

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

RAS 2624
COMMISSIONERS

DOCKETED 01/17/01

SERVED 01/17/01

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In the Matter of)
)
NORTHEAST NUCLEAR ENERGY)
COMPANY)
)
(Millstone Nuclear Power Station, Unit No. 3;)
Facility Operating License NPF-49))
)
_____)

Docket No. 50-423-LA-3

ASLBP No. 00-771-01-LA

CLI-01-03

MEMORANDUM AND ORDER

Northeast Nuclear Energy Company (“NNECO”) is seeking a license amendment to increase the storage capacity of its spent fuel pool from 756 assemblies to 1860 assemblies. The Connecticut Coalition Against Millstone (“CCAM”) and the Long Island Coalition Against Millstone (“CAM”) (collectively, “CCAM/CAM”) oppose the requested amendment. CCAM and CAM were granted standing as intervenors and three of their contentions were admitted in a proceeding under 10 C.F.R. Part 2, Subpart K (10 C.F.R. §§ 2.1101-2.1117).¹ On October 26, 2000, the Licensing Board issued a Memorandum and Order that adopted an agreed upon license condition, denied the request for an evidentiary hearing on other issues, and terminated the proceeding. See LBP-00-26, 52 NRC ____.

¹See Northeast Nuclear Energy Co. (Millstone Nuclear Power Station, Unit 3), LBP-00-02, 51 NRC 25 (2000). The Board admitted Contentions 4, 5, and 6 -- all dealing with criticality questions -- and rejected eight other contentions.

The Board ruled that there was no genuine dispute of fact or law meriting an evidentiary hearing regarding CCAM/CAM's Contention 4, relating to the risk of criticality accidents. The Board also denied an evidentiary hearing as to Contention 6, a legal question relating to the use of administrative controls to prevent criticality in the spent fuel pool. CCAM/CAM has filed a joint petition for Commission review of LBP-00-26 concerning contentions 4 and 6. They do not seek review of the Board's decision, stemming from the third admitted contention, to adopt an agreed-upon license condition.² Both NNECO and the NRC staff oppose the petition for review.

After careful review of the petition, the responses, and the record, the Commission has decided to deny review regarding Contention 4, which presents factual issues, and to grant review regarding Contention 6, which presents solely a legal question. Recently, we directed the Licensing Board to decide CCAM/CAM's newly filed motion to reopen Contention 4. See CLI-00-25, 52 NRC __ (2000). This motion relies on reports of alleged mishandling of two spent fuel rods at Millstone Unit 1. Our refusal today to review the Board's original ruling on Contention 4 is without prejudice to our consideration of Contention 4 issues in the context of the pending motion to reopen. In view of our remand of the motion to reopen, we see no basis for staying appellate proceedings, as requested by CCAM/CAM, and thus we decline to do so.

I. Petition for Review Regarding Contention 4

CCAM/CAM Contention 4 is as follows:

Undue and Unnecessary Risk to Worker and Public Health and Safety

The new set of administrative controls trades reliance on physical protection for administrative controls to an extent that poses an undue and unnecessary risk of a

²The agreed-upon license condition provides that soluble boron concentration in the spent fuel pool be maintained at greater than or equal to 800 ppm whenever fuel assemblies are present. In addition, verification of the boron concentration is required every seven days. See LBP-00-26, 52 NRC at __, slip op. at 27.

criticality accident, particularly due to the fact that the licensee has a history of not being able to adhere to administrative controls with respect, inter alia, to spent fuel pool configuration.

See LBP-00-26, 52 NRC at ___, slip op. at 10.

