

NUCLEAR REGULATORY COMMISSION ISSUANCES

OPINIONS AND DECISIONS OF THE NUCLEAR REGULATORY COMMISSION WITH SELECTED ORDERS

July 1, 1976 – December 31, 1976

Volume 4



Prepared by the Division of Rules and Records, Office of Administration,
U. S. Nuclear Regulatory Commission, Washington, D. C. 20555
(301/492-7211)

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S/N 052-010-00496-4

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PREFACE

This is the fourth volume of issuances of the Nuclear Regulatory Commission and its Atomic Safety and Licensing Appeal Boards and Atomic Safety and Licensing Boards. It covers the period from July 1, 1976, to December 31, 1976.

Atomic Safety and Licensing Boards are authorized by Section 191 of the Atomic Energy Act of 1954. These Boards, comprised of three members conduct adjudicatory hearings on applications to construct and operate nuclear power plants and related facilities and issue initial decisions which, subject to internal review and appellate procedures, become the final Commission action with respect to those applications. Boards are drawn from the Atomic Safety and Licensing Board Panel, comprised of lawyers, nuclear physicists and engineers, environmentalists, chemists, and economists. The Atomic Energy Commission first established Licensing Boards in 1962 and the Panel in 1967

Beginning in 1969 the Atomic Energy Commission authorized Atomic Safety and Licensing Appeal Boards to exercise the authority and perform the review functions which would otherwise have been exercised and performed by the Commission in facility licensing proceedings. In 1972, that Commission created an Appeal Panel, from which are drawn the Appeal Boards assigned to each licensing proceeding. The functions performed by both Appeal Boards and Licensing Boards were transferred to the Nuclear Regulatory Commission by the Energy Reorganization Act of 1974. Appeal Boards represent the final level in the administrative adjudicatory process to which parties may appeal. The Commission may however, on its own motion, review various decisions or actions of Appeal Boards.

This volume is made up of reprinted pages from the six monthly issues of the Nuclear Regulatory Commission publication *Nuclear Regulatory Commission Issuances (NRCI)*, for this time period, arranged in chronological order. Cross references in the text and indexes are to the NRCI page numbers which are the same as the page numbers in this publication.

Issuances are referred to as follows. Commission--CLI, Atomic Safety and Licensing Appeal Boards--ALAB, and Atomic Safety and Licensing Boards--LBP

The summaries and headnotes preceding the opinions reported herein are not to be deemed a part of those opinions or to have any independent legal significance.

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

CLI-76-10

COMMISSIONERS:

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Edward A. Mason

Victor Gilinsky

Richard T. Kennedy

In the Matter of

EDLOW INTERNATIONAL COMPANY

License No. XSNM-805

Docket No. 70-2071

(as amended)

**(Agent for the Government of India on
Application to Export Special Nuclear
Material)**

July 1 1976

The Commission directs the Assistant Director for Exports-Imports and International Safeguards to issue a license for the export of special nuclear material to India.

MEMORANDUM AND ORDER

The Commission has now obtained the information it requires to act on License XSNM-805, as amended. The urgency with which this license is required by the Government of India and the need to avoid, on the part of the United States, undue adverse impact on U.S. foreign policy interests persuade us to make our decision at this time. This action is taken wholly without prejudice to our review of the issues arising in connection with license Application XSNM-845 which will be the subject of forthcoming public hearings before the Commission.

We find that License No. XSNM-805 meets all the standards relevant for issuance under the Atomic Energy Act of 1954 and the Energy Reorganization Act of 1974 and hereby direct the Assistant Director for Exports-Imports and International Safeguards to issue said license to the Edlow International Company.

In view of the ongoing development of Indian reprocessing capacity at the Tarapur Atomic Power Station, the Commission intends in the forthcoming hearings to give careful consideration to the implications of the potential creation of national stockpiles of plutonium in India, and appropriate measures which might be taken in light of this possible development. In this connection we are mindful of the provisions of the U.S./India Agreement for cooperation which specify that any reprocessing in Indian facilities of special nuclear material utilized in the Tarapur Atomic Power Station would be subject to joint determination by the United States and India that safeguards in the Agreement for Cooperation may be effectively applied. The Executive Branch has offered to

consult with the NRC in conjunction with its anticipated review of this matter. Preliminary consultations between NRC and the Executive Branch have already been held.

We note further that in exchanges of letters between the Governments of the United States and India it has been agreed "that the special nuclear material that has been or is hereafter made available for, or used, or produced in the Tarapur Atomic Power Station located at Tarapur will be devoted exclusively to the needs of that Station unless our two Governments hereafter specifically agree that such material be used for other purposes." Moreover, Article II (F) of the Agreement gives the United States the first option to repurchase "any special nuclear material produced in the Tarapur Atomic Power Station which is in excess of the need of the Government of India for such material in its program for the peaceful uses of atomic energy "

In reaching its decision in the matter of License No. XSNM-805 the Commission has concluded that it would be desirable for the Department of State to explore with the Government of India steps which would provide for the repurchase by the United States of the irradiated fuel discharged from the Tarapur Atomic Power Station or any special nuclear material recovered therefrom. In connection with its consideration of License No. XSNM-845 the Commission intends to review progress in this matter.

