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August 14, 1989

OFFICE OF PUBLIC AFFAIRS
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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
ATOMIC SAFETY LICENSING BOARD

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OFFICE OF PUBLIC AFFAIRS
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In the Matter of)	
PUBLIC SERVICE COMPANY OF)	Docket No. 50-443-OL
NEW HAMPSHIRE, <u>et al.</u>)	Docket No. 50-444-OL
(Seabrook Station, Units 1 and 2)	(Off-site EP)

TOWN OF WEST NEWBURY'S PROPOSED FINDINGS AND CONCLUSIONS WITH
RESPECT TO THE SPMC

The Town of West Newbury (TOWN) files the following proposed findings and conclusions concerning the SPMC. These address sections 3 (Traffic Management Plans) and 4 (Evacuation of Transit Dependent Persons) of Applicants' Proposed Findings. Pursuant to the Board's instructions, TOWN will track the order of the Applicants' proposed findings. A finding with the same designation as that of Applicants is intended to substitute for Applicants' proposed finding. A proposed finding adding the designation "WN.a., WN.b.", etc to Applicants' numbering system is a separate proposed finding which TOWN believes is related to the topic in Applicants' proposed finding of that number. Where no express agreement is set forth in connection with any finding, ruling or conclusion proposed by Applicants, and there is no finding, ruling or conclusion substituted or bearing TOWN's additional designation, it should be assumed that TOWN disagrees with Applicants' proposal. To the extent that any other

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Intervenor has disagreed and/or submitted a substitute or additional proposed finding(s) TOWN also disagrees and adopts the proposed finding(s) submitted by other Intervenors.

3.1.15. Agree, with the amendment of the second sentence to read: Neither of these individuals had any specific training in emergency planning. Tr. 16624.

3.1.15.WN.a. However, Mr. Knowles has lived in West Newbury for 47 years. He is currently the Superintendent of Streets and has held that position for 20 years. In his capacity as Superintendent of Streets he is responsible for the maintenance and repair of the streets in TOWN. He is familiar with the road structure in West Newbury and with road conditions during all types of weather. TOWN Dir., ff. Tr. 16621, p.1. He has field experience in traffic management, which includes experience rerouting traffic. Tr. 16647. Moreover, he has experience responding to emergency road conditions throughout the town arising from snow storms and storm damage. Tr. 16624. We find Mr. Knowles to be well qualified, by virtue of his experience, as an expert concerning the road structure, traffic patterns and road and traffic problems in West Newbury

3.1.16 With respect to the issues arising under JI-4, TOWN presented testimony that some of the TCP diagrams are unclear or erroneous, that some of the TCPs are inadequate to perform their asserted functions, and that additional traffic control points, equipment and personnel would be necessary to

have any possibility of controlling traffic in an orderly fashion. TOWN Dir., ff. Tr. 16621, p.2-11.

3.1.16.WN.a. More specifically, Mr. Knowles provided testimony concerning inadequacies in each of the TCPs located in West Newbury. These inadequacies, set forth at pages 3-7 of TOWN's direct testimony (ff. Tr. 16621), were not addressed or challenged by Applicants' on cross examination of the witness (see Tr, 16622-16684), nor were they specifically addressed by the testimony of Applicant's panel on traffic management (see, App. Reb. No.9, ff. Tr.17333). We find that these inadequacies identified by Mr. Knowles could result in impairing effective traffic movement and the evacuation process at these TCPs.

3.1.16.WN.b. Mr. Knowles further provided testimony concerning the need for additional traffic personnel at the TCPs in the SPMC and for additional traffic control points and personnel at 8 intersections in West Newbury. TOWN Dir., ff. Tr. 16621, p.7-9. Applicants' panel did not respond to each suggested point. Rather, they responded generically that no additional TCPs were necessary because they would not influence the ETE. App. Reb. No.9, ff. Tr. 17333, p.11-12.

Notwithstanding this general denial, Applicants' panel did admit that traffic guides could provide useful assistance at entrances to schools and other facilities. Tr. 17680.

