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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

'90 MAY 30 P4:24

ATOMIC SAFETY AND LICENSING BOARD

Before the Administrative Judges:

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

Ivan W. Smith, Chairman
Dr. Richard F. Cole
Kenneth A. McCollom

In the Matter of)	Docket Nos. 50-445-OL
PUBLIC SERVICE COMPANY)	50-444-OL
OF NEW HAMPSHIRE, ET AL.)	
(Seabrook Station, Units 1 and 2))	May 29, 1990

MEMORANDUM OF INTERVENORS IN RESPONSE
TO LICENSING BOARD ORDER OF MAY 4, 1990

Intervenors, New England Coalition on Nuclear Pollution ("NECNP") and the Massachusetts Attorney General ("Mass AG") submit this memorandum in response to the Board's May 4, 1990 Notice of Prehearing Conference. In that Notice the Board ordered each party to provide:

their respective advice on how the issues should be resolved and how that party intends to participate in the resolution of the issues. Any memorandum shall address the Licensing Board's Memorandum and Order of May 3, 1990 (LBP-90-12).

Notice at 2. The issues remaining before this Board at the present time are:

- (1) time estimates for preparing non-ambulatory patients and advanced life support systems in the Seabrook emergency planning zone for evacuation and
- (2) shelter for visitors to the Seabrook area beaches when, in the face of a prognosis of decreasing ability to mitigate a radiological emergency at the Seabrook Station, evacuation of beach

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visitors is not possible because of physical impediments to evacuation such as weather and highway conditions.

Notice at 1-2.

Intervenors advise as follows:

1. This Board has no jurisdiction at this time to proceed with these issues. Indeed, before the Court of Appeals in Docket No. 90-1132 is a motion to enjoin further such trial-level process. This Board should postpone the presently scheduled pre-hearing conference until such time as the Court has ruled on this pending motion.

2. As to the ALS issue:

a. This is the second time this Board has solicited Intervenors' views on how this issue should be resolved and what role they would play in resolving it. In their first response, filed on February 1, Intervenors submitted as an attachment pages 48-56 of Intervenors' December 1 Supplemental Motion (Exhibit 1 to Intervenors' February 1 Response to this Board's January 11 Order.) This Board's discussion of this issue in LBP-90-12 does not discuss or even reference this Intervenor input. Instead, the Board (at 14-23) provides an etiology of the remanded issue purporting to establish that this issue has sprung full-blown, as it were, out of the appellate process. Whatever solace may be found in an historical reconstruction of this issue, the fact remains that this Board's analysis in LBP-89-33 is deeply flawed and that LBP-90-12 to whatever extent it relies on that earlier analysis

is likewise flawed. For this reason, Intervenors here repeat their December 1 analysis.

Upon review of the arrangements in the NHRERP for the evacuation of special facilities, the Appeal Board noted that the ETEs for special facilities may have been underestimated because of a failure to include in the ETE the time it takes to move an advanced life support ("ALS") patient from a bed to a stretcher adjacent to the bed ("preparation time"). This process cannot be begun before the arrival of the evacuation vehicle and it may add an additional 28 to 60 minutes per patient to the total ETE for the facility.^{1/} ALAB-924, 30 NRC 331, 351. Not only did Intervenors' witness Pilot testify that this preparation could not be begun before the evacuation vehicle arrived, but contrary to the statement of this Board in LBP-88-32 at 28 NRC at 699, the NHRERP also states that patients are assembled as and not before the evacuation vehicles arrive. ALAB-924, at 351 n.69. The Appeal Board, noting that increased evacuation times for special facilities close-in to the reactor effect the relative efficacy of

^{1/} Assuming staffing was sufficient to permit each ALS patient to be shifted from bed to stretcher simultaneously and that all ambulances for these patients arrived at a special facility at the same time, the total additional time would be between 28 and 60 minutes for any one facility. If either of these assumptions could not be made (as seems obvious) the increase in the ETE for a particular facility would be a function of the staffing available, the number of patients and the arrival times of the ambulances. Obviously, these increases could be substantial.

sheltering as compared to evacuation, remanded the matter to the Board for resolution. The Board also stated:

Correction of the preparation time omission suggested by the Licensing Board's statement also will ensure that special facility planning conforms to the guidance of NUREG-0654 that evacuation time "[e]stimates for special facilities shall be made with consideration for the means of mobilization of equipment and manpower to aid in evacuation" and that "[e]ach special facility shall be treated on an individual basis." NUREG-0654, App. 4, at 4-9 to 4-10.

