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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)
LONG ISLAND LIGHTING COMPANY) Docket No. 50-322-OL-3
(Shoreham Nuclear Power Station,) (Emergency Planning)
Unit 1)
)

SUFFOLK COUNTY MOTION FOR LEAVE TO
FILE REBUTTAL TESTIMONY ON CONTENTION 23

Pursuant to 10 C.F.R. 2.743(b) and the Board's oral Order of January 27, 1984 (Tr. 3674), Suffolk County (hereinafter "the County") hereby moves for leave to file rebuttal testimony regarding Contention 23 -- the Evacuation Shadow Phenomenon. The testimony that the County seeks to file was prepared by Dr. Stephen Cole and Dr. Andrea Tyree, both of whom are professors in the Sociology Department of the State University of New York at Stony Brook, and addresses one limited issue.

The rebuttal testimony presents the results of a rigorous statistical analysis applied to the data presented in an unpublished paper co-authored by Dr. John Sorensen, a LILCO witness, entitled "Evacuation Behavior at TMI: Review and Re-examination," (1983) [hereinafter, the "TMI paper"].^{1/} As explained in the rebuttal testimony, the results of Dr. Cole's and Dr. Tyree's

1/ That paper was admitted into evidence as Suffolk County Exhibit EP-3 (ff. Tr. 1839), during the cross-examination of LILCO's so-called behavioral panel on Contention 23. (See Tr. 1864).

analysis directly rebut the assertion in LILCO's direct testimony that "[p]re-accident fear of radiation was not a significant cause of evacuation" at TMI. (Testimony of Matthew C. Cordaro et al. on Behalf of the Long Island Lighting Company on Phase II Emergency Planning Contentions 23 (Shadow Phenomenon) and 65.C.2 and 65.F (Panicked Drivers), (November 18, 1983) (ff. Tr. 1470) [hereinafter, "LILCO Testimony"], et 61). In the LILCO testimony, LILCO's witnesses state that the data and conclusions in Dr. Sorensen's TMI paper support that assertion. The statistical analyses conducted by the County's experts demonstrate that Dr. Sorensen's data do not support the testimony of LILCO's witnesses but, in fact, support the County's testimony. The good cause upon which the County bases this motion is described below.

Group I testimony (which included the issues raised in Contention 23 -- the Evacuation Shadow Phenomenon) was filed by the parties on November 18, 1983. Eighteen days before that date, on October 31, 1984, counsel for LILCO informed the County for the first time that Dr. John Sorensen would be one of LILCO's witnesses testifying on Contention 23. This identification of Dr. Sorensen as a potential witness was well after the October 14 cutoff date for depositions set by the Board. Since prior to October 31 the County had no knowledge that Dr. Sorensen would appear on LILCO's behalf, the County did not have an opportunity to depose Dr. Sorensen.

Upon learning that Dr. Sorensen would file testimony on behalf of LILCO, however, the County requested, among other things, a copy of Dr. Sorensen's resume. On November 5, 1983,

counsel for the County received Dr. Sorensen's resume^{2/} which listed, among other things, his unpublished TMI paper.^{3/} Counsel for the County did not receive a copy of Dr. Sorensen's TMI paper until approximately November 10, 1983. Pursuant to negotiations between the parties, dissemination of the paper, following its receipt, was restricted by a confidentiality agreement which prohibited counsel for the County from copying the paper.^{4/} Copies provided by LILCO could be disseminated only to persons who had signed the agreement, resulting in the receipt of the article by the County's witnesses sometime after November 10.

As noted above, Group I testimony was filed by the parties on November 18, 1983. LILCO's testimony regarding Contention 23 contested, among other things, the County's assertion that radiation, being unique from other hazards, is more feared by people than other disaster agents and that as the TMI accident demonstrated, a radiological emergency was therefore likely to produce a much larger "shadow effect" than other types of disasters. According to LILCO's witnesses, people did not evacuate from TMI due to fear

2/ Letter from Kathy E. B. McCleskey to Christopher M. McMurray, dated November 4, 1983.

3/ Dr. Sorensen's paper also was listed as a "paper under review for publication" in a bibliography which contained the titles of 106 references which was provided to counsel for the County on August 8, 1984. The bibliography constituted LILCO's response to an informal Suffolk County discovery request for the basis for the LILCO assertion that "the factors determining human response in emergencies are not different between nuclear and natural hazard emergencies." See LILCO's Response to Certain Suffolk County Requests of July 18, 1983, at 11-23.