Aside from the difficulties with the adequacy and accuracy of the ETEs, Applicants' panel's general response ignores a number of important facts. First, as we have recognized, the

primary purpose of traffic management as part of the SPMC is to achieve maximum reasonable dose savings -- to maximize dose reduction -- and to achieve adequate protection for the public. Tr. 17538. While lowering the overall ETE is a major component and goal of a traffic management plan, it is not the only objective. Alleviating congestion within an area in the event of a release of radiation so as to assist the public in moving further away from Seabrook Station -- even though still within the EPZ -- will further the goal of maximizing dose reduction, since the closer to the plant, the greater the risk. Tr. 17529. Second, since the overall ETE is defined as the ETE for the area with the longest evacuation time, enhancing traffic control and movement strategies in other areas may well result in a lower ETE for that area.

While Applicants' panel rejected any need for additional traffic guides at TCPs, we note that they also testified that discouraging traffic movement -- which is one of the functions of a traffic guide -- means to dissuade and direct motorists from travelling in a direction which is contrary to the recommended evacuation paths as delineated in the traffic control diagram. App. Reb. No.9, ff. Tr. 17333, p.30. Common sense dictates that dissuading and directing may well require verbal communications with motorists lasting longer than the time necessary to tell them to listen to their car radios for EBS messages and could, therefore (particularly in light of the fact that even those not needing discouragement may stop to ask questions), result in a

single traffic guide being unable to perform all the functions necessary at a TCP.

3.1.16.WN.c. Mr. Knowles also testified to the narrow width of a number of roads in West Newbury which, in his opinion, based on his experience, would increase the likelihood of traffic obstructions and delays. TOWN Dir., ff. Tr. 16621, p. 10-12. On cross examination he testified that some of the streets on bus evacuation routes have no shoulders and steep dropoffs or embankments. Tr. 16650-16654. Again, this testimony was not directly addressed by Applicants' panel. We find that the road structure in West Newbury is such that the evacuation process could be impaired by traffic obstructions and natural obstacles.

3.1.16.WN.d. We find that Mr. Knowles' testimony was credible, well-founded on his expert knowledge of West Newbury's road and traffic conditions, and persuasive and we conclude that the TCPs and personnel allotted to West Newbury in the SPMC are inadequate.

3.1.24. Disagree. Adopt MAG 3.1.24.

3.1.27. The number of Traffic Guides assigned to each TCP and ACP was determined based upon the utility planners' assessment of the complexity of the point's traffic strategy, the location's general configuration, and the type of equipment assigned for use. We note that the type of equipment assigned for use has changed. While the original plans called for the use of both cones and barricades, the current plans call only for cones -- although the drawings in the currently circulated version of the plan do not reflect that change.

Police chiefs in the Massachusetts EPZ communities were requested to provide input on the traffic routing and TCP and ACP strategies by way of comments on drafts submitted to them by Mr. Lieberman. In January and February, 1986, inputs were received from five of the police chiefs and were incorporated into the traffic management plan. App. Reb. No.9, ff. Tr. 1733, p.6-7; Tr. 17444, 17475-77, 17596-99. At that time the chiefs believed that the plan would be implemented by law enforcement personnel. Tr. 17449. There has been no further input from the police chiefs. See, Tr. 17477. Nor was there any evidence that the chiefs considered the traffic management plan to be effective to maximize dose reduction and/or adequate to protect the public in the event of a radiological emergency, or that they would not have proposed additional control points absent their own personnel constraints and limitations.

3.1.28. According to Applicants, the number of Traffic Guides at each TCP was minimized to the number Applicants believed to be required to implement its control strategy in an efficient manner, in order to avoid confusion and conflict between guides.

3.1.28.WN.a. We do not believe that Applicants' minimization will, in fact, result in efficiency. Rather, we conclude that additional guides are needed to prevent traffic congestion and back-ups at TCPs and ACPs. We do not believe that the number of guides assigned will be able to keep traffic moving effectively, particularly considering that they will not be

arriving at their posts at the outset of an announcement to evacuate, and that they will be required to deal with drivers who stop with questions and with other impediments, such as breakdowns, that are likely to occur during an evacuation.

