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I. Because no Deficiencies Were Found by FEMA to Exist, All Exercise Contentions Should be Rejected as a Matter of Law as a Logical Consequence of the Arguments Made by Mass AG.

For the reasons set forth below, it is the position of the Applicants that any contentions other than those addressed to the scope of the exercise conducted on June 28-29, 1988, should be rejected in light of FEMA's holding that there were no deficiencies in the exercise.

The Board may exclude from exercise litigation "any issue . . . not material to licensing decisions." Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-86-11, 23 NRC 577, 581 (1986); U.C.S. v. NRC, 735 F.2d 1437, 1448 (D.C. Cir. 1984). As a result, an exercise contention may only be admitted if it reveals a "fundamental flaw" in the off-site emergency plans being exercised.<sup>1</sup> Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), 23 NRC 577, 581 (1986) ("Since only fundamental flaws are material licensing issues, the hearing may be restricted to those issues."); Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), LBP-84-49, 22 NRC 899, 910 (1985) ("exercise contentions alleging a 'fundamental flaw' . . . should be admitted; contentions alleging only minor or readily correctable problems should be rejected, even if they might have been admitted at an earlier stage"); U.C.S. v.

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<sup>1</sup> In addition, the contentions must satisfy the "specificity and other rules applicable to all contentions." Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), LBP-85-49, 22 N.R.C. 899, 909 (1985).

NRC, 735 F.2d 1437, 1451 (D.C. Cir. 1984) ("Emergency preparedness exercises . . . are not evaluated in terms of preestablished criteria; they are evaluated to ensure that they do not reveal any fundamental inadequacies in the nature or implementation capacity of emergency preparedness plans."). In order for an exercise contention to demonstrate a "fundamental flaw" in the plan, more must be shown than "minor or ad hoc problems [that occurred] on the exercise day." Id. at 1448.

A fundamental flaw is equivalent to a FEMA deficiency. Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-86-11, 23 NRC 577, 581 (1986) ("Under our regulations and practice, Staff review of exercise results is consistent with the predictive nature of emergency planning, and is restricted to determining if the exercise revealed any deficiencies which preclude a finding of reasonable assurance that protective measures can and will be taken, i.e., fundamental flaws in the plan."). FEMA, in its Exercise Report, found no deficiencies.

Mass AG acknowledges that, "[i]f a contention is admitted as to the adequacy of the plan or the government's implementation capacity as revealed by the exercise, a positive FEMA finding constitutes a rebuttable presumption of adequacy."<sup>2</sup> "Massachusetts Attorney General's Exercise

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<sup>2</sup> The rebuttable presumption also should be given some weight by the Board in determining whether to admit an exercise contention. Carolina Power & Light Co. (Shearon

Contentions Submitted in Response to the June 1988 Seabrook Initial Full Participation Exercise," at 2 n.1 (September 21, 1988). See also 10 CFR § 50.47(a)(2); Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), LBP-84-89, 22 NRC 899, 909 (1985). Mass AG also correctly acknowledges that, "[w]hen the offsite plan is formulated by the utility, the NRC will determine the adequacy of that plan in combination with the expected response of the non-participating governments." Id.

Mass AG, however, further argues that a presumption attributed to FEMA findings only applies in respect of state and local emergency plans. Mass AG contends that the NRC's finding as to the adequacy of utility offsite plans "is not based on any determination made by FEMA and no rebuttable presumption attaches to a FEMA finding in the event a contention raising the adequacy of utility offsite preparedness is admitted."<sup>3</sup> Id.

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Harris Nuclear Power Plant), LBP-85-49, 22 N.R.C. 899, 910 (1985) ("To be sure, the quoted regulation [10 CFR § 50.47(a)(2)] is not directly applicable at the contention stage: it comes into play when a contention goes to evidentiary hearing. Nevertheless, this regulation implies that a Board should give a FEMA finding of adequacy or correctability some deference at the contention stage. We have done so in this case.")

<sup>3</sup> But see Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB-900, slip op. at 24 (September 20, 1983). Moreover, Mass AG himself has attributed significance to the FEMA findings. In fact, Mass AG and other Intervenor argued strenuously for additional time to write exercise contentions based on the representation that FEMA's final exercise report was indispensable to the process. Tr. 14659, 14661-62.

Mass AG's argument proves too much. The logical extension of the argument would, in the final analysis, fully support Applicants' view that the FEMA finding of no deficiencies precludes litigation of any exercise contentions. If the NRC cannot base its finding on FEMA determinations, then the NRC need not, and indeed could not, base its finding, that there is "reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency," 10 CFR § 50.47(a)(1), on the performance of an exercise. As a practical matter, although the NRC staff viewed parts of the exercise, it did not observe a sufficient portion of the exercise to determine whether any observed inadequacies rose to the level of a "fundamental flaw" or were merely "minor or ad hoc problems occurring on the exercise day." U.C.S. v. NRC, 735 F.2d 1437, 1448 (D.C. Cir. 1984). Consequently, Mass AG's argument supports the concept that none of the exercise contentions should be admitted. As shown below, none would raise an issue "material to licensing."

There is no requirement that exercise results be considered by the NRC in determining whether reasonable assurance exists. See, e.g., Pennsylvania Power and Light Co. (Susquehanna Steam Electric Station, Units 1 and 2), 15 NRC 771 (1982) (license authorized without considering emergency preparedness exercises). Rather, all that is

required is that periodic exercises be conducted and that any deficiencies identified be corrected:

Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.

10 CFR § 50.47(b)(14).

Furthermore, the initial full participation exercise need only be conducted if there is state and local participation.

A full participation exercise which tests as much of the licensee, State and local emergency plans as is reasonably achievable without mandatory public participation shall be conducted for each site at which a power reactor is located for which the first operating license for that site is issued after July 13, 1982. This exercise shall be conducted within two years before the issuance of the first operating license for full power (one authorizing operation above 5% of rated power) of the first reactor and shall include participation by each State and local government within the plume exposure pathway EPZ and each State within the ingestion exposure pathway EPZ.

10 CFR Part 50, Appendix E. IV, F (emphasis added).

The regulation later provides that when state and local governments do not participate "an exercise shall be held." Id. However, the regulations do not require, as they do when there is state and local participation, a "full participation" exercise. In fact, by definition, a "full participation" exercise is impossible when state and local governments are not participating. In any case, there is no requirement that this exercise form the basis of the NRC's reasonable assurance finding.

The result argued for does not contravene the D.C. Circuit's decision in U.C.S. v. NRC. On the contrary, it is entirely consistent with it. In the U.C.S. case, the court held that an attempt by the NRC to eliminate the emergency exercise as a "prerequisite to authorization of a license"<sup>4</sup> to be violative of the hearing requirement of Section 189(a) of the Atomic Energy Act, 42 USC § 2239(a) (1976). In reaching this conclusion the court observed:

When NRC advocates successfully for a literal construction of 189(a)'s hearing requirement, it must take the bitter with the sweet: If section 189(a)'s precise language controls when interveners attempt to obtain a hearing on a proposed amendment or to expand a proceeding to cover alternatives to the NRC's proposed amendment, it also controls when the NRC or an intervenor tries to limit the hearing requirement to less than the issues the NRC has itself defined as part of the "licensing proceedings" specified in 189(a).

735 F.2d at 1443.

In Bellotti v. NRC, 725 F.2d 1380, 1382 (D.C. Cir. 1983), the Attorney General of Massachusetts was not allowed a 189(a) hearing on the adequacy of a plan of action regarding deficiencies in management of a nuclear power plant because the development of the plan of action occurred outside the proceeding and was not part of the NRC's decision to amend the license. If section 189(a)'s precise language

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<sup>4</sup> U.C.S. v. NRC, 735 F.2d at 1440. The court paraphrased the NRC rule amendment which in turn gave recognition to an existing practice. See, e.g., Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), 15 NRC 1163, 1210 (1982); cf. The Cincinnati Gas & Electric Co. (Wm. H. Zimmer Nuclear Power Station, Unit 1), 15 NRC 1549, 1566, modified in relevant part, 7 NRC 760 (1983).



controls "when the NRC or an intervenor tries to limit the hearing requirement to less than the issues the NRC itself defined as part of the 'licensing proceedings' specified in 189(a)," then it controls when as here intervenors attempt to obtain a hearing on issues that the intervenors have precluded the NRC from considering as part of the licensing proceeding. As the court ruled, "once a hearing on a licensing proceeding is begun, it must encompass all material factors bearing on the licensing decision raised by the requester." 735 F.2d at 1443 (emphasis added).

Furthermore, by eliminating FEMA's evaluation and findings from consideration<sup>5</sup>, evaluation of the exercise no longer lends itself to the hearing process. The hearing process, in order to be meaningful, requires informed participation by its participants. Given that Intervenor's contend that they were precluded from meaningful participation in the exercise, they will be hard pressed to

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<sup>5</sup> Mass AG contends:

To the extent that FEMA has engaged in a review and evaluation of utility - or licensee-only emergency preparedness and has purported to make findings as to the adequacy of that preparedness, FEMA has acted outside and beyond its legal authority and any such FEMA review and evaluation and any such findings that result from or follow upon such review and evaluation, which are represented as findings of that agency, are a legal nullity and have no legal effect or significance in this proceeding or otherwise.

"Massachusetts Attorney General's Exercise Contentions Submitted in Response to the June 1988 Seabrook Initial Full-Participation Exercise" at 27 (September 21, 1988).

argue that they observed a sufficient portion of the exercise<sup>6</sup> to determine whether any observed inadequacies rose to the level of a "fundamental flaw" or were merely "minor or ad hoc problems occurring on the exercise day." 735 F.2d at 1448.

Mass AG still has the right to a hearing on those factors that the NRC will rely on in making its reasonable assurance finding. To the extent that Mass AG is able to identify, through his own observations,<sup>7</sup> any additional facts that, if true, would preclude a reasonable assurance finding, those assertions may be made through a late-filed contention, provided he meets the appropriate standards for filing such a contention. It necessarily follows, however, that Mass AG may not use any of the exercise findings as evidence of any such contention.

To the extent that the logical and necessary extension of Mass AG's argument is also held to follow, Applicants agree with Mass AG. Otherwise, Applicants urge this Board to reject Mass AG's assertion that the adequacy of utility offsite plans cannot be based on any determination by FEMA

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<sup>6</sup> Mass AG, as he claims in his "model record," feels he was not in a position to adequately observe the exercise.

<sup>7</sup> Mass AG should be estopped from relying in any way on FEMA's evaluation because as argued by Mass AG "any such FEMA review and evaluation . . . are a legal nullity and have no legal effect or significance in this proceedings or otherwise." "Massachusetts Attorney General's Exercise Contentions Submitted in Response to the June 1988 Seabrook Initial Full-Participation Exercise" at 27 (September 21, 1988).

and to conclude that a rebuttable presumption does, indeed, attach to a FEMA finding and this fact be given some deference in determining whether a contention should be admitted.

## II. Response to Individual Contentions.

In the event the Board rejects the position of the Applicants that any contentions other than those addressed to the scope of the exercise arising out of the exercise should be rejected as a matter of law, the Applicants answer to the individual contentions as set forth below. In those cases where no objection is raised, the Applicants' response is not to be construed as an admission that all matters set out in the prolix bases are properly the subject of litigation or evidence which is admissible. Rather, the "no objection" response means only that the Applicants are satisfied that the contention, assuming it is limited in scope to the bases stated, is properly within the Board's jurisdiction and that at least one proper basis has been set out with reference to it.

### MAG EX-1

The scope of the initial full participation exercise conducted for Seabrook Station on June 27-29, 1988 was so limited that that exercise did not and could not support a finding by the NRC pursuant to 10 CFR 50.47(a)(2) (on the NHREAP) and 10 CFR 50.47(c)(1)(iii) (on the SPMC) that there is reasonable assurance that the relevant plans can be implemented and that adequate protective measures can and will be taken. The limited scope represents a fundamental flaw in the exercise. As a result, the requirements set forth at 10 CFR Appendix E, § IV.F.1 for an initial full-participation exercise have not been met. See Long Island

Lighting Company (Shoreham Nuclear Power Station, Unit 1), 26 NRC 479, 488 (1987). In a case in which a significant portion of the EPZ lies within the jurisdiction of non-participating governments, the NRC will review and evaluate the level of emergency preparedness resulting from the formulation of utility-only plans. 10 CFR 50.47(c)(1). These plans will be exercised and the results of these exercises will be relevant to any reasonable assurance determination reached by the NRC. An exercise must be broad enough to test adequately the utility's capability to implement its own plan when the relevant governments have not participated in prior emergency planning. In judging whether an exercise has adequately tested the utility's capacity to implement its own plan, the provisions of that plan itself should be considered. For example, if a utility (rightly or wrongly) does not assign to itself in its plan any snow removal role during an emergency, the exercise of that plan need not test the snow removal capabilities of the utility. But contrariwise, if a utility does establish a role or a variety of roles for itself in its own plan then an adequate initial full-participation exercise of this plan would test the utility's capacity to play those roles as long as this is "reasonably achievable without mandatory public participation." 10 CFR Part 50, Appendix E, ¶ IV.F.1.

A. NUREG-0654 ("Supp 1") establishes that an exercise of a utility-only plan must:

include[] the demonstration of off-site response organization capabilities to interface with non-participating State and local government . . . .  
Supp 1 at II.N.1.b.

Similarly, Supp 1 establishes as a requirement of an adequate utility-only plan that:

The off-site response organization shall identify liaison personnel to advise and assist State and local officials during an actual emergency in implementing those portions of the off-site plan where State or local response is identified.  
Supp 1 at II.C.5 (emphasis supplied).

In line with these requirements FEMA added the following objective to the list of exercise objectives applicable to the June 1983 exercise:

Demonstrate the capability of utility off-site response organization personnel to interface with non-participating State and local governments through their mobilization and provision of advice

and assistance. FEMA Guidance Memorandum (GM) EX-3 Amendment (March 7, 1988) at 2.

The June exercise failed to adequately test ORO personnel's capacity to meet this objective. The exercise in no fashion called on ORO personnel in the field to display their ability to advise and assist governmental personnel, who may be mobilized at the time of an emergency, in following the SPMC. Instead of exercising these capacities, FEMA evaluators simply asked some of the ORO field personnel (traffic guides at ACPs and TCPs) what they would do if local officials arrived to carry out response functions. FEMA Final Report at 242. As a result, there is no basis for finding that ORO field personnel have demonstrated the capacity to effectively interact with governmental personnel in the likely event that at the time of an emergency these governmental personnel take concrete actions in the Massachusetts EPZ to respond to an emergency. Similarly, the capacity of the 9 ORO liaison personnel to identify the unfolding governmental emergency response, harmonize ORO actions with it and communicate with relevant government officials as to further actions was not tested. The FEMA Control Cell (simulating the non-participating officials) did not test the liaison personnel's capacity to communicate the essentials or the details of the SPMC to governmental officials.

B. Moreover, as FEMA has noted, there are specific exercise objectives which are "legal authority-sensitive." (GM EX-3 Amend. at 2-3 listing objectives 11-26, 30, 32-33).

They may be authority-sensitive because some aspect of their implementation in an actual radiological emergency may be dependent upon the authority of the non-participating State and local governments. Thus, the demonstration of these objects in an exercise could be dependent upon how authority-related issues are addressed in the utility [ORO] plan . . . . The demonstration and evaluation of the objectives should follow the specific provisions of the plan being tested . . . . If the plan requires the utility [ORO] to secure legal authority to carry out necessary functions, they should follow the procedures contained in the plan that would be used in the event of an emergency.

Id. at 2-3, 4. (emphasis supplied).

The SPMC expressly identifies specific response functions which the ORO is legally prohibited from unilaterally fulfilling. The SPMC posits a range of possible combinations of response: from pure Mode 1 in which the ORO offers assistance to the responding governments, through a "mixed

delegation" Mode 2 in which ORO handles certain response areas while the governments retain control over others, to a pure Mode 2 in which all requisite authority is purportedly delegated to the ORO. These various modes were not exercised even though as a matter of both fact and law pure Mode 1 or "mixed-delegation" Mode 2 are far more likely to occur in reality than pure Mode 2. The exercise tested only ORO's capacity to meet the "legal authority-sensitive" objectives assuming the Commonwealth delegates all necessary authority and does not itself respond -- as any intelligible best-efforts assumption would mandate<sup>7</sup> -- with emergency response actions on the ground. The SPMC posits just such a range of mixed and (purportedly coordinated) government and ORO responses yet the exercise did not test the ORO personnel's capacity to anticipate, accept, integrate, coordinate and harmonize the likely governmental responses. The exercise scenario assumed that the Commonwealth and each community would not respond to the emergency and:

The FEMA Control Cell did not commit any State or local resources or personnel to assist in the NHY ORO response. Legal authority was requested and received for appropriate response activities  
. . . . FEMA Final Report at 242.

In light of this glaring failure to test the capacity of ORO to implement critical provisions of the utility's own plans, this exercise does not meet the legal requirements and its results will not support a reasonable assurance finding.<sup>8</sup>

[start footnote 7] As Public Service of New Hampshire noted in its comments to the Draft Supp 1 document:

"A utility plan should be expected to account for varying degrees of participation in response to an actual radiological emergency."

NRC/FEMA Analysis of Comments [received on Supp 1] at 11. As a corollary, an initial full-participation exercise of such a plan should test the capacity of the utility's ORO to integrate and coordinate such varying degrees of governmental best-efforts response. Failure to test adequately that capacity constitutes a fundamental flaw in the exercise.  
[end footnote]

[start footnote 8] Putting the same point a different way: no presumption will be entertained concerning the governments following the SPMC until it is established as an adequate plan. The SPMC sets forth as one possible manner in which the governments could follow the plan a mixed-delegation Mode 2. Before it could be presumed that such a mixed mode would be followed, the capacity of the ORO to

implement it would have to be established. (If the ORO could not perform in this mixed mode then that mode would not be established as adequate and the governments would not be presumed to follow it.) But the exercise did not test the ORO's capacity in this regard at all. Because only pure Mode 2 was tested by this exercise, the results could only support a finding of reasonable assurance based on a pure Mode 2 implementation of the SPMC. Not only is the legality of such a pure Mode 2 delegation at issue in this proceeding, but the SPMC is not limited to that mode. Thus, the exercise was too limited in scope to test the authority-related issues as those issues "are addressed in the utility [ORO] plan." FEMA GM EX-3 Amendment at 3. [end footnote]

#### Applicants' Position

It is not clear from the way this contention is set out where the contention ends and the bases begin. However, the Applicants assume that the contention ends with the citation to the Shoreham proceeding in lines 11 and 12 of the text on page 11 of the Mass AG filing, and the bases then start with the words "In a case." On that reading, the Applicants object to admission of the contention on the grounds that no proper basis has been stated. A contention must both identify a regulation that is supposedly being violated and contain sufficient detail as to the nature of the supposed violation as to permit the Board to determine how it is supposedly being violated. Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), LBP-82-106, 16 NRC 1649, 1656 n.7 (1982). See also Kansas Gas & Electric Co. (Wolf Creek Generating Station, Unit 1), LBP-84-1, 19 NRC 29, 33 (1984). All of the rhetoric on pages 11 and 12 (until the next to last line) is simply an argument as to what Mass AG believes should be in an exercise and how it is to be

judged. The balance of the "bases" statement raises alleged shortcomings which arise from the fact that Massachusetts and its political subdivisions would not participate. However, the obligation is only to conduct an exercise of those matters which can be exercised without the nonparticipating state or local government. 10 CFR § 50.47(c)(1); 10 CFR Part 50 App. E § IV.F.6; NUREG-0654, Rev. 1, Supp. 1, § II.N.6. In short, the contention simply has no cognizable basis because it depends upon ignoring the fact that The Commonwealth of Massachusetts and its political subdivisions were not participating.

#### MAG EX-2

The scope of the June 28-29, 1988, exercise of the SPMC was so limited that it could not and did not yield valid or meaningful results on implementation capability as required by 10 CFR § 50.47(a)(2) and Appendix E paragraph IV.F.1. in that it did not include demonstrations or evaluations of major portions of the SPMC and the emergency response capabilities of many persons and entities relied upon to implement it. The data set forth in the subparts of this contention individually and collectively establish that there is no reasonable assurance that the SPMC can or will be implemented in critical respects. Thus, the Exercise precludes a finding that there is reasonable assurance that adequate protective measures can and will be taken, as required by 10 CFR § 50.47(c)(1).

Each of the following portions of the plan, or the response capability of the following organizations relied upon, was required to be tested for this Exercise to qualify as the initial full participation Exercise. For all of the plan portions and supporting organizations listed, the Exercise did not test "as much of the . . . plans as is reasonably achievable without mandatory public participation." 10 CFR Part 50, App. E, par. IV.F.1.