More specifically, this contention alleges that NNECO's proposed reliance on fuel enrichment, burn-up, and decay considerations, which CCAM/CAM considers to be administrative controls, could lead to a criticality accident. CCAM/CAM asserts that the probability of a criticality accident in the Millstone spent fuel pool would significantly increase because of the interaction of the following five factors: (1) NNECO will rely on administrative controls of increased complexity; (2) failure of administrative controls can lead to a criticality accident, and such failure is more likely if the controls are more complex; (3) criticality calculations can contain errors, and reliance on increasingly complex administrative controls will increase the potential that those errors will lead to a criticality accident; (4) administrative controls on fuel positioning are likely to fail, and failure is more likely if the controls are more complex; and (5) there is a significant probability that the concentration of soluble boron in the pool water will be insufficient to prevent a criticality accident in the event of a fuel mispositioning.³ CCAM/CAM also alleges that human factors issues will further increase the risk.⁴

A two-part test set out in 10 C.F.R. § 2.1115(b) is used to determine whether a full evidentiary hearing is warranted on a contention in a Subpart K proceeding: (1) There must be a genuine and substantial dispute of fact which can only be resolved with sufficient accuracy by the introduction of evidence in an adjudicatory hearing; and, (2) The decision of the

³See CCAM/CAM Petition for Review at 4, Nov. 13, 2000.

⁴See *Id.*

Commission is likely to depend in whole or in part on the resolution of that dispute.⁵ The Board concluded that Contention 4 fails the first part of the test. Specifically, the Board stated:

We find that NNECO has demonstrated that it can adhere to administrative controls, with adequate safety margin and defense-in-depth, without posing an undue or unnecessary risk to plant workers or the public. The conservatively estimated error rate of fuel assembly misplacement of 1 in 3000 moves (or once every 9 years) is not high enough to characterize such an event as likely. Safety margins are maintained by the regulatory requirement that rack reactivity be less than 0.95, while the use of soluble boron adds defense-in-depth against an accidental criticality. Criticality calculations have used conservative assumptions, thereby introducing additional margin. We find, therefore, that, relative to Contention 4, there is no genuine and substantial dispute of fact or law that can only be resolved with sufficient accuracy by the introduction of evidence in an evidentiary hearing.

See LBP-00-26, 52 NRC at ___, slip op. at 26.

The Board's fact finding on Contention 4 appears well grounded in the extensive original record. (That record may be supplemented, of course, should CCAM/CAM's motion to reopen prove successful.) We decline further review of Contention 4 at this time because the petition for review raises no substantial question whether the Board's finding of fact is clearly erroneous.⁶ Indeed, CCAM/CAM has provided no probative evidence regarding human factors

⁵In promulgating § 2.1115(b) of Subpart K, we used the same test described in the Nuclear Waste Policy Act of 1983 at 42 U.S.C. § 10154(b)(1). We noted that

the statutory criteria are quite strict and are designed to ensure that the hearing is focused exclusively on real issues. They are similar to the standards under the Commission's existing rule for determining whether summary disposition is warranted. They go further, however, in requiring a finding that adjudication is necessary to resolution of the dispute and in placing the burden of demonstrating the existence of a genuine and substantial dispute of material fact on the party requesting adjudication.

See Final Rule, "Hybrid Hearing Procedures for Expansion of Spent Nuclear Fuel Storage Capacity at Civilian Nuclear Power Reactors," 50 Fed. Reg. 41,662, 41,667 (Oct. 15, 1985).

⁶See 10 C.F.R. § 2.786(b)(4)(i). The Commission will grant a petition for review if, inter alia, the petition raises a "substantial question" whether a finding of material fact is clearly erroneous or in conflict with a finding as to the same fact in a different proceeding. The general reviewability standards set out in section 2.786 apply to Subpart K by virtue of 10 C.F.R.

(continued...)

and has expressly accepted NNECO's criticality calculations, which indicate that criticality will not occur in the spent fuel pool even with concurrent misplacements of several fuel assemblies and substantial dilution of the soluble boron.⁷ Thus, there are no factual issues remaining to be resolved, on the original record.

In response to specific facts presented by NNECO, CCAM/CAM has made only general allegations regarding criticality accidents and environmental harm; these, however, are insufficient to trigger an evidentiary hearing under Subpart K, which provides for the hearing of specific factual controversies. See note 5. Factual allegations must be supported by experts or documents to demonstrate that an evidentiary hearing is warranted. The applicant cannot be required to prove that uncertain future events could never happen. Although the ultimate burden of persuasion is on the license applicant, the proponent of the contention has the initial burden of coming forward with factual issues, not merely conclusory statements and vague allegations regarding the fears of its members. See id. CCAM/CAM has not met its threshold burden, inasmuch as it has not raised any specific, genuine, substantial and material factual issues that are relevant to NNECO's request for a license amendment and that create a basis for calling on the applicant to satisfy the ultimate burden of proof.

