZ.

2.0 RESPONSIBILITIES

VANS Operators are responsible for the operation of the VANS Staging Areas, including maintaining VANS vehicles in a state of readiness, and deployment of VANS vehicles in support of Public Alert and Notification System activation.

3.0 PRECAUTIONS

Prior to VANS activation, direction is required from the Seabrook Station Short Term Emergency Director, Seabrook Station Site Emergency Director, Seabrook Station Response Manager, or the New Hampshire Yankee (NHY) Off-site Response Director.

4.0 PREREQUISITES

An Unusual Event or higher emergency classification has been declared at Seabrook Station.

5.0 ACTIONS

5.1 VANS Operator

5.1.1 Non-Emergency (Ongoing) Actions

A. Assume the VANS Operator watch at the Staging Area.

B. Receive a briefing and status of VANS vehicle readiness from VANS Operators going off shift.

C. Establish a chronological log using Attachment 1, VANS Operator Chronological Event Log. Document assuming the watch (shift), and actions in response to an emergency, if applicable.

D. Ensure that a VANS Operator is assigned to each VANS vehicle.

> **NOTE**
>
> Additional VANS operators may be assigned to selected shifts to provide backup for problems which might be encountered.

E. Inspect VANS vehicle for its state of readiness and report status.

F. Obtain dosimetry and KI in the VANS Staging Area. Rezero dosimetry.

1. 0-20 R dosimeter
2. 0-200 mR dosimeter
3. TLD
4. KI

G. Refer to Procedure IP 2.8, Dosimetry and Exposure Control and complete the Emergency Worker Dose Record Form with name, Social Security Number, dosimetry serial numbers and initial readings.

H. Refer to Procedure IP 2.8, Dosimetry and Exposure Control and read the Dosimetry Briefing Instructions and Regulatory Guide 8.13, Instructions Concerning Prenatal Radiation Exposure.

I. When assigned, additional VANS Operators drive routes to verify their condition and availability.

1. Use a vehicle other than a VANS vehicle, to accomplish this.
2. Provide reports to the VANS Operators at the VANS Staging Area of impassable routes or problems with acoustic locations, if any.

J. Review procedure Step 5.1.2 during the shift, however, do not implement further actions (steps) unless notified of an Alert or higher emergency by the NHY Offsite Response EOC Contact.

K. Provide a briefing to the oncoming VANS Operator (upon shift change) on the status of the following:

- o VANS
- o Manpower
- o Route Accessibility
- o Communications

5.1.2 Emergency Actions

A. Receive notification of an emergency at Seabrook Station from the NHY Offsite Response EOC Contact over the VANS Alarm System, the NHY Offsite Response Organization (ORO) Emergency Radio Network or commercial telephone.

1. Log the emergency classification and time of notification

2.

IF	THEN
Notified by the VANS Alarm System	Continue procedure with Step 5.1.2.D
Notified by radio or commercial telephone	Continue procedure with Step 5.1.2.B

B. Inform all VANS Operators at your VANS Staging Area of notification of the emergency.

C. Continue this procedure, as applicable, depending on emergency classification notification.

IF	THEN
Unusual Event	No further action, standby
Alert, Site Area Emergency or General Emergency	Continue procedure with Step 5.1.2.D

D. Report to your VANS vehicle in accordance with preassigned routes/acoustic locations (ensure that you have the route map required for your assigned acoustic location in the VANS vehicle).

1. Perform a radio check with the NHY Offsite Response EOC Contact upon dispatch, and verify the emergency classification and that the proper action is being taken in accordance with Step 5.1.2.C.

2. If the radio does not work, obtain another radio.

E. Depart from the VANS Staging Area and proceed to the assigned acoustic location.

NOTE

Notification may be received while enroute that remote siren activation has been initiated at the NHY Offsite Response EOC.

CAUTION

FAILURE TO PLACE THE VANS VEHICLE IN AN OPERABLE POSITION SHOULD BE REPORTED TO THE NHY OFFSITE RESPONSE EOC CONTACT VIA RADIO.

F. Upon arrival at the VANS acoustic location, place the VANS vehicle in an operable position. Upon raising the siren, ensure the Manual Interlock Switch (MIS) is in the CLOSED position.

NOTE

The siren may sound upon placing the MIS in the CLOSED position if remote activation from the NHY Offsite Response EOC had been initiated while enroute to the VANS acoustical location. If this occurs go to Step 5.1.2.L, then return to Step 5.1.2.G.