ALAB-924 at 352 n.71.2/

This Board began its analysis by setting forth the total generic ETE used in the NHRERP for special facilities: 3.30 hours composed of

Mobilization time:	.33 hours
Inbound Travel: 90/50 + .50	2.30
Loading Passengers	<u>.67</u>
	3.30 hours

LBP-89-33, 30 NRC 656, 668 citing NHRERP, vol. 6 at 11-26.

Next, the Board compares this estimate of loading time (.67 hours = 40.2 minutes) with the average preparation time estimated by Ms. Pilot (28 + 60 minutes/2 = 44 minutes), and finds that the Pilot estimate and the assumptions in the NHRERP do not "deviate in any significant way" and that an "increase

2/ The NHRERP provides no particularized ETEs for the special facilities on the grounds that no special facility ETE is longer than the overall ETE for the EPZ. Obviously, if the NHRERP has underestimated the special facility ETEs by a substantial amount that varies from facility to facility for the reasons set forth in the preceding footnote, then the NHRERP has not complied with governing regulations. Indeed, in reality, the plan may call for an evacuation of a facility whose dose minimizing action would be sheltering.

of four minutes in the ETE would not affect the choice" of a PAR for the ALS patient population as a whole. Id. at 669.

It is wrongheaded to compare the preparation time which Pilot estimated at 44 minutes on average per patient with the loading time per facility. The whole point of Pilot's testimony and the Appeal Board's remand in this regard was that before an ALS patient could be loaded at a facility preparation time was necessary and this preparation could not begin until the evacuation vehicle arrived. Thus, Pilot's 44 minutes per patient would have to be added to the NHRERP's estimate of 40.1 minutes of loading time per facility as long as the preparation could not begin until the evacuation vehicles arrived.

Next, the Board proceeded as follows: 1) the Board outlined notification and mobilization procedures for EMS vehicles and the special facilities and found a margin of extra time there in which to perform Pilot's preparatory tasks; and 2) the Board asserted that the NHRERP can be amended post-licensing under the oversight of the Staff to:

provide instructions to the staff of special facilities to prepare ALS patients for transportation at the order to evacuate.

Id. at 670.

Turning first to the mobilization procedures for the EMS vehicles, the Board accurately states that these vehicles would be notified and possibly mobilized at an Alert. Id. at 669. If mobilized at Alert (obviously before an order to evacuate would issue) they travel from their point of origin to the State Transportation Staging Areas (TSAs). Id. Later when the

order to evacuate is given these vehicles travel from the State TSAs to the Local TSAs in the communities and from there to the individual facilities. As set out above, this 2-staged transit process for these vehicles is reflected in the NHRERP at vol. 6 at 11-26 in two separate estimates of "inbound travel time": 1) 90 miles at 50 mph = 1.8 hours (travel time from point of origin to State TSA) and 2) .50 hours which equals the time on average for traveling from the State TSA to the local TSA to the special facility. (See Vol 6, 11-19 to 11-20). Thus, because the staffs of the facilities are told when the order to evacuate is given and because, assuming the vehicles have already arrived at the State TSA, it is estimated that the vehicles will travel from there to the individual facilities in about 30 minutes, the Board believes that this 30 minutes

provides an extra margin of time within which ALS patients can be readied for evacuation -- a margin of time beyond that assumed as loading time for those patients.

Id. at 669. Thus, because the Board believes this extra time exists, the remanded issue appeared to be resolvable by simply requiring an amendment instructing the staff of the special facilities to begin preparation upon the order to evacuate.

