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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL.	)	Docket Nos. 50-440 50-441
	)	
(Perry Nuclear Power Plant, Units 1 and 2)	)	

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APPLICANTS' MOTION FOR SUMMARY DISPOSITION OF ISSUE 14

The Cleveland Electric Illuminating Company, et al. ("Applicants") hereby move the Atomic Safety and Licensing Board, (the "Board") pursuant to 10 C.F.R. § 2.749, for summary disposition in Applicants' favor of Issue 14. As grounds for their motion, Applicants assert that there is no genuine issue of material fact to be heard with respect to Issue 14, and that Applicants are entitled to a decision in their favor on this contention as a matter of law.

This motion is supported by:

1. Applicants' Statement of Material Facts As to Which There Is No Genuine Issue To Be Heard On Issue 14;

2. Affidavit of Charles B. Johnson dated January 11, 1985 ("Johnson Affidavit")

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3. Affidavit of Frank R. Stead dated January 11, 1985 ("Stead Affidavit");

4. Affidavit of Gary R. Leidich dated January 11, 1985 ("Leidich Affidavit");

I. BACKGROUND

Issue 14 was admitted as a contention in this proceeding in the Board's "Memorandum and Order (Concerning Ohio Citizens for Responsible Energy's Late-Filed Contentions 21-26)", October 29, 1982 ("Memorandum and Order"). Ohio Citizens for Responsible Energy ("OCRE") is the lead intervenor on this issue. As admitted by the Board, Issue 14 states:

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

Memorandum and Order at 15. The Memorandum indicates that "the bases for the contention are the Reg. Guide [and NUREG 0737], plus an analysis performed by Battelle Laboratories and described in a letter by C. L. Wheeler and The Accident Hazards of Nuclear Power Plants, by Dr. Richard E. Webb, at 59-61." Id. at 10. On November 11, 1982, Applicants filed a Motion for Directed Certification to the Atomic Safety and Licensing Appeal Board, challenging the admission of this contention. The motion, which was supported by the NRC Staff, was denied by the Appeal Board on December 15, 1983 as interlocutory. Cleveland

Electric Illuminating Company, (Perry Nuclear Power Plant, Units 1 and 2), ALAB-706, 16 N.R.C. 1754 (1982).

Discovery on this issue was conducted from January, 1983 to June 1983 and included: OCRE's 9th Set of Interrogatories to the NRC Staff, January 31, 1983 to which the Staff responded on March 1, 1983; OCRE's 9th Set of Interrogatories to Applicants, January 31, 1983 to which Applicants responded on February 25, 1983; Applicants' Interrogatories and Request for Production of Documents to Intervenor OCRE (Third Set), January 31, 1983 to which OCRE responded on March 18, 1983; and Applicants' Interrogatories and Request for Production of Documents to Intervenor OCRE (Fourth Set), April 8, 1983 to which OCRE responded on June 20, 1983.1/

II. ARGUMENT

A. Standards for Summary Disposition

The admission of a contention for adjudication, under the standards of 10 C.F.R. § 2.714, is not an appraisal of the merits of a contention, but merely a determination that it meets the criteria of specificity, asserted basis and relevance. A hearing on an admitted contention, however, is not inevitable.

1/ On November 16, 1983 OCRE filed a motion to reopen discovery on four issues, including Issue 14. That motion was denied in the Board's "Memorandum and Order (OCRE Motion to Reopen Discovery)", December 20, 1983, without prejudice to OCRE's filing late discovery requests. OCRE has filed no subsequent discovery requests on Issue 14.

Licensing boards are authorized to decide an admitted contention on its merits in advance of trial on the basis of pleadings filed.

"Any party to a proceeding may move, with or without supporting affidavits, for a decision by the presiding officer in that party's favor as to all or any part of the matters involved in the proceeding." 10 C.F.R. § 2.749(a). The standard embodied in the regulation is that "[t]he presiding officer shall render the decision sought if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law." 10 C.F.R. § 2.749(d).