4/ The need for the confidentiality agreement arose from Dr. Sorensen's concern that unauthorized disclosure of the contents of the paper might have jeopardized the anonymous peer review process which his TMI paper was undergoing at that time.

of radiation, but rather because of conflicting information disseminated by various sources. (See, e.g., LILCO Testimony at 52-63). The only quantitative data relied upon by the LILCO witnesses to support that assertion in their testimony was Dr. Sorensen's paper which, according to the LILCO witnesses, demonstrated that "[p]re-accident fear of radiation was not a significant cause of evacuation" at TMI. (LILCO Testimony at 61).

The County was surprised by LILCO's reliance in its November 18 testimony on Dr. Sorensen's paper to support its argument concerning the TMI evacuation, since the County believes Dr. Sorensen's data in fact show exactly the opposite of what LILCO contends. After the County conducted its own analysis of the data in Dr. Sorensen's paper, by subjecting Dr. Sorensen's data and analysis to a rigorous regression analysis by Drs. Cole and Tyree, it became clear that it is possible to prove quantitatively that LILCO's reliance on Dr. Sorensen's TMI paper is unfounded. That analysis and demonstration that LILCO's testimony is incorrect is set forth in the rebuttal testimony of Drs. Cole and Tyree.

In its oral January 27, 1984 order, the Board stated that parties seeking to file rebuttal testimony must make a showing of good cause. The County submits that good cause is plainly evident in the instant case because the statistical analysis and explanation contained in the County's rebuttal testimony is relevant to the issues raised in Contention 23, non-cumulative to other testimony, and could not have been included in the County's November 18 direct testimony.

Dr. Cole's and Dr. Tyree's rebuttal testimony on behalf of the County is focused narrowly on the data presented in Dr. Sorensen's TMI paper which were discussed and relied upon by the LILCO witnesses in their November 18 testimony. Drs. Cole and Tyree have applied statistical methods to the Sorensen data. The results of their analysis demonstrate that, contrary to LILCO's assertion, pre-existing fear of radiation was indeed a significant cause of evacuation behavior at TMI. The results of the County's analysis further show contrary to LILCO's assertions (see, e.g., LILCO Testimony at 52-55), the conflicting information issued at TMI does not explain the evacuation behavior at TMI. Thus, the issues addressed in the County's rebuttal testimony are clearly relevant to the issues which have been explored by the parties in connection with Contention 23. Moreover, the rebuttal testimony directly addresses the validity of a specific point made in the LILCO direct testimony -- that Dr. Sorensen's data and article support the LILCO position that pre-accident fear of radiation was not a significant cause of evacuation at TMI. Thus, the rebuttal testimony does not raise any new issues but, rather, provides the Board with the County's experts' opinion as to an issue raised by the LILCO witnesses.

In addition, the County's rebuttal testimony is not cumulative to the direct testimony submitted by the County on November 18, nor could the rebuttal testimony have been presented by the County's witnesses in their direct testimony. The County had no way of knowing, until it had received and reviewed LILCO's November 18 testimony, that the LILCO witnesses would use the data

and conclusions in the TMI paper as they did on pages 57-61 of the LILCO testimony. Indeed, because the Sorensen data in fact support the County's interpretation of the events at TMI rather than LILCO's, it did not occur to the County witnesses, prior to reading the LILCO testimony, to address a LILCO argument to the contrary. Further, given the brief time that the TMI article was available to the County's experts prior to November 18, there would not have been sufficient time to address it in detail in the Group I testimony. The propriety of the limited rebuttal testimony submitted by the County in this instance is thus clear.^{5/}

CONCLUSION

Because the County has shown good cause, this Board should grant the County's Motion for Leave to File Rebuttal Testimony on Contention 23 by Drs. Cole and Tyree.

Respectfully submitted,

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February 1, 1984

^{5/} Furthermore, while the County took full advantage of its opportunity to cross-examine Dr. Sorensen on his TMI paper, (see, e.g., Tr. 1838-1867), cross-examination is not meant to be the vehicle by which a party presents its own direct affirmative evidence. Thus, it was not possible for the County to attempt during cross-examination to submit into evidence its own analysis of the TMI data presented in Dr. Sorensen's testimony.

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CERTIFICATE OF SERVICE

I hereby certify that copies of Suffolk County Motion for Leave to File Rebuttal Testimony on Contention 23 have been served on the following by U.S. mail, first class, except where noted, this 1st day of February, 1984.

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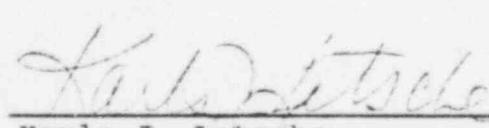
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