

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

Before Administrative Judges:  
Helen F. Hoyt, Chairperson  
Emmeth A. Luebke  
Jerry Harbour



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In the Matter of )  
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PUBLIC SERVICE COMPANY OF NEW )  
HAMPSHIRE ET AL. )  
(Seabrook Station, Units 1 and 2) )

) Docket Nos.  
) 50-433/444-OL  
) (Off-Site EP)  
) May 15, 1986  
)

BRIEF IN SUPPORT OF ATTORNEY GENERAL FRANCIS X. BELLOTTI'S  
APPEAL OF LICENSING BOARD ORDER OF APRIL 29, 1986

Attorney General Francis X. Bellotti, pursuant to Section 2.714a of the Regulations of the Nuclear Regulatory Commission, submits this brief in support of his appeal of the Atomic Safety and Licensing Board Order of April 29, 1986 rejecting his single contention filed in this proceeding and thereby dismissing the Attorney General as a party.

STATEMENT OF PROCEEDINGS

The Atomic Safety and Licensing Board by Order dated January 17, 1986 established a hearing schedule for New Hampshire off-site emergency planning contentions requiring that contentions relative to the State of New Hampshire

Radiological Emergency Plans be filed with the Board by February 24, 1986. A prehearing conference was scheduled for March 25-26, 1986.

On February 21, 1986, Attorney General Bellotti submitted a single contention in this proceeding [attached hereto as "Exhibit A"] relating to the emergency plans for the coastal communities within the Seabrook Emergency Planning Zone. That contention states:

The draft radiological emergency response plans for the Towns of Seabrook, Hampton, North Hampton, and Rye do not provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the Seabrook Station, as required by 10 C.F.R. § 50.47(a)(1), because in the event of a severe accident on a summer weekend some or all of the beach area transient populations within those communities cannot under many plausible meteorological conditions be protected by means of evacuation even from early death and because there are not adequate plans or provisions for sheltering the beach area transients within those communities.

As part of the basis for his contention the Attorney General cites a preliminary site-specific consequence study performed for his office by a nuclear physicist, Dr. Jan Beyea. See Contention of Attorney General Bellotti, Exhibit A, at 3-12.

On March 5, March 6 and March 14, respectively, the Applicants, State of New Hampshire and the Staff filed their responses to the Attorney General's contention. See Applicants' Response to Off-Site EP Contentions Submitted by Massachusetts Attorney General, dated March 5, 1986; State of

New Hampshire's Response to Contentions of NECNP, the Commonwealth of Massachusetts, the Towns of Rye, Hampton, South Hampton, Kensington and Hampton Falls on the New Hampshire Radiological Response Plan, dated March 6, 1985; NRC Staff's Response to Contention Filed By State of Massachusetts Attorney General Francis X. Bellotti, dated March 14, 1986. The Attorney General filed an Answer to those responses [attached hereto as "Exhibit B"] on March 24, 1986. See Answer of Attorney General Francis X. Bellotti to Staffs', Applicants' and State of New Hampshire's Responses to His Contention Relative to Emergency Planning for the New Hampshire Beach Communities, dated March 24, 1986 [hereinafter "Answer of Attorney General Bellotti"]. At the prehearing conference held on March 25-26, 1986, oral argument was heard on the Attorney General's contention. After argument, the Licensing Board requested additional briefs on the admissibility of the Commonwealth's contention. Applicants filed their brief on April 11, 1986 and the Attorney General filed a brief on the admissibility of his contention [attached hereto as "Exhibit C"] on April 16, 1986. See Brief of Attorney General Francis X. Bellotti in Support of Admitting his Contention Relative to Emergency Planning for the New Hampshire Beach Communities, dated April 16, 1986 [hereinafter "Brief of Attorney General Bellotti"]. The Staff elected not to file an additional brief.

On April 29, 1986, the Licensing Board issued a Memorandum and Order (served on the parties by mail on April 30, 1986)

ruling on the admissibility of contentions filed in this proceeding. See Memorandum and Order of Atomic Safety and Licensing Board, dated April 29, 1986 [hereinafter "Memorandum of ASLB"]. The Licensing Board rejected the Attorney General's sole contention on the ground that it lacks a regulatory basis. See Memorandum of ASLB at 40-46. The Attorney General hereby appeals the Licensing Board's Order rejecting his single contention and thereby dismissing the Attorney General as a party to this proceeding.

#### ARGUMENT

I. The Attorney General Has a Right of Appeal Pursuant to 10 C.F.R. § 2.714a

Attorney General Francis X. Bellotti has sought intervenor status in this proceeding to protect the interests of the many citizens of the Commonwealth of Massachusetts who use New Hampshire beaches within the Seabrook emergency planning zone. In that vein, the Attorney General filed a single contention in this proceeding relative to the adequacy of emergency planning for the transient summer beach population within the New Hampshire EPZ. The Licensing Board rejected Attorney General Bellotti's single contention from this proceeding and he now claims a right of immediate appeal pursuant to 10 C.F.R. § 2.714a.

The regulatory bases for Attorney General Bellotti's right to immediate appeal are 10 C.F.R. §§ 2.714a and 2.714. Section 2.714a provides that "[a]n order wholly denying a petition for leave to intervene" may be appealed "within ten days after service of the order." 10 C.F.R. § 2.714(a) and (b). Section 2.714(b) provides, in relevant part:

(b) not later than fifteen (15) days prior to the holding of the special prehearing conference . . . the petitioner shall file a supplement to his petition to intervene which must include a list of contentions which petitioner seeks to have litigated in this matter, . . . . A petitioner who fails to file such a supplement which satisfies the requirements of this paragraph with respect to at least one contention will not be permitted to participate as a party.

10 C.F.R. § 2.714(b). Thus the effect of the Board's Order of April 29, 1986, rejecting Attorney General Bellotti's single contention from this proceeding, is that the Attorney General's right to participate as a party is terminated.

Attorney General Bellotti has no other contentions before the Board and has not joined in the contentions of any other party to this proceeding. Therefore, the Attorney General has a right pursuant to 10 C.F.R. § 2.714a to immediate appeal of the Licensing Board Order of April 29, 1986 rejecting his contention. See, e.g., Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB-787, 20 NRC 1097, 1098 n. 9, citing Kansas Gas and Electric Co. (Wolf Creek Generating Station, Unit 1), ALAB-784, 20 NRC 845 (1984), for the

proposition that "dismissal of an intervenor's sole contention ha[s] the necessary effect of bringing to an end the participation of that party in the proceeding." Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2) ALAB-731, 17 NRC 1073-1075 (1983). ("As a general matter, a Licensing Board's action is final for appellate purposes where it either disposes of at least a major segment of the case or terminates a party's right to participate.") (citations omitted).

II. The Licensing Board Erred in Refusing to Admit Attorney General Bellotti's Contention Relative to the Adequacy of the Protective Response Actions for the Summer Beach Population Near the Seabrook Plant.

The Licensing Board rejected Attorney General Bellotti's contention from this proceeding "on grounds that it does not state a violation of a regulatory basis." Memorandum of ASLB at 45. The regulatory bases for Attorney General Bellotti's contention are 10 C.F.R. § 50.47(a)(1) and 10 C.F.R. § 50.47 (b)(10).

Regulation 50.47(a)(1) provides, in relevant part, that "no operating license for a nuclear power reactor will be issued unless a finding is made by NRC that adequate protective measures can and will be taken in the event of a radiological emergency." 10 C.F.R. § 50.47(a)(1) (emphasis added). Regulation 50.47(b)(1) requires as a precondition of license issuance that "[a] range of protective actions have been

developed for the plume exposure pathway for emergency workers and the public [and that] [g]uidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place . . . ." 10 C.F.R.

§ 50.47(b)(10). Attorney General Bellotti maintains that his contention, which states, in essence, that the "range" of protective actions provided in the New Hampshire emergency response plan does not provide any assurance that adequate protective measures can and will be taken with respect to the summer beach population near the Seabrook plant in the event of a severe accident on a summer weekend, asserts a violation of regulatory basis and is therefore admissible.

- A. The Licensing Board's Interpretation of the Commission's Emergency Planning Regulations Is Plainly Inconsistent With the Regulatory Language Requiring "Reasonable Assurance That Adequate Protective Measures Can and Will Be Taken."

The Licensing Board, in rejecting Attorney General Bellotti's contention, has misinterpreted the Commission's regulations so as to preclude any consideration of the adequacy of protective response actions. Indeed, to justify its decision, the Board throughout its opinion literally rewrites the Commission's standard so as to omit almost all reference to the word "adequate."

Thus the Board miscites the Commission's regulatory standard when it states: "We believe that the Commission's intent for emergency planning is to . . . provide reasonable

assurance that protective measures can and will be taken." Memorandum of ASLB at 44. And in another part of its decision, explaining that the Commonwealth's interpretation of emergency planning -- requiring reasonable assurance of adequate protective measures -- is not in accord with the Commission's, it actually misquotes the Commission, deleting the word "adequate," when it states:

It was the Commission's intent, as this Board understands these regulations, . . . to ensure that the means and procedures will be in place or will be within a reasonable time, to assess the course of an accident and its potential severity, ' . . . that appropriate authorities will be notified promptly and protective actions in response to actual or anticipated condition [sic] can and will be taken.'

Memorandum of ASLB at 43 (emphasis added), citing Statement of Consideration, Emergency Planning, 45 Fed. Reg. 55402 (August 19, 1980).<sup>1/</sup>

The Licensing Board expressly uses the wrong standard, then, in rejecting Attorney General Bellotti's preferred contention relative to the adequacy of the New Hampshire plan's

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<sup>1/</sup> The actual Commission statement reads:

In order to discharge effectively its statutory responsibilities, the Commission must know that proper means and procedures will be in place to assess the course of an accident and its potential severity, that NRC and other appropriate authorities and the public will be notified promptly, and that adequate protective actions in response to actual or anticipated conditions can and will be taken." Statement of Consideration, Emergency Planning, 45 Fed. Reg. 55402, 55403 (August 19, 1980) (emphasis added).



protective response actions for the summer beach population. The standard the Licensing Board employs is one requiring only "reasonable assurance that protective measures can and will be taken."

Moreover, this is not a case where the Licensing Board has simply forgotten an occasional reference to the word "adequate." Rather, the Board's entire decision is structured to effectively preclude any consideration of the adequacy of the New Hampshire plan's emergency response actions.

Under the Board's interpretation of the Commission's regulations, as long as an emergency response plan provides reasonable assurance that either one of the protective response actions, evacuation or sheltering, or a combination of the two can or will be implemented, any further inquiry ends. Memorandum of ASLB at 43-44. This is so regardless of the ability of those response actions to protect people in the event of an emergency. Under such a standard any emergency response plan would be found adequate as long as it contained an evacuation plan capable of implementation -- even if it could be shown that the evacuation response contained in the plan would never afford any level of protection.<sup>2/</sup>

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<sup>2/</sup> Notably, the Board's decision does not even require that a plan contain a sheltering response capable of being implemented, as long as there is an evacuation response capable of implementation. See also, Memorandum of ASLB at 36-37. Attorney General Bellotti maintains that the Commission's regulations require there be in place a range of protective response actions generally capable of implementation such that there is reasonable assurance that in response to an accident

(footnote continued)

It is just such an interpretation of the Commission's regulations that the circuit court in Guard v. NRC, 753 F.2d 1144 (D.C. Cir. 1985), refused to accept. The court in Guard held that the Commission could not reasonably interpret the requirement of Regulation 50.47(b)(12), that "arrangements [be] made for medical services for contaminated injured individuals," to be met by a mere listing of medical facilities capable of treating radiation exposure. Id. at 1146. Under the Commission's interpretation of the regulation, the court pointed out, no inquiry would be allowed into the "adequacy" of the listed medical facilities, id. at 1149, the effect of this being that the regulatory "standard" would be "met automatically in every case." Id. at 1150. Yet the court held that this apparent assumption on the part of the Commission, that medical facilities would in every case be adequate, "is not an assumption properly indulged in an emergency planning regulation." Id.

