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February 4, 1985

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED
USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

In the Matter of	)	
	)	
CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL.	)	Docket No. 50-440 OL 50-441 OL
	)	
(Perry Nuclear Power Plant, Units 1 and 2)	)	

NRC STAFF RESPONSE IN SUPPORT OF APPLICANTS' MOTION FOR SUMMARY DISPOSITION OF ISSUE #14

I. INTRODUCTION

By motion dated January 14, 1985 the Cleveland Electric Company et al. (CEI or Applicants) requested the Atomic Safety and Licensing Board (the Board) to grant summary disposition of Issue #14, a contention sponsored by Ohio Citizens for Responsible Energy (OCRE). By means of the discussion below, the attached affidavit, and NRC Staff regulatory guidance documents provided, the Staff supports the Applicants' motion pursuant to 10 CFR § 2.749(a).

II. DISCUSSION

A. Summary Disposition, Where Appropriate, is Recommended by the Commission and Appeal Board In Order to Avoid Unnecessary Litigation

The Applicants' Motion describes the legal standards for summary disposition set out in 10 CFR § 2.749 and the Commission's caselaw

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(Applicants' Motion, pp. 3-5). It should be added that summary disposition is the preferred method of deciding issues in order to avoid unnecessary litigation where the movant meets the burden of proof by demonstrating the absence of any genuine issue of material fact in the manner described by 10 CFR § 2.749(d). 1/

As discussed below, the Staff believes the documents of record and those now submitted by Applicants and Staff demonstrate the absence of any issue of material fact underlying this contention in accord with 10 CFR § 2.749(d) so that there is no reason for litigation of Issue #14.

B. Issue #14 Rests on Staff Guidance Which Was Changed In 1982 Due to New Information

Issue #14 states as follows:

> Applicant has not demonstrated that the Perry Nuclear Power Plant will meet the regulatory safety requirements unless it installs incore thermocouples, as suggested by staff regulatory guidelines, including Regulatory Guide 1.97, Revision 2. 2/

1/ Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 & 2), CLI-73-12, 6 AEC 241 (1973), aff'd sub nom, BPI v. Atomic Energy Commission, 502 F.2d 424 (D.C. Cir. 1974); Houston Lighting and Power Co. (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542, 550 (1980); Mississippi Power & Light Co. (Grand Gulf Nuclear Station, Units 1 & 2), ALAB-130, 6 AEC 423, 424-25 (1973); Duquesne Light Co. (Beaver Valley Power Station, Unit 1), ALAB-109, 6 AEC 243, 245 (1973). See also, Statement of Policy on Conduct of Licensing Proceedings, CLI-81-8, 13 NRC 452, 457 (1981). Cf Public Service Co. of Oklahoma (Black Fox Station, Units 1 and 2), CLI-80-31, 12 NRC 264, 277 (1980).

2/ The contention submitted by OCRE stated "Incore Thermocouples should be used at PNPP in conformance with the requirements of Regulatory Guide 1.97, Revision 2, and TMI Action Plan item II.F.2. Incore thermocouples provide an indication of inadequate core cooling (ICC) and are a redundant and diverse means by which to detect reactor coolant level." The Board order admitting the contention shortened the issue to the form stated above. Cleveland Electric Illuminating Co. et al. (Perry Nuclear Power Plant, Units 1 and 2), LBP-82-98, 16 NRC 1459, 1467, 1471 (1982).

The bases provided by OCRE for this contention were, in addition to (1) Reg. Guide 1.97, and (2) NUREG-0737, (3) a report by Battelle Laboratory, (4) a 1981 analysis of the need for thermocouples by the General Electric Company, and (5) an assertion that incore thermocouples are necessary to detect blocked fuel bundles and thus prevent damage to fuel. 3/