On closer review, such a solution would be an egregious error and reflects again this Board's incomprehension of the remanded issue. First, assuming the planners knew that all necessary vehicles would arrive at each facility 30 minutes after the staffs were told to begin the preparation of their patients, the point made by Ms. Pilot and noted by the Appeal

Board was that each patient would require 28 to 60 minutes to complete the preparation prior to loading. Since there are no individual ETEs for each special facility reflecting "the means of mobilization of equipment and manpower to aid in evacuation" (ALAB-924 at 352 n.71 citing NUREG 0654) there is no basis for assuming that within that 30 minutes even 1 patient will be ready to begin the loading process when the EMS vehicles arrive. Ms. Pilot estimated the process to take 28-60 minutes per patient and without knowing "on an individual basis" how many patients can be prepared simultaneously the impact of this additional process on the ETE for any one facility could be very great.^{3/}

But more fundamentally, the Board misconceives the ETE scheme it cites, and indeed no extra 30 minutes is available at all! If the emergency is slower-paced and permits a two-staged mobilization of the EMS vehicles, then it is clear that at the point at which a decision comparing evacuation to sheltering for the special facilities is made, the appropriate ETE has nothing to do with the one cited by the Board and set out above, i.e. 3.30 hours. That estimate includes a 2.5 hour

^{3/} For example, assume five ALS patients at a facility each of which takes 45 minutes to prepare and available staffing permits preparation of only 1 patient at a time. The total preparation time for this facility would be 3 hours 45 minutes and even if this process began 30 minutes early (the purported extra time the Board believes it has found) the total additional evacuation time would be over 3 hours, a significant amount and one having an impact on any determination whether this facility should evacuate or shelter.

mobilization and travel time which would already have taken place before the protective action decision would have to be made. In this situation, the much lower transit time for the EMS vehicles (.50 hours to travel from State TSA to Local TSA to facilities) would greatly reduce the special facility ETEs and indeed counterbalance (in whole or in part) the omission of any preparation time in the ETE calculation.^{4/} Thus, the extra margin of time is available only when it is not needed. Assuming instead the very type of emergency for which the ETE calculation set out at Vol. 6, 11-26 was designed (in which the EMS vehicle upon the order to evacuate must first mobilize and then travel to the State TSA, the Local TSA and finally the facility) it is obvious that it would be an unmitigated disaster to amend the NHRERP and instruct the staff to begin the preparation time upon the order to evacuate when the evacuation vehicles will arrive over a very long and uncertain period of time up to 2.63 hours after that same order. It is obviously this point that led the planners to quite reasonably instruct the staff to begin preparations as and not before the evacuation vehicles arrive. Thus, in precisely those emergency situations in which the omission of any preparation time will

^{4/} The NHRERP is contradictory on this point. At Vol. 6, 11-21 "loading time" for special facilities is defined to include the travel time from the local TSA to the facility. But at 11-26 the inbound travel time calculation includes .50 hours which as is clear from 11-20 includes trips both from State TSA to Local TSA and from Local TSA to facility. The analysis above assumes the "loading time" estimate reflects only activities at the facility and no travel time from Local TSA to the facility.

most affect the special facility ETEs (because the mobilization time for the vehicles will be longest) there is absolutely no extra time before vehicle arrival to begin preparation, and indeed the uncertain and varied arrival times of the evacuation vehicles demand that preparations be begun only upon arrival and not at the order to evacuate.

Thus, this remanded issue requires additional planning to determine the total preparation time per facility and then to calculate for each facility an appropriate ETE to determine if and when certain facilities should be sheltered when others should be evacuated. These plan changes are complex and involve no small amount of judgment and, therefore, resolution of this remanded issue requires further adversary proceedings.

b. As to the "subissues" set out at 23 of LBP-90-12 these open and unresolved matters should be resolved in keeping with NRC practice and regulations. The State of New Hampshire, ably assisted as always by the Applicants, should prepare planning documents which address these "subissues." After review Intervenors should be given an opportunity to contest the "adequacy" of these plan changes in whatever manner is appropriate, including testimonial presentations. Throughout, the burden of proof on these open issues remains, as always in NRC proceedings, on the Applicants.

