

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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Before the Atomic Safety and Licensing Board

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

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In the Matter of )  
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LONG ISLAND LIGHTING COMPANY )  
 )  
(Shoreham Nuclear Power Station, )  
Unit 1) )  
\_\_\_\_\_ )

Docket No. 50-322 (OL)  
(Emergency Planning  
Proceedings)

SUFFOLK COUNTY'S RESPONSE TO  
LILCO'S MOTION FOR SUMMARY  
DISPOSITION OF EPs 2B, 5B AND 7B

On November 9, 1982, LILCO moved for summary disposition of Suffolk County emergency planning (Phase I) contentions EP 2B, EP 5B and EP 7B, claiming that those contentions contained no genuine issues of fact to be heard by the Board. See 10 C.F.R. §2.749. Contrary to LILCO's assertions, however, County EPs 2B, 5B and 7B present a number of genuine issues of fact, the resolution of which is essential to proper adjudication of the disputes that are represented by the contentions. Those factual issues are set forth in the following discussion and the attached "Statement Of Material Facts As To Which There Is A Genuine Issue To Be Heard On Contentions EP 2B, 5B and 7B" (Attachment 1). Attached affidavits from Mr. Andrew C. Kanen (Attachment 2) and Dr. Edward P. Radford (Attachment 3) are provided in support of the County's position, as is an excerpt from the deposition of

a LILCO employee, Nicholas J. Di Mascio (Attachment 4). Based upon the foregoing, the County respectfully submits that LILCO's motion for summary disposition should be denied.

EPs 2B and 5B

A review of LILCO's onsite emergency plan led to the County's concern that in the event of a radiological emergency, the ensuing traffic conditions would impede an effective emergency response on the part of LILCO. As a result of its concerns, the County contended the following before the Board:

EP2: Medical And Public Health Support  
(SC, joined by NSC and SOC)

B. Furthermore, LILCO has failed to adequately demonstrate that ground transportation (Plan at 6-16) is adequate for conveyance of contaminated injured individuals to Central Suffolk Hospital under the congested traffic or radiological conditions that are likely to exist during a radiological emergency. Thus, LILCO has failed to satisfy 10 C.F.R. §50.47(b)(12), 10 C.F.R. Part 50, Appendix E, Item IV.E.6, and NUREG 0654, Item II.L.4.

EP5: Offsite Response Organization And  
Onsite Response Augmentation  
(SC, joined by NSC and SOC)

Suffolk County contends that LILCO has failed to provide reasonable assurance that onsite assistance from offsite agencies will be forthcoming in the event of a radiological emergency at the Shoreham site (see. e.g., Plan at 5-8 6-15). LILCO has therefore not met the requirements of 10 C.F.R. §§50.47(b)(1), (2), (3), (8), (12) and (15), 10 C.F.R. Part 50, Appendix E, Item A, and NUREG 0654. In addition, LILCO has not demonstrated adequately that it will be able to augment its onsite emergency response staff in a timely manner (see Plan. Ch. 5). LILCO has also, therefore, failed to meet the requirements of 10 C.F.R. §50,47(b)(1) and (2). Thus:

LILCO has not adequately demonstrated the possible effects of traffic congestion during evacuation of the population upon the ability of offsite personnel and/or onsite augmenting personnel to respond promptly to the Shoreham site.

To support its contention, the County submitted the written direct testimony of Mr. Andrew C. Kanen, a traffic planner, and Drs. James H. Johnson, Kai T. Erikson and Stephen Cole. Mr. Kanen's testimony addresses the various factors that could lead to traffic congestion in the event of a radiological emergency and the impact of those factors upon LILCO's emergency response. The latter three experts discuss the "evacuation shadow phenomenon," a factor which Mr. Kanen specifically recognized as a major contributor to traffic congestion during a radiological emergency (Kanen Direct Testimony at 8, 10-13).

LILCO's Motion for Summary Disposition is based on its assertion that the traffic delays described by the County's experts are "immaterial" because "the congestion is simply too short in duration or too late in getting started... ." LILCO Motion at 5, n.3, 7.