A. The hardware involved in the VANS system was not exercised, nor was the capability of the ORO to use this hardware in a timely and effective manner. The VANS system includes the Whelen sirens, the trucks on which they are to



be mounted, and the VANS drivers. During a real emergency, the VANS trucks with their Whelen sirens are to travel from their staging areas to pre-established acoustic locations, park, deploy outriggers, and then the sirens are to be hydraulically lifted high into the air. During the Exercise, the following capabilities were not tested or demonstrated:

a. driving times from the VANS staging areas to acoustic locations using fully equipped VANS vehicles, to determine whether transit times are such that the 15-minute criterion can be met. (The much smaller, lighter personal cars used during the Exercise are likely to be able to be driven faster to these acoustic locations.)

b. ability of VANS drivers, once at the acoustic locations, to park vehicles in an appropriate location, deploy the outriggers, remove the boom strap, raise the siren to its operational height, and do all this in a short enough time to permit the 15-minute criterion to be met.

c. suitability of each acoustic location for the planned VANS usage, i.e., is the ground level and firm enough, even in bad weather, to provide adequate stability to the VANS vehicles when sirens are fully lifted.

d. familiarity of the VANS drivers with the siren system operation.

e. operability of sirens.

All of these items could and should have been tested and were not. A VANS siren operability test, like many other aspects of the SPMC tested during the Exercise, could have been held out of sequence at a suitable location, perhaps at Seabrook Station or in an indoor location in a large garage, so as not to have disturbed the public.

B. The ability of the primary EBS radio station to promptly broadcast the EBS messages was not tested. After EBS messages were telefaxed to the station, no effort was made to determine how quickly the station could review the message and prepare an announcer to read it over the air. This, too, is an important element in ascertaining whether the 15-minute criterion can be met. In addition, no effort was made to test how well the announcer could read the message after this very short preparatory period. Apparently, tapes were made at the station of the announcers reading the EBS messages, but this occurred out of sequence

with no check on how much time was spent in preparing to read the message.

C. Only the primary EBS radio station participated in the Exercise; the secondary stations did not participate at all.

D. ORO's plans and procedures for public education and the dissemination of information to the public on a periodic basis and a demonstration of the adequacy of public education materials were excluded from the Exercise. Such materials are required by 10 CFR § 50.47(b)(7) and Part 50, App. E., par. IV.D., and NUREG-0654 § II, G.

E. ORO's capability to implement a timely evacuation of the Mass. EPZ's two hospitals and all other special facilities was not tested. Specifically, ORO did not attempt to demonstrate that it could muster the appropriate vehicles and personnel to the EPZ hospitals, nursing homes, and other special facilities in a timely fashion and did not attempt to demonstrate appropriate procedures for loading patients. (The total "extent of play" for testing hospital evacuation procedures was that one ambulance was assigned the task of driving to one hospital and then to a reception center.) The Exercise also failed to test the preparedness of the bus, ambulance, and wheelchair van companies being relied upon for this important function. It should be noted that the simulated plume released during the Exercise put both Massachusetts EPZ hospitals at risk and eventually passed over them both. Both should have been evacuated. Likewise, most other special facilities in the Massachusetts EPZ were put at risk and should have been evacuated as well.

F. The ability of the Massachusetts chapters of the American Red Cross to establish and maintain the Host Special Facility and the 26 Congregate Care Centers was not tested or evaluated at all, and activation of none of these facilities occurred during the Exercise. The fact that the American Red Cross has refused to participate in Massachusetts in planning and preparing for an emergency at Seabrook cannot be used to justify their absence from the Exercise. As a key support organization, their capabilities and preparedness need to be evaluated just as the capabilities of the primary EBS station or the MS-1 Hospital need to be evaluated. Since the NRC rule change in November of 1987, the participation of state and local governments is no longer required in a "full participation" exercise "to the extent that the applicant has identified those governments as refusing to participate further in emergency planning activities." 10 CFR Part 50, App. E, par. IV.F.6. But for this exception, however, a "full participation" exercise must include "testing the major observable portions of the onsite and offsite emergency plans

and mobilization of state, local and licensee personnel and other resources in sufficient numbers to verify the capability to respond to the accident scenario." 10 CFR Part 50, App. E, par. IV.F.1, n.4. The resource which NHY's ORO is relying on to establish, staff, and maintain the Host Special Facility and the Congregate Care Centers is the ARC, yet no ARC resources whatsoever were tested in Massachusetts during this Exercise. This is not an excusable defect in this Exercise. While Appendix E does not require testing those parts of a plan which are not "reasonably achievable without mandatory public participation," *id.* at IV.F.1., this is not such a part. The establishment, staffing, and maintenance of the Host Special Facility and Congregate Care Centers was clearly reasonably achieved without mandatory public participation. All that was needed was the ARC; no member of the public needed to be involved. The ARC's absence alone constitutes a fundamental flaw in the Exercise, and it cannot qualify as a full participation exercise. Furthermore, there is no reasonable assurance that in the event of an emergency at Seabrook the ARC can, without any prior planning or preparedness, mobilize the staff and resources needed to establish the Congregate Care Centers and Host Special Facility in a timely fashion.

G. During the Exercise, school administrators, special facility administrators, and hospital administrators were not evaluated at all to assess how knowledgeable and prepared they are to implement appropriate sheltering and evacuation procedures for each of their facilities. The SPMC relies primarily on these administrators to perform these functions, assisting only in the provision of transportation resources if such resources are needed. During the Exercise, these administrators were not even contacted by FEMA evaluators and questioned voluntarily regarding whether they have the knowledge, plans, and capability to implement what will be required of them and their staffs in a real emergency. By using at least a questioning/interview process, some voluntary assessment of their sheltering and evacuation capabilities could have been achieved. This same questioning/interview process was used by FEMA evaluators during the Exercise to partially evaluate other important emergency responders. For example, Traffic Guides were questioned very briefly to assess their knowledge of their procedures. This technique would have been useful in assessing the administrators as well. Participation in answering these questions need not have been considered mandatory for the school, hospital, and other special facility administrators. While some may have refused to answer FEMA's questions regarding the state of their preparedness, there is every reason to believe that most would have been quite willing to speak to FEMA: Those who support Seabrook and are prepared would want FEMA's

evaluators to know this just as those who oppose Seabrook and are not prepared would want FEMA to note this as a deficiency. Those administrators who are neither for nor against Seabrook would have no reason not to tell FEMA about their preparedness either. The only reason FEMA may be reluctant to voluntarily question school, hospital, and special facility administrators is that it senses correctly that there is a general unpreparedness in these facilities and does not want to document how gravely inadequate things are. This is hardly a valid reason for the total lack of any evaluation of these administrators during the initial "full participation" exercise.

The fact that some of the school administrators work in public schools cannot justify an absence of any evaluation of them either. First, the exemption from a full participation exercise for state and local governments is not an absolute exemption but one which expands or contracts its coverage "to the extent that" non-participation is realistically expected. See 10 CFR Part 50, App. E, par. IV.F.6. As noted above, participation in a voluntary questioning/interview would have been expected. Second, public schools in Massachusetts are governed by school committees which are independent of local city and town governments except as a source of funding. Thus, in a "full participation" exercise, their participation is not excused by 10 CFR Part 50, App. E, par. IV.F.6. Third, although one need not test parts of the SPMC that are not "reasonably achievable without mandatory public participation," *Id.* at IV.F.1, some assessment of the preparedness of these administrators is reasonably achievable through voluntary questioning/interviewing.

Absent such an evaluation of these key administrators for schools, hospitals, and other special facilities, the Exercise had insufficient scope to base a finding that adequate protective measures can and will be taken for school children, hospital patients, nursing home residents, and those in other special facilities.

#### Applicants' Position

Applicants do not object to the admission of this convention.

As to the language in the last two sentences of the first paragraph of Basis G, however, this allegation of a federal agency cover-up is in fact a libel. It should be stricken.

Furthermore, Basis G takes issue with the FEMA evaluation, not what FEMA evaluated. To the extent that the contention takes issue with federal agency review of the exercise, it is not a litigable contention. "[I]n an operating license proceeding . . . , the applicant's license application is in issue, not the adequacy of the staff's review of the application. An intervenor . . . may not proceed on the basis of allegations that the staff has somehow failed in its performance." Louisiana Power & Light Co. (Waterford Steam Electric Station, Unit 3), ALAB-812, 22 NRC 5, 56 (1985), quoting Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-728, 17 NRC 777, 807, review declined, CLI-83-32, 18 NRC 1309 (1983).

Any order admitting this contention should also make clear that Bases A and D are not proper bases for the contention. As to Basis A, there is no regulatory requirement that the testing of the siren system be exercised, Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), ALAB-852, 24 NRC 532, 546 (1986), and, furthermore, even if the allegations were true, they would not provide the requisite basis for the contention. Basis D should be rejected as non-litigable because its concern with public information is not related to the exercise.

MAG EX-3

In the circumstances in which a significant portion of the EPZ lies within the jurisdiction of non-participating governments, the NRC will review and evaluate the level of preparedness resulting from the formulation of utility-only plans. 10 CFR 50.47(c)(1). This review "may result in the Commission declining to issue an operating license." Id. An operating license "may be issued if the applicant demonstrates to the Commission's satisfaction that:

(iii) The applicant's emergency plan provides reasonable assurance that public health and safety is not endangered by operation of the facility concerned. To make that finding, the applicant must demonstrate that . . . adequate protective measures can and will be taken in the event of an emergency. Id.

The prospective finding that is necessary for full-power operation -- that adequate protective measures will be taken -- is not supported by the June 1988 exercise in the absence of: (1) any participation in the exercise by the relevant governments whose necessary involvement (in one form or another) at the time of an actual emergency is not disputed by the Applicants<sup>9</sup>; and/or (2) any attempt to demonstrate the capacity of the non-participating governments to implement the SPMC (other than in pure Mode 2) without any preplanning, training, or familiarity with that plan; and/or (3) any attempt to demonstrate that the ORO could effectively accommodate a best efforts response by the non-participating governments which involved not mere delegation of authority but actual concrete efforts to protect the public. In the absence of any test of these capabilities -- which individually and collectively capture the essence of the Commission's "realism doctrine" -- the June 1988 exercise was fundamentally flawed and its results will not support a reasonable assurance finding. Instead of testing the SPMC in pure Mode 2 (which is a planner's fiction to avoid the difficult issues of coordination and accommodation) the exercise should have recognized:

the reality that in an actual emergency, State and local government officials will exercise their best efforts to protect the health and safety of the public . . . [and] determine[d] the adequacy of that expected response, in combination with the utility's compensating measures, on a case-by-case basis . . . . 10 CFR 50.47(c)(1).

[start footnote 9] This statement should not be misread as an impermissible challenge to 10 CFR Part 50, Appendix E,

¶ IV.F.6. An exercise is not flawed per se simply because non-participating governments do not participate. However, when a significant portion of an EPZ has no participating governments at either the local or higher level and it is undisputed that these governments as a matter of fact and law hold the key to what would actually occur during an emergency (because the utility is unable unilaterally to implement its own plan) then their failure to participate in that exercise makes any prospective finding about what protective measures will be taken too speculative to support licensing. [end footnote]

#### Applicants' Position

This contention should be excluded for the same reasons the Applicants objected to MAG EX-1. The contention has as its only basis matters which were caused by the refusal of The Commonwealth and its political subdivisions to participate. There is no requirement that the exercise test matters which are made impossible to test by the refusal of the State or local governments to participate. See NUREG-0654, Rev. 1, Supp. 1, II.N.6. Despite the disclaimer in footnote 9 at page 24 of his filing, the fact is that Mass AG's contention is a challenge to the regulations and should be rejected as such. See 10 CFR § 2.758.

#### MAG EX-4

The June 1988 exercise for the Massachusetts portions of the EPZ tested Mode 2 of the SPMC. As such the exercise was fundamentally flawed because the delegation of authority by the Commonwealth to a foreign bankrupt corporation simulated during the exercise is unlawful. Thus, the exercise can not (sic) support the finding necessary for full power operation pur uant to 10 CFR 50.47(c)(1).

#### Applicants' Position

This contention should be excluded. The contention is nothing more or less than a revisit of the legal authority

questions raised by the Mass AG contentions which have been admitted for the purpose of allowing litigation of those issues. See JI Contention 44A and B. Thus the contention should be excluded as duplicative of a contention already in litigation.

#### MAG EX-5

The June 1988 exercise for the Massachusetts portions of the EPZ tested Mode 2 of the SPMC. As such the exercise was fundamentally flawed because it failed to account for the best efforts responses of State and local governments which are to be assumed under 10 CFR 50.47(c)(10) in evaluating the SPMC. If such "expected response" is to be assessed on a case-by-case basis "in combination with the utility's compensating measures", id., then an exercise that does not permit such an assessment is irrelevant to a finding pursuant to 10 CFR 50.47(c)(1).

#### Applicants' Position

This contention should be excluded for the same reasons as expressed above with respect to MAG EX-3. The complaint arises out of the refusal of Massachusetts and its political subdivisions to participate. Therefore it is a challenge to the regulations, in particular, 10 CFR Part 50 App. E § IV.F.6 and 10 CFR § 50.47(c)(1).

#### MAG EX-6

To the extent that FEMA has engaged in a review and evaluation of utility- or licensee-only emergency preparedness and has purported to make findings as to the adequacy of that preparedness, FEMA has acted outside and beyond its legal authority and any such FEMA review and evaluation and any such findings that result from or follow upon such review and evaluation, which are represented as findings of that agency, are a legal nullity and have no legal effect or significance in this proceeding or otherwise.

A. FEMA has reviewed the SPMC and the June 1988 exercise pursuant to its regulations set forth at 44 CFR 350 (the "350 Process"). However, those regulations expressly



limit FEMA to the review of State and local governmental off-site emergency plans:

The regulation in this part [44 CFR 350] does not apply to, nor will FEMA apply any criteria with respect to, any evaluation, assessment or determination regarding the NRC licensee's emergency plans or preparedness, nor shall FEMA make any similar determination with respect to the integration of off-site and NRC licensee emergency preparedness except as these assessments and determinations affect the emergency preparedness of State and local governments. The regulation in this part applies only to State and local planning and preparedness with respect to emergencies at commercial nuclear power facilities and does not apply to other facilities . . . .  
10 CFR 350.4 (emphasis added).

B. The authority cited by FEMA in support of its review of utility off-site plans is twofold:

1. FEMA refers to 44 CFR 350.3(e) which provides:

Notwithstanding the procedures set forth in these rules for requesting and reaching a FEMA administrative approval of State and local plans, findings and determinations on the current status of emergency preparedness around particular sites may be requested by the NRC and provided by FEMA for use as needed in the NRC licensing process. These findings and determinations may be based upon plans currently available to FEMA or furnished to FEMA by the NRC through the NRC/FEMA Steering Committee.

This provision was part of the 44 CFR 350 regulations adopted by FEMA on September 28, 1983. 48 Fed. 44332, 44337 (September 28, 1983). The provision entitled "Exclusions" quoted earlier (350.4) was (and is) the immediately following regulation.

2. FEMA and NRC signed a Memorandum of Understanding on April 18, 1985 ("1985 MOU") 50 Fed Reg 15485. The purpose of this MOU was to provide the "basis and conditions for interim findings" pursuant to 44 CFR 350.3(f):

Notwithstanding the procedures which are set forth in 44 CFR 350 for requesting and reaching a FEMA administrative approval of State and local plans, findings and determinations on the current status of emergency planning and preparedness around

particular sites, referred to as interim findings, will be provided by FEMA for use as needed in the NRC licensing process . . . . An interim finding provided under this arrangement will be an extension of FEMA's procedures for review and approval of off-site radiological emergency plans and preparedness set forth in 44 CFR 350. It will be based on the review of currently available plans and, if appropriate, joint exercise results related to a specific nuclear power plant site. 1985 MOU, 50 Fed Reg 15485, 15486.

FEMA's regulations, therefore, do permit "interim findings" (1985 MOU) which reflect its evaluation of the "current status" (44 CFR 350.3(f)) of preparedness. However, the regulatory context makes clear that this additional procedure was aimed at delays in NRC licensing caused by FEMA's normal 350 review of State and local governmental plans. Section 350.3(f) and the 1985 MOU do not extend FEMA's jurisdiction to include evaluation of utility off-site plans or otherwise modify 350.4 limitations. This conclusion follows from the following:

a. The exclusionary language of 350.4 was adopted by FEMA at the same time that provision was made in 350.3(f) for findings on the "current status" of planning.

b. The MOU at no point mentions or refers to utility off-site plans. Instead, it speaks of "plans currently available to FEMA or furnished to FEMA by the NRC/FEMA Steering Committee." 50 Fed Reg 15485, 15486 n.1. Thus, the MOU simply took official notice of the fact that FEMA had been receiving State and local plans (from both utilities<sup>10</sup> and governments) for review without following the formal request procedures set forth at 44 CFR 350.7. Section 350.7(d), for example, requires a state's application for formal FEMA review to include a statement that "in the opinion of the State, [the submitted plan is] adequate to protect the public health and safety . . . ." The MOU did not (and could not) extend FEMA's review to utility off-site plans in light of the exclusionary language at 350.4.

[start footnote 10] Utilities had prepared off-site plans on behalf of State and local governments which these governments affirmed as their own and some of these plans were submitted to FEMA by the utilities acting for the State and local governments. As David McLoughlin explained during Congressional hearings in May 1987:

There are places in the United States where a utility has done the great bulk of the planning itself. It has the [sic] been adopted by State and

local governments and there has been a lot of training to bring State and local people up to the ability to perform the operations that are outlined in the plan.

These plans were reviewed pursuant to 350.3(f) and this review did not contravene 350.4 because the State and local governments adopted these utility plans as their own. [end footnote]

c. The language of the MOU makes clear that its focus was the procedural aspects of FEMA review of State and local government plans and not the substantive issue of whose plans would FEMA review:

If in FEMA's view the plans [being reviewed pursuant to the 1985 MOU] that are available are not completed or are not ready for review, FEMA will provide NRC with a status report delineating milestones for preparation of the plan by the offsite authorities . . . .  
50 Fed Reg 15485, 15486.

The FEMA reports will be a part of an interim finding on emergency preparedness; or will be the result of an exercise conducted pursuant to FEMA's review and approval procedures under 44 CFR Part 350. Exercise evaluations will identify one of the following conditions:  
. . . (2) there are deficiencies that may adversely impact public health and safety that must be corrected by the affected State and local governments in order to provide reasonable assurance that the plan can be implemented . . . .

In short, no legal authority supports FEMA's review of the SPMC and the June 1988 exercise and its findings qua agency findings are a nullity.<sup>11</sup>

[start footnote 11] That FEMA has some concern over these issues is clear from the following:

(1) In September 1987, a draft proposed amendment to 44 CFR 350 was circulated by FEMA to all state emergency management directors. FEMA propose, inter alia, to amend the exclusionary language of 350.4 as follows:

The regulation in this part does not apply to, nor will FEMA apply any criteria with respect to any evaluation, assessment or determinations regarding the NRC licensee's on-site emergency plans or

preparedness, nor shall FEMA make any similar determination with respect to the integration of offsite and NRC licensee on-site emergency preparedness except as these assessments and determinations affect the emergency preparedness of State and local governments. [The] This regulation [in this part] applies [only to State and local planning and preparedness with respect to emergencies at commercial nuclear power facilities] and does not apply to other facilities . . . .  
(words added by FEMA are underlined, words deleted by FEMA are bracketed)

(2) The November 1987 Draft NUREG-0654, Supp 1 at 1 stated:

It [Supp 1] is consistent with the provisions of the FEMA/NRC [1985 MOU], wherein the parties agreed to evaluate plans prepared by utilities on behalf of State and local governments. (emphasis supplied)

The final version of this same sentence reads:

It [Supp ?] is consistent with the provisions of the FEMA/NRC [1985 MOU], wherein the parties agreed to evaluate plans prepared by utilities and provided to FEMA by the NRC.

As noted, the 1985 MOU contains not one reference to utility offsite plans. [end footnote]

#### Applicants' Position

This contention should be excluded. It is nothing more than a legal argument (and an incorrect one, as shown above in Section I) as to the scope of the authority of FEMA. Moreover, to the extent that the Board accepts Mass AG's argument that FEMA's review and evaluation "are a legal nullity and have no legal effect or significance in this proceeding or otherwise," the Board must reject all contentions or bases that rely upon FEMA's evaluations. E.g., MAG EX-9B and C; MAG EX-15; MAG EX-18C, D, and F; SAPL

EX-1A; SAPL EX-2; SAPL EX-3; SAPL EX-9. A contention cannot be based upon a "nullity".

Applicants further object to this contention on the grounds that it amounts to no more than an attempt to introduce a late-filed contention without meeting the five-factor test of 10 CFR § 2.714(a)(1). As a legal argument, it should have been raised before the exercise, when SPMC contentions were due.

#### MAG EX-7

The SPMC and the June 1988 graded exercise of the SPMC were reviewed and evaluated by FEMA. The findings of FEMA should be given no weight as agency findings in this proceeding.

A. Unlike FEMA findings and determinations as to the adequacy of State and local government emergency (sic) plans, no rebuttable presumption attaches to a FEMA review of utility offsite preparedness. Cf. 50.47(a)(2) with 50.47(c)(1).

B. FEMA's review of the state of preparedness for the Massachusetts EPZ was expressly based on three "assumptions." One of these assumptions -- that the non-participating governments will follow the SPMC -- should not be made unless and until the SPMC is determined to be an adequate plan. Another assumption -- that the governments will "have the resources sufficient to implement those portions of the utility offsite plan where State and local response is necessary" (Supp 1 at 2) -- completely undermines the integrity of any FEMA determination regarding the adequacy of offsite preparedness. FEMA has simply assumed that the governments' resources will be adequate in the event that the SPMC is "generally followed" in accordance with Mode 1 and mixed-delegation Mode 2. Yet, one key issue in this proceeding, at least as to the adequacy of the implementation of the SPMC in any mode other than pure Mode 2 (which is unlawful), is the capacity of the governments to implement that plan. FEMA has simply assumed adequate governmental resources exist.