4. As to the sheltering issue:

a. What remains at this time before this Board is sheltering the general beach population^{5/} under Condition (2): when evacuation constraints make sheltering relatively superior (although absolutely poor and "inadequate") to evacuation.

b. First, under oath and subject to cross-examination, State officials -- including those who testified on these matters in the last phase of hearings -- should make clear whether the "general beach population" will be sheltered or evacuated under Condition (2). If they do not intend to shelter this population they should explain:

(1) Why they are not recommending the protective action that minimizes doses.

(2) If they believe that "evacuation" is dose-savings superior to sheltering even when evacuation constraints make evacuation impossible (assuming this proposition can be rationally entertained at all) they should explain on what basis they believe "evacuation" in these circumstances is superior.

^{5/} This group has become semantically elusive. During the 1987-88 hearings and in LBP-88-32 it was called the "98%." Now the concept has been unmoored and is just drifting in an adjudicatory sea of uncertainty. Intervenors refer by the phrase "general beach population" to those at T₁ who are physically on the beach -- whatever their geographic and temporal point of origin. In the May 3 Notice this Board uses the phrase "visitors to the Seabrook area beaches" which is imprecise as to geographic and temporal origin as well as location at T₁.

(3) They should explain what the phrase "evacuation constraints" includes and does not include. In this regard Intervenors repeat what they stated in their February 12 Reply to Applicants' Response to Licensing Board Order of January 11, 1980 at 8-9:

Condition (2) is not limited in the way Applicants now assert. Attached as Exhibit 1 hereto is Attachment C to Appendix U to Vol. 4A of the NHRERP which sets forth the local conditions which are evaluated by decision makers pursuant to Appendix U step IV. B.4 (General Emergency) cited by the Applicants at 10 of their February 1 Response. (Although dated 2/88 Exhibit 1 was current and part of the October 1988 update.) Obviously, local condition b. ("population density and distribution") could well signify that large beach populations without more, are a local condition which is considered a constraint on evacuation thereby resulting in a sheltering PAR. (Attached as Exhibit 2 is the corresponding portion of Revision 3 of the NHRERP dated February, 1990.)^{6/}

^{6/} Intervenors note that in the February 1990 revision of the NHRERP at Vol. 8 there is repeated ambiguity concerning the use of sheltering for the general beach population under Condition (2); i.e., evacuation constraints. At §6.1, Section 8 (at 6.1-8), it is clear that (just as in the October 1988 iteration) sheltering is considered for the beach areas if the constraints (as identified at §6.4, Exhibit 2 here) on evacuation exist. But at §6.10 ("Protective Action for Seasonal Beach Populations") at Section 4 (at 6.10-3 to 6.10-4) it is not clear that sheltering is considered even if the evacuation constraints as set out at §6.4 exist.

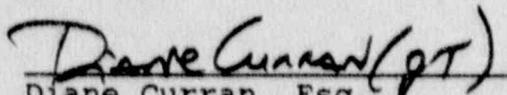
(4) If, after all, the plan does call for sheltering, then a sheltering plan sufficient in scope and range to meet the regulatory requirements should be prepared, and after review Intervenor should be given an opportunity to contest the "adequacy" of this plan in whatever manner is appropriate, including testimonial presentations. Again, the burden of proof should remain on the Applicants.