Likewise, in the present case, it is not acceptable for the Licensing Board, in evaluating the New Hampshire emergency response plans, to merely assess whether an evacuation, or sheltering, plan capable of implementation is in place. The word "adequate" in the Commission's regulations is not just superfluous as this Licensing Board would have it. As the

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(footnote continued)

within the Commission's planning basis one of those response actions, or a combination of such actions, will be capable of providing adequate protection. See Brief of Attorney General Bellotti at 6-7.

court in Guard noted, the Licensing Board may not simply "disregard the word[] used in the regulation to describe the required protection." Guard v. NRC, supra, 753 F.2d at 1149. If the word "adequate" is to have any effect, then, this Board must make some inquiry into the adequacy of the New Hampshire RERP's protective response actions.

This interpretation of the Commission's regulations, which would require the Licensing Board in making its "reasonable assurance" finding to look beyond the mere fact of whether an evacuation plan exists, is in keeping with the way other NRC licensing boards have treated this issue. See, e.g., Consumers Power Co. (Big Rock Point Plant), LBP-84-32, 20 NRC 601, 695 (1984) (Licensing Board considers impediments to evacuation in evaluating adequacy of that response action and requires consideration of remedies such as construction of new exit roads for problem of serious traffic congestion resulting from summer rock concerts); Consolidated Edison Co. (Indian Point, Units 2 and 3) LBP-83-68, 18 NRC 811, 989-90 (1983) (Licensing Board examines whether evacuation would be an ineffective protective response); The Detroit Edison Co. (Enrico Fermi Atomic Power Plant, Unit 2) LBP-82-96, 16 NRC 1408, 1422-29 (1982) (Board examines whether use of particular evacuation route toward plant would provide adequate protection). See also, The Detroit Edison Co., supra, DD-84-11, 19 NRC 1108, 1120-21 (1984) (Director considers whether adverse weather

evacuation times are unreasonable to the extent evacuation would be ineffective as a protective response).

Nevertheless, the Licensing Board in this case appears to be constrained from inquiring into the adequacy of protective response actions, that is, the ability of such responses to protect people in the event of an emergency, based on a misconception that no standard of protection is imposed by the Commission's regulations. See Memorandum of ASLB at 41, 43-45. While the Attorney General agrees that the Commission has not set a precise level of protection that must be achieved by emergency response actions, it simply does not follow from this that no level of protection need be afforded by emergency response actions, or that inquiry into the level of protection provided by a response plan should be foreclosed.<sup>3/</sup> The Commission has set a standard, one which requires "reasonable assurance [of] adequate protective measures."

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<sup>3/</sup> As the Attorney General previously stated in his brief filed with the Licensing Board:

The fact that the Commission has failed to quantify or further define what constitutes adequate protection can only be viewed as a reflection of the fact that this cannot be done on a generic basis . . . . 'Many aspects of emergency plans . . . are by their very nature site specific. We doubt whether the Commission could prescribe by rule a generic emergency plan suitable for all reactor sites, as the Staff's argument seems to suggest. In any event the Commission did not do that, . . . '

Brief of Attorney General at 9, citing Southern California Edison Co. (San Onofre Nuclear Generating Stations, Units 2 and 3), LBP-81-36, 14 NRC 691, 698-99 (1981).

10 C.F.R. § 50.47(a)(1) (emphasis added). And as the circuit court in Guard stated, the Licensing Board may not interpret the words of that regulation "as meaning something other than what those words in the context of a nuclear plant emergency planning standard may rationally convey." Guard v. NRC, supra, 753 F.2d at 1146. The very term "protective response" means a response that can "cover or shield from injury or destruction." Webster's Seventh New Collegiate Dictionary 685 (1965). Thus, the "plain meaning" of the Commission's regulation requires that there be reasonable assurance that some "adequate" level of protection can and will be provided by such response actions. The Licensing Board can not just assume that all evacuation or sheltering plans capable of implementation will be adequate in this regard. It therefore may not foreclose inquiry into the capability of such response actions to provide the requisite protection.

- B. The Licensing Board Mischaracterizes the Attorney General's Contention as Seeking to Impose a Standard of Absolute Protection Under All Conditions.

The Licensing Board further stretches to exclude Attorney General Bellotti's contention from this proceeding when it states "Massachusetts would have each of the responses within the range of protective responses provide absolute assurance that protective measures can and will be taken." Memorandum of ASLB at 44 (emphasis in original). It appears, then, to adopt

the Applicants' characterization of the Attorney General's contention as one requiring "absolute protection . . . against all radiation doses . . . for all possible accident scenarios." Id. at 41 (emphasis added). Yet the Attorney General has expressly stated, both in his Answer and Brief filed with the Board, that he is not contending that the New Hampshire plans must provide absolute assurance that the public can be protected in the event of an emergency or that any absolute level of protection must be ensured. See Answer of Attorney General Bellotti at 2; Brief of Attorney General Bellotti at 9.<sup>4/</sup> Moreover, the Attorney General submits that his contention, which asserts that in the event of a severe accident on a summer weekend the emergency response actions contained in the New Hampshire plans will not, even under typical meteorological conditions, prevent thousands of beachgoers from being exposed to radiation doses that can lead to death in a matter of days, does not raise an issue of absolute protection at all, but rather an issue of whether the New Hampshire plans provide reasonable assurance of adequate protection.

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<sup>4/</sup> The Attorney General has also expressly stated that it is precisely because no one protective response can provide reasonable assurance of an adequate protective response to a spectrum of radiological emergencies that one cannot isolate such protective responses when examining the adequacy of a radiological response plan, but must rather look to whether the range of protective actions, viewed together, provides the requisite "reasonable assurance of adequate protective measures." See Brief of Attorney General at 6-7.

Furthermore, the Attorney General does not maintain, as stated by the Board, "that protective actions must be developed which assure that any particular level of radiological dose consequences do not occur in the event of an accident." Memorandum of ASLB at 45. As the Attorney General previously stated in his brief filed with the Board,

It would simply not be reasonable for the Commission to set a precise level of dose which, in order for a plant to become licensed, no one could ever receive under any circumstances. And Attorney General Bellotti does not contend that any plan wherein some people might under some circumstances receive death-level doses would be inadequate. Under that standard it is doubtful that any nuclear power plant could ever be licensed.

Brief of Attorney General Bellotti at 9.

What the Attorney General does contend is that evidence of dose consequence goes to the "adequacy" of an emergency response plan's range of protective actions. Such evidence is relevant to a response action's ability to provide protection, or meaningful dose-savings, in the event of an emergency and has bearing on whether the range of protective actions can provide adequate response to the spectrum of accidents within the Commission's planning basis. While evidence of dose consequences would not necessarily be determinative of the issue of adequacy, a Licensing Board presented with such evidence may not simply choose to ignore it and then "assume" that the protective response actions contained in the plan are adequate. Cf. Guard v. NRC, supra, 753 F.2d at 1149-50.

Rather the Board must consider such evidence as one factor that must be weighed in determining whether there is "reasonable assurance that adequate protective measures can and will be taken." See Brief of Attorney General Bellotti at 9-10. Thus Licensing Boards in other proceedings have considered evidence of dose consequences in determining the adequacy of emergency response plans. See, e.g., The Detroit Edison Co., supra, 16 NRC at 1424-29; Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), LBP-83-8D, 17 NRC 306, 310 (1982); Consolidated Edison Co., supra, 18 NRC at 989-90.

The Licensing Board also suggests that the Attorney General is maintaining that absolute protection must be provided in response to all possible accident scenarios and goes on to posit as basis for rejecting Attorney General Bellotti's contention that "particular postulated accidents are inappropriate for litigation under [NRC] regulations." Memorandum of ASLB at 46. While the Attorney General agrees that "no single specific accident sequence should be isolated as the one for which to plan," Memorandum of ASLB at 44, the Commission does require that "emergency plans must be developed that will have the flexibility to ensure response to a wide spectrum of accidents." Statement of Consideration, "Emergency Planning," 45 Fed. Reg. 55402 (August 19, 1980). And, as the Atomic Safety and Licensing Appeal Board recently noted:



The Commission's emergency planning regulations are premised on the assumption that a serious accident might occur and that evacuation of the EPZ might well be necessary. The adequacy of a given emergency plan must be judged therefore with this underlying assumption in mind.

Philadelphia Electric Co. (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 713 (1985), citing Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), CLI-83-10, 17 NRC 528, 533 (1983) (emphasis added). Thus Attorney General Bellotti maintains that his contention, which relates to the ability of the New Hampshire plan's protective response actions to provide protection for the summer beach population in the event of a serious accident on a summer weekend, goes to the very issue of whether these plans do have the requisite flexibility to ensure an adequate response to a particular spectrum of accidents within the Commission's planning basis, and must therefore be admissible.

A review of NRC case law in fact shows that other Licensing Boards, in making their "reasonable assurance" findings, have consistently looked to whether plans will work in the event of particular serious accidents involving substantial off-site radiation releases. See, e.g., Detroit Edison Co., supra, 16 NRC at 1424-29; Southern California Edison Co., supra, 15 NRC 1163, 1195 (1982); Consolidated Edison Co., supra, 18 NRC at 989; Philadelphia Electric Co., supra, 22 NRC at 713.

Moreover, the Attorney General's contention does not even raise an issue of some remotely occurring worst-case accident scenario, such as a severe accident happening coincidentally with a severe flood or blizzard, scenarios that notably have been considered by other Licensing Boards in evaluating emergency plans. See e.g., Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1) LBP-85-12, 21 NRC 644, 815 (1985); Consolidated Edison Co., supra, 18 NRC at 989-90; Cf Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-84-12, 20 NRC 249 (1984) (Probability of contemporaneous occurrence of an earthquake and an independently occurring serious radiological accident is too remote a possibility to consider).

Indeed, the Attorney General's contention raises only an issue of a severe accident within the Commission's planning basis occurring on any typical summer weekend. See Contention of Attorney Bellotti, Exhibit A at 5.<sup>5/</sup> Attorney General Bellotti is thus not seeking to impose any "zero risk" standard on emergency planning, as the Licensing Board has stated. See Memorandum of ASLB at 44. And there can be no grounds for rejecting Attorney General Bellotti's Contention simply

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<sup>5/</sup> In the basis for his contention the Attorney General sets forth evidence based on a preliminary study involving only the consequences of a PWR-2 release. If his contention is admitted to this proceeding, he will seek to introduce further evidence relative to the site-specific consequences of a number of other representative release categories of varying severity.

because he raises an issue of whether the New Hampshire plans have the requisite flexibility to respond adequately in the event of a serious accident occurring at the Seabrook plant on a summer weekend.

- C. Attorney General Bellotti's Contention Raises an Important Safety Issue Which Must Be Considered By the Licensing Board Before It Can Make Any Finding That There Exists "Reasonable Assurance That Adequate Protective Measures Can and Will Be Taken."

The Attorney General, as part of the basis for his contention, has presented evidence that the evacuation response provided in the New Hampshire plan will, under typical meteorological conditions, subject thousands of beachgoers to doses that can lead to death in a matter of days. It is Attorney General Bellotti's contention that an emergency plan that relies solely on evacuation and sheltering as the two possible protective options, that cannot at present prevent as many as fifteen thousand beachgoers from being exposed to early death doses by means of evacuation even under typical meteorological conditions, and that contains no plans or provisions for sheltering the beach population, does not provide adequate protection for that population, and therefore raises a serious safety issue that must be addressed by the Licensing Board if it is ever to make a finding that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the Seabrook plant.