The County submits that LILCO's own words ("too short in duration" and "too late in getting started") are themselves evidence of the factual issues in dispute between the parties. Indeed, as a matter of fact, the County disputes LILCO's statements and is prepared to go forward to prove LILCO incorrect.

LILCO further argues that even accepting the substantial problems of congestion which are the focus of the County's concerns, "[t]here is simply no indication in the NRC regulations that traffic congestion that might slow down emergency vehicles renders an applicant's emergency planning arrangements unacceptable." LILCO Motion at 6. LILCO's statement is unsupportable because NRC regulations require that emergency staffing at Shoreham be both adequate in numbers and timely. LILCO's factual assertions and its legal conclusions as to its compliance with NRC regulations are erroneous and, therefore, directly disputed by the County.

EP 2B - Ambulance Travel

An adequate on-site emergency plan requires that:

Arrangements are made for medical services for contaminated injured individuals.

10 C.F.R. §50.47(b)(12). To meet that requirement, an applicant must make:

Arrangements for transportation of contaminated injured individuals from the site to specifically identified treatment facilities outside the site boundary;

Arrangements for treatment of individuals injured in support of licensed activities on the site at treatment facilities outside the site boundary.

10 C.F.R. Part 50, Appendix E, IV.E.6 and 7. NUREG 0654 provides the further guidance that:

Each organization shall arrange for transporting victims of radiological accidents to medical support facilities.

Thus, it is clear that NRC regulations place on the applicant a requirement that its plan provide adequate medical care for contaminated injured persons. See In the Matter of Southern California Edison Company (San Onofre Nuclear Generating Station, Units 2 and 3) ALAB 680, \_\_\_ NRC \_\_\_, slip op. at 18 (July 16, 1982). To provide that care, the applicant must also be able to provide reasonable assurance that contaminated injured persons can be transported to the appropriate medical facility. 10 C.F.R. Part 50, Appendix E, IV.E.6. However, in the case of transportation of persons to Central Suffolk Hospital, LILCO clearly does not provide such assurance.

As Mr. Kanen states in his direct testimony at 15, ambulances traveling to Central Suffolk Hospital from the Shoreham site may experience delays of up to an hour, particularly during an evacuation (recommended or voluntary) of the area encompassing the hospital and the routes leading to it (see also Kanen Affidavit at 2). Such delays could have serious consequences for a contaminated injured person suffering life-threatening injuries or substantial contamination (Radford Affidavit at 1-2). Indeed, traffic congestion caused by evacuating traffic could deny a contaminated injured individual the treatment that NRC regulations explicitly require be provided.

In light of these facts, LILCO's submission "that there is no requirement that an applicant show that ambulances must be able to get to designated hospitals quicker than

[over one hour]" is erroneous and unsupportable in fact or law. With the serious delays in treatment that the County contends will occur during a radiological emergency, LILCO has not provided assurance of medical treatment that the NRC regulation requires.

LILCO seeks in its motion to dispute the County's testimony on EP 2B by asserting that the routes that ambulances are expected to take, in particular Sound Avenue and Roanoke Avenue, are not evacuation routes and, therefore, will not be congested (LILCO Motion at 8; LILCO Attachment 1 at paragraphs 11-14; Lieberman affidavit at 2-3).<sup>1/</sup> That argument is, however, without basis and unrealistic. As stated in Mr. Kanen's affidavit at 2, routes not designated as evacuation routes may become congested as evacuees in a recommended or voluntary evacuation seek to escape the congestion of designated evacuation routes. This action will cause secondary routes such as Sound Avenue and Roanoke Avenue to become congested as well, with a resulting impact on the movement of emergency vehicles. Thus, there is a clear issue of fact for the Board to hear regarding the likely congestion that will occur on the routes that ambulances will take from the site to Central Suffolk Hospital.

