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July 31, 1984

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

DOCKETED  
1984

84 A70-5 P3:56

In the Matter of

CAROLINA POWER AND LIGHT COMPANY AND  
NORTH CAROLINA EASTERN MUNICIPAL  
POWER AGENCY

(Shearon Harris Nuclear Power Plant,  
Units 1 and 2)

Docket Nos. 50-400 OL  
50-401 OL

NRC STAFF RESPONSE IN SUPPORT OF APPLICANTS' MOTION  
FOR RECONSIDERATION OR CLARIFICATION OF BOARD  
MEMORANDUM AND ORDER OF APRIL 13, 1984

I. INTRODUCTION

On July 18, 1984, Applicants filed a document entitled "APPLICANTS' MOTION FOR RECONSIDERATION OR CLARIFICATION OF BOARD MEMORANDUM AND ORDER ON JOINT CONTENTION IV" [hereinafter Applicants' Motion]. This Motion requested either that the Board reconsider its decision and grant Applicants' Motion for Summary Disposition of Joint Contention IV in its entirety, or clarify the scope of proof it expects to hear in the hearings scheduled for October 10, 1984. Applicants' Motion at 18. For the reasons set forth below, the Staff supports Applicants' Motion for reconsideration or, in the alternative for clarification. The Staff supports this motion on the ground principally that the Board has misinterpreted the Commission's regulations concerning the standards for accuracy of dosimeter processing.

II. BACKGROUND

On April 13, 1984, the Licensing Board issued an order in which it partially granted Applicants' Motion for Summary Disposition of Joint

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Contention IV. The Board found that an issue of material fact did exist as to the accuracy of dosimeters. "MEMORANDUM AND ORDER (Ruling on Motions for Summary Disposition) [hereinafter Order]. In its Order the Board stated:

For the reasons outlined above, the Board finds an issue of material fact; namely, does compliance with the 1983 ANSI Standard insure compliance with the NRC regulations? . . . Alternatively, there is an issue of material fact whether the TLDs to be used at the Harris facility nevertheless can be used to measure occupational doses with sufficient accuracy to comply with NRC regulations.

Order at 20.

The Staff informed the Board that it was considering filing a motion for reconsideration of the Board's Order, and asked that consideration of this issue be deferred until the hearings scheduled to begin in October of 1984. The parties raised no objection and the Board granted the Staff's request. The Staff did not, however, file that motion. On July 18, 1984, the Applicants filed the instant motion, citing the Staff's previous statements as the reason for the failure to file earlier. For the reasons set forth below, the Staff supports Applicants' Motion.

### III. ARGUMENT

#### A. There Remains No Material Issue of Fact With Respect to Contention IV

Applicants argue that no material issue of fact exists with respect to Contention IV. Applicants' Motion at 12-14. We agree.

The Board granted summary disposition with respect to all aspects of this contention except with respect to the question of whether thermoluminescent dosimeters (TLDs) are accurate. With respect to the accuracy of TLDs, the Board, reasoning from the provisions of 10 C.F.R. § 20.407, inferred a numerical standard for accuracy of TLDs. The Staff

and the Applicants dispute this inferred standard (see Section B below), arguing that no numerical standard is established by the regulations in 10 CFR Part 20. As discussed below, it is the Staff's view that the regulations are geared toward the conduct of surveys to evaluate the extent of radiation hazard which may be present at a given facility. See 10 C.F.R. § 20.201(b). These regulations do not require the use of particular instruments with particular accuracy; rather they impose an obligation on the Licensee to satisfy the survey requirement reasonably taking into consideration the current state of technology.

Both Applicants and Staff as part of their arguments in support of the accuracy of CP&L TLDs referred to the ANSI N13.11-1983 standard (and the related NVLAP program) as an appropriate basis for comparison for assessing the accuracy of TLDs. Block Affidavit at 3, Browne Affidavit at 8-10. <sup>1/</sup> The Board outlined its concerns as to the adequacy of the ANSI standard. Order pp. 12-16. However, the record is clear that regardless of whether the ANSI standard for accuracy or the Board's numerical standard inferred from 10 C.F.R. § 20.407 is correct, the TLDs as used by Applicants satisfy such standard.

As the Board stated:

"As the Board has outlined above, we believe that the NRC regulations require that personnel dosimetry be carried out in a manner such that the results can be relied upon to be accurate to integer values or one significant figure for doses of a few rem. Such performance could be achieved by limiting acceptable bias to 10-20% and variability or the standard deviation also to 10-20%. That such performance is reasonable and not beyond limitations dictated by available measurement techniques is demonstrated by the performance of CP&L outlined above."

Order at 19.

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<sup>1/</sup> For this reason, we do not agree with Applicants' argument that the Board has raised a sua sponte issue.

As the Board further stated:

"The Board notes in passing that the performance of CP&L in Test 3 (NUREG/CR-2891) was better than the average of the other participants (Table 6, p. 22). The average of the standard deviations for all participants was 19% and the average standard deviation for the CP&L data was 7%. The average bias for all participants was 19% and the average bias for the CP&L data was 8%."

Order at 18

Finally, the Board rejected Intervenor's assertions concerning the accuracy of Applicants' TLDs were rejected by the Board. Order at 18.

Thus, the evidence demonstrates that the TLDs as used by Applicants satisfy the numerical standards for accuracy suggested by the Board at page 19 of its Order. This standard is stricter than the ANSI 1983 standard discussed by Applicants and Staff. Joint Intervenors did not propose a standard of accuracy for TLDs.