As has been pointed out to the Licensing Board, the emergency planning considerations posed by the Seabrook power plant are unique. See Brief of Attorney General Bellotti at 12, 13 n. 6; Answer of Attorney General Bellotti at 5-6. Not only is one faced here with an extremely dense beach population within several miles of the plant, but also with long evacuation times, and virtually no provision for sheltering that summer beach population. See Contention of Attorney General Bellotti, Exhibit A, Table 5, at 11, which shows a transient beach population of 100,000 people within 10 miles of the Seabrook plant, more than a third of whom are situated within two miles of the plant.<sup>6/</sup> See also, id. at 2; id., Exhibit A, Table 5, at 8; and id., Exhibit A, at 12-13. In addition, this summer beach population will typically not be wearing even the clothing, which would serve as some protection, that a resident around the average nuclear power plant would wear. Id. at Exhibit A, p. 3. Thus the Attorney General seeks to introduce expert testimony in this proceeding that would show that for a typical summer weekend the average radiation dose that would be received by a New Hampshire beachgoer is four times that which would be received by

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<sup>6/</sup> According to population figures contained in the New Hampshire plans, the total peak summer population figures for the area surrounding the plant are: 44,354 for the area within two miles of the plant; 131,911 for the entire area within five miles of the plant; and 241,983 for the entire ten mile radius. See State of New Hampshire Radiological Response Plan, Vol. 18, Hampton RERP (NHRERP 6.23) at I-15.

persons within the same distance of the average nuclear power plant. The Attorney General's evidence will show that even in the event of certain radiological releases that would typically result in no early fatalities at the average nuclear plant site, there will be a number of early fatalities at the Seabrook site given the protective response actions currently in the New Hampshire plans.

Attorney General Bellotti therefore contends that even if one could generally assume the adequacy of evacuation or sheltering plans capable of implementation, the Licensing Board may not do so in the present case. The Attorney General has presented in the bases for his contention relevant evidence that shows that the response actions contained in the New Hampshire RERP will not work, that is, will not adequately protect the transient beach population in the event of a serious accident (within the Commission's planning bases) on a summer weekend. The Board cannot refuse to hear such evidence relevant to the adequacy of the emergency response actions and still be able to make a finding that the New Hampshire plan provides "reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency." 10 C.F.R. § 50.47(a)(1).

CONCLUSION

For all the foregoing reasons, the Atomic Safety and Licensing Appeal Board should reverse the decision of the Licensing Board and admit Attorney General Bellotti's contention to this proceeding.

Respectfully submitted,

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Dated: May 15, 1986

Exhibit "A"

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD



Before Administrative Judges:  
Helen F. Hoyt, Chairperson  
Emmeth A. Luebke  
Jerry Harbour

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

February 21, 1986

CONTENTION OF ATTORNEY GENERAL  
FRANCIS X. BELLOTTI RELATIVE TO  
EMERGENCY PLANNING FOR THE  
NEW HAMPSHIRE BEACH COMMUNITIES

By Order dated January 17, 1986, the Board provided all parties an opportunity to file new contentions on redrafted emergency plans submitted to FEMA by the State of New Hampshire. We have reviewed the new plans and find that they in no way address or alleviate the concerns which prompted our earlier contention (a copy of which is attached hereto as Exhibit A) regarding the adequacy of emergency planning for Massachusetts citizens present in the New Hampshire beach communities within the EPZ at the time of an emergency. Thus,

the new plans continue to rely on evacuation and sheltering as the two possible protective actions in the event of a serious accident. See N.H. RERP, at 2.6-5. However, the plans have in no way developed the option of sheltering for the beach populations despite the severe limitations, discussed in Exhibit A hereto, on evacuation as a protective response for those persons.<sup>1/</sup>

While the Board's Order did not appear to require this we are, in an excess of caution, hereby refileing our earlier contention. Developments since our earlier filing provide additional bases for our contention and will be thoroughly addressed in our testimony. For example, the Applicants' own Probabilistic Safety Assessment contains release sequences which support the need for additional protective measures for the beach area populations. And, as FEMA personnel have

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<sup>1/</sup> The New Hampshire plan is hopelessly confusing on the question of sheltering for the beach populations, indicating on the one hand that "[s]heltering may not be considered as a protective action on the seacoast beaches during the summer" and on the other hand that "[t]ransients without access to suitable shelters will be directed . . . , if possible, to seek directions to a nearby public building from local emergency workers." See N.H. RERP, at 2.6-8. Suffice it to say it remains the case, as we stated in the bases for our contention, that

Neither the New Hampshire Radiological Emergency Response Plan nor the local community plans contain any analysis of available public sheltering, or its capacity to accomodate the beach populations; or to provide sheltering from radionuclides, or any plans for effecting such sheltering. In short, there is at present no basis for (and has not been) any development of sheltering as a potential protective action for the beach population.

Exhibit A, at 12-13.



determined, the revised New Hampshire plans fail to demonstrate that the New Hampshire EPZ communities have sufficient personnel and resources (including communications equipment) to implement the plans<sup>2/</sup> or that certain of the communities (including Rye<sup>3/</sup> and Hampton,<sup>4/</sup> two of the coastal towns) even intend to implement the plans. See Exhibit C hereto. a document prepared by FEMA personnel in response to these latest New Hampshire plans and entitled "Planning Milestones."<sup>5/</sup>

In short, there continues to be no "reasonable assurance that adequate protective measures can and will be taken" to protect Massachusetts citizens on New Hampshire beaches at the time of an accident, as required by 10 C.F.R. § 50.47(a)(1).

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2/ The plans contain no letters of agreement assuring the provision of necessary resources.

3/ According to pleadings filed with this Board by the Town of Rye, that Town has not even reviewed the plan submitted for it by the State of New Hampshire and is not committed at this time to implementing any such plan. For these reasons the Town of Rye has informed FEMA that it will not participate in an upcoming exercise of the plans and has thus far refused to authorize the installation of sirens necessary to alert the public, and particularly the beach population, in the event of an accident.

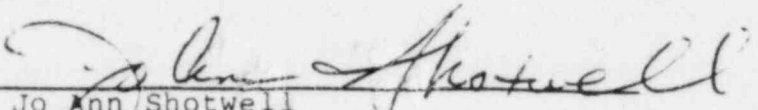
4/ On October 29, 1985, the Hampton Board of Selectmen wrote Governor Sununu (see Exhibit B hereto) indicating, inter alia, that all Town departments lack sufficient manpower to implement the plan.

5/ FEMA notes the need for contingency plans from the State of New Hampshire to cover any communities where the local governments are not committed to implementing plans and specifically criticizes the plans for their failure to address the beach populations.

For this reason we respectfully urge the Board's acceptance of our prior Contention attached hereto as Exhibit A.

Respectfully submitted,

ATTORNEY GENERAL  
FRANCIS X. BELLOTTI

By:   
Jo Ann Shotwell  
Assistant Attorney General  
Environmental Protection Division  
Department of the Attorney General  
One Ashburton Place, Room 1902  
Boston, MA 02108  
(617) 727-2265

DATED: February 21, 1986



emergency action in the coastal beach areas of Seabrook, Hampton, North Hampton, and Rye which are frequented by Massachusetts citizens.

CONTENTION:

The draft radiological emergency response plans for the Towns of Seabrook, Hampton, North Hampton, and Rye do not provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the Seabrook Station, as required by 10 C.F.R. §50.47(a)(1), because in the event of a severe accident on a summer weekend some or all of the beach area transient populations within those communities cannot under many plausible meteorological conditions be protected by means of evacuation even from early death and because there are not adequate plans or provisions for sheltering the beach area transients within those communities.

BASES:

The draft emergency response plans for the Towns of Seabrook, Hampton, North Hampton, and Rye all rely on evacuation and sheltering as the two options for protecting persons present in those communities at the time of a radiological emergency at Seabrook Station which results in a radiological release to areas within those communities. See, e.g., Seabrook Plan, at II-I6 - II-I8; Rye Plan, at II-I6 - II-I8; North Hampton Plan, at II-I7 - II-20; and Hampton Plan,

at II-17 - II-20. However, a preliminary site-specific accident consequence analysis performed for the Massachusetts Attorney General has revealed that, given the unusual circumstances associated with dense beach populations, evacuation cannot protect the transient beach area populations in the vicinity of the Seabrook site from early death in the event of a PWR 2 release as defined in the NRC's Reactor Safety Study (WASH-1400) on a summer weekend.

A Seabrook-specific accident consequence analysis is being performed for the Department of the Attorney General by Dr. Jan Beyea, a nuclear physicist with extensive experience in accident consequence modelling and analysis. (A copy of Dr. Beyea's resumé is attached hereto as Exhibit A and incorporated herein by reference.) Dr. Beyea has advised the Department that there are unique considerations involved in the modelling and analysis of accident consequences for a site such as Seabrook having a large summer beach area population which have never before been taken into account in generic or site-specific consequence studies. In addition to the obvious effects on accident consequences of the increased population and evacuation times associated with summer beach areas and the absence of shielding normally provided by buildings, there are increased consequences due to material deposited directly on the skin and hair of beachgoers and on vehicles in the plume. The former factor has received no consideration in accident

consequence analyses in the past and the latter has received inadequate consideration.

In the work which Dr. Beyea and his assistant Brian Palenik, a graduate student at the Massachusetts Institute of Technology, have performed for this Department to date they have investigated the conditions under which the nearest beach population to this site, at about two miles, might be exposed to doses at a threshold level for early death (200 rem) in the event of a PWR 2 release as defined in the Reactor Safety Study (WASH-1400). Estimates of the time within which that population would receive a 200 rem dose have been calculated for various weather stability classes and wind speeds using two sets of assumptions. The first set assumes that all persons are inside automobiles when the release occurs and receive only a fraction of the doses they would receive if they were in the open, exposed directly to a plane of contaminated ground. These results have been calculated using the assumptions which have heretofore been considered standard in accident consequence calculations. The second set of results goes beyond the standard assumptions, to account specifically for the Seabrook beach situation. Those results assume that some of the population will not have reached their vehicles before plume passage such that there will be a "skin deposition dose" and a "car deposition dose." For each of the two sets of results calculations have been performed separately for high

and low energy release rates. This division was necessary given the large uncertainty in the height to which the radioactive plume will rise, a factor which is affected by energy release rates and which is an important determinant of the doses to a nearby population.

Tables 1 and 2, which follow hereafter, contain the results of Dr. Beyea's modelling and analysis as described above. The entries in the last column of each table result from a comparison between the time required to reach a 200 rem dose and current estimates of the time required to evacuate the population within two miles on a summer weekend. See Table 3. The data set forth in these tables reveal that the summer weekend beach population within two miles of the Seabrook site cannot be protected from early death by means of evacuation under many weather conditions.

It should be noted that neither precipitation nor slow wind speeds have been considered in the analyses set forth in Tables 1 and 2. Both such conditions are more severe than those represented in the tables. The frequencies of the Pasquill stability classes reflected in Tables 1 and 2 as reported in the Applicants' ER-OL are given in Table 4. The frequencies of the A, B, and C stability classes increase during the summer months, with C the most frequent of the three. D and E are the dominant stability classes. The results discussed herein are not, therefore, based on infrequently occurring or worst-case weather conditions.