EP 5B - Augmenting Emergency Response Personnel

NRC emergency planning regulations call for the applicant to assure that "timely augmentation of response

<sup>1/</sup> Indeed, the County disputes any designation of "evacuation routes" prior to the County Legislature's approval of Suffolk County's emergency plan.

capabilities is available....," 10 C.F.R. §50.47(b)(2), and that "[a]rrangements for requesting and effectively using assistance resources have been made... ." 10 C.F.R. §50.47 (b)(3). The clear intent of these regulations is to assure that the licensee can augment its on-shift emergency response "within a short period after declaration of an emergency." NUREG 0654, B.5.<sup>2/</sup> However, if traffic congestion impedes the movement of emergency personnel toward the site, it is likely to render the augmentation of LILCO's own response capabilities untimely and block the effective use of "assistance resources" such as fire and ambulance services.

As Mr. Kanen states (Direct Testimony at 6-8), a number of factors may in fact impede the movement of offsite personnel to the Shoreham site in the event of a radiological emergency. One such factor is perimeter control. LILCO recognizes the problem in a footnote (LILCO Motion at 5, n. 3), and incorrectly dismisses it as immaterial. Nowhere in LILCO's motion or supporting documents does LILCO confront the factual issue of perimeter control or ever attempt to explain why it believes the County's testimony on this issue does not invoke a general dispute between the parties.

In fact, perimeter control is a factor LILCO must address as must the County in its own plan. It will be necessary in a radiological emergency to implement perimeter

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<sup>2/</sup> NUREG 0654 specifies in Table B-1 30 minute and 60 minute augmentation requirements for the applicant's emergency response. That issue is addressed in greater detail in the discussion of contention EP 7B.

control in order to keep automobiles from unnecessarily entering the evacuation area or perhaps even a potential evacuation area. However, since perimeter control will be established promptly upon notification of an emergency, queues will result almost immediately thereafter (Kanen Affidavit at 3). Thus, emergency workers who are located outside the perimeter before an accident and who then attempt to reach the site may be caught in queues, thereby substantially delaying their arrival. In addition, LILCO's own survey (see LILCO Attachments 6 and 7) shows that many LILCO personnel live a substantial distance from the plant (Kanen Affidavit at 3-4). It is therefore likely that many of them will be unable to cross the perimeter points before perimeter control is established (Kanen Affidavit at 3), no matter how quickly they respond upon notification.

LILCO also makes much of the argument that emergency personnel moving toward the site will be unhindered because all traffic will be moving away from the plant following public notification of a radiological emergency (LILCO Motion at 5; LILCO Statement at paragraphs 5, 23 and 30). This argument, however, is an unrealistic characterization of the traffic patterns that will emerge during an emergency and the many instances where traffic may move toward the plant, such as: (1) the phase of work to home travel occurring immediately following public notification of an emergency; (2) attempts by evacuating motorists to seek less congested routes than those they are on; and (3) evacuation to the west by those located to the



east of the plant who fear being stranded on the end of Long Island and consequently shun evacuation eastward. In all of these instances, the ensuing congestion could have a substantial impact on the ability of offsite personnel to reach the Shoreham site (Kanen Affidavit at 2-3).

EP 7B

As discussed above, NRC regulations demand that the applicant demonstrate an ability to augment its onsite emergency response personnel in a "timely" manner. The guidance offered by NUREG 0654, Table B-1, specifies that the applicant should meet specific requirements to augment its personnel within thirty minutes and again at sixty minutes from the declaration of an emergency. LILCO, however, has been unwilling to commit itself to any strict response limits, particularly within the thirty minute time frame following an accident. Therefore, Suffolk County submitted EP 7B:

EP 7: Onsite Response Organization  
(SC, joined by NSC and SOC)

Suffolk County contends that LILCO has not satisfactorily delineated the responsibilities of LILCO response personnel, nor has it demonstrated adequately that it will be able to augment its emergency response staff in a timely manner. Thus, LILCO's emergency response plan is not in compliance with 10 CFR §§50.47(b)(1)(2)(3) and (8), 10 CFR Part 50, Appendix E, Items A and C, and NUREG 0654, Items II.A, B, C and H for the following reasons:

- B. Table 5-1 does not clearly demonstrate LILCO's ability to augment its staff within 30 minutes of declaration of an emergency and is not in compliance with Table B-1 of NUREG 0654.