C. FEMA has expressly disclaimed that it is the lead agency in the review of utility offsite emergency plans. The NRC and not FEMA drafted the key assumptions in Supp 1. In a

memorandum from David McLoughlin to Victor J. Stello dated October 16, 1987, McLoughlin stated:

I would like to stress the importance of having written instructions prepared by the Nuclear Regulatory Commission, before beginning the project [the development of utility plan criteria, i.e. Supp 1] which state specifically the assumptions upon which the plan review would be conducted.

In response to this request, Frank Congel, NRC Director of the Division of Radiation Protection, wrote to Richard Krimm, Assistant Associate Director at FEMA on October 21, 1987:

This responds to the understanding reached at the October 15, 1987 meeting between FEMA and NRC, and reflected in Dave McLoughlin's October 16, 1987 memorandum to Victor Stello. We agreed that the NRC would provide written instructions which state specifically the assumptions upon which utility offsite plan reviews would be conducted by FEMA  
. . . .

As we further agreed, any FEMA findings on the adequacy of utility offsite plans will necessarily include the caveat that FEMA was requested by the NRC to use the above assumptions in evaluating a utility offsite plan.

Finally, in response to comments on Supp 1 filed by the Mass AG on March 3, 1988 asserting that FEMA was abdicating its function as lead agency by permitting the NRC to draft its criteria for it, FEMA stated quite openly:

FEMA leadership responsibilities in regard to offsite planning extends to offsite planning of State and local governments. In the case of offsite planning by utilities, NRC has the lead and FEMA's role is one of cooperating with the NRC.

Thus, it is not appropriate for FEMA to appear before the NRC as an independent expert agency in this proceeding when its findings are the result of evaluative standards established by the NRC and not by it. The result is an exercise in agency ventriloquism.

D. FEMA has recognized and stated that State and local governmental participation is essential for an adequate level of offsite preparedness to exist. In an internal memorandum commenting on the then-proposed NRC amendments to 10 CFR 50.47, FEMA expert staff comments were explicit on this point:

FEMA has consistently and repeatedly taken the position that such participation [state and local] is essential to a finding of adequacy of offsite preparedness . . . . Wherever the changed regulatory philosophy toward preparedness would be applied, the integrated onsite-offsite approach, which has been considered essential to adequate preparedness, would be put in jeopardy. Next in importance to State and local government cooperation in offsite planning and preparedness, is the interaction that must take place between the licensee and offsite authorities and the general public. This interaction is best illustrated in the required joint exercises, which would be waived under the NRC proposal.

FEMA's comments filed with the NRC on the then-proposed rule in April 1987 stated:

From this experience [February 1986 Shoreham exercise], FEMA concludes that the practice of simulating governmental participation has several important consequences. First, the real-time interaction between officials and other emergency responders is not realistically tested. That compromises the quality of the findings which FEMA is able to make about the preparedness of those other responders. Secondly, the preparedness of the state and local governments is not demonstrated in any meaningful sense. As a result, the conclusions that FEMA would be called on to make about the probable response of state and local governments would be based largely on conjecture. FEMA is very reluctant to certify that adequate protective measures can be taken where any finding would be based on such a degree of conjecture . . . . The lack of training which would, in all probability, follow from holding exercises without State and local government participation would also increase the risk to the population of the affected emergency planning zones.

Thus, to the extent that FEMA submits findings in this proceeding certifying that offsite preparedness is adequate, those findings either: contradict the considered position of FEMA based on its experience, or simply reflect the assumptions made by FEMA at the direction of the NRC. In the latter case, FEMA has simply introduced the NRC's "assumptions" to avoid the element of conjecture concerning the probable response of State and local governments and the overall adequacy of off-site planning.

### Applicants' Position

This contention should be excluded for the same reason as set forth with respect to MAG EX-6. Again this is an incorrect legal argument as to the weight to be given to FEMA's findings upon the exercise.

To the extent that the contention takes issue with federal agency review of the exercise, it is not a litigable contention. "[I]n an operating license proceeding . . . , the applicant's license application is in issue, not the adequacy of the staff's review of the application. An intervenor . . . may not proceed on the basis of allegations that the staff has somehow failed in its performance." Louisiana Power & Light Co. (Waterford Steam Electric Station, Unit 3), ALAB-812, 22 NRC 5, 56 (1985), quoting Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-728, 17 NRC 777, 807, review declined, CLI-83-32, 18 NRC 1309 (1983).

### MAG EX-8

The results of the Graded Exercise reveal that there exist fundamental flaws in the Seabrook off-site emergency plans submitted by the State of New Hampshire and the Applicants with respect to planning standards 10 CFR 50.47(b)(6) and (b)(8) and the corresponding requirements of NUREG 0654, Supp 1 at II.F.1.b and c, and 2 and H.10. As a result, exercise objective 4, which requires that the exercise "[d]emonstrate the ability to communicate with all appropriate locations, organizations and field personnel," GM EX-3 at 11, was not met and no finding of reasonable assurance can be made pursuant to 10 CFR 50.47(a) and (c)(1).

Exercise results which individually and/or collectively provide basis for this contention include the following:



A. The ORO EOC relied on commercial telephone lines to conduct most if not all ORO liaison activities, all of the communications between and with contract service providers and their personnel, and communications with schools and other facilities. All of the telephone lines at the Salem Staging Area were commercial telephone lines. Because commercial telephone lines should be assumed to be overloaded shortly after the onset of an accident at Seabrook, the exercise did not establish adequate means of communication.

B. The communication net linking the ORO field personnel with the EOC and with each other was demonstrated to be completely inadequate. Information flows were delayed and accuracy was compromised by the vertical communication chain required by the SPMC. Further details in support of this contention are set forth at MAG EX-13. ORO field personnel including VANS drivers, traffic guides, transfer point dispatchers, route guides, radiological field teams and others, were using hand-held, battery powered 8 channel radios. Radio communications were demonstrated to be deficient:

1. The EMS radio, the primary communications link with mobile medical support facilities like ambulances and vans, malfunctioned and could transmit but not receive messages. This indicates that ORO had not provided adequate inspection and inventory check for critical emergency communications equipment. No immediately accessible back-up communications system was available at the Staging Area and portable radios had to be produced (from an unidentified source in an unidentified manner) and provided to the one ambulance and three vans involved in the Exercise. (Obviously, had the actual emergency number of ambulances and vans been involved this procurement task would have been measurably greater.) Dispatch of one ambulance was delayed 20 minutes while these portable radios were procured. (However, this does not indicate that it took only 20 minutes to procure them.) The vans were not "delayed" only because they were not ordered out until after the substitute radios were procured. But one van did not establish appropriate radio contact until more than 80 minutes after it had been dispatched. That van was instead communicating on the wrong channel with the Evacuation Support Dispatcher ("ESD") but neither the van nor the ESD notified the appropriate persons (including each other) that the communication linkage was inappropriate. The other two vans and the ambulance which were using the replacement radios were restricted by the shorter range that these substitute radios had in comparison with the EMS that had been malfunctioned.

2. Radio communication between the ESD and traffic guides was sporadically interrupted by breaks in

reception. Communications between road crews and transfer points were delayed by other radio traffic. Apparently, road crews could not communicate directly with the ESD and, in one instance, the ESD was informed using a traffic guide's radio that an additional wrecker was necessary.

3. Radio communication between the Staging Area and school evacuation buses was limited to these periods when the buses were within range. Several bus yards were out of that range and these buses could not be reached for hours. The same problem existed in trying to communicate with the buses for day care centers and the transit dependent.

4. Other ORO field personnel had only sporadic communications with the Staging Area because of channel overloading and intermittent reception. When route guides (sic) and bus drivers were told to ingest KI at 15:45, 4 of 11 did not ingest KI; 4 of 7 buses for the transit dependent did not receive this transmission.

C. Communications established with the non-participating governments were also demonstrated to be inadequate:

1. No verification methodology was used in communicating with the Governor's Representative (FEMA Control Cell). As a result, the exercise did not demonstrate that ORO could establish communications with the governor.

2. The exercise did not demonstrate that ORO could establish emergency communications with non-participating governments either by means of emergency telephone communications or any back-up system. Instead of attempting to establish communications with emergency personnel in each community, ORO simply contacted the FEMA Control Cell. Thus, the exercise fails to establish that during an actual emergency communications can be established in the absence of access by ORO to the emergency radio frequencies used by the non-participating governments.

3. Significantly, the exercise failed to demonstrate that ORO emergency communications are compatible with those systems used by the non-participating governments. In fact, the Applicants made representations to the Mass AG that Massachusetts police radios and other forms of communication might interfere with ORO communications. Thus, in the event that the governments respond by employing their own personnel and communications equipment, there is no reasonable assurance that any integrated communications will exist or that the ORO system itself will continue to be effective.

D. In further support of this contention, the following contentions and bases are referred to and incorporated by reference: 9, 10, 11, 12, 13.

#### Applicants' Position

No objection. In any order admitting the contention, however, the Board should make clear that Basis A presents no litigable issue about the exercise, but only makes the same point as JI Contention 30. Also, it should be made clear that Basis D attempts impermissible repetition: contentions cannot be used to support contentions.

#### MAG EX-9

The Exercise revealed a fundamental flaw in the SPMC in that NHY's ORO demonstrated that it did not have the ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after initial alert and notification has occurred, as required by 10 CFR 50.47(b)(5) and (6) and the guidance set forth at NUREG 0654 (Supp 1) at II.E.3-8, and F.1. As a result, exercise Objective 13 was not met and the exercise will not support a finding that adequate protective measures can and will be taken in the event of an emergency.

The following bases both individually and collectively provide support for this contention:

A. The EBS messages and the News Releases actually generated during the Exercise were confusing and contained conflicting information. An average member of the public who had heard over the radio or on television the ORO News Releases and EBS messages in sequence would have come away with all kinds of unanswered questions. Confusion would have been generated, for example, regarding who/what ORO was, what had happened to town police and Civil Defense, what the role of the state was, what it meant that ORO was "activated," what it meant to leave the "beach areas" ("How far should I go?" "What if I live there?"). Much confusion would have been generated about the school children, what schools were doing, and what parents should or should not do (as is more specifically described in MAG EX-10). There was even confusion generated on Day 2 of the Exercise with respect to what people would be let into the EPZ to care for animals. Much confusion was also generated on both days of the

Exercise due to the conflicting nature of the ORO and New Hampshire EBS messages and news releases.

B. The EBS messages and news releases were not accurate in many respects. For example, there was misinformation about the Newburyport schools in ORO EBS #3, as FEMA has noted. Also, there was a serious mistake in News Release #15, which said that the overturned lumber truck (described in more detail in MAG EX-13) was blocking traffic on southbound I-95.

C. The news releases were not timely in many instances. Events were repeatedly not reported at the Media Center until long after they had occurred, as was the case with the overturned lumber truck, which was not reported until long after it had began (sic) blocking traffic. Messages and information were not forwarded promptly from the EOC to the Media Center and the Joint Telephone Information center, as can be seen from the times noted on many of the player generated material. See also FEMA report at 217. In addition, and perhaps most serious, ORO generally lagged behind New Hampshire in issuing PARs to the public, as can be seen clearly in the time lines contained in the FEMA report. On Day 2, for example, it took a very long time after the State of New Hampshire for ORO to get an EBS message out regarding farmers re-entering the EPZ to care for livestock.

D. The timing and content of ORO's public information was not coordinated in any systematic way with the public information (sic) being released by New Hampshire. This would have led to further confusion and mistrust. Comparison of the messages released at about the same time by NH and ORO reveal numerous differences that needed to be resolved and were not. The process for coordinating the information released was shown to be ad hoc and therefore inadequate.

#### Applicants' Position

No objection.

#### MAG EX-10

The Exercise revealed a fundamental flaw in the SPMC in that NHY's ORO demonstrated that it did not have the ability and resources necessary to implement appropriate protective actions for school and day care children within the plume EPZ, as required by 10 CFR § 50.57(b)(10) and the guidance set forth in NUREG-0654, Rev. 1, Supp. 1, §§ J.9 and J.10.g. Thus, ORO failed to satisfy Exercise Objective 19, and this precludes a finding of reasonable assurance that adequate protective measures can and will be taken in the event of a

radiological emergency at Seabrook, as required by 10 CFR § 50.47(c)(1).

Exercise results which individually and/or collectively form the basis for this contention include the following:

A. Over the course of Day 1 of the Exercise, ORO demonstrated that it was unable to notify and exchange information with all the schools and day care centers in a timely fashion to keep pace with the changing developments of the emergency and to implement timely protective actions. Except in one instance (see B, below), the hundreds of phone calls made to schools and day care centers during the exercise were made to the FEMA Control Cell. FEMA Control Cell personnel received these phone calls, listened to what the School Liaisons had to say, did not ask to have information repeated, infrequently asked a single question or two, and promptly gave any information sought by the School Liaisons. This allowed the Liaisons to make the calls to the assigned schools at an unrealistically rapid pace that could not be achieved in a real emergency when real school officials would ask a great many more questions than FEMA Controllers did and their responses to the Liaisons questions would not be as readily forthcoming or as brief. In a real emergency, each of these calls would take considerably longer. Moreover, during the Exercise, the phone numbers used by the Liaisons to call the FEMA Control Cell were rarely busy. During a real emergency it must realistically be expected that many dozens of phone calls from concerned parents will flood phone lines to the schools making it probable that School Liaisons will have to spend considerable time making call-backs. Nevertheless, even with the cooperative FEMA Control Cell and the absence of busy school phone lines during the Exercise, ORO's School Liaisons were not able to make their calls and exchange information with schools and day care centers at a rapid enough rate to keep schools adequately informed in a timely fashion of changing developments and PARs. The Exercise thus demonstrated that each School Liaison has too many calls to make, and too much information to exchange, to keep all schools adequately informed in a timely fashion in a real emergency.

B. One real school in the Massachusetts portion of the EPZ actually was to be contacted on the Day 1 of the exercise and a real, rather than a simulated, exchange of information was to occur. When the Amesbury School Liaison first called this school at 11:17 a.m. to notify it of the Alert and exchange information, the phone went unanswered. He did not call back until 1:50 p.m. when he was in the process of making his second round of calls to the Amesbury Schools. Again he received no answer. No further attempts were made to call the school; no call was made to the phone company or

elsewhere to confirm the accuracy of the phone number; and no route guide was dispatched to see what the problem was at the school. In the event of a real emergency, ORO needs to anticipate both that some school officials will be away from their phones momentarily and that school phones generally will often be busy. In either case call-backs need to be made promptly to ensure that some schools do not get bypassed. During the Exercise, ORO demonstrated that it does not have a system in place for ensuring that call-backs can or will be made promptly or, where schools which are expected to be in session have phones which go unanswered or are repeatedly busy, that timely efforts can or will be made to contact the schools using alternative means.

C. The ORO demonstrated that it could not make a school PAR and communicate it to the schools in a timely fashion, thereby effectively precluding implementation of the chosen protective actions for a significant number of school children. While New Hampshire was able to make a protective action decision to have its children "stay in school" at 11:52 a.m. (immediately after the SAE was declared), ORO's decisionmakers did not have a serious discussion focussing on the school PARs until 1:25 p.m., just minutes before the General Emergency was declared. In that discussion at 1:25 the ORO Director recognized the need to quickly come to a decision on a PAR for schools, because he knew the schools had normal closing times which were generally between 2:15 and 3:00 p.m. Yet he decided to postpone making a PAR decision at 1:25. At 1:32 a General Alert diverted ORO's focus on the schools. Finally, at about 2:05 p.m., a decision on a school PAR was made: hold the children in the schools rather than releasing them at the normal times. By 2:05 p.m., however, ORO had left itself too little time to notify the Merrimac schools of this PAR before it released its students at 2:15. ORO's own (sic) actions and delays thereby precluded it from implementing this PAR for the Merrimac schools. So the PAR was issued only to the schools in the remaining five communities. But, again, ORO could not act quickly enough and notification was delivered too late to four (4) of the schools in Newburyport to prevent them from releasing their students at the normal time. Thus, because of ORO's delays in making a school PAR and in communicating it to the schools, ORO was unable to implement its recommended PAR in all of Merrimac and most of Newburyport.

D. Thereafter, ORO's efforts to communicate its PAR to the schools and parents, were uncoordinated, confusing, conflicting, and likely would have resulted in chaos at the schools and day care centers. As a result, there is no reasonable assurance that ORO's recommended protective actions could have been implemented. First, ORO's leadership failed to explain the specifics and the logic of the "hold

the students" decision to its own staff including the School Coordinator, the School Liaisons, and ORO's personnel in the Media Center. At 2:15, the School Coordinator told all the School Liaisons (except the one for Merrimac) to call their respective schools (including day care centers) and tell them "that the children are to stay at school until parents pick them up or we evacuate them." However, School Liaisons were also instructed to find out whether the schools wished to retain and use their own buses or use ORO buses later on. Thus, when the School Liaisons called the schools from about 2:15 to 3:15 p.m. after the declaration of the General Emergency, the message given about PARs was confusing and lacking in logic. No instructions were given to school administrators about how to implement or whether to implement sheltering for the students. Indeed, it was not even clear whether the schools were evacuating, sheltering, or sheltering now and evacuating later. If schools indicated that they could not retain their buses, Liaisons were unable to estimate when ORO buses might be able to get to them.

Difficulties in implementing ORO's school PAR would have resulted from these confused, illogical communications to the schools and day care centers. For example, when the Amesbury School Liaison called the Horace Mann School at 2:54 p.m. and found that the school was then in the process of loading students onto its buses, the Liaison told school officials there to unload the buses and get the children back into the school "due to the release going out to sea." This, of course, makes no sense. It also was not true, for at that time the wind had begun to shift around and to come from the north, blowing the plume toward Massachusetts. If school officials sought out a weather forecast, they would have learned that the wind was soon going to swing around and blow from the east, blowing the plume right at Amesbury. They undoubtedly would have also learned that the Town of Amesbury had been recommended to evacuate. In this situation, in a real emergency, there is no reasonable assurance that Amesbury school officials would have heeded the School Liaison's advice to hold the students.

To make matters worse, conflicting messages were then being given regarding whether parents should or could pick up their children at the schools and what was happening to the students. The School Liaisons (except for Merrimac, which sent its students home) were instructed to tell the schools that the children should be kept in school until parents pick them up or ORO evacuates them. Meanwhile, ORO issued an EBS message (ORO EBS #3) at about 2:20 p.m. which advised parents:

- a. that a radioactive release had occurred;

b. that immediate evacuation is recommended for people in Salisbury and Amesbury and that people in Newburyport, Newbury, West Newbury, and Merrimac was safer if they sheltered in place immediately;

c. that "[a]ll schools within the communities directed to evacuate are being evacuated to the designated Reception Centers for the community in which they are located. Parents should not drive to school to meet their children since schools (sic) are now being evacuated and children are being taken safely by bus directly to their Reception Centers. School children will then be sent to The Host Facility in A [sic] where they may be picked up";

d. that schools "in the communities advised to shelter are taking similar sheltering actions. Officials have instructions for protecting the children or other persons in their care until sheltering is no longer necessary. Parents and relatives are advised not to call the schools or other institutions, nor to drive to the schools to attempt to pick up their children. Community safety will be better protected if the schools are permitted to conduct sheltering activities over the next several hours"; and

e. that "[p]arents with children attending school within Salisbury, Amesbury, Newbury, West Newbury and Newburyport are advised that their children are currently being safely maintained at school, where they will be kept until it is determined that they can be safely moved."

This message was so confusing, contradictory, and misleading that it would have torpedoed any effective implementation of ORO's PAR for the schools and day care centers. Some, but not all, of the problems with this message are as follows:

\* While ORO's School Liaisons were telling schools that parents can pick up students, this message tells parents to stay away and not even call the schools.

\* It instructs the general population of Amesbury and Salisbury to evacuate immediately while telling parents in these towns both (a) that Amesbury school children "are being" evacuated and (b) later in the message, that these same children



are being "kept" at school "until it is determined that they can be safely moved."

\* It instructs the general population in Newburyport, Newbury, and West Newbury to shelter in place immediately while telling parents in these towns that schools are taking similar sheltering actions (a) "over the next several hours" and (b) later on in the message, "until it is determined that they can be safely moved." Besides being confusing, this message is erroneous in that four of the schools in Newburyport were releasing students and sending them home.

\* It instructs the general population in Merrimac to shelter in place immediately but gives parents in Merrimac no information whatsoever about what is happening to their children.

\* For students who are being or may be evacuated, it failed to say specifically where parents may go to meet them and pick them up and when this can occur.