TABLE 1  
PROTECTION OF CLOSEST BEACH POPULATION<sup>a)</sup>  
FROM EARLY DEATH ON A SUMMER WEEKEND DAY  
HIGH ENERGY RELEASE RATE<sup>b)</sup>

Stability <sup>c)</sup> Class	Wind Speed (m/sec)	Dose Scaling <sup>d)</sup> Factor	Time to Reach 200 rem	Protection <sup>e)</sup> of Population
A	2	.53-.78	14.5-20.9	Yes
A	2	1.0-1.3	9.0-11.5	Yes
A	4	.53-.78	> 24	Yes
A	4	1.0-1.3	19.2-25.0	Yes
B	2	.53-.78	4.6-6.4	No
B	2	1.0-1.3	3.2-3.8	No
B	4	.53-.78	12.2-17.8	Yes
B	4	1.0-1.3	7.6-9.6	Yes
C	2	.53-.78	2.6-3.4	No
C	2	1.0-1.3	1.9-2.2	No
C	4	.53-.78	8-11.5	Yes
C	4	1.0-1.3	5.1-6.4	No
D	2	.53-.78	> 24	Yes
D	2	1.0-1.3	> 24	Yes
D	4	.53-.78	6.5-9.2	Yes
D	4	1.0-1.3	4.2-5.3	No

- a) The population two miles from the plant.  
b) Assumes an energy release rate of  $176 \times 10^6$  Btu/hour.  
c) Pasquill stability class.  
d) The dose scaling factor range of .53-.78 assumes an individual is in a car within the plume. The dose scaling factor range of 1.0-1.3 assumes an individual is in a car within the plume, with a dose component from radioactive material deposited on the car and directly on the individual.  
e) Protection of the population from a 200 rem dose or higher. This assumes an evacuation time of about five and a half hours. If the evacuation time is longer, the population is not necessarily protected.



TABLE 2

PROTECTION OF CLOSEST BEACH POPULATION<sup>a)</sup>  
FROM EARLY DEATH ON A SUMMER WEEKEND DAY

LOW ENERGY RELEASE RATE<sup>b)</sup>

Stability <sup>c)</sup> Class	Wind Speed (m/sec)	Dose Scaling <sup>d)</sup> Factor	Time to Reach 200 rem	Protection <sup>e)</sup> of Population:
A	2	.53-.78	13.8-19.9	Yes
A	2	1.0-1.3	8.6-10.9	Yes
A	4	.53-.78	> 24	Yes
A	4	1.0-1.3	18.4-23.7	Yes
B	2	.53-.78	3.7-4.9	No
B	2	1.0-1.3	2.5-3.0	No
B	4	.53-.78	9.9-14.2	Yes
B	4	1.0-1.3	6.2-7.8	Yes
C	2	.53-.78	< 1	No
C	2	1.0-1.3	< 1	No
C	4	.53-.78	1.7-2.2	No
C	4	1.0-1.3	1.3-1.5	No
D	2	.53-.78	< 1	No
D	2	1.0-1.3	< 1	No
D	4	.53-.78	< 1	No
D	4	1.0-1.3	< 1	No

- a) The population two miles from the plant.
- b) Assumes an energy release rate of  $20 \times 10^6$  Btu/hour, or an equivalently low plume for reasons unrelated to the energy release rate.
- c) Pasquill stability class.
- d) The dose scaling factor range of .53-.78 assumes an individual is in a car within the plume. The dose scaling factor range of 1.0-1.3 assumes an individual is in a car within the plume, with a dose component from radioactive material deposited on the car and directly on the individual.
- e) Protection of the population from a 200 rem dose or higher. This assumes an evacuation time of about five and a half hours. If the evacuation time is longer, the population is not necessarily protected.

TABLE 3

SEABROOK EVACUATION CLEAR TIME ESTIMATES a)  
SUMMER WEEKEND/FAIR WEATHER SCENARIO

Radius	Degrees	HMM <sup>b)</sup>	Vorhees <sup>c)</sup>	Maguire <sup>d)</sup>	NRCE <sup>e)</sup>
0-2	360°	4:50	5:10	5:40	---
0-3	180° E	5:20	---	---	---
0-5	360°	5:50	5:10-5:40	---	---
0-10	360°	6:05	5:10-6:10	5:50	11:25

- a) Time (hours:minutes) for the population to clear the indicated area after notification.
- b) Preliminary Evacuation Clear Time Estimates for Areas Near Seabrook Station, HMM Document No. C-80-024A, HMM Associates, Inc., May 20, 1980.
- c) Final Report, Estimate of Evacuation Times, Alan M. Vorhees & Associates, July 1980.
- d) Emergency Planning Zone Evacuation Clear Time Estimates, C.E. Maguire, Inc., February 1983.
- e) An Independent Assessment of Evacuation Time Estimates for a Peak Population Scenario in the Emergency Planning Zone of the Seabrook Nuclear Power Station, M.P. Mueller, et al., Pacific Northwest Laboratory NUREG/CR-2903, PNL-4290.

TABLE 4

FREQUENCY OF PASQUILL STABILITY CLASSES AT SEABROOK<sup>a)</sup>  
(Values in % of Time)

<u>Month</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>
Apr 1979	1.27	2.11	3.80	49.65	29.40	7.88	5.91
May	1.20	2.86	4.82	52.86	26.51	5.27	6.48
June	2.92	6.69	12.26	39.83	25.49	6.13	6.69
July	4.90	6.94	11.56	29.12	28.84	12.65	5.99
Aug	2.91	4.71	9.97	43.07	26.59	7.34	5.40
Sep	1.25	7.64	11.81	30.69	27.36	10.83	10.42
Oct	0.81	2.96	5.79	39.30	34.05	10.09	7.00
Nov	0.00	0.56	4.76	43.92	34.83	9.37	6.57
Dec	0.00	0.41	2.70	47.03	41.35	5.81	2.70
Jan 1980	0.13	1.88	6.59	51.88	30.38	5.78	3.36
Feb	0.44	2.03	5.37	50.36	34.69	5.66	1.45
Mar	10.68	1.64	5.34	43.15	24.66	6.03	8.49
Yearly	2.22	3.37	7.08	43.31	30.38	7.76	5.87

a) Period of Record: April 1979 - March 1980. Stability class calculated using 43'-209' delta temperature. Source: SB 1&2, ER-OLS, Table 2.3-24.

The size of the beach area population around Seabrook is uncertain. One estimate of this population for 1980 has been made by Public Service Company of New Hampshire and is found in Table 5. Although its accuracy is uncertain, this estimate does indicate that a substantial number of people are located within two miles of the plant. The number of persons that would be located within a plume obviously varies with wind direction, but it also varies with stability class and distance from the plant. At two miles the plume could be viewed as being between a  $29^\circ$  wedge (A stability class) and a  $13^\circ$  wedge (D stability class)<sup>2/</sup> compared to the  $22.5^\circ$  population wedges in the table.

In addition to investigating the conditions under which the beach population within two miles of the Seabrook site might be exposed to early death doses, Dr. Beyea and Mr. Palenik have commenced work designed to determine the radius within which early deaths might result in the vicinity of this site assuming an accidental release on a summer weekend. Dr. Beyea has found early death radii ranging from  $<2$  to 4.3 miles assuming a PWR 2 release as defined in the Reactor Safety Study (WASH-1400), C stability class weather conditions, an evacuation time of 5-1/2 hours, and the two sets of dose scaling factors discussed previously. For weather conditions with overcast skies (D

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<sup>2/</sup> Wedges are assumed to have plume widths equal to three times the horizontal dispersion coefficient.

TABLE 5

1980 BEACH AREA TRANSIENT POPULATION ESTIMATE<sup>a)</sup> BY SECTOR<sup>b)</sup>

Ring Radii (miles)	NE	ENE	E	ESE	SE	SSE
0-1	0	0	0	0	0	0
1-2	464	14,647	12,780	5,842	129	23
2-3	1,104	8,882	0	0	3,905	654
3-4	8,710	608	0	0	0	6,198
4-5	4,344	0	0	0	0	8,880
5-10	5,660	0	0	0	0	16,597

Source: Public Service of New Hampshire, Seabrook Station - Units 1 & 2, Environmental Report, Operating License Stage, Figure 2.1-19.

- a) Estimate of peak transient population found by multiplying the capacity of beach area parking lots (less leased space) by 3.2 persons per vehicle, and contributions from off-street parking users, seasonal residents, and overnight visitors.
- b) Each direction in the table is the centerline of a 22.5 degree wedge.

stability class), or longer evacuation times,<sup>3/</sup> the early death radii will be larger. And the time before doses reach 200 rem, assuming a PWR 2 release on a summer weekend evening and a low energy release rate such as that assumed in the draft Seabrook Probabilistic Risk Assessment, is less than four hours out to 6-7 miles from the site. Thus, the beach area population within 6-7 miles exposed to the plume would not be protected from early death even if there were a 20-30 percent reduction in evacuation times from daytime to evening. It should be noted in this connection that at least the Hampton Beach area has a very substantial nighttime population.

Thus, primary accident consequence data developed for this Department reveal that evacuation cannot under a number of plausible weather conditions protect the summer weekend beach area populations in the vicinity of this site from even early death. The results described herein do not account for the less severe consequences of radiation illness and delayed fatalities due to latent cancers. Despite the severe limitations on the utility of evacuation as a protective option for the transient beach population, however, there are currently no provisions for sheltering that population within the EPZ. Neither the New Hampshire Radiological Emergency

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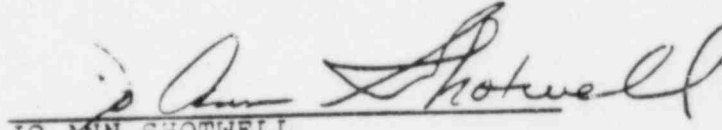
<sup>3/</sup> The Applicants have now provided a 6 hours 5 minutes estimate for summer weekend simultaneous beach evacuation within ten miles of the site. See Applicants' Direct Testimony No. 1, filed July 15, 1983, at 19-20.

Response Plan nor the local community plans contain any analysis of available public sheltering, or its capacity to accommodate the beach populations or to provide shielding from radionuclides, or any plans for effecting such sheltering. In short, there is at present no basis for (and has not been) any development of sheltering as a potential protective action for the beach population.

Respectfully submitted,

FRANCIS X. BELLOTTI  
ATTORNEY GENERAL

By:

  
JO ANN SHOTWELL  
Assistant Attorney General  
Environmental Protection Division  
One Ashburton Place  
Boston, MA 02108  
(617) 727-2265

EDUCATION:

Ph.D., Columbia University, 1968 (Nuclear Physics)  
B. A., Amherst College, 1962

EMPLOYMENT HISTORY:

1980 to date, Senior Energy Scientist, National Audubon Society,  
950 Third Avenue, New York, New York 10022.  
1976 to 1980, Research Staff, Center for Energy and Environmental Studies,  
Princeton University.  
1970 to 1976, Assistant Professor of Physics, Holy Cross College.  
1968 to 1970, Research Associate, Columbia University Physics Department.

CONSULTING WORK:

Consultant on nuclear energy to the Office of Technology Assessment, the New Jersey Department of Environmental Protection; the Offices of the Attorney General in New York State and the Commonwealth of Massachusetts; the state of Lower Saxony in West Germany; the Swedish Energy Commission; and various citizens' groups in the United States.

PUBLICATIONS CONCERNING ENERGY CONSERVATION AND ENERGY POLICY:

"Comments on Energy Forecasting," material submitted for the record at the Hearings before the Subcommittee on Investigations and Oversight of the Committee on Science and Technology, U. S. House of Representatives; Committee Print, June 1, 2, 1981 / No. 14 /.

"The Audubon Energy Plan Technical Report," Peterson, Beyea, Paulson and Cutler, National Audubon Society, April 1981.

"Locating and Eliminating Obscure but Major Energy Losses in Residential Housing," Harrje, Dutt and Beyea, ASHRAE Transactions, 85, Part II (1979). Winner of ASHRAE outstanding paper award.)