3.1.32. Agree, only with the addition of the following sentence: This draft was rejected by the Commonwealth as inadequate.

3.1.33. As noted earlier, a number of Intervenor witnesses have testified that, in their opinions, based on their experience in their communities, additional TCPs and personnel to those provided for in the SPMC are necessary. The Board finds that additional TCPs and personnel would be helpful in assisting traffic movements and providing assistance to evacuees. While additional TCPs might not reduce the overall ETE they may reduce the ETEs for certain communities not using the critical pathway defining the overall ETE, and, at minimum, would further the ultimate goal of achieving dose reduction by moving people farther away from the plant, thereby lessening their exposure.

3.1.35. Disagree. Proposed finding 3.1.33, as amended above, addresses this issue.

3.1.36. We note that while Applicants assert that cars with flashing lights would be confusing at TCPs (App. Reb. No.9 ff. Tr. 17333, p.12), they assert that those same cars with flashing lights would be helpful at ACPs (App. Reb. No.9 ff. Tr. 17333, p.20-21). We do not see the difference between ACPs and TCPs insofar as the use of flashing lights to alert and warn

motorists is concerned, and find that cars with flashing lights would provide assistance to motorists at both TCPs and ACPs.

3.1.37. Disagree. Last paragraph of proposed finding 3.1.16.WN.b. addresses this issue.

3.1.38. In sum, the traffic management plan fails to adequately implement an effective strategy for maximizing dose reduction and adequately protecting the public. While input was obtained in 1986 from five of six chiefs of police, that input cannot be viewed as an endorsement of the present plan since there is no evidence that the chiefs considered the plan to be one that would maximize dose reduction or adequately protect the public at the time, much less that they now consider the plan adequate. Indeed some current chiefs testified that they believed the plan to be inadequate.

3.1.39. Particularized errors in a RERP can, cumulatively, demonstrate that the plan is not adequate to enable the board to make its requisite "reasonable assurance" finding. That Applicants claim to have committed themselves to correcting those errors in the future does not resolve the issue, particularly since some of those errors were brought to their attention when the contentions were filed and, despite the issuance of amendments containing revisions since that time, have not yet been corrected. Moreover, until the proposed corrections are set forth more specifically and examined, the board cannot determine whether they rectify the errors so as to render the plan one that permits a "reasonable assurance" finding.

3.1.41. Based on the testimony of Intervenors' witnesses, the Board finds that traffic cones, as their utilization has been described by Applicants' witnesses, do not constitute an appropriate and adequate traffic control device.

3.1.42. While it is reasonable to assume, under a best efforts response, that state and local police will assist in efforts to protect the public, including traffic control and access activities, there is no evidentiary basis for assuming that those activities would consist of assisting at the specific points delineated in the SPMC. See, e.g., Tr. 17626. Nor is there any evidentiary basis for assuming that a significant number of local police would be available at any time or for making any assumption as to when any local police would be available. See App. Reb. No.9, ff. Tr. 17333, p.20-21, Tr. 17444-45.

3.1.42.WN.a. West Newbury provided direct testimony concerning its resources available for traffic control. Sandra Raymond, a member of the Board of Selectmen, testified that the Board feels that the Town's resources, detailed in the testimony, are inadequate to provide appropriate coordination and control of traffic in the event of an order to evacuate due to a radiological emergency at Seabrook Station. TOWN Dir., ff. Tr. 16621, p.11-12. Applicants presented no contrary evidence concerning West Newbury's resources or their adequacy for traffic coordination and control.

3.1.42.WN.b. Applicants' panel testified that, while West Newbury's police chief was contacted in early 1986, no

witness had spoken to anybody in the West Newbury Police Department since then about traffic control points or traffic management. Tr. 17444-45. No member of the panel had any knowledge of the number of police available in West Newbury to respond to an emergency at any particular point in time, or when officers would become available after notification of an emergency. Tr. 17445. While Mr. Lieberman testified that in 1986 the police chief felt that the traffic control points reviewed could be handled, he also testified that he did not know whether the chief expected state aid. Tr. 17445.