Despite the precaution in the message not to call or drive to the schools, this EBS message given at about 2:20 p.m. is so confusing and inadequate that in each of the six Massachusetts EPZ communities, parents would not have had sufficient information about what actually was happening to their children, and most would either have attempted to call or drive to the schools. Parents' calls would undoubtedly have flooded the schools shortly after 2:20, just when the School Liaisons were calling to inform the schools directly of the PAR to "hold" the students and inquire of their need for buses. The likely result would have been that ORO would have had great difficulty getting phone calls through to each of the schools to inform them of the PARs. Thus implementation of PARs for schools was likely to have been frustrated due to the confusion generated by ORO's 2:20 p.m. EBS message. There is substantial uncertainty regarding what would have happened next. School officials would likely have hesitated, not sure what to do, causing parents, teachers, and the regular bus drivers alike to each consider taking independent, ad hoc, uncoordinated action as each group saw fit. ORO's attempt to resolve the confusion it had created over the school children came belatedly in the form of an EBS message at 4:03 p.m., almost 1½ hours after the first message. It, too, was confusing and came too late to have had any significant impact in resolving the confusion the first message would have created. These Exercise results demonstrate that ORO is unable to coordinate the timing and content of its messages to the schools (through calls from

Liaisons) and parents (using the EBS system) to ensure that PAR implementation is not frustrated by general confusion and chaotic, independent actions.

E. Events during the Exercise demonstrated that, given the absence of school-specific emergency plans, there is no reasonable assurance that school officials will take the appropriate steps to implement proper sheltering techniques in a timely fashion when it becomes necessary to do so. ORO EBS #3 inaccurately stated that school officials "have instruction for protecting the children or other persons in their care until sheltering is no longer necessary." This simply is not the case. While it is true that some EPZ schools were sent a "generic" school plan which contained some very general instructions for sheltering that were not specific to any particular school, the schools have not kept this generic plan. The schools also have no plans or instructions of their own for implementing sheltering, and school officials are not knowledgeable (sic) in this area. The Exercise further demonstrated that ORO does not have the capability to compensate for the lack of existing school radiological plans or information. School Liaisons demonstrated that in an accident like the one simulated here, which was hardly the fastest developing accident within the planning basis of NUREG-0654 advancing from an Alert to a release of radiation in more than four (4) hours, they were pressed beyond their abilities just to notify schools of developments and PARs and briefly answer a quick question or two. They were too busy with these basic functions to take the time to assess whether in fact schools know how to implement proper sheltering techniques and, if not, to offer detailed, adequate advice. Thus, if the Exercise had been a real emergency, the schools would not have been able to implement proper sheltering techniques while waiting for ORO buses to arrive. Since the simulated plume passed over many of the Massachusetts schools before the buses arrived, this failing would have increased dosages to school children.

F. If any conclusions are to be drawn from the extremely limited scope of the Exercise regarding ORO's buses for schools, they are: (1) that ORO cannot estimate accurately the arrival time of its buses at any given school and (2) that there is no reasonable assurance that ORO's fleet of hired buses can get to the schools in a timely fashion. Although the SPMC claims to have agreements with private bus companies to provide 534 buses in a radiological emergency at Seabrook, and that 226 buses would be needed to evacuate the schools, for this Exercise only four (4) buses were tested by being dispatched and driving routes to schools. (Three other buses were dispatched on various routes to day care centers, for which the SPMC specifies only 19 buses may be needed.) Normal mobilization times were not

even tested as all seven buses and drives had been pre-arranged to be ready to go on the day of the Exercise. The extent of play was limited to dispatching and driving the four school buses to four different schools and then to reception centers in the "real" time sequence. The first Exercise problem ORO encountered after dispatching the buses was to generate an estimated time of arrival ("ETA") of each bus for each target school. School officials and the public would demand these ETAs during an emergency, and the FEMA Control Cell sought them here from the School Liaisons. During the Exercise, ORO at first delayed but then finally offered a set of ETAs for buses for each town, but these ETAs were not released publicly in a timely fashion. Events during the Exercise proved these ETAs to be significantly optimistic, and they had to be changed. If the Exercise had been a real emergency and ORO had dealt with the ETAs in this same fashion, it would have created further difficulty in implementing a safe and coordinated evacuation of the schools, because both schools and parents would have lost confidence in ORO's ability to do what it promised it would to, i.e., evacuate the students in a timely fashion. This would have spurred parents and schools to take ad hoc, independent, uncoordinated action regarding the students.

The second bus-related problem ORO encountered was to have the buses drive the prescribed routes on their ORO maps, locate the target schools, and do so in a timely fashion. Although only seven buses were tested (four on routes to schools; three on routes to day care centers), there were a significant number of mistakes made. Even though each ORO bus had a Route Guide on board to assist the driver in following routes, in several instances the drivers were unable to follow the prescribed routes. In one case, a bus ended up on a dead end street in such a position that it took 20 minutes to get out. In some cases the Route Guides made no effort to request that the driver following the prescribed routes. In other instances, Route Guides disregarded their SPMC prescribed routes and improvised other routes. The buses for day care centers actually had difficulty locating several day care centers, and one center was actually missing from the SPMC map. The upshot of all these difficulties is that: first, ORO cannot accurately estimate the bus ETAs as they must to ensure that parents and schools will cooperate with evacuation plans, and, second, based on this very limited sample of buses and the number of routing difficulties encountered, there is no reasonable assurance that buses for any given school can and will arrive in a timely fashion to adequately protect the school children. Here, during the Exercise, because the buses were not able to arrive in a timely fashion, a large number of school children were still waiting in schools for the arrival of the buses when the plume swept over them.

At the root of these problems is the fact that: (a) ORO bus drivers and Route Guides brought in from other towns just are not familiar enough with this area and (b) the area is so lacking in street signs that difficulties and delays of the sort displayed during the Exercise will be inevitable.

G. All of the above-described Exercise problems, missteps, delays, and confused and erroneous communications preclude a finding that there is a reasonable assurance that teachers and day care personnel in the six Massachusetts EPZ communities can be counted on to stay in schools with the remaining children until buses arrive and then to board and ride the buses with the students. If this Exercise had been a real emergency, and ORO had performed just as it did during the Exercise, providing the information to the schools through the School liaisons, EBS messages, and the media that had been provided during the Exercise, there is no reasonable assurance that there would have been sufficient teachers left in the schools to accompany the students on the buses.

#### Applicants' Position

No objection. Any order admitting this contention, however, should make clear that the matters raised in Basis G are not litigable as they are speculative, lack basis, and concern aspects of human behavior already litigated before this Board.

#### MAG EX-11

The Exercise revealed a fundamental flaw in the SPMC in that the NHY ORO demonstrated that it did not have the ability to make appropriate protective action decisions, based on projected or actual dosage, EPA PAG's, availability or adequate shelter, evacuation time estimates, and other relevant factors, as required by 10 CFR §§ 50.47(b)(10) and the guidance set forth in NUREG-0654, Rev. 1, Supp. 1, § J.10.m. Thus, ORO failed to satisfy Exercise Objective 11, and this precludes a finding of reasonable assurance that adequate protective measures can and will be taken in the event of an emergency at Seabrook, as required by 10 CFR § 50.47(c)(1).

Exercise results which individually and/or collectively form the basis for this contention include the following:

A. During the Exercise NHY ORO personnel did not make their own independent assessments, evaluations, judgments or determinations regarding protective action recommendations but merely acted as a conduit, accepting the protective action recommendations received from the Seabrook Station EOF without any meaningful scrutiny being applied to assess their adequacy, and then simply seeking approval to implement them from the (simulated) Massachusetts Governor's representative. By acting in this fashion, which is contrary to the SPMC's procedures for making protective action decisions at Plan § 3.4.2 and the corresponding Procedures sections, the ORO failed to demonstrate that it has the technical understanding, judgment, and ability to assess and weigh all factors relevant to a protective action recommendation and to make appropriate recommendations in a timely fashion on its own.

B. Virtually every one of the protective actions recommended by the NHY's ORO were not appropriate, in light of all relevant circumstances at the time. Other protective action choices were available which were more appropriate and could have achieved significantly greater dose reduction. For example:

(1) Upon the declaration of the Alert at Seabrook Station, ORO demonstrated a fundamental flaw in the SPMC when, after New Hampshire acted to close Hampton and Seabrook beaches, and with a wind blowing from west to east that was expected to shift around to come from the north and later on from the east, NHY's ORO refused to consider a precautionary beach closing of the Salisbury beaches and actively discouraged the (simulated) Governor's representative when he considered making this recommendation. This refusal to consider a beach closing at the Alert turned out to be a mistake, for when the wind later shifted as expected, and the plant began releasing a radioactive plume, the plume drifted across the Salisbury beach areas long before all persons there evacuated.

An earlier beach closing at the Alert stage, rather than at the Site Area Emergency, would have been the more appropriate PAR for another reason as well. Considerations of the "shadow" beach evacuation and the traffic conditions which it will cause in Massachusetts if New Hampshire alone were to close its beaches due to problems at Seabrook, suggest strongly that a beach closing in New Hampshire must be carefully coordinated with and imposed at the same time as a beach closing in Massachusetts. Because this was not done, and New Hampshire closed its beaches well before those in Massachusetts were closed, it would have been impossible later on for the ORO to control the traffic streaming through

Massachusetts from both the Massachusetts and New Hampshire beach areas.

(2) After being notified of the SAE at 11:51 a.m., ORO finally made a protective action recommendation to close the beaches but inappropriately failed to make any early PAR whatsoever for the schools, as New Hampshire did. An early school closing, for example, would have been an appropriate PAR at this stage, at least for those schools with buses available, given all the circumstances known at that time. This PAR would have ensured that students would not have been hit with the radioactive plume that resulted as a direct result of ORO's delayed-school-closing PAR (see (4), below).

(3) After the General Emergency was declared at 1:30 p.m., with a release of radiation minutes thereafter, ORO recommended that Amesbury and Salisbury be evacuated and that the four remaining Massachusetts EPZ communities be sheltered. This PAR, too, was inappropriate. If all relevant factors had been considered and judgment and common sense applied, Newburyport, with its sizeable population, also should have been given a recommendation to evacuate. The SPMC, however, locks ORO into making PARs for Newburyport only when the same PAR is made for Newbury, West Newbury, and Merrimac. The Exercise demonstrates a fundamental need for greater flexibility in shaping appropriate PARs for the Massachusetts communities.

(4) During the General Emergency, with the wind still blowing the plume out to sea but expected to shift around and blow toward Massachusetts, ORO inexplicably made a PAR to hold the school children in school past the normal closing times in all towns except Merrimac. This decision to hold the school children was not only an inappropriate PAR; it was a disastrous one. Given ORO's knowledge of the plant conditions and weather, and all the uncertainties facing ORO at that time, including uncertainties regarding the lack of emergency plans for each school, uncertainties regarding whether the buses relied on by the schools would be available after normal departure times, and the uncertainties about how long it would take ORO's buses to arrive at the schools if those buses were to be used, the appropriate protective action at that time was to close the schools at normal closing times and use the schools' own buses to get the children home as soon as possible. The scope of the disaster created by ORO's inappropriate PAR to delay closing the schools was made apparent when Seabrook's radioactive plume swept over many schools before ORO's buses arrived late that afternoon or early in the evening to pick up the students. The inappropriate PAR to hold the school children may have actually maximized their dose consequences, not minimized them.

(5) ORO's PAR at approximately 4:00 p.m. that afternoon was also inappropriate. At that point ORO recommended that the four (4) remaining towns (Newburyport, Newbury, West Newbury, and Merrimac) evacuate. Prior to this time residents in these towns had been advised to shelter. Given the conditions of the release, the weather forecasts, the ETEs, the uncertainties about how long it would take to get ORO's buses into the towns, and other relevant factors, this PAR should have been given much sooner. As a result, many residents of these communities who could have evacuated prior to the arrival of the plume were unable to do so.

(6) When a 92-year-old bedridden person who could not be evacuated contacted ORO regarding what to do, he was told: "Keep all your doors and windows closed." This individual PAR was totally inappropriate, given the person's physical condition. Assistance should have been offered: first in the form of an ambulance and, if that was refused, then by sending help to implement proper sheltering measures for him.

(7) Traffic heading from Massachusetts to Maine on I-95 was provided with a suggested by-pass route around the EPZ which was inappropriate because (a) the route suggested consisted of a series of highways which do not connect and, if followed, would send travelers right into the EPZ at Portsmouth; and (b) it purported to direct people to Kittery, Maine, to pick up I-95, but Kittery, a border town just across the Piscataqua River from Portsmouth, is much too close to the EPZ to be included on a safe by-pass route. Indeed, in the evening of Day 1 of the Exercise the plume, with still dangerous concentrations of radioactive material, blew directly over Portsmouth into Kittery. Before that happened, when the wind began blowing the plume northward, ORO should have recognized that use of Kittery on a by-pass route was inappropriate. But, ORO failed to change its by-pass recommendation and directed unwary travelers to drive right into harms way.

C. During the Exercise ORO demonstrated that it was unable to make appropriate PARs during the summer beach season because it had no reliable method for determining the size of the Massachusetts beach-area population. ORO's method of checking on the size of the Massachusetts beach population (as was done @ 11:30 a.m.) was to dispatch a helicopter to fly over and assess the size of the population on the beaches. There are numerous problems with this approach, including:

1. Coastal fog was reported on the Weather Status Board. In such circumstances, a helicopter probably would

not fly, and even if it did risk flying, it probably would not see all portions of the beach area; so it would be unable to make the population assessment.

2. Even if the helicopter pilot flew over and observed all the beaches, he has no reliable method for quantitatively assessing the actual size of the total population in the beach areas. Yet, that is what protective action decision-makers need to know, not the number of people out on the sand or in the water. While a pilot may be able to fly over and guess roughly how many people are on a given stretch of beach, he cannot determine how many people are inside cottages, motels, and other buildings. He could not tell ORO whether the beach areas are at 50% of capacity or 85% of capacity, a distinction one needs to know when assessing how long the ETES are for the beach areas that day.

D. The process of deliberation which finally resulted in the selection of a PAR for school children was ad hoc and impromptu and not guided by and pre-set procedures, plans, or criteria, including institution-by-institution ETES. As a result the choice that was finally made was not made in a timely fashion, failed to take into account many relevant factors, and turned out to be a dose-increasing rather than a dose-reducing measure for the children. Thus, the exercise reveals that the SPMC's plans for selecting an appropriate PAR for schools and day care centers is fundamentally flawed in that the plans fail to document an appropriate decision-making process and criteria for selecting the most appropriate PAR for school children.

#### Applicants' Position

No objection.

#### MAG EX-12

During the Exercise, NHY's ORO using the procedures set forth in the SPMC, demonstrated that it does not have the administrative, as well as the physical, means to provide early notification and clear instruction to the populace within the Massachusetts portion of the plume exposure pathway EPZ, as required by 10 CFR § 50.47(b)(5); 10 CFR Part 50, App. E. IV. D; NUREG 0654, Rev. 1, Supp. 1, §§ II.E.E.6, E.7, and E.8. Thus, ORO failed to satisfy Exercise Objective 12, and this precludes a finding of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at Seabrook, as required by 10 CFR § 50.47(c)(1).

Exercise results which individually and/or collectively form the basis for this contention include the following:



A. The only exercise objective for the initial alert and notification system -- Objective 12 -- was not met. Objective 12 required that ORO "[d]emonstrate the ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate state and/or local official(s)." In fact, in each of the three (3) instances on Day 1 of the Exercise when ORO simulated the sounding of the alerting sirens, it failed to begin dissemination of its instructional EBS message within 15 minutes of a decision by the simulated representative of the Governor of Massachusetts. On the first such occasion, after a Site Area Emergency was declared (at approximately 11:46), representatives from ORO contacted a simulated Massachusetts official (the "Governor's representative A") at approximately 12:05, and by no later than 12:07 they had received his concurrence that an EBS message should be issued which recommended a closing of the Massachusetts beaches. Thereafter, further discussion ensued with "A" regarding the transfer of legal authority to ORO and the exact wording of the EBS message. A simulated sounding of the sirens was initiated at approximately 12:22, and a simulated broadcast of the EBS message began no sooner than 12:25. Thus, the simulated dissemination of ORO's first EBS message did not begin within 15 minutes of the decision by "A" to issue such a message.

After the General Emergency was declared, the ORO's second EBS message took longer to begin disseminating than did this first message. After the General Emergency was declared (at approximately 13:30), representatives (sic) from the ORO again contacted the Massachusetts Governor's representative "A", reaching him at approximately 13:47. He was immediately informed of the General Emergency and the ORO protective action recommendations, and after 2-3 minutes, at a point prior to 13:50, "A" made his decision to proceed to issue those PARs to the public. Thereafter, however, a discussion ensued with "A" regarding the exact wording of the EBS message. A simulated sounding of the sirens was finally initiated at approximately 14:17, and a simulated broadcast of the EBS message began no sooner than 14:20. This was at least 50 minutes after the declaration of a General Emergency (with a release of radiation) and at least 30 minutes after a decision by "A" to issue such a message.

ORO's third and last use of the alert and notification system during Day 1 of the Exercise occurred later that afternoon, and again the 15-minute criteria set forth in Exercise Objective 1 was not met. The Governor's representative "A" agreed to an evacuation of the four remaining Massachusetts towns prior to 15:48; a simulated sounding of the sirens was initiated at approximately 15:56; and a

simulated broadcast of the EBS message began no sooner than 16:03.

B. Even if ORO is found to have met exercise Objective 12, i.e., it is found to have demonstrated that it could "begin" dissemination of an instructional EBS message within 15 minutes of a governmental decision, it certainly did not demonstrate that it could "essentially complete" the initial notification of the public within the plume exposure pathway EPZ within about 15 minutes." 10 CFR Part 50, App. E. IV. D. 3 (emphasis supplied). This is the design objective set forth in the regulations. To meet this, the initial EBS message broadcast after each sounding of the sirens on Day 1 of the Exercise had to have been read through once -- at least to the point in each message where the information offered began to be repeated. The first of the three EBS messages described above in Basis A would have taken at least two (2) minutes to broadcast, and the second and third of those messages would have taken at least five (5) minutes each to broadcast. This means that in each instance, the time it took from the moment the decision to alert the public was made to the essential completion of the initial EBS notification significantly exceeded 15 minutes. In its Guidance Memorandum (AN-1) regarding alert and notification systems. (sic) FEMA Action to Qualify Alert and Notification Systems Against NUREG-0654/FEMA-REP-1 and FEMA-REP-10" (sic) states that a:

[f]ailure by offsite authorities to complete the primary alert and notification process within the time frames stipulated in NUREG-0654/FEMA-REP-1, Appendix 3 and FEMA-REP-10 should automatically result in a "deficiency" citation.

FEMA Guidance Memorandum AN-3, p. I-6 (emphasis deleted).

C. The time it took the VANS drivers to drive during the Exercise from their staging areas to their acoustic locations demonstrated that in a fast-breaking accident which moved quickly from an Alert to a Site Area Emergency (which under the SPMC automatically warrants a beach closing), most of the sirens could not be sounded promptly enough to alert the beach area populace and still have time to complete a broadcast of an EBS notification within the prescribed 15-minute period. Travel times for at least the following VANS routes were excessive: VL-1, VL-3, VL-8, VL-9, VL-10, VL-11, VL-12, VL-13 and VL-16S.

D. The total length of time it took during the Exercise from the declaration of the SAE and the GE to the completion of the initial notification of the protective actions recommended in direct response to each of these ECLs

was excessive and, if the Exercise had been a real emergency, would have resulted in the public being placed at significantly greater risk than if the entire process leading to public notification had been accomplished reasonably promptly. Thus, the Exercise demonstrated that there is no reasonable assurance that the public will be notified in a timely enough fashion to take adequate protective measures. Too many physical and administrative steps exist in ORO's public alert and notification process for it to be completed in a timely manner.

#### Applicants' Position

No objection. Any order admitting the contention should make clear, however, that matters raised in Basis D will not be considered. No criteria exists for judging the proper amount of time from General Emergency or Site Area Emergency declarations to notification of the public of the selected protective action recommendations. This is because, inter alia, that time frame encompasses the time for gubernatorial decisionmaking that is unlimited in scope and indeed, in fact, consisted of most of the time in this exercise. Furthermore, the issue of travel times for VANS routes, referenced in Basis C, is currently being litigated before the On-site Board and should not be relitigated here.

#### MAG EX-13

The Exercise revealed that there is no reasonable assurance that NHY's ORO has the organizational ability to control evacuation traffic flow and to control access to evacuated and sheltered areas, as required by 10 CFR § 50.47(b)(10) and the guidance set forth in NUREG-0654, Rev. 1, Supp. 1, §§ J.10.j. and J.10.k. Thus, the ORO failed to satisfy Objective 19, and this precludes a finding of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at Seabrook, as required by 10 CFR § 50.47(c)(1).

Exercise results which individually and/or collectively form the basis for this contention include the following:

A. During the exercise NHY's ORO failed to dispatch and deploy its Traffic Guides in a timely enough fashion after the beach closings in New Hampshire and Massachusetts for them to have arrived at key beach-road Traffic Control Points before the vehicles streaming from the beach areas would have filled up both lanes of Routes 286 and 1A in Salisbury and the Plum Island Turnpike. As a result, if the Exercise had been a real mid-day, summertime emergency, there is no reasonable assurance that ORO would have been able to implement its traffic control strategies and actually control traffic at the time the Traffic Guides arrived at their posts.