"Attic Heat Loss and Conservation Policy," Dutt, Beyea, Sinden. ASME Technology and Society Division paper 78-TS-5, Houston, Texas, 1978.

"Comments on the proposed FTC trade regulation rule on labeling and advertising of thermal insulation," Jan Beyea and Gautam Dutt, testimony before the Federal Trade Commission, January 1978.

"Critical Significance of Attics and Basements in the Energy Balance of Twin Rivers Townhouses," Beyea, Dutt, Woteki, Energy and Buildings, Volume I (1977), Page 261. Also Chapter 3 of Saving Energy in the Home, Ballinger, 1978.

"The Two-Resistance Model for Attic Heat Flow: Implications for Conservation Policy," Woteki, Dutt, Beyea, Energy--the International Journal, 3, 657 (1978).

"Energy Conservation in an Old 3-Story Apartment Complex," Beyea, Harrje, Sinden, Energy Use Management, Fazzolare and Smith, Pergamon 1977, Volume I, Page 373.

"Load Shifting Techniques Using Home Appliances," Jan Beyea, Robert Weatherwax, Energy Use Management, Fazzolare and Smith, Pergamon 1978, Volume III/IV, Page 121.



PUBLICATIONS CONCERNING ENERGY RISKS:

Articles:

"Containment of a Reactor Meltdown," (with Frank von Hippel), Bulletin of the Atomic Scientists, 38, Page 52, December 1982.

"Second Thoughts (about Nuclear Safety)," in Nuclear Power: Both Sides, W. W. Norton and Co. (New York, 1982).

"Indoor Air Pollution," Commentary in the Bulletin of the Atomic Scientists, 37, Page 63, February 1981.

"Emergency Planning for Reactor Accidents," Bulletin of the Atomic Scientists, 36, Page 40, December 1980. (An earlier version of this article appeared in German as Chapter 3 in Im Ernstfall hilflos?, E. R. Koch, Fritz Vahrenholt, editors, Kiepenheuer & Witsch, Cologne, 1980.)

"Dispute at Indian Point," Bulletin of the Atomic Scientists, 36, Page 63, May 1980.

Published Debates:

The Crisis of Nuclear Energy, Subject No. 367 on William Buckley's Firing Line, P.B.S. Television. Transcript printed by Southern Educational Communications Association, 928 Woodrow Street, P. O. Box 5966, Columbia, South Carolina, 1979.

Nuclear Reactors: How Safe Are They?, panel discussion sponsored by the Academy Forum of The National Academy of Sciences, 2101 Constitution Avenue, Washington, D. C. 20418, May 5, 1980.

Reports:

"Implications for Mortality of Weakening the Clean Air Act," (with G. Steve Jordan), National Audubon Society, Environmental Policy Analysis Department Report No. 18, May 1982.

"Some Long-Term Consequences of Hypothetical Major Releases of Radioactivity to the Atmosphere from Three Mile Island," Report to the President's Council on Environmental Quality, December 1980.

"Decontamination of Krypton 85 from Three Mile Island Nuclear Plant," (with Kendall, et.al.), Report of the Union of Concerned Scientists to the Governor of Pennsylvania, May 15, 1980.

"Some Comments on Consequences of Hypothetical Reactor Accidents at the Philippines Nuclear Power Plant" (with Gordon Thompson), National Audubon Society, Environmental Policy Analysis Department Report No. 3, April 1980.

"Nuclear Reactor Accidents: The Value of Improved Containment," (with Frank von Hippel), Center for Energy and Environmental Studies Report PU/CEES 94, Princeton University, January 1980.

"The Effects of Releases to the Atmosphere of Radioactivity from Hypothetical Large-Scale Accidents at the Proposed Gorleben Waste Treatment Facility," report to the Government of Lower Saxony, Federal Republic of Germany, as part of the "Gorleben International Review," February 1979.

Reports (Cont'd.):

"Reactor Safety Research at the Large Consequence End of the Risk Spectrum," presented to the Experts' Meeting on Reactor Safety Research in the Federal Republic of Germany, Bonn, September 1, 1978.

A Study of Some of the Consequences of Hypothetical Reactor Accidents at Barseback, report to the Swedish Energy Commission Stockholm, DS I 1978:5, January 1978.

Testimony:

"Some Consequences of Catastrophic Accidents at Indian Point and Their Implications for Emergency Planning," testimony and cross-examination before the Nuclear Regulatory Commission's Atomic Safety and Licensing Board, on behalf of the New York State Attorney General and others, July 1982.

"In the Matter of Application of Orange and Rockland Counties, Inc. for Conversion to Coal of Lovett Units 4 and 5," testimony and cross-examination on the health impacts of eliminating scrubbers as a requirement for conversion to coal; Department of Environmental Resources, State of New York, November 5, 1981.

"Future Prospects for Commercial Nuclear Power in the United States," before the Subcommittee on Oversight and Investigations, Committee on Interior and Insular Affairs, U. S. House of Representatives, October 23, 1981.

"Stockpiling of Potassium Iodide for the General Public as a Condition for Restart of TMI Unit No. 1," testimony and cross-examination before the Atomic Safety and Licensing Board on behalf of the Anti-nuclear Group Representing York, April 1981.

"Advice and Recommendations Concerning Changes in Reactor Design and Safety Analysis which should be Required in Light of the Accident at Three Mile Island," statement to the Nuclear Regulatory Commission concerning the proposed rulemaking hearing on degraded cores, December 29, 1980.

"Alternatives to the Indian Point Nuclear Reactors," Statement before the Environmental Protection Committee of the New York City Council, December 14, 1979. Also before the Committee, "The Impact on New York City of Reactor Accidents at Indian Point," June 11, 1979. Also "Consequences of a Catastrophic Reactor Accident," statement to the New York City Board of Health, August 12, 1976 (with Frank von Hippel).

"Emergency Planning for a Catastrophic Reactor Accident," Testimony before the California Energy Resources and Development Commission, Emergency Response and Evacuation Plans Hearings, November 4, 1973, Page 171.

"Short-Term Effects of Catastrophic Accidents on Communities Surrounding the Sunderset Nuclear Installation," testimony before the California Energy Resources and Development Commission, December 3, 1976.

"Consequences of Catastrophic Accidents at Jamesport," Testimony before the New York State Board on Electric Generation Siting and the Environment in the Matter of Long Island Lighting Company (Jamesport Nuclear Power Station, Units 1 and 2), May 1977.

Miscellaneous:

"Comments on WASH-1400," Statement to the Subcommittee on Energy and the Environment, Oversight Hearings on Reactor Safety, June 11, 1976, Serial No. 94-61, Page 210.

"Upper Limit Calculations of Deaths from Nuclear Reactors," Bull. Am. Phys. Soc. 21, III (1976).

PLANNING MILESTONES  
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New Hampshire

1. We have not received a complete submission of New Hampshire Plans. We understand that work is being completed on these sections:
  - Letters of Agreement, including those referenced in appendix C of the local plans. These letters, particularly for transportation, are necessary so we will know what facilities we will visit as part of the exercise. We need your proposal as to how you propose to demonstrate your exercise objectives so we can formulate our observer strategy.
  - Evacuation Time Estimate. We understand from reading the progress reports the updated ETE will require greatly increase personnel resources to staff traffic control posts.
  - A & N Design Report, as referenced in state and local plans.
    - needed to determine if local resources and training are sufficient to carry out all functions which may be assigned.
2. The plans do not show sufficient personnel resources at the local levels:
  - personnel for emergency positions.
  - provide for transit dependent populations as stated in the plan.
  - proper number of dosimeters for the emergency workers.
3. Contingency Plans
  - With respect to an exercise, we were informed that the following communities are not going to participate:
    - Rye
    - South Hampton
    - Hampton Falls
    - Hampton (possibly)
  - We do not have contingency plans from the State of New Hampshire which show what they plan to do in the event that local government(s) does not perform the required emergency functions in the event of an accident at Seabrook
4. The plans for those towns with a beach population and some state agencies procedures need to be revised to reflect their responsibilities to assist in protecting that population in the event of an accident.

5. Local Plans are not specific as to how they will meet the needs of the transit dependent population, including mobility-impaired and institutional populations, such as hospitals and nursing homes. We, therefore, cannot evaluate the plans. We are also concerned that the local plans are excessively cumbersome as designed.
6. Actual installation of at least minimum communications equipment.

Massachusetts

1. Formal submission of plans from Massachusetts.

Town of Hampton



350th Anniversary  
1638 - 1988  
January 16, 1986

DOCKETED  
USA 10

'86 JAN 21 P4:10

RECEIVED  
TOWN OF HAMPTON  
JAN 21 1986

FILE NUMBER 50-443 0 L  
50-444 0 L

JAN 22 1986

Henry G. Vickers, Regional Director  
Federal Emergency Management Agency  
Region 1, J. W. McCormack Post Office  
& Court House  
Boston, MA. 02109

Dear Mr. Vickers:

The Hampton Board of Selectmen has requested in a separate letter that any public hearings held by your agency be held in the Seacoast area.

The Emergency Evacuation Plans for the Seabrook Power Station were forwarded to your agency without the approval of the Hampton Board. On a 3-1 (1 absent) vote, a letter pointing out weaknesses in the plans was sent to Governor Sununu and Richard Strome, the State Civil Defense Director, on October 29, 1985. No response was received until December 2nd and no changes in the plans were made then; the reply was simply that our concerns were not valid. We understand that the plans were forwarded to FEMA on December 9th, hardly leaving your board time for further response.

We also understand that the plans were forwarded by FEMA to the NRC on January 8th, as reviewed but not approved. The Town is very concerned as to what this transmittal means in terms of our being able to report to our citizens that we have worked to get the best evacuation plan possible.

As the plans were sent without local board's approval, we feel that they should be returned for further work and not submitted until local communities think that they are workable.

Sincerely,

FOR THE BOARD OF SELECTMEN

*John R. Walker*  
John R. Walker  
Chairman

DRJ/cb

Encs: Copies of letter to Governor Sununu; letter from Governor Sununu; and letter from Director Strome

136 Winnacunnel Road, Hampton, New Hampshire 03842 Tel. 603-926-6766  
CC: U.S. Nuclear Regulatory Commission

# Town of Hampton



DOCKETED

'86 JAN 21 P4:10

350th Anniversary  
1638-1988

October 29, 1985

Honorable John Sununu  
Governor's Office  
State House  
Concord, New Hampshire 03301

50-443 02  
58-444 02

Dear Governor Sununu:

The undersigned members of the Hampton Board of Selectmen wish to state their reservations about the adequacy of the Radiological Emergency Response Plan. These reservations were publicly presented at a meeting of the Board on October 3, 1985, a meeting scheduled between new members of the Board and local department heads, but which was attended by officials from New Hampshire Civil Defense.

Our original questions about the plan concerned population estimates. We understand that the figure of 85,000 peak population has been revised to 110,000, a move in the right direction but still lower than traffic counts and local business figures indicate. Perhaps our best comment on the population figures is that they can only be an estimate and they will vary widely from day to day, especially on summer weekends.

Other problems remain. Very serious are the estimates of the number of personnel required to effect an orderly evacuation. Each of our department heads agreed that he lacks sufficient manpower to carry out the plan, but each has been told to request additional help from the State. Such advice appears to have been given to each town in the zone; obviously there will not be enough workers to go around. As a corollary to the numbers required, there are no provisions for security for workers' homes and families nor does there seem to be provision for specialized equipment other than dosimeters. It is unclear if the count on dosimeters is a State total or a town by town total, as our radiological officer said that he could obtain all the equipment needed in a matter of a few hours. Is more protective apparatus, such as suits or gloves or breathing apparatus, needed?