G. Return to the cab and notify the NHY Offsite Response EOC that the VANS is operable.

CAUTION

IF THE SIREN IS SOUNDING, THE GENERATOR SHOULD NOT BE STARTED UNTIL SIREN ACTIVATION IS COMPLETE.

H. Start the Generator

I. If after repeated attempts to start the Generator, it does not start, call the NHY Offsite Response EOC and inform the NHY Offsite Response EOC Contact or the Communication Coordinator that the generator is not operating.

J. Periodically check the Generator to ensure that it is on.

K. Periodically check the Interlock Light on the Siren Activation Encoder.

IF	THEN
Interlock Light is ON	Continue procedure with Step 5.1.2.L
Interlock Light is OFF	1. Check that the Manual Interlock Switch is in the CLOSED position (open and close the switch to make sure) 2. If the Interlock Light remains OFF, call the NHY Offsite Response EOC

L. Periodically check the Siren Activation Light on the Siren Activation Encoder

> **NOTE**
>
> If the Siren Activation Light goes ON at any time it should be preceded, or immediately followed, by Step 5.1.2.M. If no notification is received, contact the NHY Offsite Response EOC immediately to inform them.

> **CAUTION**
>
> IF THE SIREN SOUNDS AT ANY TIME WITHOUT NOTIFICATION FROM THE NHY OFFSITE RESPONSE EOC (PRIOR TO, OR IMMEDIATELY FOLLOWING), CONTACT THE NHY OFFSITE RESPONSE EOC IMMEDIATELY TO OBTAIN A STATUS OF THE SITUATION.

M. Receive notification from the NHY Offsite Response EOC Contact or Communication Coordinator of siren system activation and time, note this on the Chronological Event Log, and perform the following actions:

> **NOTE**
>
> Siren activation is not required for all emergency conditions. The remainder of this procedure should be performed if no siren activation is inititated by the NHY Offsite Response EOC Contact or Communications Coordinator.

1. Verify siren activation. If the siren does not activate check that the Manual Interlock Switch is in the CLOSED position (open and close the switch to make sure).

2. Respond to the roll call performed by the NHY Offsite Response EOC Contact, or Communication Coordinator, with the status of siren activation.

3. If no roll call is initiated, contact and inform the NHY Offsite Response EOC Contact, or Communication Coordinator, of the failure of the siren to activate.

4. If directed by the NHY Offsite Response EOC Contact or Communication Coordinator, to manually activate the siren, perform the following actions:

   a) Turn the manual activation encoder ON.
   b) Press and release the ALERT button.
   c) Press and release the SEND button.

5. Notify the NHY Offsite Response EOC Contact or Communication Coordinator, of the status of siren activation.

N. Standby at the acoustic location, with the VANS vehicle operable, and await further instructions. If notified of siren activation by the NHY Offsite Response EOC Contact or Communication Coordinator, perform Step 5.2.1.M.

O. Periodically read dosimetry and log readings on the Emergency Worker Dose Record Form. Report readings to the Exposure Control Coordinator at the Staging Area if they approach limits indicated in the dosimetry instructions.

- 175mR or greater on the 0-200 mR DRD
- 1R, 5R, 10R, 15R, 20R on the 0-20R DRD

P. Upon being relieved by an oncoming VANS Operator at an acoustic location, report to the Emergency Worker Facility to be monitored and decontaminated if required. Turn in dosimetry and Emergency Worker Dose Record Form to a Dosimetry Recordkeeper.

Q. Upon direction from the NHY Offsite Response EOC Contact or Communication Coordinator, return to the VANS Staging Area or other location specified.

- Place siren batteries on charge
- Provide a debriefing and logs to the VANS Operators
- Await further instructions from the NHY Offsite Response EOC

5.2 Backup VANS Operator

5.2.1 Receive notification of an emergency from Seabrook Station Security.

5.2.2 Report to the Backup VANS Staging Area.

A. Contact the NHY Offsite Response EOC Contact to verify notification and confirm readiness status using commercial telephone or the NHY ORO Emergency Radio Network.

B. Establish a chronological log using Attachment 1, VANS Operator Chronological Event Log.

C. Ensure that a VANS Operator is assigned to each VANS vehicle.

D. Complete Steps 5.1.1.E through Step 5.1.1.H.

5.2.3 Upon direction of the NHY Offsite Response EOC Contact or Communication Coordinator, dispatch backup VANS Operator(s) to acoustic location(s) designated.