The basic facts are as follows: At about 11:00 a.m. New Hampshire sounded its beach sirens and announced that in response to an Alert condition at Seabrook Station the Governor had ordered the closing of the state beaches in Seabrook and Hampton. This announcement would undoubtedly have generated a heavy flow of traffic out Route 286 into Salisbury, Massachusetts, and down Route 1A into Salisbury Beach (due to the delays in establishing the New Hampshire Traffic Control Point at the state line and also due to a "shadow" beach closing evacuation in Salisbury prompted by the closing of the New Hampshire beaches). Thereafter, at 12:22 p.m. ORO sounded its sirens and announced that in response to the declaration of Site Area Emergency the Governor was recommending that persons in the beach and park areas from Salisbury to the southern tip of Plum Island leave those areas immediately. This would have very quickly added to the traffic flowing out of Salisbury on Routes 286 and 1A, and it would have created a heavy flow of westbound traffic on the Plum Island Turnpike. Not until almost one hour later at 1:15 p.m., however, did the ORO dispatch any Traffic Guides to these areas. Thus, ORO Traffic Guides could not have arrived at the key TCPs for these three beach traffic egress routes until approximately 1:45 at the earliest -- almost three hours after New Hampshire had closed its beaches and almost 1 1/2 hours after people in the Massachusetts beach areas were directed to evacuate. By this time in the summer, just a few days before the 4th of July weekend, the seasonal, monthly, and weekly beach transient population is always very high; so even though the Exercise drafters may have postulated a small number of people on the sand and in the water on the day of the Exercise, there is no doubt but that there were tens of thousands of people in the beach areas at mid-day on the day of the Exercise and that cars coming from the beach areas would have formed lengthy queues on Route 286, Route 1A, and the Plum Island Turnpike long before ORO could have implemented any traffic control whatsoever. The combination of any kind of an emergency at Seabrook Station, long traffic queues, and no traffic control

is a prescription for traffic disorderliness, and under these circumstances it is likely that prior to the arrival of ORO's traffic control personnel, vehicles would have filled up both lanes of traffic (inbound as well as outbound) on the only three roads providing egress off the Massachusetts beaches. Furthermore, once two-way flow had been lost, it is highly unlikely that the Traffic Guides, dressed as they were during the Exercise in plain clothes and driving private, unmarked cars, would be able even to drive into the beach areas on these roads to reach their posts, let alone to re-channel the traffic back into one lane by setting up traffic controls that evacuees would follow. Even state and local police would have great difficulty doing so after both lanes of these roads had been converted to outbound flow. Thus, the Exercise reveals a fundamental flaw in the SPMC in that there is no mechanism in place to ensure that traffic controls can and will be implemented prior to the loss of two-way flow on the key egress roads from the beaches.

B. Further indication that there is no reasonable assurance that the NHY ORO has the organizational ability to control evacuation traffic flow came during the Exercise when the ORO issued an EBS message at approximately 2:20 p.m. recommending the immediate evacuation of Salisbury and Amesbury without obtaining either (a) a grant of legal authority to direct traffic and implement their traffic management plan or (b) an assurance from state and/or local officials that they would direct traffic in accordance with the SPMC's traffic management plan. It was not until approximately 3:19 p.m., an hour after the EBS message went out, that ORO sought and obtained legal authority to direct traffic in Massachusetts. No one was assigned to control the evacuation traffic prior to this point. By 3:19 p.m., in the absence of traffic controls, traffic disorderliness throughout the EPZ would have been widespread and intractable, and there is no reasonable assurance that efforts to implement the SPMC's traffic and access control strategies at that point would have been successful, especially by non-uniformed ORO Traffic Guides, who would possess neither the traffic handling skill nor garner the respect normally afforded by motorists to uniformed state and local police officers directing traffic. That ORO sought to obtain legal authority to alert and notify the public to evacuate towns without having obtained either (a) a grant of legal authority to ORO to direct traffic or (b) an assurance from state and/or local officials that they would direct traffic, indicates a fundamental flaw in the SPMC's plans for traffic control, a fundamental lack of common sense by ORO's leadership, a fundamental flaw in ORO's training program, and a fundamental flaw in the SPMC's legal authority delegation process.

C. While the SPMC itself is ambiguous on this point, the observation of the Exercise and the NHY Controller materials for the Exercise revealed that ORO's Traffic Guides at Access Control Points ("ACPs") will actually attempt to stop traffic seeking to enter the EPZ as a step in the process of seeking to "discourage" all but returning commuters and appropriate emergency responders from entering the EPZ during an evacuation. The Exercise also revealed that NHY's ORO intends to activate ACPs during the first few hours of the evacuation process, even on normal workdays when thousands of EPZ residents would be at work outside the EPZ. In situations like this, where ACPs are activated within the first few hours of an evacuation and incoming traffic is actually stopped in the process, extremely lengthy queues will form on most key routes used by returning commuters, and those commuters will experience extremely frustrating and significant delays as they attempt to rush home to gather household members and evacuate with them. As a result, not only will the evacuation process be unnecessarily lengthened significantly, the evacuation time estimates ("ETES") be rendered inaccurate by many hours, and entry into the EPZ by emergency responders be delayed long enough to impact adversely on public health and safety, but high driver frustration levels will result in such widespread traffic disorderliness at ACPs that the Traffic Guides will not be able to control traffic, either inbound or outbound, especially if, as is the case with ORO Traffic Guides, they are not uniformed in the fashion of state and local police officers in Massachusetts and are equipped only with the kind of traffic cones Traffic Guides displayed during the Exercise. These cones are not large enough to deter highly frustrated drivers from running over them.

D. Further indication that there is no reasonable assurance that NHY's ORO has the organizational ability to control traffic flow came during the Exercise when ORO completely mishandled the one (simulated) road impediment which blocked evacuating traffic during the Exercise. At 4:45 p.m. on Day 1 of the Exercise a Controller gave an ORO Traffic Guide at TCP WN-03 (the I-95 interchange with Scotland Road/South Street) a controller message that read as follows:

A major accident involving a truckload of lumber has just occurred. The truck which had been heading north on I-95 was making the turn onto the I-95 South on-ramp when the load shifted. The truck rolled onto its right side and the load spilled. There are not 2x4s, 1x8s and sheet rock panels strewn all over the roadway. The ramp is completely blocked.

There were no injuries, the driver is only shaken up.

In blocking the I-95 South on-ramp at this location, three separate lines of backed-up traffic would have been created:

1. Evacuation traffic from Newburyport and Newbury heading southwest on Scotland Road;
2. Evacuation traffic from West Newbury heading east on South Street; and
3. Northbound traffic on I-95 which was being turned around at this point.

The tasks confronting the ORO in response to this accident included at least the following: (a) to report the event up ORO's chain of command in a timely and accurate fashion; (b) to coordinate the dispatch of the necessary assistance to remove the road impediment (sic); (c) to implement an effective temporary detour for traffic blocked at the scene; and (d) to devise, implement, and notify the public in a timely fashion of an evacuation re-route for evacuees who might otherwise seek to use the blocked route. Time was of the essence here, because the radioactive plume was then only a short distance away, heading towards the blockage.

ORO's actions on each of these tasks failed miserably to demonstrate an adequate capability to deal with road impediments in a sensible, timely, and coordinated fashion. First, the ORO was unable to communicate and report the accident up the ORO chain of command in a timely and accurate fashion. According to the SPMC, Traffic Guides are to report road impediments to the Evacuation Support Dispatcher, who reports the impediment to the Staging Area Leader, who notifies the Transfer Point Dispatcher to dispatch the appropriate road crew (wrecker) to remove the impediment. If an evacuation route is blocked, the Staging Area Leader needs to advise the ORO EOC promptly so that he can notify the public and assist in preparing a re-route. After being given to the Traffic Guide, however, the message took a full hour to reach the Staging Area leader (at approximately 5:50 p.m.), and by then the message had begun to evolve. Some details were missing; others were distorted. Inexplicably, a wrecker was not dispatched until 6:50, a full two hours after the simulated accident occurred. Meanwhile, the ORO EOC was not notified of the blockage until nearly 6 p.m., and the message it thought it heard was that the lumber truck had overturned and was blocking traffic on I-95 southbound. It then took the EOC staff at least a full half hour to study a wall map and devise a re-routing strategy, not for all three

separate lines of blocked traffic, but for only the evacuees leaving Newburyport and Newbury who would have used Scotland Road. The re-route plan they came up with uses a road, Highfield Road, which is not adequate for use as an evacuation route because it is only one and a half lanes wide, is very winding, and is going to be heavily used by ORO's Evacuation buses due to the fact that Newbury's Transfer Point is located on it. Finally, at about 7:00 p.m., two and a quarter hours after the accident, ORO issued a press release intended to advise the public about the road impediment and to instruct evacuees on ORO's recommended re-route. The news release, however, was grossly inaccurate and advised the media (and the public) that "[a]n overturned lumber truck on Route I-95 southbound at the junction of Scotland Road is blocking traffic flow southbound." This, of course, was simply not true. The consequences were likely to have been serious: Thousands of evacuees heading south on I-95 would undoubtedly have heard press reports of a road blockage on I-95 and would have left I-95 seeking alternative evacuation routes. Those who got off I-95 and sought routes to the west of I-95 would have driven back into the plume, which by 7:00 p.m. had just passed over I-95 and was heading further west. Meanwhile, the road crew that was dispatched to the scene arrived at about 7:00 p.m. only to discover that it did not have a large enough wrecker to remove the lumber truck. ORO had not properly assessed the needed assistance. At 7:14 the road crew had to call for additional assistance from a 10-ton wrecker. Then, when the road impediment was finally removed at about 7:30 p.m., no efforts were taken before the Exercise ended to quickly notify the public that the blockage was removed and that I-95 was clear for travel.

In summary, at each and every step in dealing with this traffic impediment, ORO personnel bungled the task at hand: communications internally were delayed and sloppy, causing ORO's perception of the event to evolve to the point of distortion. ORO failed to adequately coordinate the dispatch of the necessary removal equipment in a timely fashion. They failed to implement an effective temporary detour for the traffic backed-up at the scene, and the re-route devised for traffic heading toward the impediment was not adequate. Most importantly, ORO failed to notify the public in an accurate and timely fashion of the existence of the blockage, and when they attempted to do so they issued a factually incorrect location for the blockage on I-95 southbound -- that would have caused thousands of evacuating drivers to leave I-95 and drive directly into the radioactive plume. Indeed, throughout its handling of this road impediment, ORO personnel acted without any regard for the plume's location.

ORO's response to this road impediment demonstrates that much more than additional training is needed before it can be



concluded that ORO has the organizational ability and resources to adequately assess and respond to road blockages. Even with extensive and repeated communications training, a plan re-structuring is needed to streamline the process, give road-blocking impediments organizational priority, and ensure that plume location and direction are considered. Only a further exercise can test whether the fundamental flaws demonstrated during this exercise are correctible (sic) or whether, as is more likely the case, a non-professional group of emergency responders can not, given the degree of skill and coordination required, ever respond adequately in a timely enough fashion to ad hoc problems like this that will inevitably develop during a real emergency.

#### Applicants' Position

This contention should be excluded. Mass AG has indulged himself in a long stream of consciousness that does not even attempt to conform to the NRC requirements for contentions and bases. Exclusion of the entire contention is particularly appropriate in the context of exercise contentions, where drafters are responsible for alleging only fundamental flaws and not each and every isolated instance of departure from conceived perfection. See Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), LBP-85-49, 22 NRC 899, 910 (1985) ("contention alleging only minor or readily correctable problems should be rejected").

Should the Board decide to admit this contention in spite of its superfluity, Applicants make additional specific objection to Bases A, B, and C, which attempt to raise issues of human behavior and evacuation time estimates already litigated or admitted for litigation before this Board. In addition, the summary paragraph is surplusage, pejoratively

argumentative, and in part contains MAG's own planning ideas which no one need litigate.

#### MAG EX-14

The Exercise revealed a fundamental flaw in the SPMC in that the medical facilities, equipment, procedures, and personnel demonstrated in the exercise were not adequate for handling contaminated, injured or exposed individuals, as required by 10 CFR § 50.47(b)(12) and the guidance set forth in the NUREG-0654, Rev. 1, Supp. 1, § II.L.1. Thus, ORO failed to satisfy Exercise Objective 24, and this precludes a finding of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at Seabrook, as required by 10 CFR § 50.47(c)(1).

Exercise results which individually and/or collectively form the basis for this contention include the following:

A. According to NUREG-0654, Rev. 1, Supp. 1, § L.1:

"The offsite response organization shall arrange for local and backup hospital and medical services having the capability for evaluation of radiation exposure and uptake, including assurance that persons providing these services are adequately prepared to handle contaminated individuals."

During the Exercise, only one hospital participated as a host hospital for the ORO. Thus, there was no demonstration of ORO's arrangements with both a local and at least one back-up hospital, and there is no reasonable assurance that such other hospitals as are relied upon in the SPMC have the same or similar capabilities as demonstrated by the hospital which did participate. A test of only one hospital is insufficient in a full-participation exercise.

B. The one hospital which did participate in the Exercise has inadequate facilities. This hospital uses a room in the Emergency Department to treat and decontaminate seriously ill or trauma patients contaminated with radioactive material. If the patient is ambulatory, however, and had only minor injuries, he/she is taken to the morgue for decontamination. Use of the hospital's morgue for this purpose is highly inappropriate. The persons taken there have already been traumatized enough by being both injured and radiologically contaminated. Taking them to the morgue at this point is not in the patients' best interests.

C. Personnel at the one hospital tested displayed serious weaknesses as well. Incredibly, both the medical and the nursing staff did not adequately understand the biological effects radiation and the significance of counts per minute, contamination, and millirems per hour dose rates. This is a fundamental problem that casts serious doubt on the ability of this hospital, one which does not do much radiological monitoring/decontamination work, to perform adequately in an emergency. More training may or may not be the solution. If these workers rarely get to perform these procedures, occasional training may not be sufficient to keep the staff ready. Only another exercise can adequately assess whether training can solve this deficiency.

#### Applicants' Position

It is the Applicants' position that this contention should be excluded as an independent contention for lack of basis. The contention asserts in substance that the exercise revealed a fundamental flaw with respect to the handling of the contaminated injured. Basis A is not a statement of a fundamental flaw revealed by the exercise; rather, it is an argument that the scope of the exercise was insufficient. Scope of the exercise will be litigated under other contentions not specifically objected to. Basis B is an argument that the morgue should not be used for decontamination; and Basis C alleges that certain personnel were not properly trained. Assuming that these allegations were true, Mass AG presents no basis for believing that these matters would rise to the status of "fundamental flaws." The contention should be rejected as an independent contention.

#### MAG EX-15

The exercise revealed a fundamental flaw in the SPMC in that NHY's ORO and the personnel of various support organizations relied upon by NHY demonstrated a need for so much additional training that NHY's training program itself

was demonstrated to be inadequate. This failing violates 10 CFR § 50.47(b)(15) and the guidance set forth in NUREG-0654, Rev. 1, Supp. 1, § II.O. In a utility-sponsored emergency offsite response organization like ORO's, which utilizes non-professionals (typically utility workers) to staff key emergency response positions that are nothing like their day-to-day jobs, an adequate training program is essential to ensure that personnel can and will be able to provide adequate protective measures for the public as required by 10 CFR § 50.47(c)(1).

Under the SPMC, ORO regularly offers training and retraining for both NHY and non-NHY personnel involved in an emergency response. Training has consisted of classroom presentations, table-top sessions, walkthroughs and drills. There are (21) modules or areas of training which are offered. The large number of training deficiencies revealed during the Exercise demonstrates serious inadequacies in ORO's training to date. Such a program fails to comply with 10 CFR § 50.47(b)(14) and (15) and NUREG 0654, § II.N and O.

In its Final Report, FEMA identifies a significant number of training inadequacies in almost all areas assessed during the Exercise. Yet ORO had practiced and trained extensively in each of these areas prior to the Graded Exercise. Thus, the exercise results disclose fundamental flaws in the SPMC training program which preclude a finding that adequate protective measures can and will be taken in an emergency.

Virtually every error made by an ORO player during the exercise involves, to some degree, a failure of the SPMC training program to convey basic and essential knowledge and/or skill. As such, each "ARCA" identified by FEMA, plus each additional significant error committed during the exercise and identified in other contentions, provides the basis for this contention that the exercise results showed a fundamental flaw in the training program. Listed below are some of these ARCAs and errors:

A. The exercise demonstrated that the SPMC training program has not successfully or effectively trained respondents to follow and implement basic plan procedures and to accurately communicate information and data essential to an integrated, coordinated response.

B. The exercise demonstrated that the SPMC training program does not successfully or effectively train or prepare respondents to respond properly, appropriately, or effectively to unanticipated and unrehearsed situations likely to arise in an emergency and tested in the Exercise by "free play."

C. The exercise demonstrated that the SPMC training program has not successfully or effectively trained respondents to follow direction given by superiors during an emergency.

D. The exercise demonstrated that the SPMC training program has not successfully or effectively trained respondents to exercise independent or good judgment or to use common sense in implementing the Plan and procedures.

E. The exercise demonstrated that the SPMC training program is ineffective in preparing and training respondents to provide truly, accurate, consistent and unconflicting information to the public through interaction with the media.

F. The exercise demonstrated that the SPMC training program fails to provide adequate training to those players who are not employed by NHY or Seabrook Station but upon whom ORO relies to implement its plan.

G. The exercise demonstrated that SPMC training in the areas of dosimetry, exposure control, KI, understanding of radiation terminology and related areas is deficient. Because the public, during an emergency will seek information from ORO workers regarding these matters, it is absolutely essential that ORO understand and know how to use dosimetry equipment.

#### Applicants' Position

No objection. However, if the Board accepts Mass AG's argument that FEMA's review and evaluation "are a legal nullity and have no legal effect or significance in the proceeding or otherwise", see supra MAG EX-6, then this contention should be rejected as having no basis. A contention cannot be based upon a "nullity."

#### MAG EX-16

The exercise demonstrated fundamental flaws in the SPMC and the state of off-site preparedness with regard to planning standard 10 CFR 50.47(b)(9) and the corresponding guidance set forth at NUREG 0654 II.I.7 and as a result exercise Objective 10 which required the ORO to "[d]emonstrate the ability, within the plume exposure pathway to project dosage to the public via plume exposure, based on

plant and field data" was not a consequence, no reasonable assurance finding supported by the exercise results.

A. ORO had insufficient numbers of radiological monitoring field teams available. As a consequence, during the exercise ORO requested 60 additional monitoring teams from outside sources. These teams were not available in a timely fashion and even if they had been available no prior planning existed to deploy these teams effectively and coordinate and integrate the field data they would be generating.

B. The teams available to ORO were not deployed effectively around the perimeter of the plume in a timely fashion.

C. Field data was not effectively communicated to or utilized by ORO personnel responsible for assessing and recommending appropriate PARs.

#### Applicants' Position

No objection. Any order admitting this contention, however, should make clear that "Basis" C, which alleges a failure to use field data to recommend PARs, provides no basis for the contention, which alleges a failure to adequately project doses. Moreover, the "Basis" is too vague to support litigation or advise the parties as to what Mass AG intends to present.

#### MAG EX-17

The exercise demonstrated that ORO was unable to establish and operate rumor control in a timely and efficient fashion. Thus, it failed to comply with 10 CFR 50.47(b)(7) and NUREG 0654 § II.G.4. Exercise results which individually and collectively evidence the aforementioned deficiencies preclude a finding of reasonable assurance that adequate protective measures can and will be taken in the event of an emergency. The following bases support this contention:

A. The maximum number of calls able to be simultaneously handled by JTIC phone staff does not demonstrate an adequate ability to handle and control rumors for the entire EPZ and all media callers. In a radiological

emergency there would be many more calls and the inability to effectively deal with all or most calls in a timely manner could result in confusion and lack of communication and would effectively cancel out any benefit that may have been gained by the effective handling of a few calls.

B. The constraints imposed by FEMA regarding extent of play were too limiting and as a result, the ability of the ORO to meet FEMA Objective 15 and to comply with pertinent provisions of the SPMC were not adequately demonstrated. FEMA limited rumor control calls to a maximum of five calls per hour for each player. Such a limitation is totally unrealistic and does not show how those players individually or how ORO in general would operate a rumor control in a coordinated and timely fashion under actual emergency conditions.

C. During the exercise, ORO personnel responded to various inquiries from the public. As is shown in the following examples, their responses demonstrated ORO's inability to dispel rumors, to correct misinformation, to provide necessary, accurate and timely information to the public and to ensure that such information is coordinated and non-conflicting. These examples of repeated errors demonstrate a fundamental flaw: Inquiry/Rumor Memos ("IRM") logged at the following times with the following callers: 1:30 (Brown); 2:00 (Randolph); (no time) (Clark); 3:18 (Collins); 3:30 (Lynn); 4:22 (Crand); 1:10 (David); 2:45 (Sanders); 3:10 (Bradshaw); 6:12 (Frances); 7:02 (Stone); 7:10 (McGuire); 16:40 (Jones).

#### Applicants' Position

No objection. Any order admitting this contention, however, should make clear that Basis A is not litigable as it does not appear to have any basis even remotely related to the exercise.