⁶(...continued)

§ 2.1117, which makes our general Subpart G rules applicable "except where inconsistent" with Subpart K. Subpart K has no reviewability rules of its own.

⁷See LBP-00-26, 52 NRC at ___, slip op. at 25, citing transcript of hearing at 348. When asked at the hearing whether there were errors in the criticality calculations, CCAM/CAM's attorney stated, "we are assuming, for purposes of this hearing, at this stage, that the calculations are correct." See Official Transcript of Proceedings, U. S. Nuclear Regulatory Commission, Millstone 3 License Amendment Proceeding at 348 (July 19, 2000).

II. Petition for Review Regarding Contention 6

In Contention 6, CCAM/CAM alleged that proposed criticality control measures would violate NRC regulations. Petitioners refer specifically to Criterion 62 of the General Design Criteria of 10 C.F.R. Part 50, Appendix A ("GDC 62"), which states, "Criticality in the fuel storage and handling system shall be prevented by physical systems or processes, preferably by use of geometrically safe configurations." CCAM/CAM contends that NNECO proposes to violate GDC 62 by using measures that CCAM/CAM characterizes as "administrative" rather than "physical" to prevent criticality at Millstone 3. Credits for soluble boron in the pool water and for fuel enrichment, burn-up, and decay time limits are the disputed "administrative" methods of criticality control, considered by CCAM/CAM to be precluded by GDC 62.⁸ The Board rephrased Contention 6 as a question of law: "Does GDC 62 permit a licensee to take credit in criticality calculations for enrichment, burn-up, and decay time limits, limits that will ultimately be enforced by administrative controls?" See LBP-00-02, 51 NRC at 41. The Board analyzed the parties' arguments and answered the question in the affirmative. See LBP-00-26, 52 NRC at ___, slip op. at 42-45.

Although GDC 62 goes to the heart of spent fuel storage, the Commission has not directly addressed the interpretation of GDC 62.⁹ In the ongoing Shearon Harris proceeding, the licensing board, in an interlocutory order, reached the same conclusion as the Board in the instant case. See note 9, supra. The Board of Commissioners of Orange County, North

⁸See CCAM/CAM's Supplemental Petition to Intervene, dated Nov. 15, 1999, at 19-21.

⁹One licensing board has explicitly interpreted GDC 62 as it relates to the issues in this proceeding. See Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), LBP-00-12, 51 NRC 247, 255-60 (2000). GDC 62 has also been implicitly interpreted to permit controls other than geometric configuration. See, e.g., Consumers Power Co. (Big Rock Point Nuclear Plant), ALAB-725, 17 NRC 562, 571 (1983).

Carolina, the intervenor in Shearon Harris, petitioned for Commission review of the interlocutory order. The Commission rejected the petition, without prejudice, as premature. See Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), CLI-00-11, 51 NRC 297 (2000). In the instant case, the issue is ripe for consideration and involves a question of law that has been raised before and has the potential to be raised again in Shearon Harris and other proceedings. Accordingly, we find that one of our criteria for discretionary review in 10 C.F.R. § 2.786(b)(4)(ii) (a necessary legal conclusion is without governing precedent) is met and we grant the petition to review LBP-00-26 as it relates to CCAM/CAM's Contention 6.¹⁰

The Commission sets the following briefing schedule:

- (1) CCAM/CAM shall file its brief within 21 days of the date of this order. The brief shall be no longer than 25 pages.
- (2) NNECO and the NRC staff shall file their responsive briefs within 21 days after their receipt of CCAM/CAM's brief. Their briefs shall each be no longer than 25 pages.
- (3) CCAM/CAM may file a reply brief within 10 days of receiving the briefs of NNECO and the NRC staff. The reply brief shall be no longer than 10 pages.

In addition to the arguments the parties choose to present, the Commission directs all parties to address the question whether GDC 62 permits a licensee to take credit in criticality calculations for fuel enrichment, burn-up, and decay time limits.