Although the contention references staff guidance documents (Regulatory Guide 1.97, Revision 2 and NUREG-0737: "TMI Requirements") which recommended installation of incore thermocouples to detect inadequate core cooling (ICC), the attached affidavit of Dr. Summer B. K. Sun explains the change in the Staff's viewpoint reflected in Revision 3 to Regulatory Guide 1.97 and Supplement 1 to NUREG-0737, both of which are provided as attachments. Dr. Sun explains that the 1980 Regulatory Guide 1.97 (Rev. 2) did recommend installation of incore thermocouples for boiling water reactors (BWRs) but, because of questions raised by the ACRS and the BWR owners group (BWROG), concerning the reliability of information from thermocouples the Staff revised its position in 1982 and asked for studies of water level instrumentation and additional ICC devices. (Sun Affidavit ¶¶ 3-5; SER § 4.4.7). 4/ Upon completion and review of two studies by the

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3/ See: OCRE's Motion to Admit Contentions dated August 18, 1982. OCRE referenced a Battelle Laboratory study (letter from C. L. Wheeler, BNL to W. V. Johnston, NRC dated April 6, 1981) for the proposition that the time lag for thermocouples might be 1-1½ minutes rather than the longer 10+ minutes calculated by the BWROG study discussed infra. OCRE also challenged the bases and assumptions in the GE "Evaluation of the Need for BWR Core Thermocouples," November 1981, Appendix B.

4/ The PNPP SER § 4.4.7 notes the possibility of inaccurate information from thermocouples due to temperature reduction by core spray operation in case of loss of coolant.

BWR owners group (BWROG), the Staff concluded that certain improvements to the water level instrumentation recommended by one owners' group report would be sufficient to provide detection of ICC (documented in Generic Letter 84-23, attached) and that additional ICC detection devices would not result in any significant risk reduction (Sun Affidavit ¶¶ 5-10). The Staff also agreed with the BWROG study conclusion that, because of significant time delay in sensing ICC in BWRs, incore thermocouples might provide ambiguous information about plant conditions for BWRs. (Sun Affidavit ¶ 9). Consequently, based on plant specific information concerning improvements to the water level instrumentation at Perry as recommended by the BWROG analyses, it is the Staff's opinion that the system to detect ICC at Perry is adequate and the addition of incore thermocouples would not significantly improve the system and could create confusion about the plant condition during an accident. (Sun Affidavit, ¶¶ 10, 13).

Finally, Dr. Sun explains that the analyses performed by Battelle Laboratory and General Electric in 1981 referenced by OCRE, do not contradict the basis for the conclusions in the BWROG analyses (Sun Affidavit ¶ 11) nor is there any justification for installation of thermocouples to detect blocked flow to fuel bundles. (Sun Affidavit ¶ 12).

Therefore, as explained by Dr. Sun and demonstrated by the documents accompanying this response, [5/] the Staff changed its previous recommendation

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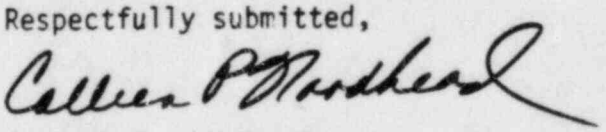
5/ The documents accompanying the Staff's response are (1) Regulatory Guide 1.97, Revision 3, (2) NUREG-0737 Supplement 1, and (3) Generic Letter 84-23 (Reactor Vessel Water Level Instrumentation in BWRs).

for incore thermocouples for detection of ICC in BWRs based on the conclusion that thermocouples do not provide clear and reliable information in a BWR due to masking effects of the core spray, if in operation, and the long delay in sensing core uncovery and this additional instrumentation is not justified by the resulting risk reduction. (SER § 4.4.7; Sun Affidavit ¶¶ 4, 9) For these reasons, the Staff recommendation for ICC detection in BWRs is now limited to the improvements to water level instrumentation described in the BWROG report and implemented in the design for the Perry plant. Consequently, Issue #14 rests on a previous Staff opinion which has changed due to new information, and studies which do not support the contention. Thus, there is no basis for the assertion in issue #14 that incore thermocouples are necessary to meet safety requirements and staff regulatory guidance. ICC detection at Perry is adequately accomplished through improved water level instrumentation, (Sun Affidavit ¶¶ 8, 10) and no genuine issue of material fact remains to be litigated under Issue #14.

III. CONCLUSION

For the reasons stated, the Board should grant the Applicants' motion for summary disposition of Issue #14.

Respectfully submitted,



Colleen P. Woodhead
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 4th day of February, 1985