5.2.4 Complete Steps 5.1.2.D through Step 5.1.2.Q.

> CAUTION
>
> PROCEDURE STEP 5.3 APPLIES ONLY WHEN THE PUBLIC ALERT AND NOTIFICATION SYSTEM HAS BEEN ACTIVATED.

5.3 Offshift VANS Operators and Backup VANS Operators.

A. When notified by the NHY Offsite Response EOC Contact, report to the NHY ORO Staging Area and obtain dosimetry.

B. Report to the assigned acoustic location or backup VANS vehicle.

C. Relieve preceding shift VANS Operator.

D. Inform the NHY Offsite Response EOC Contact of completed shift change.

E. Continue this procedure, as applicable.

6.0 REFERENCES

6.1 Implementing Procedure 2.1, Notification of Emergency Response Personnel and Support Organizations

6.2 Implementing Procedure 2.8, Dosimetry and Exposure Control

6.3 Implementing Procedure 2.13, Public Alert and Notification System Including EBS Activation

VANS OPERATOR
CHRONOLOGICAL EVENT LOG

POSITION: VANS Operator

NAME: _____ ASSIGNMENT: _____
Community

DATE: _____ _____
VANS ID

FACILITY: VANS Staging Area - _____ _____
(location/ID) Acoustic Location ID

Time am/pm	Event Description

Lawrence M. Jacobson
Professional Qualification

I have over thirty years of maintenance experience to apply to the emergency-plan sirens. I have over thirty years of maintenance experience dealing with electronic and electro-mechanical systems. The majority of these systems were portable and many were housed in weather tight containers.

Work Experience

1983 to present - Seabrook Station

1978 to 1983 - Electro Rent Corporation
Responsible for maintaining over 3 million dollars worth of rental measuring and test equipment rented throughout New England

1964 to 1978 - United States Air Force
Measuring and test equipment technician/supervisor working in Iceland, North Dakota, Crete, Greece and Colorado

1960 to 1964 - United States Air Force
Airborne radar/weapons control technician working in Alaska and Florida

1956 to 1960 - United States Air Force
Aircraft electrician working in Labrador and New Hampshire

Please note that I've worked where weather conditions are much more severe than in New Hampshire. I've operated and repaired many different systems in all types of weather and feel this gives me an excellent background for judging the weather protective ability of the siren system control cabinets.

EDWARD LIEBERMAN

Position: President

Education: B.S., Civil Engineering, 1951, Polytechnic Institute of Brooklyn
M.S., Civil Engineering, 1954, Columbia University
M.S., Aero Engineering, 1964, Polytechnic Institute of Brooklyn
Subsequent studies toward a Ph.D. in Transportation Planning at Polytechnic University

Professional Background: With almost 30 years' professional experience, Mr. Lieberman has managed numerous major projects. Mr. Lieberman pioneered the development and application of traffic simulation models, making major innovations in the state of the art in the Traffic Engineering profession. He has also been responsible for many engineering studies involving data collection, analysis and design of traffic control systems to expedite traffic flow and relieve congestion.

He has developed simulation models to study traffic performance on urban networks, on freeways, and on freeway corridors. These programs include consideration of pedestrians' interacting with vehicular traffic, truck and bus operations, special turning lanes, and vehicle fuel consumption and emissions; both pretimed and actuated traffic signal control are represented. Selected project activities include:

- Principal Investigator for development of traffic signal control strategies for congested conditions in mid-Manhattan. These strategies were implemented and evaluated in the field. Floating car tests indicated substantial reductions in delay combined with increased vehicle throughput.

- Principal Investigator in the development of an interactive computer graphics (ICG) software system for displaying traffic simulation results generated by the Netsim model. Mr. Lieberman designed the overall structure of the software for implementation on PC AT computers and, subsequently, on larger ICG work stations. This work was sponsored by FHWA.

- Responsibility for the theoretical development of DYNEV, a dynamic evacuation simulation model. DYNEV is designed to be used as a tool to develop and optimize evacuation plans needed as part of general disaster preparedness planning. DYNEV was used to analyze an existing evacuation scenario at the Con Edison Indian Point Nuclear Power Station and was used to develop an extensive evacuation plan for the LILCO Shoreham Nuclear Power Station on Long Island, New York.