Another serious consideration is the lack of communication and coordination in moving school children out of the area. On October 3 the statement was made that Civil Defense is working with school officials;

October 29, 1985  
Honorable John Sununu  
Page Two

our local superintendent had received a copy of the plan the previous day. There are many problems; number of buses available (for 16 towns), availability of sufficient bus drivers, traffic problems caused by parents trying to get to schools to pick up their own children, formal signed agreements with bus companies. An added problem with buses is the number of non-auto owning residents who would need transportation, and vacationers who are at the beach without automobiles.

There seem to be severe inconsistencies in the amount of warning time available to accomplish evacuation. Can communities rely on the 18-hour figure that was presented in August as the time we would have to act? The maximum figure given to move the population out (7 hours and 40 minutes) is given for a summer population on a bad weather day; may we suggest that a summer population on a very hot Sunday is likely to be larger and pose potentially more traffic problems, both with overheated cars and tempers?

We are not qualified to comment on the adequacy of most buildings on Hampton Beach for sheltering, if that should be the preferred action. However, the plan completely ignores that there may be thousands of beach goers clad only in bathing suits during a radiological accident.

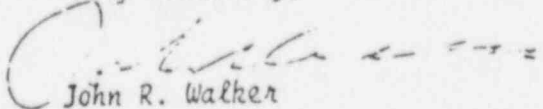
Last and vitally important is the problem of roads leading out of Hampton. The Church Street access to Route 51 and thence to Route 101 is inadequate for the "normal" non-panicked population. Route 1 is already over-loaded with daily winter traffic. All towns in the area will rely on these routes to get to I-95; it simply cannot be done safely or quickly. Nuclear plant owners and regulators have known for over six years that evacuation plans would be necessary; during that time no serious work has been done on Seacoast roads nor do there seem to be plans to improve these roads significantly.

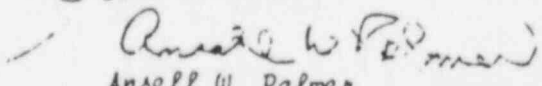
In conclusion, this plan seems to be written primarily to justify the requirement that a plan exist rather than to make a serious attempt to evacuate an endangered citizenry. We have touched on what seem to us to be primary and basic weaknesses. Added to these is the general distrust of our citizens towards the owners of the plant, occasioned by inconsistencies between promises made and results delivered during the construction process.

We would respectfully urge that you consider not approving this plan; but if you must, that you do with the understanding that you are opposing the recommendation of the majority of the Hampton Board of Selectmen. Thank you for your consideration.

cc: Richard Strome  
Gerarld Coogan  
William Cahill  
Robert Preston  
State Representatives  
Area Towns

Very sincerely,

  
John R. Walker

  
Ansell W. Palmer

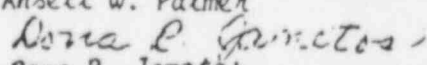
  
Dona R. Janetos



Exhibit "B"

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
ATOMIC SAFETY AND LICENSING BOARD



BEFORE ADMINISTRATIVE JUDGES:  
Helen F. Hoyt, Chairman  
Dr. Emmeth A. Luebke  
Dr. Jerry Harbour

_____ )	
In the matter of )	Docket Nos.
)	50-443-OL
PUBLIC SERVICE COMPANY OF )	50-444-OL
NEW HAMPSHIRE, <u>et al.</u> )	
(Seabrook Station, <u>Units 1 and 2</u> ) )	(Off-Site EP)
_____ )	March 24, 1986

ANSWER OF ATTORNEY GENERAL FRANCIS X. BELLOTTI TO  
THE STAFFS', APPLICANTS' AND STATE OF NEW HAMPSHIRE'S  
RESPONSES TO HIS CONTENTION RELATIVE TO EMERGENCY  
PLANNING FOR THE NEW HAMPSHIRE BEACH COMMUNITIES

On February 21, 1986, Attorney General Bellotti submitted a single contention relating to the local emergency plans for the coastal New Hampshire communities within the Seabrook Emergency Planning Zone. On March 5, March 6 and March 14, respectively, the Applicants, State of New Hampshire and the Staff filed their responses to that contention. Attorney General Bellotti hereby responds to the Applicants, State of New Hampshire, and Staff positions as set forth in those pleadings.

The State of New Hampshire objects to the admission of Attorney General Bellotti's contention "to the extent that [the] contention asserts that the protective actions of

evacuation and sheltering must ensure complete protection to the transient beach population under all circumstances. . . ."

See, the State of New Hampshire's Response to Contentions Filed by NECNP, the Commonwealth of Massachusetts, the Towns of Rye, Hampton, South Hampton, Kensington and Hampton Falls on the New Hampshire Radiological Emergency Response Plan, dated March 6, 1986, at 5. The Applicants and Staff similarly posit as their major basis for either limiting or not admitting the Attorney General's sole contention that, "neither the Commission's regulations nor NUREG-0654 requires that absolute assurance of radiological safety be provided in the event of an emergency or that evacuations be completed in any particular time frame."

See, NRC Staff's Response to Contentions Filed By State of Massachusetts Attorney General Francis X. Bellotti, dated March 14, 1986, [hereinafter "Staff's Response"], at 3. See also, Applicants' Response to Off-Site EP Contentions Submitted by Massachusetts Attorney General, dated March 5, 1986 [hereinafter "Applicants' Response"], at 14. The short answer to these objections is that the Massachusetts Attorney General is not contending that emergency plans must assure absolute protection under all circumstances or even that the protective action of evacuation must be completed within any particular amount of time. Nor is the Attorney General contending, as the Applicants' response to our contention suggests, that one must plan only for a worst case accident. See Applicants' Response at 2-3.

What the Attorney General does contend is that, pursuant to the Commission's regulations, emergency response plans must provide reasonable assurance that adequate protective measures can and will be taken in response to a full spectrum of possible accident sequences, and that the New Hampshire plans fail to meet this standard because they provide virtually no assurance that adequate protective measures can or will be taken in the event of a severe accident at the Seabrook power plant on a summer weekend. There can be no basis, then, for not admitting Attorney General Bellotti's contention to this proceeding. The relevant inquiry at this stage is simply whether the contention states a violation of a regulatory requirement with reasonable specificity and this it clearly does.

The Staff and Applicant would nevertheless argue that the contention is not admissible, as is, for the simple reason that the Commission has never established a precise level of protection which emergency plans must meet. It does not follow, however, that just because there is no absolute level of protection required for emergency plans, that no standard at all exists against which protective response actions must be judged. See Applicants' Response at 15; Staff's Response at 3-4. Commission regulations require that there be "reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency." 10 C.F.R.

§ 50.47(a)(1). Thus, there is a standard, a level of protection, which must be satisfied. To say otherwise, would be to disregard the plain meaning of the regulation which requires "adequate protection." Cf. Guard v. NRC, 753 F.2d 1144, 1149 (D.C. Cir. 1985). The fact that the Commission has not particularized that standard by establishing a "threshold number of unacceptable deaths or injuries" or otherwise further defined what constitutes "adequate protection," does not mean that a contention challenging the level of protection accorded in a given instance is inadmissible. It means, rather, that any such contention is admissible and it is then up to the Board to determine whether the level of protection provided is adequate, thus meeting the regulatory standard.

In the basis to our contention, we present evidence that evacuation within the times currently estimated will, under typical meteorological conditions, subject thousands of beachgoers to doses which can lead to death in a matter of days. It is Attorney General Bellotti's contention that an emergency plan which relies solely on evacuation and sheltering as the two possible protective options, which cannot at present prevent thousands of beachgoers from being exposed to early death doses by means of evacuation even under typical meteorological conditions, and which contains no plans or provisions for sheltering the beach population does not provide adequate protection for that population.

While the Staff concedes that Attorney General Bellotti's contention should be admitted to this proceeding, they seek to limit that contention by limiting the evidence which the Attorney General may introduce in support of its contention. See Staff's Response at 2. Yet, fear that certain evidence or arguments might be proffered in support of a contention is not a proper basis for limiting the admissibility of a contention. The issue of what evidence may be introduced is just not a relevant inquiry at this stage in the proceedings. Moreover, the fact that the Commission has not further defined what constitutes "adequate protection" means that the Board should not be able to limit the type of evidence admissible on this point.

While it may be the case that in a typical licensing proceeding it would be unnecessary to look at dose consequences of particular accidents to determine the adequacy of the provided protective response actions, Attorney General Bellotti intends to introduce evidence in support of its contention which will show that, primarily due to the large summer beach population, the situation at the Seabrook plant is unique; that emergency response measures which might be perfectly adequate to protect the populations surrounding the average nuclear power plant are simply not adequate to protect the summer beach population near the Seabrook plant. The Attorney General thus seeks to introduce relevant evidence on this very serious issue

concerning the ability of the New Hampshire Plan's emergency response measures to provide adequate protection for the beach population. The admissibility of such relevant evidence should certainly not be limited at this stage.

The Staff also attempts to inappropriately narrow Attorney General Bellotti's contention to the sole issue of whether the New Hampshire Plan makes adequate provision for sheltering the summer beach population. Our contention, however, is intended to address the broader requirement that the plan provide "reasonable assurance that adequate protective measures can and will be taken" to protect the beach population. Since there has, to date, been no examination of the availability of adequate sheltering for the beach population, the contention cannot be so limited with respect to the possible means for providing adequate protection. Other potential means for assuring adequate protection include improvements in traffic management or control or improvements in the evacuation network to decrease evacuation times, examination of alternative protective options such as evacuation by foot, and imposition of a license condition prohibiting operation of the facility during the summer months. Again, the Commission's regulation is not restrictive in terms of the means by which adequate protection must be provided and the Board and parties to the proceeding cannot, therefore, be restricted to sheltering as the sole means for providing the necessary protection.

The only remaining objection to our contention, not yet addressed, is the Applicants' objection, that the issues raised by our contention should have been litigated at the siting stage. We agree with the Applicants, in part. Unfortunately this was not possible to do. The Applicants received their construction permit before the Commission's current emergency planning regulations, requiring evacuation planning for the area within ten miles around a nuclear power plant, were in effect. When these emergency planning regulations did become effective, Attorney General Bellotti supported the Seacoast Anti-pollution League ["SAPL"] in seeking an Order to Show Cause why the construction permit for the Seabrook nuclear power plant should not be suspended or revoked. See, Memorandum of the Commonwealth of Massachusetts in Support of Seacoast Anti-Pollution League's Request for an Order to Show Cause dated June 30, 1980, dated March 13, 1981. In that proceeding, we sought to have determined the feasibility of evacuating the population within ten miles around the Seabrook plant. The Applicants argued, however, and the Commission ruled, that the issue of evacuability was one to be decided at the licensing stage. See SAPL v. NRC, 690 F.2d 1025 (D.C. Cir. 1980). The Applicants, then, would place the Attorney General in a "Catch-22" type of situation, in which this important issue over the adequacy of the New Hampshire plans' protective responses may never be heard. That position is simply

untenable. As the court affirmed in SAPL, the issue of whether adequate protection responses can and will be implemented with respect to the summer beach population near the Seabrook nuclear power plant is an issue of emergency planning properly before the Licensing Board at this time. SAPL v. NRC, supra at 1030.