#### MAG EX-18

The Exercise revealed fundamental flaws in both the SPMC and the NHRERP in that both NHY's ORO and the State of New Hampshire failed to demonstrate the adequacy of their procedures, facilities, equipment and personnel for the registration, radiological monitoring, and decontaminating of evacuees, as required by 10 CFR § 50.47(b)(10) and the guidance set forth in NUREG-0654 § II.J.12 ("The personnel and equipment available shall be capable of monitoring within about a 12-hour period all residents and transients in the

plume exposure EPZ arriving at reception centers"). Thus, ORO and the State of New Hampshire failed to satisfy Exercise Objection 19, and this precludes a finding of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at Seabrook, as required by 10 CFR § 50.47(a)(1) and (c)(1).

Exercise results which individually and/or collectively form the basis for this contention include the following:

A. The Exercise failed to demonstrate that in the event of an actual emergency at Seabrook Station, the reception centers could be timely activated, because for the Exercise, necessary equipment and supplies, including monitoring trailers, were delivered to the reception centers prior to the commencement of the Exercise. In a real emergency such equipment would not be located at the reception centers prior to the emergency.

B. The exercise failed to demonstrate that ORO and New Hampshire had adequate staffing, procedures, facilities and equipment to monitor within 12 hours all evacuees who would have arrived at reception centers.

As required by NUREG-0654, § II.J.12, neither NHY ORO nor the State of New Hampshire demonstrated the ability to meet the SPMC's and NHRERP's goal of monitoring evacuees at a rate of 55/hour per monitoring station. In twenty minute "mini scenarios," the State of New Hampshire averaged three minutes to process one evacuee, and NHY ORO also averaged less than 55 evacuees per hour for each monitoring team with the second shift teams performing considerably worse than the first shift teams. There is no reasonable assurance that even the monitoring rates that were demonstrated in the 20 minute scenarios, when personnel know they were being tested for speed, could be maintained for a 12 hour period. See also Par. (g), below. Moreover, the Exercise demonstrated a fundamental flaw in the SPMC and the NHRERP in that in the event of the kind of radioactive release that occurred during the Exercise, resulting in a clock-wise sweeping plume that hit virtually every town in the EPZ, many more persons would have been reporting to the reception centers for monitoring than ORO and the State of New Hampshire had the staff and equipment to monitor within a 12-hour period, even assuming each team could monitor at a continuous rate of 55 evacuees per hour. Moreover, in the event of an actual wide-spread contaminating release, such as occurred in the Exercise, it is likely that many persons not within the towns specifically instructed to report for monitoring would also report to the reception centers for monitoring to assure themselves that they had not been contaminated.



C. During the Exercise the State of New Hampshire and NHY's ORO also failed to demonstrate the capability to adequately monitor evacuees and vehicles and to detect radiation. The State of New Hampshire failed during the exercise to detect increased levels of radiation in two persons, which FEMA believes was due to a lack of sufficient equipment, *i.e.*, headsets for each monitoring team and/or faulty monitoring equipment or inadequate maintenance of monitoring equipment. In addition, NHY ORO did not use adequate or consistent procedures for monitoring most vehicles entering the reception centers, (*e.g.*, only the door handles and front grill were monitored on most cars) and the monitoring trailer for evacuees at the North Andover reception center was inappropriately set up in an area with a high level of background radiation which caused the outside dosimetry to "spike real bad" according to ORO personnel. Furthermore, the twenty-minute mini-scenarios did not appropriately test monitoring capability in that monitoring teams knew to look for contamination in the only one or two places on the person where the packets of contaminated material could be placed, *i.e.*, pockets, and the contaminated packets were not distributed randomly among the "evacuees," but were instead distributed to every fifth person in line. Except for the two twenty-minute mini-scenarios, when the monitoring teams were alerted that packets of contaminated material were being placed on the "evacuees," no contaminated packets were placed on any persons to be monitored.

D. The Exercise revealed a fundamental flaw in that it failed to demonstrate adequate knowledge or training and/or adequate procedures in the handling of contaminated individuals and vehicles. For example, with respect to the State of New Hampshire, FEMA found the DPHS staff at the state EOC were not familiar with the Radiological Screening Program and who has specific duties and responsibilities for implementation of the program. In addition, FEMA found further training warranted for the DPHS personnel relative to providing recommendations to reception center staff pertaining to the handling of contaminated individuals and vehicles. With respect to NHY's ORO, it took over one half hour to complete monitoring of the one contaminated injured individual who arrived at the North Andover reception center, and at least ten minutes before any of the personnel discovered that the man was injured, as well as contaminated. In addition, the man was not informed, prior to his departure in a simulated "ambulance," of the radiological monitoring program.

E. The Exercise demonstrated a fundamental flaw because there is insufficient space at the reception centers to handle all the vehicles that would arrive there in the event of a wide-spread contaminating release like the one which was

simulated for the Exercise. For example, the North Andover reception center, to which all of the Town of Amesbury was instructed to evacuate, has parking capacity in its "clean car" lot for at best 100 cars, leaving aisles between cars for them to exit. The parking lot for contaminated vehicles is considerably smaller. Many more vehicles would have needed to be parked in these lots if the Exercise had been a real emergency.

F. The Exercise revealed a fundamental flaw because it did not demonstrate adequate staffing for two shifts at the reception centers. For example, at the reception center in Dover, FEMA found that "additional personnel for security, directing evacuees, and housekeeping would have to be provided to bring the facility to fully operational capacity." FEMA Exercise Report, pp 184-185. There were also insufficient personnel at the reception centers in Beverly and North Andover to staff all necessary functions, and a large percentage of the first shift personnel, especially those in supervisory positions, were not relieved by personnel from the second shift. There is thus no assurance of a 24-hour staffing capability for these facilities.

G. The Exercise demonstrated a fundamental flaw because procedures for exposure control at the reception centers were inadequate. For example, although "clean" and "dirty" areas were established and roped off at each center, procedures were insufficient and staffing inadequate to ensure that clean/dirty areas were respected by staff and evacuees; people were routinely able to cross over these lines undetected. There was also insufficient space inside the monitoring trailer for people being monitored to consistently stay behind the "clean" line, and those found to be contaminated could not move down to the decontamination area in the trailer without brushing against those who were being monitored.

In addition, clean/dirty procedures were not adequately maintained during the twenty-minute mini-scenarios where the goal was to process evacuees through the trailer as rapidly as possible. During the mini-scenarios in North Andover there was no monitoring of the evacuees' feet or hands prior to entering the trailer. As a result, people whose feet were contaminated would likely have spread the contamination to others inside the trailers. Also, no green "clean" tags were issued to those people deemed clean after monitoring. If these procedures had been in place, it would have taken significantly longer to process evacuees through the monitoring trailer.

In addition, the Exercise demonstrated that procedures for handling contaminated clothing are inadequate. During the Exercise evacuees who do not wish to give up their clothing were allowed to leave the reception center with the contaminated articles in hand, albeit in a plastic bag.

The Exercise revealed a fundamental flaw in that no procedures are in place for dealing with pets who may be brought to the reception center by their owners, and who may be contaminated. For example, staff at the reception center in North Andover said they would not monitor pets brought to the reception center because the SPMC did not provide for that and had no idea what would be done with pets. In the event of an actual emergency at Seabrook Station, it must be expected that many people will arrive at the centers with their pets regardless of any instructions they may receive not to. (EBS messages given during the Exercise did not instruct evacuees to leave pets at home when they left, and pre-emergency information -- which people do not have -- will not be an effective way to tell people to leave pets at home.) In the event of a major contaminating release, as was simulated during the Exercise, some of these pets brought to reception centers are bound to be contaminated. If these contaminated pets are not monitored and allowed to leave the reception centers without decontamination, they could contaminate clean people they subsequently come in contact with.

H. The Exercise further revealed a fundamental flaw because there are insufficient procedures and equipment in place to deal with vehicles that may break down while in line at the reception centers. For example, personnel at the North Andover reception center did not know what to do with a special needs van that broke down in front of the monitoring trailer and was to some extent disrupting the flow of traffic for several hours.

I. The Exercise further revealed a fundamental flaw in that most processing of evacuees prior to monitoring, including registration, occurred (sic) outdoors without any covering overhead. In rainy weather, the conditions simulated on the day of the Exercise, not only would evacuees get soaked, but clean/dirty lines could not be maintained, and all papers, including the RERPS and registration material which were set out on tables outdoors would be drenched. Indoor processing space has not been demonstrated to be available; thus there is no reasonable assurance that these facilities are adequate.

### Applicants' Position

No objection. Any order admitting this contention, however, should make clear that there is no regulation or guidance addressing the issue of monitoring pets and, therefore, no litigation on this issue is possible.

### MAG EX-19

The Exercise revealed a fundamental flaw in the Seabrook Station Radiological Plan and Emergency Response Procedures in that during the Exercise the licensee's personnel did not issue appropriate protective action recommendations ("PARs") to the NHY Offsite Response Organization, the State of New Hampshire, or the State of Maine, as required by 10 CFR § 50.47(b)(10), and the guidance set forth in NUREG-0654, § II.J.7. and NUREG-0396.

This licensee failing, coupled with the high degree of reliance placed by NHY's ORO, the State of New Hampshire, and the State of Maine on the PARs provided by the licensee, precludes a finding that there is reasonable assurance that protective measures for the public can and will be taken in the event of a radiological emergency at Seabrook Station.

Exercise results which individually or collectively form the basis for this contention include the following:

A. As described in detail in MAG EX-19 (incorporated herein by reference), the PARs issued by NHY's ORO were not appropriate in numerous respects. These PARs were exactly those which were being recommended by the licensee at that time, and the ORO relied on these licensee PARs almost totally.

B. The PARs issued by the State of New Hampshire were also inappropriate in many respects, including the following:

1. While evacuation of Seabrook, Hampton, Hampton Falls, Kensington, South Hampton, and North Hampton was recommended to the public at about 2:30 p.m., people in ERPA F (Brentwood, East Kensington, Exeter, Kingston, Newfields, and Newton) were not recommended to evacuate until almost 5:00 p.m. Given the size of the release, the potential for increased releases Iodines and Cesium if filters degraded or failed, and the uncertain and unfavorable meteorological conditions (particularly regarding wind speeds, wind direction, and the likelihood of precipitation), this ERPA should have been recommended to evacuate sooner.

As a result, thousands of residents in this ERPA who could have safely evacuated earlier were hit by the plume; and

2. The residents of Stratham, Greenland, New Castle, Rye, and Portsmouth were never advised to evacuate but were advised to shelter. Unfortunately, later that evening the plume passed over all of these communities with the possible exception of New Castle.

As a result of these inappropriate PARs, the chances were significantly increased that people in these areas would have received dosages in excess of PAGs. These PARs issued by New Hampshire were exactly those PARs recommended to it by the licensee at that time, and state officials placed great reliance on them.

C. The State of Maine issued no PARs to evacuate or shelter any of its towns during the Exercise. Indeed, because they relied totally on the licensee's PARs, Maine was unaware that an evacuation and/or sheltering PAR needed to be issued for Kittery, Maine, and perhaps other towns as well. The licensee's failure to make such a PAR for Maine -- i.e., to extend a PAR to those just beyond the northern border of the EPZ -- had serious consequences because by about 8:20 p.m. on Day 1 of the Exercise, the plume reached Kittery and passed directly over it carrying sizeable concentrations of radioactivity. Prior to that point the same factors noted above at B should have prompted the licensee to issue at least a sheltering and probably an evacuation PAR for that area. The failure to do so significantly increased the likelihood that people in this part of Maine would have received dosages in excess of PAGs. NUREG-0654 does not excuse the licensee from recommending protective actions outside the EPZ when necessary. To the contrary, NUREG-0654 implies that this will happen as a matter of course and uses this as a justification for requiring detailed planning only out to about 10 miles. See NUREG-0654, p. 12. Beyond 10 miles, ad hoc protective actions can perhaps be effective, but only if the state officials in charge have been advised by the licensee that such actions are recommended.

D. In all the instances described above, the licensee's inappropriate PARs were derived from its METPAC computer model. It appears from what happened during the Exercise that this model has some fundamental flaws that cause it to fail to take into proper consideration all known facts as well as existing uncertainties in the generation of PARs. It, among other things, fails to adequately consider ETEs, weather uncertainties including wind speed and directional changes, and release conditions. In recommending PARs to offsite officials, licensee personnel in the EOF merely passed on copies of the METPAC print-outs without offering

any guidance on how much reliance the PARs contained therein should be given.

#### Applicants' Position

No objection. Any order admitting the contention, however, should make clear that Bases A, C, and D are not accepted as proper bases for the contention.

Basis A starts by being hopelessly confusing by adopting "MAG EX-19" which is the contention to which it is attached. More importantly, the fact, if it be a fact, that the ORO followed all of the PARs recommended by the Station itself, is no basis for a contention. The fact that the recommendations were followed states no per se case.

As to Basis C, the State of Maine is beyond the boundaries of the Plume Exposure Pathway EPZ. There is no regulatory requirement that ad hoc protective actions beyond Plume Exposure EPZ be exercised.

Basis D takes issue with the METPAC computer model which performed no differently in this exercise than any previous exercises; no issue is raised by this exercise or can be litigated under the umbrella of this exercise. The model has been part of the on-site plan and NHRERP, Vol. 1, § 2.5 and has gone unchallenged. This basis is an unwarranted attempt to reopen the closed record.

#### MAG EX-20

The Exercise revealed a fundamental flaw in the SPMC in that NHY's ORO demonstrated that it does not have adequate facilities, equipment, displays and other materials to support emergency operations, as required by 10 CFR § 50.47(b)(8) and the guidance set forth in NUREG-0654,

Rev. 1, Supp. 1, § II.H. Thus, ORO failed to satisfy Exercise Objective 5, and this precludes a finding of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at Seabrook, as required by 10 CFR § 50.47(c)(1).

Exercise results which individually and/or collectively form the basis for this contention include the following:

A. The facility in Haverhill designated in the SPMC as the Staging Area was not demonstrated because, according to the NHY's manual for the 1988 FEMA NRC Graded Exercise (the NHY Exercise Manual) "constraints . . . currently exist with the use of the Haverhill Staging Area." NHY Exercise Manual, p. 2.3-3. Absent the availability of the Haverhill Staging Area, and a demonstration of the adequacy of its facility as a staging area is impermissible under the City of Haverhill zoning ordinances, and there is no likelihood that Haverhill will change these ordinances to permit this use in the near future. While the utility has appealed the denial of the special use permit to Superior Court, speculation that the court will overturn the city's decision is just that -- speculation. The "realism" doctrine does not carry such force that it must be assumed that in the event of a real emergency at Seabrook, local and state laws in Massachusetts can be waived or ignored. Thus, there is no reasonable assurance that the SPMC's designated facility for use as a Staging Area will ever be available for that use. The area in Salem, N.H., used during the Exercise as a substitute Staging Area would not be a suitable permanent substitute for the Haverhill site. It is too far from the EPZ and does not have adequate space, facilities, or equipment.

B. During the Exercise, the Media Center was demonstrated to be inadequately equipped with maps and displays detailing evacuation routes, the plume path, relocation centers, congregate care centers and meteorological data. This constitutes a fundamental flaw because absent these maps and displays, ORO's media representatives, and those from New Hampshire and the utility, were unable to offer the media a clear, concise, and readily understandable explanation of what was going on. Confusion was generated; the media liaisons appeared to be less than knowledgeable about evacuation routes, plume path, etc.; and the public was not able to gain much more information from the media than they got from sketchy EBS messages. To the extent that the media liaisons are not clear, the public's anxiety will be heightened and spontaneous evacuation and other ad hoc actions will increase. The solution is not simply to properly equip the Media Center. The staff there need to know how to use maps and displays in their presentations, and a mechanism must be

in place to keep the maps and displays current. Only another exercise can prove with reasonable assurance that these things can be accomplished.

C. The Exercise events revealed that in the event that ORO had to call in a third shift before the Exercise ended, ORO did not have adequate dosimetry for the third shift workers.

D. The traffic cones displayed by ORO's Traffic Guides during the exercise were too small, and will be too hard to see at night to function effectively in controlling evacuation traffic.

#### Applicants' Position

Applicants object to this contention since not one of Mass AG's basis examples are proper subjects of litigation.

Basis A merely rehashes an issue that already has been decided by this Board. Contrary to Mass AG's assertion, the Board has ruled that "realism" does mandate the assumption that obstructing local laws would not be enforced in the event of an actual emergency. See Memorandum and Order (Ruling on Contentions on the Seabrook Plan For Massachusetts Communities) (July 22 and 29, 1988), Part II at 15 (rejecting argument that Amesbury officials will enforce zoning ordinances against use of transfer point in emergency); id. at 36 (rejecting same argument as to Salisbury transfer point); id. Part I at 80-82 (rejecting argument of Mass AG that building code would be enforced to prohibit operation of special host facility during an emergency). Mass AG may not use exercise contentions as a vehicle for resurrecting positions that he has already argued and lost before the Board. Moreover, to the extent that the Board's rulings



leave any litigable issue as to the availability of the Haverhill staging area, that issue is already before the Board as an SPMC planning contention. See JI Contention 53.

The allegations regarding maps and displays in Basis B, if valid, are readily corrected and do not rise to the level of fundamental flaws. See Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant). LBP-85-49, 22 NRC 899, 910 (1985) ("contentions alleging only minor or readily correctable problems should be rejected").

Basis C presents no litigable issue. There is no requirement in the regulations or guidance to provide for and equip more than two twelve-hour shifts for protracted twenty-four hour operations. The basis relies on speculation to support the need for a third shift. Even if additional dosimetry were needed, however, purchase of additional dosimetry is a minor matter, easily accomplished, and does not rise to the level of a fundamental flaw.

The issue of the size of traffic cones, referenced in Basis D, is simply not a proper subject for litigation; it is too small.

#### MAG EX-21

The Exercise revealed a fundamental flaw in the SPMC in that NHY's ORO failed to demonstrate that it has adequate vehicles, equipment, procedures, and personnel for transporting contaminated, injured individuals, as required by 10 CFR § 50.47(b)(12) and the guidance set forth in NUREG-0654, Rev. 1., Supp. 1, § L.4. Thus, NHY's ORO failed to satisfy Exercise Objective 19, and this precludes a finding of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at Seabrook, as required by 10 CFR § 50.47(c)(1).

Exercise results which individually and collectively form the basis for this contention include the following:

A. During the course of the exercise, because the ORO failed to implement traffic control in a timely fashion and then would not have been able to control traffic at all, evacuation traffic would have been so disorderly that many accidents producing personal injuries would have occurred, many of them in areas which were being or had been contaminated. ORO's meager ambulance resources, even on paper, would have been woefully inadequate to transport the number of contaminated, injured persons that would need transportation to hospitals.

B. During the Exercise, only one of the ambulances ORO is relying on to transport contaminated, injured persons was tested. The two ambulance attendants in this (sic) ambulance were called to a reception center and asked to deal with one single contaminated, injured person. Procedures were observed and evaluated. By mobilizing only one ambulance and its crew and testing its knowledge of proper handling procedures, the Exercise failed to test this major portion of ORO's plans using sufficient numbers of ambulances and crews to verify in any meaningful way the capability of ORO to respond to the accident scenario contained in the Exercise with an adequate number of ambulances and adequately trained ambulance attendants, as required by 10 CFR Part 50, App. E, IV. F. 1., n. 4.

C. The one ambulance crew that was tested performed poorly in its demonstration of its ability to properly handle a contaminated, injured individual. First, the attendants did not cover the patient to confine contamination immediately before or after loading. This exhibits a fundamental lack of understanding of the concepts involved in handling contaminated individuals. While the attendants later realized their error and then did wrap the patient, their failure to do so at the outset would have likely contaminated their vehicle. A further major mistake was made when the attendants failed to change their shoe covers and gloves at the scene, which is not only the proper technique but is set forth in their procedures. When questioned where they would take the individual, the attendants noted that they would go to one of two designated hospitals listed in their procedures. In the event of a life-threatening medical problem, however, they should go to the nearest hospital, not one of the two they had listed. This, too, exhibits a fundamental failure in their knowledge and procedures. The poor performance of this ambulance crew cannot be dismissed lightly. FEMA notes in its Exercise Report that this crew had received an eight-hour training course provided by NHY

personnel, viewed a video on proper procedures, and was "familiar" with its written procedures (available in the ambulance). It is not at all clear that with a little more (sic) training or clearer procedures, these attendants would perform any better. Only another exercise will reveal whether these individuals have the capability to carry out the transportation of contaminated, injured individuals in a proper manner.

D. Based on the performance errors exhibited by the one ambulance crew tested, no valid generalizations can be made that there is "reasonable assurance" that the entire fleet of ambulances and attendants being relied upon by ORO can perform in an adequate manner. Given the small sample size, there were too many errors observed to draw any such conclusion.

#### Applicants' Position

No objection. Any order admitting this contention, however, should make clear that the human behavior issues raised by AG attempts to resurrect in Basis A may not be litigated for a second time.

#### SAPL EX-1

##### Contention

The graded exercise of the New Hampshire Radiological Emergency Response Plan (NHRERP) for Seabrook Station did not result in an adequate demonstration that appropriate Protective Actions (PA's) can be implemented to reasonably assure the protection of school children within the plume EPZ. Therefore, the requirements of 10 CFR § 50.47(a)(1), § 50.47(b)(10), § 50.47(b)(14) and NUREG-0654 J.9 and J.10.d., g., k. and m. have not been met.