On September 1, 1982, LILCO amended its emergency plan stating:

The augmentation of onsite personnel shall be accomplished as soon as possible upon notification, and, based on the average, normal one-way commute time for these personnel, meets the objectives of NUREG 0654 Table B-1 for a 30 to 60 minute response, (Figure 5-6).<sup>3/</sup>

LILCO plan at 5-2. As the qualified language above indicates, LILCO's new "commitment" to Table B-1 does not in fact conform to Table B-1's requirements. In any event, whether or not LILCO's amendment to its plan meets the requirement of 10 CFR 50.47(b)(2) is a question which revolves around issues of fact for this Board to hear and decide.

First, LILCO seeks to support its ability to augment promptly with surveys it conducted (see LILCO Attachments 6 and 7) showing the "average, normal one-way commute time" for its augmenting personnel. LILCO offers this evidence, however, on the false premise that normal commuting times and conditions are representative of the conditions that would exist immediately following notification of an emergency. In fact, following such notification on a normal weekday, there is likely to be an almost immediate commencement of work to home travel as workers seek to join their families in preparation for a evacuation. The congestion resulting from this multi-directional traffic flow will be at least as intense as normal rush hour conditions and probably more so (Kanen Affidavit at 3-4). Therefore, the

<sup>3/</sup> Thus, former Table 5-1 has been supplanted by Figure 5-6 in the LILCO plan.

times in Attachments 6 and 7 represent the bare minimum of the time it would take emergency workers to reach the plant on a normal weekday. The real times could be substantially higher (Kanen Affidavit at 4). In addition, the times in Attachment 6 and 7 do not reflect any possible delays due to perimeter control (Kanen Affidavit at 4).

Furthermore, it appears that LILCO itself does not believe that it has the capability to augment its staff promptly. This is most evident in the deposition of a LILCO employee, Nicholas J. Di Mascio (Attachment 4), who continually states that to expect the type of prompt response required by Table B-1 is "unrealistic," particularly given the distance personnel may live from the plant and the expected times in which they could cover that distance (Attachment 4 at 114-115; see generally Attachment 4 at 93-121). Moreover, there appears to be confusion on the part of LILCO as to "when the clock started" to meet Table B-1 requirements (Attachment 4 at 106). At issue in LILCO's mind is "whether or not 30 minutes was at the declaration of the emergency or upon actually calling of a person" (Attachment 4 at 106). That is, whether augmenting personnel must arrive at the site within thirty minutes of the declaration of an emergency or thirty minutes from the time they are notified and ordered to respond. Clearly, the latter interpretation could add substantially to LILCO's actual response since it may take some time to notify all augmenting personnel following the declaration of an emergency. LILCO's interpretation of the time requirements of Table B-1 thus

presents another issue of fact which must be considered in order to determine whether its commitment to "the objectives of NUREG 0654 Table B-1" is meaningful in any way and meets NRC regulations calling for "timely" augmentation. It is the County's view, which seems obvious under the letter and purpose of 10 C.F.R. §50,47, that the "clock" begins to run upon the acknowledgement of emergency conditions at the plant.

In light of the above issues of fact requiring consideration by the Board to adjudicate EP 7B, LILCO's motion for summary disposition should be denied.

Conclusion

Contentions EP 2B, 5B and 7B and the testimony and pleadings submitted by the parties raise genuine issues of fact which the Board must hear and make findings upon prior to adjudication of the contentions. Therefore, LILCO's motion for summary disposition should be denied.