Respectfully submitted,

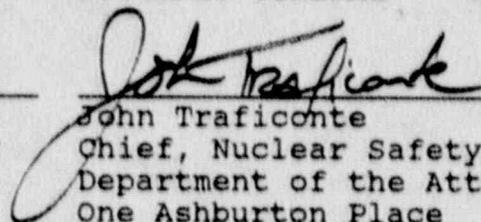
COMMONWEALTH OF MASSACHUSETTS

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DATED: May 29, 1990

EXHIBIT 1

ATTACHMENT C

EMERGENCY ORGANIZATION STATUS AND LOCAL CONDITIONS

A. Response Status of the State and Town Emergency Organizations

1. The protective action decision must take into consideration the status of state and town emergency personnel and resources and the timing of the protective action announcements to the public.
2. Of particular importance to precautionary actions for the beach areas is the status of the State Police and local police to implement traffic and access controls.
3. Status considerations include:
 - a. Availability of personnel
 - b. Time required for mobilization
 - c. Degree to which mobilization has progressed
 - d. Time required for implementation of emergency actions

B. Local Conditions

1. Local conditions within an affected area may constrain protective action decisions and their implementation.
2. Local conditions should be reported to decision makers by local EOC personnel through the IFO at Newington.
3. Pertinent local conditions include:
 - a. Conditions of road and evacuation routes considering:
 - (1) Seasonal travel impediments
 - (2) Status of road repairs
 - (3) Surface conditions due to weather

ATTACHMENT C (cont'd)

- (4) Natural or man-made impediments
- (5) Effect of traffic signals on traffic flow in direction of evacuation.
- b. Population density and distribution
- c. Evacuation route capabilities
- d. Inclement weather conditions that would affect travel (snow, fog, heavy rains, etc.)
- e. Local events which may present requirements for special notification, traffic control, transportation assistance
- f. Status of schools and other special facilities.

EXHIBIT 2

6.4 EMERGENCY ORGANIZATION STATUS AND LOCAL CONDITIONS

Section 1 Response Status of the State and Town Emergency Organizations

1. The protective action decision must take into consideration the status of state and town emergency personnel and resources and the timing of the protective action announcements to the public.
2. Of particular importance to precautionary actions for the beach areas is the status of the State Police and local police to implement traffic and access controls.
3. Status considerations include:
 - o Availability of personnel
 - o Time required for mobilization
 - o Degree to which mobilization has progressed
 - o Time required for implementation of emergency actions

Section 2 Local Conditions

1. Local conditions within an affected area may constrain protective action decisions and their implementation.
2. Local conditions should be reported to decision makers by local Emergency Operations Center (EOC) personnel through the Incident Field Office (IFO) at Newington.
3. Pertinent local conditions include:

EMERGENCY ORGANIZATION STATUS AND LOCAL CONDITIONS (cont.)

- o Conditions of road and evacuation routes considering:
 - Seasonal travel impediments
 - Status of road repairs
 - Surface conditions due to weather
 - Natural or man-made impediments
 - Effect of traffic signals on traffic flow in direction of evacuation.

- o Population density and distribution

- o Evacuation route capabilities

- o Inclement weather conditions that would affect travel (snow, fog, heavy rains, etc.)

- o Local events which may present requirements for special notification, traffic control, transportation assistance

- o Status of schools and other special facilities.

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In the Matter of)

PUBLIC SERVICE COMPANY)
OF NEW HAMPSHIRE, ET AL.)

(Seabrook Station, Units 1 and 2))

) Docket Nos. 50-443-OL
) 50-444-OL

) May 29, 1990

CERTIFICATE OF SERVICE

I, John Traficonte, hereby certify that on May 29, 1990, I made service of the within MEMORANDUM OF INTERVENORS IN RESPONSE TO LICENSING BOARD ORDER OF MAY 4, 1990 by Federal Express as indicated by (*), by hand as indicated by (**), and by first class mail to:

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1/ Hand delivery was made on May 30, 1990 by 10:00am

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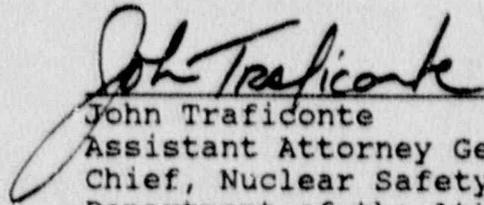
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DATED: May 29, 1990