- Served as a principal in the development of an evacuation plan for the Long Island Lighting Company's Shoreham Nuclear Power Station. Mr. Lieberman's activities in this project include, definition of evacuation scenarios, definition of the evacuation network, analysis of trip tables, analysis and optimization of simulation results, the preparation of formal documentation and testimony, and providing testimony at public hearings conducted as part of the licensing procedures.

- Responsible for the development of the I-DYNEV model, an interactive version and enhancement of the DYNEV model, under contract with the Federal Emergency Management Agency (FEMA). I-DYNEV, in turn, was integrated into the Integrated Emergency Management Information System (IEMIS), developed by FEMA.

- Applied I-DYNEV to estimate the evacuation times for the Emergency Planning Zones (EPZ) for eight nuclear power stations.

- Developed course material and conducted training for emergency planning personnel at the National Emergency Training Center (NETC) in Emmittsburgh, MD.

- Designed the NETSIM microscopic traffic simulation model (formerly UTCS-1) for urban environments to evaluate traffic operations, for the Federal Highway Administration.

- The SCOT model which simulates traffic on freeway corridors was developed for the Transportation System Center of the Department of Transportation. This program includes a dynamic traffic assignment algorithm which routes traffic over a network to satisfy a specified origin-destination table, in response to changing traffic flow characteristics.

- Developed advanced traffic control policies for urban traffic for the FHWA-sponsored UTCS Project, as well as a bus preemption policy to enhance the performance of mass transit operations within urban environs.

- Designed and programmed the advanced "Third Generation" area-wide, cycle-free control policies for moderate and congested traffic flow for computer-monitored real-time systems.

- Developed a cycle-based, off-line computational procedure named SIGOP-II, to optimize signal timing patterns to minimize system "disutility."

- Led a group of traffic engineers and systems analysts in developing a system of macroscopic traffic simulation models designed to evaluate Transportation Systems Management (TSM) strategies. This software system, named TRAFLO, also includes an equilibrium traffic assignment model. This model has been distributed to other agencies including FEMA.

- An "Integrated Traffic Simulation System," named TRAF, has been designed by Mr. Lieberman. This model incorporates all the best traffic simulation models available. Using structured programming techniques, TRAF integrates: NETSIM, TRAFLO, INTRAS (a microscopic freeway traffic simulation model), and a microscopic rural-road traffic simulation model named ROADSIM. All of these models were developed under the direction of Mr. Lieberman.

- Mr. Lieberman served as Principal Investigator on NCHRP Project 3-20 entitled, "Traffic Signal Warrants." This project involved both field data collection and the application of the NETSIM model to study intersection delay as a function of traffic volume, type of control and geometrics. New signal warrants were developed and documented.

- Under NHTSA sponsorship, Mr. Lieberman directed a research study to evaluate a Driver Vehicle Evaluation Model named DRIVEM. This model simulates, the response of motorists to hazardous events. The effort included analysis of the model formulation and software and sensitivity testing. A workshop was designed, organized, scheduled and conducted by KLD; experts were invited from all over the U.S. to recommend specific NHTSA research activities for the further development of the mode. A recommended research program constituted the major output of the contract.

Prior to 1965, Mr. Lieberman applied his skills to the areas of stress analysis, vibrations, fluid dynamics and numerical analysis of differential equations. These analyses were programmed for the IBM 7090 and System 360, CDC 6600, G.E. 625 and UNIVAC 1108 digital computers in assembly language, FORTRAN and PLI. He also designed the logic and real-time programming for a sonar simulator built for the Department of Navy and monitored by a PDP-8 process-control digital computer.

Professional Activities: Member of the American Society of Civil Engineers, the Institute of Traffic Engineers, the Association of Computing Machinery and the Transportation Research Board (TRB). He was a member of the Highway Capacity Committee and is on the Traffic Flow Theory and Characteristics Committee of the TRB. He is a licensed Professional Engineer in New York and Maryland.

Honorary Society: He is a member of the Chi Epsilon Honorary Fraternity.

Selected Publications:

"DYNET - A Dynamic Network Simulation of Urban Traffic Flow," Proceedings, Third Annual Simulation Symposium, 1970.

"Simulation of Traffic Flow at Signalized Intersections: the SURF System," Proceedings, 1970 Summer Computer Simulation Conference, 1970.

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EDWARD LIEBERMAN
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