The Commission and its adjudicatory boards have long encouraged the use of this summary disposition process so that evidentiary hearing time is not unnecessarily devoted to issues where the proponent of a contention cannot establish that a genuine issue exists. Statement of Policy on Conduct of Licensing Proceedings, CLI-81-8, 13 N.R.C. 452, 457 (1981); see also Houston Lighting Power and Company (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 N.R.C. 542, 550 (1980) (". . . the Section 2.749 summary disposition procedures provide in reality as well as in theory, an efficacious means of avoiding unnecessary and possibly time-consuming hearings on demonstrably insubstantial issues . . .").

The standards governing summary disposition motions in an NRC proceeding are quite similar to the standards applied under Rule 56 of the Federal Rules of Civil Procedure. Alabama Power Company (Joseph M. Farley Nuclear Plant, Units 1 and 2), ALAB-182, 7 A.E.C. 210, 217 (1974); Tennessee Valley Authority (Hartsville Nuclear Plant, Units 1A, 2A, 1B and 2B), ALAB-554, 10 N.R.C. 15, 20 n. 17 (1979). Where, as here, motions for summary disposition are properly supported pursuant to the Commission's Rules of Practice, a party opposing the motions may not rest upon the mere allegations or denials of its answers. Rather, an opposing party must set forth specific facts showing that there is a genuine issue of fact. 10 C.F.R. § 2.749(b). A party cannot avoid summary disposition on the basis of guesses or suspicions, or on the hope that at the hearing the movant's evidence may be discredited or that "something may turn up." Gulf States Utilities Company (River Bend Station, Units 1 and 2), LBP-75-10, 1 N.R.C. 246, 248 (1975).

B. There Is No Genuine Issue of Material Fact With Respect to OCRE Issue 14

Applying the Commission's summary disposition standards to the facts of this case, it is clear that this motion for summary disposition of Issue 14 should be granted. Issue 14 suggests that in-core thermocouples are necessary at PNPP to detect inadequate core cooling ("ICC"). In fact, PNPP already has systems to detect ICC which are highly reliable, redundant and diverse. Water level inside the reactor core, for example

is a direct and unambiguous indicator of the approach and existence of ICC. Johnson Affidavit, ¶ 18. PNPP uses eleven variable legs, each of which is connected through one or more differential pressure sensors to a reference leg, to measure water level inside the reactor, which provide multiple measurements of water level from approximately 18 feet above the top of active fuel to the bottom of active fuel. Id. at ¶ 9. The differential pressure instruments are connected to analog trip units which activate various plant systems as water level drops, including high pressure core spray, feed pumps, recirculation pumps, isolation valves, and so forth. Id. Differential pressure instruments are also connected to guages or recorders in the control room, providing the operator with visual indications of water level. Id.

PNPP also has two redundant radiation monitoring systems which can be used to detect both localized and generalized overheating. Id. at ¶¶ 10-11. These two systems are the main steamline radiation monitors, and the off-gas monitors. Id. If localized overheating occurs (due, for example, to blockage of coolant around a single fuel bundle), gaseous fission products will be released from the fuel. Id. at ¶ 10. The main steamline radiation monitors can detect and trigger plant response to the release of fission products within 13 seconds after occurrence. Id. The off-gas monitors can detect the release of fission products within two minutes after occurrence. Id. at ¶ 11. The water level measurement systems and the

radiation monitoring systems provide reliable, redundant and diverse methods of monitoring ICC, as suggested by staff regulatory guidelines. Thus, there is no genuine issue as to whether yet another method of monitoring ICC, such as in-core thermocouples, is necessary at PNPP.