We will permit the parties in the Shearon Harris proceeding (Carolina Power & Light Company and intervenor, the Board of Commissioners of Orange County, North Carolina) to file amicus curiae briefs, not to exceed 20 pages, should they choose to do so. These entities must file their amicus briefs no later than the filing date of the opening briefs of the parties

¹⁰We recognize that Contentions 4 and 6 are interrelated, as they both deal with the use of limits on fuel enrichment, burn-up, and decay time. But Contention 4 raises factual issues which were properly disposed of by the Board and do not require Commission attention. Contention 6, on the other hand, raises a recurring legal issue. A decision in favor of CCAM/CAM on the merits of Contention 6 would merely render Contention 4 moot, as the criticality controls at issue would be disallowed. A decision against CCAM/CAM on the merits of Contention 6 would not disturb the Board's ruling on the factual issues raised in Contention 4.

whose position they support. See 10 C.F.R. § 2.715(d). The amici will not be permitted to file reply briefs.

All briefs shall be filed and served in a manner that ensures their receipt on their due date. Electronic or facsimile submissions are acceptable, but shall be followed by hard copies within a reasonable time. Briefs in excess of 10 pages must contain a table of contents, with page references, and a table of cases (alphabetically arranged), statutes, regulations, and other authorities cited. Page limitations on briefs are exclusive of pages containing a table of contents or tables of authorities.

III. CCAM/CAM's Motion to Reopen and Motion to Stay

One final point requires Commission attention. As we noted above, on December 18, 2000, CCAM/CAM filed a motion to stay appellate proceedings and a motion to reopen the record, based on recent reports of two fuel rods allegedly missing at NNECO's Millstone Unit No. 1 and alleged discovery violations by NNECO. We decline to stay appellate proceedings, for we see no reason to delay further consideration of the GDC 62 issue, a pure legal matter unrelated to new factual developments. Our decision today to deny review regarding Contention 4 rests on the record as it existed before the Board at the time CCAM/CAM filed their petition for Commission review. Nothing in this order should be understood to preclude CCAM/CAM from pursuing their motion to reopen the proceedings as to Contention 4 based on the new information. We expressly remanded the motion to reopen to the Board for its consideration in the first instance, notwithstanding the Board's termination of proceedings before it.

IV. Conclusion

For the foregoing reasons, the Commission (a) *denies* the petition for review challenging LBP-00-26 as to CCAM/CAM's Contention 4, (b) *grants* the petition as to CCAM/CAM's Contention 6, (c) *directs* the parties to file briefs regarding whether GDC 62 permits a licensee to take credit in criticality calculations for fuel enrichment, burn-up, and decay time limits, (d) *invites* Carolina Power & Light Company and the Board of Commissioners of Orange County, North Carolina, to file amicus curiae briefs, and (e) *denies* the motion to stay appellate proceedings.

IT IS SO ORDERED.

For the Commission

/RA/

Annette L. Vietti-Cook
Secretary of the Commission

Dated at Rockville, Maryland
this 17th day of January, 2001.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
NORTHEAST NUCLEAR ENERGY) Docket No. 50-423-LA-3
COMPANY)
)
(Millstone Nuclear Power Station,)
Unit No. 3))

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing COMMISSION MEMORANDUM AND ORDER (CLI-01-03) have been served upon the following persons by Electronic mail. Each party will also receive a paper copy of the Commission Memorandum and Order by U.S. mail, first class.

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COMMISSION MEMORANDUM AND ORDER
(CLI-01-03)

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[Original signed by Evangeline S. Ngbea]

Office of the Secretary of the Commission

Dated at Rockville, Maryland,
this 17th day of January 2001

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
CAROLINA POWER & LIGHT COMPANY) Docket No. 50-400-LA
)
(Shearon Harris Nuclear Power Plant))

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing COMMISSION MEMORANDUM AND ORDER (CLI-01-03) have been served upon the following persons by U.S. mail, first class, as indicated by an asterisk (*) or through deposit in the Nuclear Regulatory Commission's internal mail system as indicated by double asterisks (**), with copies by electronic mail as indicated.

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COMMISSION MEMORANDUM AND ORDER
(CLI-01-03)

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[Original signed by Evangeline S. Ngbea]

Office of the Secretary of the Commission

Dated at Rockville, Maryland,
this 17th day of January 2001