While there may be disagreement between the Staff and the Board as to whether it is proper to infer a numerical standard from 10 C.F.R. § 20.407 or whether the ANSI standard has been properly developed,<sup>2/</sup> these disputes do not bear upon the issue of whether the TLDs as used by Applicants are accurate. On this point the undisputed evidence of the tests demonstrates that such TLDs are accurate. There are no other material issues remaining with respect to this contention.

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<sup>2/</sup> Whether the ANSI standard is properly developed for use in connection with the proposed rule relating to Improved Personnel Dosimetry Processing (49 FR 1205) is an issue for the rulemaking process in connection with the proposed rule. As Applicants' Motion indicates, pp. 9-12, this is not an issue for the Harris proceeding.

B. The Board's Order is Based on an Incorrect Interpretation of 10 C.F.R. §§ 20.407(b) and 20.101(a) of the Commission's Regulations

In their Motion Applicants argue, among other things, that the Board in its order implied a standard for dosimeter accuracy into the Commission's regulations which is not actually reflected by those regulations. Applicants' Motion at 14-16. The Staff agrees with this argument.

The Staff agrees with Applicants that the regulations do not contain any numerical standards for accuracy of dosimeters. Section 20.101(a) of the Commission's regulations sets forth quarterly exposure limits for individuals in restricted areas. 10 C.F.R. § 20.407 contains exposure reporting procedures. The Staff does not find that the Commission intended, in promulgating these reporting requirements, to imply the existence of a standard of accuracy for dosimetric procedures. Rather than suggesting a dosimetry accuracy standard, the purpose ascribed to these reports by the Commission was to:

...assist in the evaluation of the risk from radiation exposure in the nuclear industry by permitting a meaningful comparison of current exposure experience among the types of licensees required to report, and among licensees within each type. The information would also assist in the identification of situations to be studied further in order that guidance may be developed on action that should be taken to keep in-plant radiation exposures as low as practicable.

39 Fed. Reg. 1000-1001 (January 4, 1974).

It is clear that the Commission viewed the reporting requirement as an information gathering tool. The Board's attempt to infer an accuracy requirement from this regulation is not well founded.

The Commission's regulations are geared toward the conduct of surveys to evaluate the extent of radiation hazards which may be present at a given facility. See 10 C.F.R. § 20.201(b). These regulations do



not require the use of particular instruments with particular accuracy; rather they impose an obligation on the Licensee to satisfy the requirement reasonably taking into consideration the current state of technology. 3/

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3/ The Board Order also raised some question concerning the enforcement policy of the Office of Inspection and Enforcement regarding exposure of workers. The Commission's standard is set forth in 10 C.F.R. § 20.101(b)(1). The enforcement policy is set forth in 10 C.F.R. Part 2, Appendix C Supplement IV C1 which states that any exposure exceeding 3 rems to the whole body is a severity III violation. It should be noted that the Appendix C supplements are guidance, not regulations. The example in 10 C.F.R. Part 2 Appendix C Supp. IV C1 is in absolute terms with no margin for error or judgement permitted.

The Board questioned whether the Commission's regulations and enforcement policy provide for some error band. The enforcement policy does not address error bands nor does it address what is a violation. Rather the enforcement policy provides guidance as to what action should be taken in the event a violation occurs. For example, Supplement IV C1 of 10 C.F.R. Part 2, Appendix C provides that a violation involving an exposure in excess of 3 rems is to be categorized at a Severity Level III. Whether such a violation occurred is, of course, the question. The regulations do not provide for an error band.

Whether the reading of the monitoring device demonstrates a violation is an evidentiary question. The Staff position has been to adopt the nominal reading of the film badge absent some specific reasons not to accept the reading because of the circumstances of the case. See In the Matter of Met Lab, Inc. (Civil Penalty Order), 46 Fed. Reg. 42555, 42556 (Aug. 21, 1981). Met Lab involved a case where the question of the accuracy of the film badge arose in the context of a civil penalty action.

In settlement of that case the Administrative Law Judge accepted a condition that the licensee treat the film badge or other monitoring device as the correct measurement for reporting programs. The agreement reserved the right of the licensee to contest the accuracy of a film badge or other monitoring device in an adjudication over any enforcement action. Met Lab (Settlement Agreement) 47 Fed. Reg. 24673 (June 7, 1982).

The Board has incorrectly inferred from 10 CFR § 20.407 a numerical standard for the accuracy of dosimeters which does not exist in the current regulations. Thus the Staff would support the Applicant's Motion for the Board to reconsider its rulings.

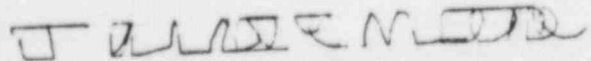
C. Applicants' Request for Alternative Relief is Appropriate

Finally, Applicants point out that some clarification is required to know whether it is necessary for the parties to address all of the issues raised by the Board. The Staff agrees with the request for the reasons stated by Applicants in their Motion. Applicants' Motion at 17.

IV. CONCLUSION

For the reasons set forth above, the Staff supports Applicants' Motion for reconsideration and alternative request for clarification.

Respectfully submitted,



Janice E. Moore  
Counsel for NRC Staff

Dated in Bethesda, Maryland  
this 31st day of July, 1984

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NUCLEAR REGULATORY COMMISSION

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CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF RESPONSE IN SUPPORT OF APPLICANTS' MOTION FOR RECONSIDERATION OR CLARIFICATION OF BOARD MEMORANDUM AND ORDER OF APRIL 13, 1984" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system (\*), this 31st day of July, 1984.

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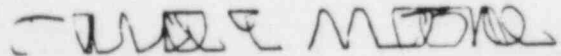
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