Respectfully submitted,

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NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of	)	
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LONG ISLAND LIGHTING COMPANY	)	Docket No. 50-322 (OL)
	)	(Emergency Planning
(Shoreham Nuclear Power Station,	)	Proceedings)
Unit 1)	)	
	)	

STATEMENT OF  
MATERIAL FACTS AS TO WHICH THERE  
EXISTS A GENUINE ISSUE TO BE  
HEARD ON CONTENTIONS EP 2B, 5B AND 7B

1. There are four major factors which would contribute to congestion following public notification of an accident at the Shoreham plant. They are:

- a. Work to home travel
- b. Perimeter control
- c. Evacuating traffic
- d. Voluntary evacuees

Kanen Affidavit at 1-2.

2. Ambulance travel from the Shoreham site to Central Suffolk Hospital could be delayed by evacuating traffic for up to an hour in the event of a radiological emergency. It is imprudent to rely on the belief that because certain routes such as Sound Avenue or Roanoke Avenue may not be designated as evacuation routes, they will not therefore be congested (see LILCO's Statement Of Facts As To Which There Is No Genuine Issue To Be Heard [hereinafter "LILCO Statement"] at

paragraphs 13-19). On the contrary, it is likely that as designated routes become congested during a radiological emergency, persons attempting to evacuate will seek alternate routes. Non-designated evacuation routes will appear to be attractive alternatives. Therefore, congestion can be expected to become more widespread and affect facilities such as Sound Avenue or Roanoke Avenue. Kanen Affidavit at 2.

3. Delays of up to an hour in transporting a contaminated injured individual to Central Suffolk Hospital from the Shoreham site could have an extreme adverse impact on those requiring treatment for life-threatening traumatic injuries. In addition, delay in decontamination could greatly increase the radiation exposure of such injured persons, with the possibilities of — immediate or delayed effects of radiation thereby greatly increased. Radford Affidavit at 1-2.

4. It is unrealistic to expect that in the event of a radiological emergency all traffic necessarily will be moving away from the plant (LILCO Statement at paragraphs 5, 20 and 30). In fact, traffic in some instances may move toward the plant for a number of reasons, including:

- a. Evacuees seeking alternate, uncongested routes;
- b. Evacuation (recommended or voluntary) by those to the east of the plant who choose to evacuate to the west because they fear

being stranded on the North or South  
Forks;

- c. Work to home travel preceding actual  
evacuation.

This traffic could have an adverse impact on LILCO personnel or emergency vehicles moving toward the plant.

5. Perimeter control (see Kanen Direct Testimony on EPs 2B and 5B at page 7) will be established within a very short time after LILCO notifies the County that an emergency is taking place. A review of Attachments 6 and 7 to LILCO's Motion For Summary Disposition reveals that many personnel who are expected to augment LILCO's emergency response live a substantial distance from the Shoreham plant. It is likely that a significant number of such personnel may not be able to respond quickly enough to proceed toward the plant and cross the perimeter control points before perimeter control is established. The queuing that will occur almost immediately at the perimeter control points will thus delay those personnel in their attempts to reach the Shoreham plant (Kanen Affidavit at 3).

6. Work to home travel following notification of an emergency is expected to begin very shortly after notification of an emergency (Kanen Direct Testimony at 6-7). The congestion that will occur is likely to be at least as intense as rush hour traffic and probably more so. Therefore, at best, the travel times in Attachment 7 reflect only the minimum

amount of time it would take LILCO augmenting personnel to reach the Shoreham plant under emergency conditions. In fact, the travel times could be higher. In addition, those times do not reflect the substantial delay that could result due to perimeter control (Kanen Affidavit at 3-4).

7. By its own admission, LILCO's commitment to the guidance of Table B-1 in NUREG 0654, regarding augmentation times for onsite emergency personnel, is uncertain at best. LILCO Motion at 10, n. 8. LILCO's commitment is all the more questionable in light of the deposition testimony of Nicholas J. Di Mascio, taken on August 13, 1982 in which he specifically admits that any commitment on the part of LILCO to certain guidelines in Table B-1 would be "unrealistic" (Di Mascio Deposition, Attachment 4, at 112-121). Furthermore, there is uncertainty within LILCO whether the Table B-1 response requirements commence at the declaration of an emergency or the notification of its personnel (Di Mascio Deposition, Attachment 4, at 106).