OCRE has also failed to demonstrate any genuine issue of material fact regarding the serious drawbacks of in-core thermocouples. For example, thermocouples must be uncovered before they can detect and respond to ICC. Id. at ¶ 26, 31. This virtually eliminates their ability to detect the approach of ICC. Id. A second problem with thermocouples is that inordinate numbers (presumbly one per fuel bundle, or 748) of them would be required to detect localized overheating reliably. Id. at ¶ 28. However, if installed in these numbers, thermocouples could interfere with heat transfer/coolant flow, thereby contributing to localized overheating. Id. Finally, in-core thermocouples can generate erroneous readings during a loss-of-coolant accident ("LOCA"). Id. at ¶ 27. Activation of core sprays or opening of pressure relief valves can rewet the thermocouples, causing them to indicate lower temperatures than actually exist in the core. Id.

OCRE has not shown that there is any genuine issue with respect to (1) the reliability and accuracy of PNPP's existing ICC monitoring systems, and (2) the problems associated with the use of in-core thermocouples. Moreover, OCRE's bases for

its position on this issue are "demonstrably insubstantial." For example, the first basis for OCRE's position, an NRC Regulatory Guide, is no longer valid because the NRC Staff has changed its position since 1980 and no longer recommends that in-core thermocouples be used in Boiling Water Reactors ("BWRs") to detect ICC. Johnson Affidavit, ¶ 30. This can be seen in Reg. Guide 1.97, Revision 3, and in supplement 1 to NUREG 0737, in which the Staff states that:

> BWR in-core thermocouples . . . . are not required pending their further development and consideration as requirements.

"Further consideration" has led the Staff to conclude, in Generic Letter No. 84-23 (Oct. 26, 1984), that rather than installing thermocouples to improve ICC detection in BWRs, two types of improvements to water level measurement systems should be made. Johnson Affidavit at ¶ 30, n.7. These improvements have been made at PNPP. Stead Affidavit, ¶ 6, Johnson Affidavit, ¶ 30, n. 7. Consequently, in contrast to the situation in October of 1982 when Issue 14 was admitted, Applicants <u>have</u> "demonstrated that the Perry Nuclear Power Plant will meet regulatory safety requirements [for monitoring ICC] as suggested by Staff regulatory guidelines . . ."

The other bases for OCRE's Issue 14 are similarly insufficient to support the installation of in-core thermocouples at PNPP. The second basis, for example, is an analysis of thermocouples response time performed by Battelle Labs which

suggests that thermocouples would indicate ICC relatively quickly (1.5 minutes vs. 13 minutes as calculated by S. Levy, Inc.) after uncovery. Id. at ¶ 32. However, the Battelle analysis was based on a relatively rapid loss-of-coolant accident where emergency core cooling systems would have been automatically initiated by the time in-core thermocouples were able to indicate ICC, regardless of their response time. Id. Moreover, the Battelle analysis supports the proposition that thermocouples will not indicate overheating until after they are uncovered, which virtually eliminates their usefulness in detecting the approach of ICC. Id. at ¶ 26. PNPP's water level measurement system, by contrast, can detect the approach of ICC well in advance of its occurrence. Id.

Likewise, the third basis for OCRE's Issue 14 does not substantiate OCRE's position regarding in-core thermocouples. The thrust of OCRE's argument seems to be that localized overheating, even if detected, can propagate throughout the core and that thermocouples should be installed to avoid this possibility. Id. at ¶ 33. However, extensive analyses demonstrate that neither steam explosions, nor any other postulated mechanism for propagation after localized overheating, will in fact occur. Id. at ¶¶ 33-34. Thus, like the other two bases for Issue 14, this hypothetical concern provides no real support for the proposition that in-core thermocouples should be installed at PNPP.

III. CONCLUSION

Because there is no genuine issue of material fact to be heard on OCRE Issue 14, and because Applicants have demonstrated that the reasons which OCRE has put forth to support the installation of in-core thermocouples at PNPP are insubstantial, Applicants' Motion for Summary Disposition should be granted.

Respectfully submitted,

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