3.1.49 It is likely under fast-breaking accidents that some evacuation routes may experience congestion prior to the arrival of traffic guides at the TCPs. Activating a TCP in a congested traffic environment is likely to be more difficult and may take a significant amount of time. Comparisons to the ability of law enforcement personnel to assert control in congested situations are inapposite, given the differences between ORO personnel and police officers.

3.3.1 The Board concludes that the traffic management plan included in the SPMC is not adequate and is not implementable.

4.1.2. While FEMA has found the procedures for the evacuation of the transit dependent to be adequate, that finding does not encompass a finding that the bus routes for transit dependent persons themselves are adequate. App. Ex. 43C at 64-65.

4.1.3. Mr. Knowles' direct testimony identified seven intersections along the bus routes which did not have street signs. On cross examination he testified that since the preparation of his direct testimony, the Town of West Newbury has obtained signs for three of those intersections and that one of the full cross intersections has one sign on one of the cross streets. There are still no signs at or for three of the intersections. TOWN Dir., ff. Tr. 16621, p. 12-13. Tr 16633-16634.

4.1.3.WN.a. Mr. Knowles further testified concerning flooding conditions along some of the bus routes. First, part of Ash Street, as detailed in his testimony, is a dirt road which runs through the Ash Street swamp and is rendered seasonably impassible. It generally floods at least twice a year between February and May and may be totally flooded from 24 hours to five days. That road has been closed for as long as two months. An additional problem is caused by the fact that backup from clogged drainage ditches on Crane Neck Street flows toward Ash Street and may put it underwater. Second, parts of River Road, as detailed in his testimony, are subject to flooding. These areas will generally go underwater with a combination of northeast winds and an 11 -11 1/2 foot tide. In 1986 these portions of River Road were underwater for four days. All of the accesses to River Road and most of River Road is in the floodplain. TOWN Dir., ff. Tr. 16621, p. 13-14.

4.1.3.WN.b. Mr. Knowles also testified to inadequacies in the bus transfer point on Stewart Street, including its size,

and the nature of the road in that area. Moreover, the transfer point is at the base of a hill which can become temporarily impassible due to ice and snow. A Highway Department snowplow was unable to negotiate this hill eight years ago and went off the road. TOWN Dir., ff. Tr. 16621, p.14.

4.1.3.WN.c. Mr. Knowles also testified to another potential blockage on a bus route. Moulton Street, between Erickett Street and the reservoir can be blocked temporarily during a snowstorm with high winds, due to the configuration of the banking on the side of the road. TOWN Dir., ff. Tr. 16621, p.14.

4.1.3.WN.d. Finally, Mr. Knowles testified that delays may also result from the previously described inadequacy of traffic control points. TOWN Dir., ff. Tr. 16621, p.14.

4.1.3.WN.e. Mr. Knowles also testified that there is an increase in the likelihood that disabled or improperly parked vehicles would obstruct traffic flow, including buses, from the fact that a number of the streets in West Newbury have not been paved with state funds and are narrower than the 22 feet width required for roads paved with such funds. These include nine roads along the bus routes which range from 12 feet to 18 feet either in whole or in part. The narrower widths of these streets would increase the difficulty of simply circumventing an obstruction. Furthermore, some of the streets on bus evacuation routes have no shoulders and steep dropoffs or embankments, some on both sides of the road. TOWN Dir., ff. Tr. 16621, p.10-11.

Tr. 16650-16654. In addition, we note that the Applicants proposed finding 4.1.12 recognizes that 17 feet of road width -- absent on some of these roads -- are needed for two buses to pass each other.

4.1.3.WN.f. We find Mr. Knowles testimony to be credible and persuasive in demonstrating that the bus routes in West Newbury are inadequate.