Respectfully submitted,

FRANCIS X. BELLOTTI  
ATTORNEY GENERAL

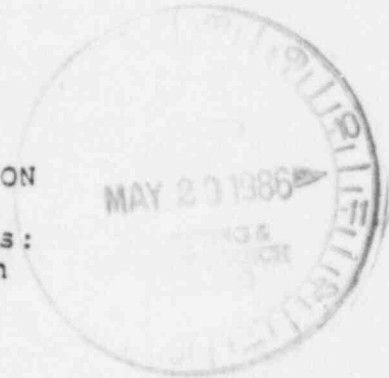
By: Carol S. Sneider  
Carol S. Sneider  
Assistant Attorney General  
Environmental Protection Division  
Department of the Attorney General  
One Ashburton Place, Room 1902  
Boston, MA 02108

March 24, 1986



Exhibit "C"

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
Before Administrative Judges:  
Helen F. Hoyt, Chairperson  
Emmeth A. Luebke  
Jerry Harbour



_____ )	
In the Matter of )	
)	
PUBLIC SERVICE COMPANY OF NEW )	Docket Nos.
HAMPSHIRE, ET AL. )	50-433/444-OL
(Seabrook Station, Units 1 and 2) )	(Off-Site EP)
)	April 16, 1986
_____ )	

BRIEF OF ATTORNEY GENERAL FRANCIS X. BELLOTTI IN  
SUPPORT OF ADMITTING HIS CONTENTION RELATIVE TO  
EMERGENCY PLANNING FOR THE NEW HAMPSHIRE BEACH COMMUNITIES

On February 21, 1986, Attorney General Francis X. Bellotti submitted a single contention in this proceeding [attached hereto as "Exhibit A"] relating to the emergency plans for the coastal New Hampshire communities within the Seabrook Emergency Planning Zone. That contention states:

The draft radiological emergency response plans for the Towns of Seabrook, Hampton, North Hampton, and Rye do not provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the Seabrook Station, as required by 10 C.F.R. § 50.47(a)(1), because in the event of a severe accident on a summer weekend some or all of the beach area transient populations within those communities cannot under many plausible meteorological conditions be protected by means

of evacuation even from early death and because there are not adequate plans or provisions for sheltering the beach area transients within those communities.

On March 5, 1986, the Applicants filed a response to Attorney General Bellotti's contention seeking to exclude it from this proceeding. See Applicants' Response to Off-Site EP Contentions Submitted by Massachusetts Attorney General, dated March 5, 1986 [hereinafter "Applicants' Response"]. On March 14, 1986, the Staff filed a response seeking to limit Attorney General Bellotti's contention. See NRC Staff's Response to Contentions Filed by State of Massachusetts Attorney General Francis X. Bellotti, dated March 14, 1986. Attorney General Bellotti hereby files this brief in support of admitting his contention.<sup>1/</sup>

- I. The Contention States a Violation of a Regulatory Standard with Reasonable Specificity.

The Commission regulations which form the basis for Attorney General Bellotti's contention are 10 C.F.R. § 50.47(a)(1) and 10 C.F.R. § 50.47(b)(10). Regulation 50.47(a)(1) provides, in relevant part, that "no operating

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<sup>1/</sup> On March 24, 1986, the Attorney General filed a written Answer to the Staff's, Applicants' and State of New Hampshire's Responses to his contention. See Answer of Attorney General Francis X. Bellotti to the Staff's, Applicants' and State of New Hampshire's Responses to His Contention Relative to Emergency Planning for the New Hampshire Beach Communities' dated March 24, 1986 [hereinafter "Answer of Attorney General Bellotti"]. This brief, requested by the Licensing Board at the pre-hearing conference on March 26, 1986, is intended as a supplement to that Answer.

license for a nuclear power reactor will be issued unless a finding is made by NRC that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency." 10 C.F.R. § 50.47(a)(1).

Regulation 50.47(b)(10) requires for a license to issue that "[a] range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public [and that] [g]uidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place . . ." 10 C.F.R. § 50.47(b)(10).

The regulatory standards for emergency plans set forth at 10 C.F.R. § 50.47(b) can only be viewed in conjunction with the ultimate standard of 10 C.F.R. § 50.47(a)(1) "that there be reasonable assurance that adequate protective measures can and will be taken." See, e.g., Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1) ALAB-818-22, NRC 651, 676-77 (1985) (Although Appeal Board agrees that an evacuation can be accomplished without traffic management and, further, that there is no requirement in the regulations for traffic control nor any requirement that an evacuation be accomplished within any specified amount of time, the Board nonetheless finds that the emergency plans must still satisfy the reasonable assurance of adequate protection standard set forth at 10 C.F.R. § 50.47(a)(1) and that Lilco's evacuation plans do not.); Commonwealth Edison Co. (Byron Nuclear Power Station, Units 1

and 2), LBP-84-2, 19 NRC 36, 252-3 (1984) ("The [applicable] law is drawn from the general standards in 10 C.F.R. 50.47(b) and the more specific evaluation criteria of NUREG-0654, FEMA-REP-1, . . . . But there is one rule which applies to all the [emergency planning issues] . . . : No operating license will be issued unless 'there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.' 10 C.F.R. 50.47(a)(1)."); Consolidated Edison Co. of New York (Indian Point, Units 2 and 3) LBP-83-68, 18 NRC 811, 989 (1983) ("The adequacy of the roads can only be judged by determining whether or not there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. 10 C.F.R. § 50.47(a)(1).").

Thus, the mere fact that an emergency plan provides for a range of protective responses in satisfaction of the superficial requirements of 10 C.F.R. § 50.47(b)(10) does not necessarily mean that the range of protective responses would be sufficient to satisfy the adequate protection standard of Section 50.47(a)(1). See, e.g., Long Island Lighting Co., supra. What the Commission's regulations require, then, is not just the provision of a range of protective responses, but a range of protective responses which will provide "reasonable assurance that adequate protective measures can and will be taken . . . ". C.F.R. § 50.47(a)(1) (emphasis added).

Applicants, thus, miss the point when they claim our contention should be excluded because there is "no NRC requirement that any particular level of safety be demonstrated, either in general or given any particular accident scenario." See Applicants' Response at 15. While it is true that there is no requirement that evacuations be completed within any set amount of time and also true that there is no particularized level of protection which must be afforded by evacuation, or by any other protective response, there is still a standard -- requiring reasonable assurance of "adequate" protection -- that must be met. If the Applicants' view of the Commission standards were taken literally that would mean that the Commission's regulations could always be satisfied simply by having an evacuation plan in place, regardless of the effectiveness of such plan.<sup>2/</sup> According to this reading of the regulations, the Commission's standards would be met even in a case where it could be shown that the response of evacuation could never work, that is never protect people from radiation injury. Yet the very term "protective response" means a response which will "cover or shield from injury or destruction." See Webster's Seventh New

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<sup>2/</sup> Licensing Boards, however, have consistently looked to the effectiveness of an evacuation response in assessing the adequacy of emergency response plans. See e.g., Long Island Lighting Co., supra, 22 NRC at 676-77; Consolidated Edison Co., supra, 18 NRC at 989-90; The Detroit Edison Co. (Enrico Fermi Atomic Power Plant, Unit 2), LBP-82-96, 16 NRC 1408, 1422-23 (1982).

Collegiate Dictionary 685 (1965). Thus, inherent in the very requirement of protective responses is a requirement that there be some adequate level of safety afforded by that response. To say otherwise would be to disregard the plain meaning of the Commission's regulations. Cf. Guard v. NRC, 753 F.2d 1144, 1149 (D.C. Cir. 1985).

Moreover, it simply does not follow from the fact that there is no specified amount of time within which an evacuation must be accomplished, that there is no standard of protection which must be provided by the proposed emergency response actions. What does follow is that one cannot look at any one particular protective response and require that it, alone, provide a certain level of protection. Rather, one must look at the range of protective responses provided in an emergency plan to determine whether, together, they provide reasonable assurance that adequate protective measures can and will be taken. Thus, repeatedly, when faced with the issue of whether a particular protective response, such as evacuation, is adequate licensing boards have only been able to answer by determining whether there is another protective response, such as sheltering, which would provide adequate protection in those instances when the evacuation response would not. E.g., Consolidated Edison Co., supra, 18 NRC at 990-91 (1983); Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3) LBP-82-39, 15 NRC 1163, 1184-86 (1982);

Kansas Gas & Electric Co. (Wolf Creek Generating Station, Unit 1), LBP-84-26, 20 NRC 53, 90 (1984).<sup>3/</sup>

Thus, it is clear, that Attorney General Bellotti's contention which asserts, in essence, that the "range" of protective responses provided in the New Hampshire plan<sup>4/</sup> cannot, under many plausible meteorological conditions, prevent thousands of beachgoers from even early death, and hence does not provide the requisite reasonable assurance that adequate protective measures can and will be taken for the summer beach population near Seabrook, asserts a violation of a regulatory basis with reasonable specificity and is therefore admissible.

The NRC Staff nonetheless seeks to limit the admission of the Attorney General's contention to the extent it seeks to litigate:

(a) the dose consequences of radiological accidents or of any specific accident sequences (including the "site-specific accident consequence analysis" referred to in the

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<sup>3/</sup> It is in large part for this reason, that protective responses must be viewed together in order to determine their adequacy, that Attorney General Bellotti objects to the Staff's attempt to limit its contention to the sole issue of whether there exist adequate sheltering for the beach population. The adequacy of sheltering cannot be viewed in a vacuum, but can only be determined when viewed in context with the other protective response options provided in the New Hampshire plans.

<sup>4/</sup> In fact, as our contention and its bases point out, insofar as the transient beach population is concerned, the New Hampshire Plan does not provide a "range" of protective responses at all; it provides only one protective response -- evacuation. And evacuation, our contention asserts, will not under many circumstances provide adequate protection.

contention's "basis"; (b) the assertion that emergency planning must assure any particular level of dose protection for the general public; or (c) accident sequences contained in the Applicants' probabilistic safety assessment.

Staff's Response at 2. Yet as the Attorney General has stated previously, fear that certain evidence or arguments might be proffered in support of a contention is not a proper basis for limiting the admissibility of a contention. The only relevant issue at this point in these proceedings is whether our contention states a violation of a regulatory basis, and this it clearly does. The issue of what evidence may be introduced is just not relevant at this stage. Moreover, the fact that the Commission has not seen fit to further define the term "adequate protection" by establishing "a threshold number of unacceptable deaths or injuries," see Staff's Response at 4, does not mean that a contention challenging the level of protection accorded in a given instance is inadmissible or that the Board should be able to limit the type of evidence admissible on this point. It means, rather, that any such contention is admissible, and it is then up to the Board to determine the adequacy of the protective response based on all the relevant evidence offered on that issue.

Moreover, the fact that the Commission has failed to quantify or further define what constitutes "adequate" protection can only be viewed as a reflection of the fact that this cannot be done on a generic basis. Rather, contrary to



the Staff's assertion, it is only by engaging in site-specific analysis that one can determine the adequacy of a specific emergency plan. As one licensing board so aptly noted:

[M]any aspects of emergency plans . . . are by their very nature site specific. We doubt whether the Commission could prescribe, by rule, a generic emergency plan suitable for all reactor sites, as the Staff's argument seems to suggest. In any event, the Commission did not try to do that, . . . . Except for the specific 10 mile EPZ, the rule speaks in general terms, such as "adequate" emergency facilities, equipment, methods, systems. § 50.47(b)(8), (9). A Board can only judge "adequacy" with respect to levels of risk, some of which vary from site to site.

Southern California Edison Company (San Onofre Nuclear Generating Station, Units 2 and 3), LBP-81-36, 14 NRC 691, 698-99 (1981).