##### Basis

a) The Same Deficiency Cited by FEMA in the February 1986 Final Exercise Assessment Still Exists.

The February 1986 FEMA Final Exercise Assessment cited as a deficiency that:

The capability to demonstrate the organizational ability to effect an orderly evacuation of schools, which was an exercise objective (D.8), was hampered

by the extent of simulated school participation. Since schools were not in session on the day of the exercise, school notification, and requests for an activation of school bus resources could not be evaluated. (February 26, 1988 (sic) Final Exercise Assessment at p. 125)

Schools were not in session during the June 28 and 29, 1988 graded exercise either and there was again no sufficient demonstration of the organizational ability of schools to effect an orderly evacuation. No school personnel were shown to be available to supervise school children during an evacuation.

b) Protective Action Decisions Affecting School Children Were Not Effectively Handled.

The decision was made not to order early dismissal of children in plume EPZ communities because of a concern for latchkey children. The City of Portsmouth, though inappropriately acting on its own in a manner incongruent with the rest of the EPZ communities, did decide upon an action that would have resulted in greater dose savings to the children, i.e. recommending early dismissal for children other than latchkey children and holding the latchkey children in schools until their parents could pick them up. [The Town of Brentwood also took an action not in congruence with the State of New Hampshire and called the Swasey School and told them to let children take their normal bus routes home after the sheltering order was received.]

The State of New Hampshire instead ordered at the Site Area Emergency ECL that a precautionary PA be effected to hold plume EPZ children in school until 5:00 p.m. This late dismissal decision was extended at 11:52 a.m. to keep school children in school until 7:00 p.m.. Subsequently, at 2:09 p.m., the Governor concurred in an NHY recommendation that an evacuation be ordered for six towns within a 5-mile radius and that sheltering should be put in effect for the 5-10 mile portion of the zone. In the sheltering towns, children were to be sheltered in place in the schools.

At 4:26 p.m, the PA order went out to evacuate six more towns, those in ERPA F. The wrong EBS message was sent out subsequently and parents were told not to pick up their children at the schools. (See p. 198 of the FEMA Draft Exercise Report where it notes that "Information about school children was confusing and at one point contradictory.")

At 6:10 p.m., the IFO Controller in Newington called the State EOC to check on whether school dismissal was still scheduled for 7:00 p.m. The IFO Controller was told not to worry. However, at 6:30 p.m. the State EOC called the IFO Controller to verify that the children were getting out. At 6:50 p.m., just 10 minutes before the scheduled dismissal time, Local Liaisons were instructed to call the town EOC's to ask if transportation was needed for school children. This confused and untimely response was clearly not a satisfactory demonstration that effective PA's can be ordered and carried out for school children.

#### Applicants' Position

Applicants do not in the main object to SAPL EX-1 but note that Basis A would incorrectly imply a requirement that an exercise be held only when area schools are in session.

Applicants also note with regard to each one of SAPL's exercise contentions that SAPL has failed to allege that its complaints about the exercise rise to the level of fundamental flaws. Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-86-11, 23 NRC 577, 581 (1986) (Board directed to "admit only those Intervenor contentions which satisfy the specificity and other requirements of 10 CFR § 2.714 by (1) pleading that the exercise demonstrated fundamental flaws in LILCO's plan, and (2) by providing bases for the contentions which, if shown to be true, would demonstrate a fundamental flaw in the plan."). Applicants only press this objection, however, with regard to those contentions raising minor, ad hoc, or readily correctable matters. See Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), LBP-85-49, 22 NRC 899, 910

(1985) ("contentions alleging only minor or readily correctable problems should be rejected").

SAPL EX-2

Contention

The graded exercise of the NHRERP failed to demonstrate the ability to provide a sufficient number of buses and ambulances with properly trained drivers to reasonably assure that transit-dependent, special facility and special needs populations can be adequately protected. There was further not an adequate demonstration that the buses that were employed in the exercise could be properly routed. Therefore, the requirements of 10 CFR § 50.47(a)(1), § 50.47(b)(10), § 50.47(b)(14) and NUREG-0604 J. 9 and J.10.d, g and k have not been met.

Basis

The February 26, 1986 FEMA Final Exercise Assessment described two of the deficiencies in the prior exercise as follows:

Serious questions arose at the exercise regarding the ability of the State to provide buses for transportation of special populations, including school children, mobility-impaired, and otherwise transit-dependent populations. Driver resources were not sufficient to meet the transportation requirements. (February 26, 1988 (sic) Final Exercise Assessment at p. 136)

Bus drivers consistently experienced problems in getting to where they would have been needed. They were unfamiliar with alternate routes and experienced difficulties because of the poor quality of photocopied maps. One of the bus drivers made wrong turns and required prompting to complete his route. One of the buses that arrived at the Rockingham County Dispatch Center was unable to continue because it was low on fuel. Some of the evacuation and other bus route maps distributed at the Rockingham County Staging Area were illegible, some provided insufficient detail to specify the route clearly, and some did not

include adequate addresses for the locations at which evacuees were to be picked up. (February 26, 1988 (sic) Final Exercise Assessment at p. 238-239)

Both of those deficiencies were not shown remedied in the current exercise. There still are serious questions about the ability of the state to provide buses for transportation of special population .

The majority of the bus routes run during the exercise were run out of the proper sequence that the scenario would have required (a good number were run on Day 2). Further, the majority of the routes were run in private passenger vehicles rather than in buses. This did not provide a realistic test of the capability to coordinate the running of the routes in a timely manner and it did not test the ability to provide the numbers of buses and drivers that would actually be required during an emergency at Seabrook.

Out of the 79 transit-dependent bus routes attempted during the exercise, the exercise report states that only 51 routes or 65 percent were completed with only "minor" problems. Routes that were not completed were as a result mainly of drivers getting lost, though in one instance a driver actually caused an accident and forced a private passenger vehicle off the road. (See South Hampton Route 1 at p. 211 of the FEMA Draft Exercise Report) Further, no routes were run from South Hampton to the Salem Reception Center as was supposed to have been done.

It appears that of the 93 routes for schools, nurseries and day care centers attempted, only 70 out of 93 of the routes were completed without controller intervention. (The Draft Report stated at p. 225 that only 60 routes were completed with drivers needing assistance on ten. If this number is correct, it would mean that only 50 routes, or 54 percent of the 93 routes were completed without controller intervention.)

During the actual course of the exercise on Day 1 of the scenario, intervenor observers noted that only six buses and drivers arrived at the Portsmouth Business Center (formerly the Omne Mall) and only five of those buses were dispatched to other locations.

At the Rockingham County Staging Area in Brentwood, only 14 buses, one wheelchair van and one ambulance were present. The FEMA Exercise Report states that 750 regular buses, 95 vans, 34 wheelchair vans, 32 ambulances and 55 coach buses were available (see p. 165). Those vehicles had to have been imaginary; the real numbers were miniscule (sic) in

comparison. There was no explicit mention in the FEMA report of how many vehicle drivers could have been made available on the day of the exercise or how that number was verified. A total of 87 drivers from the National Guard and DOT were alleged to have been put on standby, but those number would be grossly insufficient if there were a significant shortfall of bus company drivers.

Virtually the same problems with drivers having difficulties getting where they were needed and having difficulty with reading maps due to not a high enough quality of map were evidenced in this exercise as in the prior exercise. In several cases this time, maps for special facilities had wrong instructions or wrong addresses (See p. 231 of the FEMA Draft Exercise Report). The FEMA Draft Exercise Report also states that: "Some drivers demonstrated no capability to read any map" which indicates that problems with driver training have not been adequately addressed.

Further, the problem of refueling buses has not been adequately addressed. On the day of the exercise, the buses that needed fuel stopped at a gas station, which would not be possible during the course of a real radiological emergency as the proprietors would have evacuated. The signatory of the bus refueling letter of agreement in Volume 5 of Rev. 2 of the NHRERP has gone out of business.

#### Applicants' Position

No objection.

#### SAPL EX-3

#### Contention

The graded exercise of the NHRERP did not result in an adequate showing that emergency workers have been properly trained in the use of dosimetry, as required by 10 CFR § 50.47(a)(1), § 50.47(b)(11) and NUREG-0654 K.3.a and b.

#### Basis

The February 26, 1986 Final Exercise Assessment states as follows:

The two bus drivers of Timberlane Bus Company who were interviewed at the Seabrook FOC (where they had mistakenly arrived -- see section 2.2.9) stated that they had not been trained in the use of dosimetry.



The FEMA Draft Exercise Report states that though county and state emergency workers were well-versed in dosimetry use, most bus drivers, ambulance drivers and local town personnel and a few local police were not adequately trained in dosimetry equipment and exposure control procedures. The emergency workers at Stratham TCP (GST-01) did not demonstrate the ability to monitor and control their exposure limits at all. Therefore, there has still not been a demonstration sufficient to provide reasonable assurance that there has been adequate preparation for the protection of emergency workers.

#### Applicants' Position

Applicants object to SAPL EX-3 on the ground that it does not address a fundamental flaw in the plan. The regulations do not require exact implementation of emergency plans. If taken as true, the recitation in this contention amounts to, at most, ad hoc problems that occurred on the exercise day, correctable by additional training.

#### SAPL EX-4

##### Contention

The appropriate use of equipment and procedures for collection and transport of samples of food, water and other appropriate items was not adequately demonstrated by the exercise. Therefore, the requirements of 10 CFR § 50.47(a)(1), § 50.47(b)(9), § 50.47(b)(10), § 50.47(b)(14) and NUREG-0654 I.7 and 8 and J.11. have not been met.

##### Basis

Only two sampling teams were included in the exercise. One of two sampling teams, or 50 percent of those exercised, performed poorly. Team #1 was unfamiliar with procedures for sample collection and with survey techniques with the assigned instruments. Both teams had trouble with maps and had difficulty reaching their original locations and Team #1 actually collected its sample at the wrong location. Team #1 also used poor technique in collecting the sample.

### Applicants' Position

Applicants object to SAPL EX-4 on the ground that it does not address a fundamental flaw in the plan. The regulations do not require exact implementation of emergency plans. If taken as true, the recitation in this contention amounts to, at most, ad hoc problems that occurred on the exercise day, correctable by additional training.

### SAPL EX-5

#### Contention

The graded exercise of the NHRERP failed to demonstrate the adequacy of medical facilities, including proper training of staff, to reasonably assure that treatment and decontamination of seriously ill or trauma patients contaminated with radioactive material can be carried out. Therefore, the requirements of 10 CFR § 50.47(a)(1), § 50.47(b)(12), § 50.47(b)(14) and NUREG-0654 L.1., 3. and 4. have not been met.

#### Basis

Only two hospitals, the Elliott Hospital in Manchester, N.H. and the Wentworth-Douglas Hospital in Dover, N.H. were included in the exercise, and there was no significant test of the capability of these facilities to handle a major radiation emergency since each hospital simulated the handling of only one patient. Further, the medical and nursing staff members in both hospitals need additional training in the biological effects of radiation and the significance of CPM readings and mR/hr readings.

### Applicants' Position

Applicants object to SAPL EX-5 on the ground that the regulations do not require, as the contention assumes, that private medical facilities be tested or drilled in their capability to provide medical care. Furthermore, the last sentence, even if taken as true, amounts at most to ad hoc

problems that occurred on the exercise day, correctable by additional training.

To the extent this contention raises an issue of exercise scope it should be rejected because the exercise included a test of all the MS-1 New Hampshire hospitals listed in the plan, NHRERP, Vol. 4A, Attachment A to Emergency Medical Services procedures.

#### SAPL EX-6

#### Contention

The graded exercise of the NHRERP failed to demonstrate the adequacy of personnel to staff both the traffic control posts (TCP's) and access control posts (ACP's) designated in the plan to control evacuation flow and control access to evacuated and sheltered areas. Therefore, the requirements of 10 CFR § 50.47(a)(1), § 50.47(b)(10), § 50.47(b)(14) and NUREG-0654 J.10.i, j., k. and l. have not been met.

#### Basis

The total number of state police required to provide assistance in staffing of ACP's in New Hampshire is 26-28 state police. (NHRERP, Vol 6 at p. 9-12) An additional 40 state police are needed to staff TCP's and provide municipal security. During the exercise, only 4 ACP/TCP locations were staffed by N.H. State Police from Troop A, Epping. Only 13 of the 17 local communities staffed an ACP/TCP and only one was staffed in each of those communities. There was, therefore, no adequate demonstration that there is the organizational ability or personnel and equipment resources to staff all the required traffic and access control locations in New Hampshire. One of the towns that did not staff any location at all was Hampton. Hampton is the town with the most severe evacuation problems due to its extremely large beach population. The capability to control traffic in that community is critical to an adequate radiological emergency response. Further, the establishment of the TCP/ACP's was done out of the sequence and hence did not provide a true test of the capability to marshal state and/or local personnel and resources to appropriate traffic control locations in a timely manner during an emergency.

Applicants' Position

No objection.

SAPL EX-7

Contention

The graded exercise of the NHRERP for Seabrook Station failed to demonstrate the capability for decontamination of emergency workers, equipment and facilities because the facility that is to be used under the plan was not opened up and demonstrated during the exercise. Further, there was no showing that there is adequate provision for disposal of wastes. Therefore, the requirements of 10 CFR § 50.47(a)(1), § 50.47(b)(11), § 50.47(b)(14) and NUREG-0654 K.5.a. and b. have not been met.

Basis

The Hillside Junior High School was, according to FEMA's report, unavailable for purposes of demonstration during the course of the exercise. There was no showing that there were adequate numbers of trained personnel to staff the facility and no showing that the facility had been ever tested for its proposed use. The only FEMA evaluation of the facility was a visual inspection on July 22, almost a month following the exercise. Further, there was no exercise of the capability to dispose of contaminated wastes.

Applicants' Position

No objection.

SAPL EX-8

Contention

The graded exercise of the NHRERP failed to demonstrate reasonable assurance of adequate public protection since no capability for 24 hour continuous staffing of Staging Areas and Reception Centers was demonstrated and continuous staffing of local and host EOC's over a continuous 24 hour time frame was not shown to be fully adequate in any of the local or host communities. Key positions at the IFO were not fully staffed by appropriately trained individuals and the Governor's office was not represented according to the plan. Further, the exercise did not demonstrate that there are adequate provisions for filling the roles of those personnel who are absent due to sickness, vacation or other causes. Therefore, the requirements of 10 CFR § 50.47(a)(1), § 50.47(b)(1), § 50.47(b)(14) and NUREG-0654 A.1. and A.4. are not met.

## Basis

The host EOC's in Salem, Dover and Rochester did not demonstrate shift changes. The Manchester EOC is alleged to have done so, though outgoing staff failed to brief the incoming staff. Neither the Rockingham County Staging Area nor the Portsmouth Circle Business Center Staging Area attempted shift changes. The exercise ended before the shift change was completed at the Reception Center in Dover. Firefighters in Dover conducted a demonstration and distributed a statement which said, inter alia, that "the firefighters . . . universally oppose the evacuation plans as unworkable." The proposed corrective action mentioned at p. 200 of the FEMA Exercise Report of having DPHS obtain 30 personnel from the N.H. National Guard does not address the problem since the DPHS (sic) functions require very specialized training and expertise. Further, adding personnel to DPHS does not address the problem of lack of Sheriffs (sic) Deputies to staff a second shift at the staging areas. Reference to "the Hampton Center" in the Exercise Report makes no sense since there is no such location designated as either a Staging Area or Reception Center under the NHRERP.

Not even one local EOC in the 17 towns demonstrated a full shift change. The Seabrook EOC was not even staffed in accordance with the plan for the first shift, and the Civil Defense Director did not appear to be trained adequately. Further, no second shift capability was demonstrated for Sheriff's Deputies staffing the non-participating communities. Additionally, three of the Local Liaison Officers and a special needs liaison were not replaced on the second shift at the IFO. The second shift state police did not demonstrate appropriate knowledge and capabilities. One of the two positions at the Joint Telephone Information Center (JTIC) was unstaffed due to illness. The exercise demonstrated no capability to bring in trained replacement personnel for positions left unfilled due to illness or other causes.

### Applicants' Position

No objection. Any order admitting this contention, however, should make clear that the issue of augmenting DPHS reception center staffing with National Guardsmen is a planning issue, not an exercise issue, and has been litigated in the New Hampshire hearings. See Tr. 4892.

## SAPL EX-9

### Contention

The graded exercise of the NHRERP failed to demonstrate the ability to monitor, understand and use emergency classification levels (ECL's) Further, it failed to demonstrate the ability to provide for emergency actions to be taken by state and local organizations consistent with the emergency actions recommended by the nuclear facility licensee, taking into account local offsite conditions that exist at the time of the emergency. Therefore, the requirements of 10 CFR § 50.47(a)(1), § 50.47(b)(4) and NUREG-0654 D 1. are not met.

### Basis

As the FEMA Exercise Report states at p. 139, the Rockingham County Dispatch Center (RCDC) is responsible for the initial notification of all 17 N.H. plume EPZ communities at each ECL. Appendix B of the procedures for the RCDC in Vol. 4B of the NHRERP shows that RCDC is to advise the towns of protective actions and as to whether or not there has been a release of radioactivity. RCDC failed to provide this information to the towns in an appropriately prompt manner to reasonably assure adequate public protection. For example, even though the release of radiation occurred at Seabrook Station at 1:44 p.m. and the NH IFO transmitted notification of the release to RCDC at 2:13 p.m., the Director and other RCDC personnel were unaware that there had been a release until approximately 3:00 p.m., approximately 1 hour and 16 minutes after the release occurred. Further, the second NH evacuation PAR was not known and posted until approximately 4:20 p.m. because the radio over which that information was monitored was in a separate room. The EOC in Seabrook, N.H. also failed to keep its status boards current.

### Applicants' Position

Applicants object to SAPL EX-9 on the ground that it is unsupported by the stated "basis". SAPL's assertion that the exercise "failed to demonstrate the ability to monitor, understand and use emergency classification levels" is without any allegation of support. SAPL also seeks to litigate the ability of state and local organizations to take actions consistent with utility recommendations, taking into

account local conditions. The "basis", however, appears to allege that although the Rockingham County Dispatch Center (RCDC) was given timely notification of events, certain personnel at RCDC were not and the information was not timely given to New Hampshire EPZ towns. Thus, the "basis" only raises an issue of notification delay and not the much more general contention statement.

#### SAPL EX-10

##### Contention

There is no reasonable assurance that a 24-hour continuous response by adequate numbers of trained personnel can be maintained during a radiological emergency at Seabrook Station since there was no exercise of the capability to respond to either an unannounced and/or off-hours emergency. Therefore, the requirements of 10 CFR § 50.47(a)(1), § 50.47(b)(1), § 50.47(b)(14) and NUREG-0654 A.4 and N.1.b are not met.

##### Basis

The graded exercise of the emergency response plans conducted by FEMA was a pre-announced exercise which occurred largely during normal weekday work hours. It was apparent that many of the emergency responders were aware of and were poised and ready to respond during the time frame during which the exercise was to transpire and some even arrived at response locations before they would have known any emergency had occurred at Seabrook under real life circumstances. For example, most participants arrived at the EOC in Stratham about 8:00 a.m. and roughly five New Hampshire Yankee officials arrived at the Portsmouth Business Center staging area at around 9:00 a.m. The Alert declaration at Seabrook Station, the first ECL declared, did not occur until 9:09 a.m. under the exercise scenario and no protective action decision was made until 10:32 a.m. There was, therefore, no test at all of the capability to staff emergency response functions during an unannounced, off-hours emergency.

### Applicants' Position

Applicants object to SAPL EX-10 on the ground that the guidance of NUREG-0654, Rev. 1, Supp. 1, II.N.b. does not require, as the contention assumes, that a qualifying exercise be off-hours or unannounced. See also FEMA Guidance Memorandum EX-3 Amendment, at 2 (¶3).

### SAPL EX-11

#### Contention

The performance of emergency responders during the graded exercise of the emergency response plans for Seabrook Station did not adequately demonstrate that "early notification" and timely protective actions can be implemented to reasonably assure the safety of the populace in the plume exposure pathway EPZ. Therefore, the requirements of 10 CFR § 50.47(a)(1), § 50.47(b)(4), § 50.47(b)(14) and NUREG-0754 (sic) D.4 are not met.

#### Basis

The utility made its announcement of the Alert ECL at 9:09 a.m. The decision to order the protective action of beach closure was not arrived at until 10:32 a.m., a full 1 hour and 23 minutes later. Thereafter, it took another 28 minutes before the RCDC was instructed to activate the sirens, which means that there was an elapsed time of 1 hour and 51 minutes between the Alert declaration at Seabrook Station and any protective action implementation. Had a General Emergency been the very first ECL, this amount of elapsed time to recommend the first PA would have been extremely serious. Beach closure is a protective action that is supposed to occur under the NHRERP as a matter of course during the summer tourist season and the decision to act according to the plan should have followed promptly and immediately upon the Alert ECL having been declared.