4.1.11. Add to Applicants' proposed finding the following: The plans developed pursuant to instructions from MCDA were rejected by the Commonwealth of Massachusetts as unacceptable and inadequate. We further note that although Applicants maintain that a field verification was done to ensure that the roadways were correctly shown on the maps, errors still exist on the most recent versions distributed (Amendment 6, 8/1/88). See, TOWN Dir., ff. Tr 16621, p.6. See also, Tr. 17440.

4.1.12.WN.a. No member of the Applicants' panel testifying concerning the results of the field study actually participated in or observed the study. No member of the panel was present on the buses while the field study was being conducted. Tr. 17380.

4.1.14. Assertions that errors will be corrected in the future do not provide the board with an adequate basis for a finding of "reasonable assurance" at this time. Moreover, until the proposed corrections are set forth more specifically and examined, the board cannot determine whether they rectify the

errors so as to render the plan one that permits a "reasonable assurance" finding.

4.1.18. While Applicants' panel provided direct testimony concluding that impassibility due to flooding was highly unlikely (App. Reb. No.9, ff. Tr, 17333, p.69, 102-103,105-106), the reliability of that conclusion was substantially undermined by their own testimony on cross examination. For example, the map upon which they relied in determining that Ash Street in West Newbury was unlikely to flood, specifically stated that "This map is for flood insurance purposes only. It does not necessarily show all areas subject to flooding in the community...". Tr. 17426. Nor did Applicants present any testimony to contradict Mr. Knowles testimony concerning his personal knowledge of the flooding in that area. Finally, Applicants' panel agreed that flooding on an unpaved road with an organic soil could impair road traffic more than flooding on a paved surface. Tr. 17432.

Applicants' panel further testified that the map upon which they relied showed only the 100 and 500 year flood plain. The panel agreed that the map would not tell them whether roads in those boundaries, such as River Road in West Newbury, were also in a 1, 10, 25, 50 or 75 year flood plain and, therefore, were more likely to flood more frequently. Tr. 17427. Again, Applicants' presented no testimony to contradict Mr. Knowles testimony concerning his personal knowledge of flooding on River Road. We find Applicants' panel's conclusion concerning the

unlikelihood of flooding to be without factual foundation and we reject it. We also give no weight to the fact that published school bus routes traverse River Road in West Newbury, since the panel could not testify that they did so when the roads were flooded. Tr.17429-31. We reject Applicants' conclusion that impassibility due to flooding is highly unlikely, and find that the SPMC does not have sufficiently detailed alternatives for such contingencies.

4.1.19 While the SPMC calls for the determination of alternate roadways available to rejoin assigned bus routes when roads are impassable due to flooding or some other obstacle, given the configuration of some of the roads, adequate alternative roadways to achieve the goals of the bus routes do not always exist.

4.1.19.WN.a. For example, the West Newbury route map in the SPMC indicates that the route involving Ash Street continues through and beyond the area bounded by the swamp. There is no alternative route through that area. Similarly, there is no alternative roadway for rejoining the route involving River Road in West Newbury so as to achieve the goals of the bus route. See SPMC, App. J.

4.1.22. Applicants' witnesses did not fully and satisfactorily address the many-detailed bases admitted in connection with JI-7.

4.3.1. The Board concludes that the bus routes in the SPMC, even with the commitments made by Applicants on the record

of this proceeding, are not adequate for the purpose intended and are not implementable.

Respectfully submitted,
Town of West Newbury,

By its attorney,



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CERTIFICATE OF SERVICE

We, R. Scott Hill-Whilton and Judith H. Mizner, Counsel for the Towns of Newbury and West Newbury in the above-entitled action, hereby certify that we have caused copies of the enclosed documents to be served upon the persons at the addresses listed below, by first class, postage prepaid, mail and by Federal Express, postage prepaid, mail to those names which have been marked with an asterisk. AUG 15 P3:17

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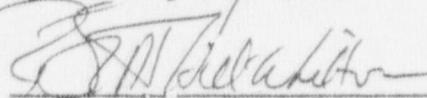
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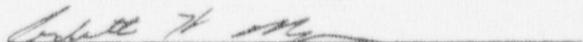
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Signed under seal this 14th day of August, 1989.



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