It would simply not be reasonable for the Commission to set a precise level of dose which, in order for a plant to become licensed, no one could ever receive under any circumstance. And Attorney General Bellotti does not contend that any plan wherein some people might under some circumstances receive death-level doses would be inadequate. Under that standard, it is doubtful that any nuclear power plan could ever be licensed. What the Commission's regulations do require, then, is that any determination of adequacy be made on a case-by-case basis. Thus the Commission has left it up to the licensing boards, when presented with evidence of inadequacy, to weigh all the relevant evidence, including levels of doses, numbers

of people who might be affected by those doses, and the probabilities of such accidents occurring, in order that they may properly assess whether a plan provides reasonable assurance that adequate protective measures can and will be taken. See, e.g., The Detroit Edison Co., supra, 16 NRC at 1424-29; Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), LBP-83-8D, 17 NRC 306, 310 (1982); Consolidated Edison Co., supra, 18 NRC at 989-90.

The Staff seems to argue, however, that any litigation involving site-specific consequence analyses is inappropriate simply because NUREG-0654 provides that "[n]o single specific accident sequence should be isolated as the one for which to plan . . .". See Staff's Response at 3.<sup>5/</sup> Although the Staff is correct that emergency plans should not be developed with one specific or worst-case accident in mind, the Commission's regulations do require, as noted by the Staff, that emergency plans "have the flexibility to ensure response to a wide spectrum of accidents." Statement of Consideration, "Emergency Planning," 45 Fed. Reg. 55402 (August 19, 1980).

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<sup>5/</sup> The Applicants' argument, that our contention should be excluded for the mere reason that if we were to present evidence on site-specific consequences they would present evidence contrary to ours, see Applicants' Response at 15-16, is absurd. The very purpose of an evidentiary hearing is for presentation of evidence on both sides of an issue so that the true facts may come to light. That the Applicants may have evidence to counter ours is certainly no basis for excluding our contention. Cf. Texas Utilities Generating Co. (Comanche Peak Stream Elec. Sta., Units 1 and 2) LBP-82-87, 16 NRC 1195, 1199 (1982) ("[The Board] has the right and duty to develop a full record for decision-making in the public interest.").

And, if a contention asserts, as does the Attorney General's, that with respect to a portion of that planning spectrum, the plans provide virtually no assurance that for large numbers of people adequate protective measures can and will be taken, that is something the Board must look at in determining the adequacy of that emergency plan. See, e.g., Philadelphia Electric Co. (Limerick Generating Station, Units 1 and 2) ALAB-819, 22 NRC 681, 713 (1985); Consolidated Edison Co., supra, 18 NRC at 989.

The Attorney General, as part of the bases for his contention, has presented evidence that the evacuation response provided in the New Hampshire plans will, under typical meteorological conditions, subject thousands of beachgoers to doses which can lead to death in a matter of days. It is Attorney General Bellotti's contention that an emergency plan which relies solely on evacuation and sheltering as the two possible protective options, which cannot at present prevent as many as fifteen thousand beachgoers from being exposed to early death doses by means of evacuation even under typical meteorological conditions, and which contains no plans or provisions for sheltering the beach population, does not provide adequate protection for that population.

In light of such evidence, the Board must do more than just simply assess whether an evacuation or sheltering plan is in place, or whether all the superficial requirements of 10 C.F.R. § 50.47(b) have been met, for it to determine the adequacy of

the New Hampshire plans. See, e.g., Southern California Edison Co., supra, 14 NRC at 699 ("Licensing Boards are required to make an overall general finding of 'reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.' § 50.47(a). Such a finding goes beyond a check-list determination of whether a plan meets the standards of 10 C.F.R. 50.47."). Although it may be the case that in a typical licensing proceeding, it would be unnecessary to look at dose consequences of particular accidents to determine the adequacy of protective responses, Attorney General Bellotti intends to introduce evidence in support of his contention (some of which has already been set forth in the basis for his contention) which will show that, primarily due to the large summer beach population which exists within close proximity to the Seabrook plant, the situation for the Seabrook nuclear power plant is unique; that emergency response measures which might be perfectly adequate to protect the populations surrounding the average power plant are simply not adequate to protect the summer beach population near Seabrook. The Board, then, has an obligation when confronted with this important safety issue to look beyond the mere fact of an evacuation plan, and to examine all the relevant evidence on this issue if it is ever to properly assess whether this New Hampshire emergency response plan does in fact provide "reasonable assurance that adequate protective measures can and will be

taken." 10 C.F.R. § 50.47(a)(1) (emphasis added). Cf.,  
Metropolitan Edison Co. (Three Mile Island Nuclear Station,  
Unit 1), CL1-84-811, 20 NRC 1, 9 (1984).<sup>6/</sup>

II. Attorney General Bellotti's Contention Relative to the  
Summer Beach Population Raises an Important Issue of  
Emergency Planning that is Properly before this Licensing  
Board.

Applicants proffer as their prime argument for excluding  
Attorney General Bellotti's contention from this proceeding  
that the Attorney General's contention is not properly before  
this Board now, because the issue of whether the beach  
population can be adequately protected is really an issue to be  
litigated at the siting, not the emergency planning, stage.  
The Applicants are simply wrong on this score. The issues  
raised by Attorney General Bellotti's contention are indeed  
emergency planning issues properly before this Board. See SAPL  
v. NRC, 690 F.2d 1025 (D.C. Cir. 1980).

The Applicants received their construction permit to build  
the plant at Seabrook in 1976, well before the accident at  
Three Mile Island and well before the Commission's emergency

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<sup>6/</sup> If indeed the Board perceives this as a situation involving  
a "regulatory gap," then the unique safety issues presented by  
this case should warrant sufficient concern for the Board to  
nevertheless admit this contention for hearing. Cf., Public  
Service Co. of New Hampshire (Seabrook Station, Units 1 and 2),  
LBP-82-106, 16 NRC 1649, 1655 (1982); Duke Power Co. (Catawba  
Nuclear Sta.) Units 1 and 2, LBP-82-16, 16 NRC 1937, 1946  
(1982).

planning regulations, requiring evacuation planning for the area within ten miles around a nuclear power plant, were in effect or even contemplated. Nevertheless, the Attorney General did seek to have heard at that stage in the proceeding the issue of whether the beach population near Seabrook could feasibly be evacuated in the event of an emergency. See Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-390, 5 NRC 733 (1977). The Atomic Safety and Licensing Appeal Board decided, however, that although there was a sizable beach population as close as 1.6 miles to the proposed plant, there was no need to determine the feasibility of safely evacuating that population since it was outside the LPZ. Id.; Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-422, 6 NRC 33 (1977); aff'd NECNP v. NRC, 582 F.2d 87 (1st Cir. 1978). After the Commission's new emergency planning regulations went into effect, Attorney General Bellotti joined Seacoast Anti-Pollution League in seeking to again have heard the issue of the feasibility of evacuating the summer beach population. See Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), DD-81-14, 14 NRC 279 (1981). In that case, the Director of Nuclear Reactor Regulation decided that based on current information it was not infeasible to develop an emergency plan for the area surrounding Seabrook, and that continuation of the plant's construction did not pose such an imminent threat as to warrant

the extraordinary measure of suspending the construction permit. Id. at 285-86. Nevertheless the Director emphasized that "this decision does not presume to decide the adequacy of emergency preparedness for the Seabrook Station," id. at 285, and "that in order to receive an operating license, the applicant must do all things necessary to ensure safe operations of the facility." Id. at 286 (emphasis added). See also SAPL v. NRC, supra.

Yet, the Applicants seek to exclude our contention from this proceeding, arguing, in effect, that just because they were able to satisfy all the Commission's criteria for a construction permit in 1976, that they have some automatic right, ten years later, to receive an operating license regardless of their ability to satisfy all the standards imposed by the Commission's emergency planning regulations. See Applicants' Response at 16. This is simply not the case. See Power Reactor v. Electricians, 367 U.S. 396, 411 (1960).

Innerent in the Commission's two-stage licensing process is the concept that the Commission's regulations and safety standards are not static. There can be no guarantee in this rapidly developing field of nuclear safety that a proposed nuclear power plant, able to satisfy all the criteria for issuance of a construction permit, will later be able to satisfy all the newly imposed safety standards for issuance of an operating license. See, e.g., Power Reactor, supra.

Indeed, even once an operating license is issued, the process does not stop and the Commission may revoke the license of any plant unable to satisfy new safety or emergency planning standards. See, e.g., Consolidated Edison Co. (Indian Point Units No. 2 and No. 3), CLI-83-16, 17 NRC 1006 (1983). Thus, regardless of the fact that the Seabrook plant in 1976 satisfied all the siting criteria necessary to receive a construction permit, it must still satisfy all the Commission's emergency planning standards before it can receive its license to operate. See, e.g., Public Service Co. of New Hampshire, supra, 14 NRC at 279.

Furthermore, Attorney General Bellotti does not contend herein that no emergency plan could ever be devised for the Seabrook plant which would satisfy the Commission's standards. What the Attorney General does contend is that the current New Hampshire plan does not satisfy those standards. The Applicants are incorrect, however, when they say that all the Commission ever requires by way of emergency planning is to do the best possible with the facilities at hand. See Applicants' Response at 2. With respect to certain other of the Commission's emergency planning regulations applicants have certainly recognized that they would have to do more than simply the best with what is at hand. Hence, the Applicants have erected sirens throughout the EPZ to satisfy the notification standards of Regulation 50.57(b)(5), and have



installed elaborate equipment, bought supplies, and even built facilities to satisfy the emergency facility and resource requirements of Regulations 50.47(b)(6), (8), (9) and (11). Thus it is that licensing boards in considering the adequacy of emergency response measures, when confronted with the possibility that adequate protection may not be feasible at a particular site, have in fact considered the necessity of requiring what the Applicant would term "extraordinary measures." See, e.g., Consolidated Edison Co., supra, 18 NRC at 991 (Board considers the necessity of widening roads); Consumer Powers Co. (Big Rock Point Plant), LBP-84-32, 20 NRC 601, 695-96 (1984) (Board requires Applicant to consider remedies, including new roads and road improvements, to alleviate problem of serious traffic congestion from occasional summer rock concerts.); The Detroit Edison Co., supra, 16 NRC at 1428 (Board considers, and rejects as unjustified under the circumstances, the building of a new evacuation route for a small portion of the population near the plant); Consumers Power Co. (Big Rock Point Plant), LBP-82-77-16 NRC 1096, 1100 (1982) (If no means for relocating the public transit-dependent portion of the population exists, then Applicant may need to supply the resources "out of its own pocket.").

While Attorney General Bellotti is not suggesting that "extraordinary measures" will necessarily be required at the Seabrook site, the Attorney General does contend that whatever

is necessary to satisfy the Commission's standards of reasonable assurance of adequate protection must be met before this plant can ever receive its license to operate. The safety of the beach population cannot be ignored. If this means, as the Applicants suggest, that this plant may never receive a license to operate because, being sited so close to populous beaches, the Commission's emergency planning standards could never be satisfied, see Applicants' Response at 16, then that must be the case. Under the present emergency response plans there is no reasonable assurance that the summer beach population can be adequately protected, and if it requires, then, that the Applicants must take some "extraordinary measures" to achieve that requisite assurance of adequate protection, then the Applicants must take those necessary measures. There can be no basis, however, for excluding Attorney General Bellotti's contention from this proceeding for the reason Applicants posit, that if the facts supporting his contention are proven true extraordinary measures might be required to provide reasonable assurance of adequate protection.

CONCLUSION

For all the foregoing reasons, the contention of Attorney General Francis X. Bellotti should be admitted to this proceeding.

Respectfully submitted,

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Dated: April 16, 1986

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION



In the Matter of )  
 )  
PUBLIC SERVICE COMPANY OF NEW ) Docket No.(s) 50-433/444-OL  
HAMPSHIRE, ET AL. )  
(Seabrook Station, Units 1 and 2) )  
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CERTIFICATE OF SERVICE

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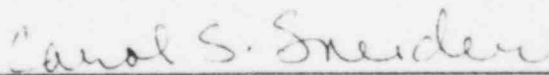
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