Further, the General Emergency ECL was declared at Seabrook Station at 1:32 p.m. The decision to evacuate the 0-5 mile portion of the EPZ was not made until 2:09 p.m, 37 minutes later, and the sirens were not activated until 2:18 p.m., a full 46 minutes after the General Emergency was classified.

Additionally, the utility made the recommendation that more of the plume EPZ should be evacuated at about the 3:20-



3:30 p.m. time frame. A state decision to evacuate additional communities in ERPA F did not follow until 4:26 p.m. Sirens were not activated to notify the public until 4:35 p.m., approximately 1 hour and 10 minutes after the action was recommended. These undue and lengthy delays betray a fundamental problem in the protective action decisionmaking and implementation process.

#### Applicants' Position

Applicants object to SAPL EX-11 on the ground that it misstates the applicable standard for early notification of the populace in the Seabrook EPZ communities. The sirens were activated within the appropriate time frame, which is measured from the time authorization for a protective action recommendation is received and not, as the contention erroneously posits, from the time the ECL is determined. See, e.g., FEMA Guidance Memorandum AN-1, p.I-4 ("Starting the Clock"). The contention and bases simply mount an attack on the regulations and not the responders' compliance therewith.

No criteria exists for judging the proper amount of time from General Emergency or Site Area Emergency declarations to notification of the public of the selected protective action recommendation. This is because, inter alia, that time frame encompasses the time for decisionmaking that is unlimited in scope and indeed, in fact, consisted of most of the time in this exercise.

#### SAPL EX-12

##### Contention

The adequacy of procedures, facilities, equipment and personnel for the registration, radiological monitoring and

decontamination of evacuees was not demonstrated during the exercise. Facilities were not well organized and not run in an adequately effective manner. Therefore, the requirements of 10 CFR § 50.47(a)(1), § 50.47(b)(10), § 50.47(b)(14) and NUREG-0654 J.12 have not been met.

#### Basis

Only two of the host communities opened Reception Centers during the exercise: Salem and Dover. In Salem, mock evacuees were kept waiting outdoors from approximately 3:14 p.m. until 5:09 p.m. when the first evacuee was monitored. Difficulties in setting up the facility included phone lines strung across a corridor, the DPHS Supervisor's radio not working and too few personnel. The personnel problems were compounded when fire personnel got called away to deal with real life situations. Monitoring times were not efficient and there was a mix-up of the Mettags. An actual breakdown in the monitoring process occurred at 6:28 p.m.

In Dover, the workers in the Reception Center seemed unclear on their responsibilities and there were not enough personnel. Mock evacuees were not allowed into the Dover Reception Center until after 3:30 p.m. There was a good deal of disarray in the organization in the monitoring section and the process of monitoring evacuees did not begin until 4:40 p.m. Some of the evacuees wandered into the wrong areas. Not enough headsets were available for the monitoring instruments.

At the State EOC, the DPHS staff who are to be an information and referral resource to the personnel at the Reception Centers were not familiar with their responsibilities and duties under the Radiological Health Screening Program. This is a very serious defect in the response capability for a radiological emergency.

#### Applicants' Position

Applicants object to the second sentence of the contention on the ground that the allegations in its support, even if true, would be minor, ad hoc and readily correctable by additional training, and would not rise to the level of fundamental flaws.

### SAPL EX-13

#### Contention

The graded exercise of the NHRERP did not provide an adequate demonstration of reasonable assurance that those persons confined to nursing homes, hospitals and like special institutions can be adequately protected in the event of a radiological emergency. Therefore, the requirements of 10 CFR § 50.47(a)(1), § 50.47(b)(10), § 50.47(b)(14) and NUREG-0654 J.9, J.10.d., e., f. and g. have not been met.

#### Basis

There was no test of capability to transport hospital and nursing home patients to host facilities by ambulance and the plan for testing of bus bed conversion capability was severely limited. There were only two mini-scenarios to test the emergency bed bus capability and it is not clear from reviewing the Exercise Report whether or not those mini-scenarios were carried out. Further, there is no mention of any test of the ability to make decisions regarding the administration of KI to institutionalized persons in regard to Objective #16. Finally, there was no test of host special facilities to receive special population evacuees and no test of the capability to monitor and decontaminate these special population evacuees. Therefore, the graded exercise provided no reasonable assurance that institutionalized persons can be adequately protected in the event of a radiological emergency at Seabrook.

#### Applicants' Position

Applicants object to SAPL EX-13 on the grounds that: 1) the regulations do not require that hospital patients and other special facility residents be transported to and received by other facilities, and 2) the basis does not even allege that the bus bed conversion capability was not exercised. The contention as framed is not sufficiently supported by the stated "basis" and should therefore be rejected.

## SAPL EX-14

### Contention

The graded exercise of the New Hampshire Radiological Emergency Response Plan (NHRERP) for Seabrook Station did not result in an adequate demonstration that appropriate Protective Action decisions will be made for the plume EPZ communities or that expansion of the response beyond ten miles can be carried out when it is prudent to carry out such an expanded response. Therefore, the requirements of 10 CFR § 50.47(a)(1), § 50.47(b)(10) and NUREG-0654 J.10.m. have not been met.

### Basis

The exercise scenario resulted in a wind shift which brought a concentrated plume over the communities of Portsmouth, Rye and Greenland toward the end of Day 1 of the scenario, yet those communities were never ordered evacuated. In view of the radiation levels in the plume as the wind carried it over those municipalities, the evacuation order should have been expanded to encompass ERPA G. Further, the concentration of the plume as it passed over Kittery, Maine would have warranted an evacuation of Kittery as well. NUREG-0654 states at p. 12 that the 10-mile plume EPZ planning basis is based on the consideration, inter alia, that:

detailed planning within 10 miles would provide a substantial base for expansion of response efforts in the event this proved necessary

The exercise demonstrated that appropriate protective actions were not wholly carried out even within the boundaries of the EPZ. The exercise showed no capability for an expansion of the response beyond 10 miles when warranted.

### Applicants' Position

Applicants object to so much of the contention as would raise an issue of "expansion of the response beyond ten miles," since that constitutes an attack on NRC regulations and not the responders' compliance therewith.

TOH/NECNP EX-1

Contention

The scope of the June 28-29, 1988 Exercise of the New Hampshire Radiological Emergency Response Plan (NHRERP) was so limited that it could not and did not yield valid or meaningful results regarding the capability to implement that plan, as required by 10 CFR § 50.47(a)(1) and (a)(2), in that it did not include demonstrations or evaluations of emergency response capabilities of many persons and entities relied upon to implement the NHRERP. In addition, the exclusion of these entities from the Exercise precludes a finding that the Exercise evaluated major portions of emergency response capabilities, as required by 10 CFR § 50.47(b)(14) and 10 CFR Part 50, Appendix E(F)(1). Other than limited participation by State of New Hampshire personnel, the majority of the organizations, entities, and individuals relied upon in the NHRERP for implementation of that plan did not participate in the Exercise. Thus, the Exercise did not address the willingness, availability, training, equipment, capability, or adequacy of performance of the entities and individuals identified in Bases a to g below, each of which is necessary to implement the portions of the NHRERP referenced therein. Accordingly, the NHRERP is fundamentally flawed.

Basis

(a) None of the teachers relied upon under the NHRERP to implement protective actions for school children, See e.g. NHRERP Vol. 18A, Appendix F, participated in the Exercise. Necessarily, the Exercise failed to meet a primary objective to demonstrate the ability and resources necessary to adequately protect students in an emergency. Exercise Report, p. 172. Since hundreds of teachers through their representatives, and by petition, have already provided evidence in this proceeding of their intent not to implement the NHRERP, failure to test for the availability and participation of New Hampshire teachers represents a fundamental flaw in the NHRERP.

(b) Since none of the New Hampshire teachers participated in the Exercise, FEMA could not observe any adequate demonstration of the organizational ability or resources necessary to effect an early dismissal, sheltering, or evacuation, of the school children, even though this demonstration was one of the Exercise objectives. Exercise Report, p. 172. Under the NHRERP, early dismissal, sheltering and evacuation are the only protective actions for school children. See (e.g.) NHRERP Vol. 18A, App F. 1-3, F. 1-4. All of these protective actions assume, and rely upon, teachers for implementation. Id. Failure to observe

or test necessary personnel or procedures to protect students represents a fundamental flaw in the NHRERP.

(c) During the summer months, Hampton Beach is the most highly and densely populated area in the Seabrook EPZ, and poses unique and extreme obstacles to emergency planning. Under the NHRERP, State Police are required to provide all 17 traffic guides to staff every traffic control post located within Hampton Beach, and to assume responsibility for regulating the bumper to bumper traffic out of the Beach area. See, NHRERP, Vol. 6, App. I; Exhibit 1 to Applicants' Direct Testimony No. 3 (Personnel Resources), Table 3.1-2. The Exercise did not provide for, test, or require even a single State Police officer to staff any of the five traffic control posts located in Hampton Beach, and the Beach, as an area for exercising the Plan, was essentially ignored. Failure to adequately demonstrate the ability and resources deemed necessary under the NHRERP to evacuate the EPZ's most populated beach area represents a fundamental flaw in the NHRERP.

(d) Although at least 45 traffic control guides are to be provided by the New Hampshire State Police to all Towns under the NHRERP, Id. at Tables 3.1-2, 3.1-3, only two troopers actually assumed that function during the Exercise. See, Exhibit 1, attached. Accordingly, there is no factual basis to support FEMA's finding that State Police could or did properly "handle beach closing," and the time frames for staffing of traffic control points relied on by FEMA are wholly speculative. See, Exercise Report, p. 182. In addition, the NHRERP requires State Police to provide 28 traffic guides to staff access control posts within the New Hampshire EPZ. Volume 6, p. 9-12. Only two troopers were actually deployed to staff ACPs during the Exercise. Exhibit 1. FEMA's conclusion that, by 1530 hours, State Police had adequately shown the capability to deploy all 89 troopers for ACP/TCPs is without foundation. Exercise Report, p. 182. Failure to adequately demonstrate the ability and resources necessary to regulate evacuation traffic and EPZ access represents a fundamental flaw in the NHRERP. Exercise Report, p. " "

(e) The Exercise did not provide for, test, or require simulation, of even a single accident or other traffic impediment in the Hampton Beach area. Even under non-emergency conditions, traffic accidents and tie-ups, with associated traffic congestion, are routine at Hampton Beach. The Exercise reasonably assumed, however, that traffic flow remained smooth throughout the beach during the entire evacuation. Failure to adequately demonstrate road clearance capabilities and traffic management, under anticipated

conditions, in the critical pathway along the beach represents a fundamental flaw in the NHRERP.

(f) 15 of 18 (83%) of the bus companies relied upon under the NHRERP for emergency and special needs transportation did not provide any drivers or buses for the Exercise. Even the three companies who did provide resources deployed only 18 regular buses (4%) of the 453 required for implementation of the NHRERP. See, Exhibit 2, Attached; Applicants' Direct Testimony No. 2, p. 13, October 21, 1987. The Exercise also utilized only one of 48 ambulances (2%), and two of 71 special needs buses (3%), deemed necessary for implementation of the Plan. See, Applicants' Direct Testimony No. 2, pp. 13-15, October 21, 1987; Exhibit 2. The adequacy of transportation resources, particularly bus drivers, has been seriously disputed in these proceedings. The failure to demonstrate the availability of any meaningful number of these resources represents a fundamental flaw in the NHRERP.

(g) There is no basis for FEMA's assertion that the State, during the Exercise, adequately demonstrated, or "identified", sufficient manned vehicles to evacuate the entire EPZ. See Exercise Report, p. 165. That identification process apparently consisted only of phone calls to bus companies to restate the number of drivers specified in each company's letter of agreement. Apparently, no determination of the number of drivers actually available to drive, was provided by the companies or required by the Exercise. The failure to demonstrate the actual availability of necessary transportation resources, including at least 96% (435 of 453) of the drivers required to implement the NHRERP, represents a fundamental flaw in the NHRERP. Exhibit 2.

#### Applicant's Position

Applicants object to this contention on the ground that it is baseless in its generality. The proffered bases only address a few specific points, most of which were covered in SAPL EX-1, SAPL EX-2, and SAPL EX-6. Indeed, upon analysis, the only non-repetitive pieces in this contention appear to be the complaints that 1) the exercise scenario did not call for a traffic impediment in the Town of Hampton; and 2) New Hampshire's identification of resources by telephone

confirmation was inappropriate. The latter complaint does not address a flaw with the plan, but an apparent dispute with FEMA on the meaning of "identify." Neither complaint amounts to an allegation of fundamental flaw.

TOH/NECNP EX-2

**Contention**

The exercise demonstrated that there is no reasonable assurance that adequate measures can and will be taken to protect school children during a radiological emergency at Seabrook.

**Basis**

During the exercise, Applicants and the State of New Hampshire demonstrated an inability to successfully carry out and integrate protective actions on behalf of the school children in the Seabrook Emergency Planning Zone ("EPZ"). Instructions to the public regarding care of school children were confusing and inaccurate, bus drivers were unable to complete their assignments without assistance, protective action ("PA") decisions regarding school children were made and carried out too late and too slowly, and the State of New Hampshire failed to follow through on protective actions for school children. The process by which the State of New Hampshire ("NH") and the New Hampshire Yankee Offsite Response Organization ("ORO") arranged for care of school children was one that would have created chaos and confusion in a real accident.

EBS messages, summarized in Table 8 of the Draft and Final Reports, lack sufficient information for parents to obtain assurance or make informed decisions about the protection of their children. At 1045, NH announced that it had closed the beaches (NH Advisory #2), and at 1101 NH beach sirens were sounded. Nothing was said at that point about the status of school children, even though beach residents whose children were in school needed that information in order to make decisions about protecting their family members.

Less than an hour later (1152), the State made a decision to keep school children in school buildings until 1700 (5 p.m.) That decision was not even conveyed to the public until 1242 (NH Advisory #4), almost two hours after the beaches had been closed. Thus, parents who were evacuating the towns of Seabrook and Hampton were likely to



go to school to get their children, in contravention of the State's procedures for orderly protective actions.

To complicate matters further, Portsmouth and Brentwood ordered protective actions that differed from the State's. Final Exercise Report at p. 173; Draft Report at p. 231.

In Massachusetts, ORO issued a News Release (#06) at 3 p.m. telling Salisbury and Amesbury residents to evacuate, while at the same time stating that school dismissal would be "delayed." No instructions were given to parents regarding whether or when to retrieve their children. It is difficult to conceive that parents in Salisbury and Amesbury, having been told by this announcement that it was advisable to leave the area, would just leave their children to await some later "dismissal."

The next News Release issued by ORO (#07 at 3:12) was also confusing. Amesbury and Salisbury residents were told to evacuate immediately. The press release also contained the contradictory statements that schools were being evacuated (p. 2) and that "children are currently being safely maintained at school, where they will be kept until it is determined that they can be safely moved." (p. 5) The underlying message conveyed to parents by that press release was that if they wanted to assure that their children would leave the EPZ immediately, as the parents had been told was advisable, they should go to school and get them.

With so many different protective actions being ordered for different groups of people (i.e. beaches closed while surrounding communities told to take no action, some communities told to evacuate while others told to shelter), and with the constant changes in those instructions<sup>1</sup>, parents had a strong incentive to "hedge their bets" by fetching their children from school.<sup>2</sup> For instance, it is reasonable to expect that parents, hearing at the Alert or Site Area Emergency stage that beaches had been closed, would go to school and get their children so that they would be ready to evacuate when the order came. It is also likely that parents who had been ordered to shelter at the General Emergency stage while other towns had been ordered to evacuate, would fetch their children from school. The poor timing of protective action decisions and the confusing media announcements prepared by NH and ORO encouraged these responses from parents. Moreover, NH and ORO failed to demonstrate any recognition of or attempt to deal with the problem. Had this been a real accident and not a simulation, the schools in both the NH and Massachusetts portions of the EPZ would have been jammed with parents trying to rescue their children.

[start footnote 1] Table 7 shows two different "waves" of evacuations of the NH EPZ: NH PA # 3 (evacuation of 0-5 miles), and NH PA # 4 (evacuation of ERPA F). In the first wave, an EBS message at 1435 told some towns to evacuate while others sheltered. In the second wave, an EBS message at 1640 told some of the towns that had been ordered to shelter in the previous EBS message that they should now evacuate. The FEMA report does not contain sufficient detail to evacuate whether schools in each of those towns were also evacuated promptly and successfully, as they should have been. [end footnote]

[start footnote 2] The discrepancies in protective instructions extended across both community and state lines - within the same state, some communities were ordered to evacuate while others were ordered to shelter; and beach closure was ordered in New Hampshire over an hour before it was ordered in Massachusetts. [end footnote]

Finally, once it had initiated protective actions for school children, the State of New Hampshire simply forgot about them. This was clearly apparent to Intervenor observers on the first day of the exercise, when protective actions for schools were carried out. For example, it wasn't until 5:45 p.m. that the State EOC asked the IFO when the towns had been or would be evacuated. At that point, the status board showed only Seabrook as having completed an evacuation -- a complete fiction, since Seabrook had withdrawn from the exercise early in the day. At that time, the status board also showed only the estimated time of arrival of buses at reception centers, and not the actual arrival times.

At 6:30 p.m., a half hour before the exercise ended, it also became apparent that NH officials had forgotten that a significant number of children were still in school awaiting late dismissal (i.e. those children in NH towns that had been ordered to shelter). Intervenor observers heard conversations between various officials who were unsure how many children were left in the schools and whether they would be bused or picked up by their parents. Nine minutes before the scheduled 7 pm dismissal, Intervenor heard the IFO call the State EOC and ask what transportation arrangements had been made for these children; the EOC responded that arrangements had been made, but EOC did not know what they were.

NH's news releases reflected the confusion over the status of children held in schools. At 1334, NH News Advisory # 6 stated that children would be held in school until 5 p.m. Nothing was said about how the children were to get home. At 4:01 p.m. (NH News Advisory # 11), NH changed

the dismissal time to 7 p.m. for children who were still being held at their schools.<sup>3</sup> At that point, parents were told that they could, if they wished, pick up their children before 7 p.m., but they were not told how the children would get home if they were not picked up by their parents. Less than an hour later, the same parents were told "not to call the schools or other institutions nor to drive to schools to attempt to pick up their children." (News Advisory # 12).

[start footnote 3] Given that there were several waves of evacuation in New Hampshire (see note 1), and the lack of information as to whether schools were evacuated concurrently with the general population of towns in which they were located, it is not clear what schools were still awaiting 7 p.m. dismissal at the end of the exercise. [end footnote]

The actual evacuation of school children was beset with problems. See Draft Exercise Report at pp. B-94 - B-95. As demonstrated at pp. 225-231, a number of bus drivers got lost or needed controller intervention. Maps were poor. One driver took almost 4 hours to run a route between the East Kingston Local Staging Area and the Portsmouth Transportation Staging Area (Draft Exercise Report at p. 225). Some time estimates are so short as to appear to be incorrect: for instance, at pp. 227 and 229 of its Draft Report, FEMA states that a number of buses took only one or two minutes to travel between locals staging areas and schools. In Massachusetts, only 7 buses were dispatched for the 29 schools and 78 nursery schools and day care centers. Even with such a small test, bus drivers experienced difficulties. Final Report at 225-26.

Finally, NH did not show an ability to swiftly make and carry out protective actions. As discussed above, NH was slow to recognize and resolve the problem of transporting the school children who remained in the EPZ. The State of New Hampshire also delayed in making and implementing other PA decisions. For instance, Intervenors observed that at 1:39 p.m., NHY recommended evacuation. The State did not concur until 2:09, even though it would take at least 45 minutes to get traffic control personnel in place.

#### Applicants' Position

Applicants object to this contention on the ground that, despite its accompanying long narrative, the points it would raise are covered by SAPL EX-1.

TOH/NECNP EX-3

Contention

The exercise showed a lack of severe coordination between New Hampshire and the New Hampshire Yankee ORO, resulting in a failure to provide adequate protection to the public health and safety.

Basis

The order to close New Hampshire beaches was given an hour and twenty minutes before the order to close Massachusetts beaches. It is reasonable to expect that visitors to Massachusetts beaches would hear and respond to the advice given to New Hampshire beachgoers that they should evacuate the beaches. Under these circumstances, an evacuation from the Massachusetts beaches would have begun long before it was planned, and long before any traffic control or other personnel were in place to direct the evacuation.

Applicants' Position

The contention complains of a "lack of severe coordination"; Applicants assume TOH and NECNP intended to allege a "severe lack of coordination." Applicants object to the corrected version on the ground that no allegation is made as to a problem or flaw. The basis suggests that Massachusetts beach visitors, overhearing advice to New Hampshire beach visitors, might take that advice and leave the beaches earlier. No adverse conclusion is drawn or even suggested and therefore the basis does not offer any litigable issue.

III. Conclusion

The intervenors' contentions should be disposed of as set forth above.

Respectfully submitted,

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'88 OCT -3 P1:50

CERTIFICATE OF SERVICE

I, Kathryn A. Selleck, one of the attorneys for the Applicants herein, hereby certify that on September 28, 1988, I made service of the within document by depositing copies thereof with Federal Express, prepaid, for delivery to (or, where indicated, by depositing in the United States mail, first class postage paid, addressed to):

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U.S. Nuclear Regulatory  
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(\* = Ordinary U.S. First Class Mail)