COMMISSIONER GILINSKY dissenting: My principal objection to the issuance of this license stems from my lack of confidence that genuinely effective safeguards will be applied to the plutonium produced in U.S.-supplied Tarapur fuel. India has a facility for reprocessing this fuel almost ready to operate. My colleagues, while urging the State Department to explore repurchase of spent U.S.-supplied Tarapur fuel (or plutonium produced therefrom) nevertheless do not close the door to reprocessing of U.S. fuel in India. Such reprocessing might well take place under traditional IAEA material accounting and inspection safeguards, which in my view are inadequate by themselves once plutonium is separated from spent reactor fuel. I believe this issue should have been faced directly now in the context of this license, and I would have withheld its approval until more positive assurances had been obtained. The need for effective safeguards over reprocessing and the subsequent storage of separated plutonium is particularly acute in this case given India's continuing nuclear explosives program and India's failure to renounce the use of such explosives as weapons through ratification of the NPT

BY THE COMMISSION

Samuel J Chilk
Secretary of the Commission

Dated at Washington, D.C.
this 1st day of July 1976

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-336

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman

Dr. John H. Buck

Michael C. Farrar

In the Matter of

Docket Nos. STN 50-528

STN 50-529

ARIZONA PUBLIC SERVICE COMPANY

STN 50-530

et al.

(Palo Verde Nuclear Generating
Station, Units 1, 2, and 3)

Upon review *sua sponte* of the Licensing Board's initial decision (LBP-76-21), the Appeal Board rules that increased local employment and additional local tax revenues should not have been included in the environmental cost-benefit balance for the project and that the balance must therefore be restructed without the inclusion of those items. On rebalancing, the Appeal Board concludes that benefits still outweigh costs.

Initial decision modified and, as modified, affirmed.

NEPA. COST-BENEFIT ANALYSIS

Increased local employment and additional local tax revenues flowing from the construction and operation of a facility consist of transfer payments resulting in offsetting costs and benefits and have no place in the cost-benefit analysis of a project. *Vermont Yankee*, ALAB-179

RULES OF PRACTICE. FINDINGS OF FACT

When resort is made in findings of fact to technical language which a layman could not be expected readily to understand, its significance in terms of what is being decided should be made clear in the course of the initial decision.

DECISION

July 1 1976

On May 24 1976, the Licensing Board issued its initial decision authorizing the issuance of construction permits for Units 1, 2 and 3 of the Palo Verde

Nuclear Generating Station. LBP 76-21, NRCI-76/5 662. This pressurized water reactor facility is to be located in Maricopa County Arizona, approximately 50 miles west of downtown Phoenix. The decision was not preceded by a partial initial decision and, therefore, it addresses all of the radiological health and safety and environmental issues which must be considered in a construction permit proceeding.

Although an organization and an individual had been granted leave to intervene under 10 CFR 2.714(a), both withdrew at a relatively early stage. The Arizona Atomic Energy Commission entered the proceeding under the "interested State" provisions of 10 CFR 2.715(c) but did not take an active role. No exceptions to the initial decision have been filed by either of the other parties, the applicants and the NRC staff. Accordingly we have performed our customary *sua sponte* review of the initial decision and the underlying record.

1 That review has disclosed a single error requiring corrective action. In striking its environmental cost-benefit balance, the Licensing Board included on the benefit side both the increased local employment and the additional local tax revenues which would flow from the construction and operation of the facility Par. 120, NRCI-76/5 at 696. We long ago held, however, that since they "consist of transfer payments resulting in offsetting costs and benefits," such benefits "have no place in the overall evaluation of the appropriateness of the project." *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-179 7 AEC 159 177 (1974).¹ It follows that paragraph 120 must be modified to delete the references therein to local employment and taxes.

This modification does not affect the validity of the ultimate finding of the Licensing Board that "the balance between the benefits and costs involved in the proposed action favors granting construction permits for the facility " Par. 121, NRCI-76/5 at 696. The principal environmental costs which the record reflects will be associated with construction and operation of Palo Verde are accurately summarized in the initial decision. Par. 119 NRCI-76/5 at 694-696. We are fully satisfied that these costs are substantially outweighed by the benefits which the Board properly took into account in paragraph 120; *viz.*, the generation of approximately 21 billion kwh of electric power each year and the attendant enhancement of the reliability of the applicants' systems.

2. One additional observation is prompted by the following sentences appearing in paragraph 19 of the initial decision (which paragraph is a part of that portion of the opinion entitled "Site Selection and Suitability"):

The proposed site lies within the Sonoran Desert Subprovince of the Basin and Tectonic Province. Across a basement complex composed of granitic

¹ Their enumeration in final environmental statements is for informational purposes alone. *Ibid.*

and metamorphic rocks of Precambrian age underlies a bedrock sequence composed of Tertiary volcanic and interbedded sedimentary rocks, and the bedrock sequence underlies an unconsolidated sedimentary sequence composed primarily of alluvial, colluvial and lacustrine sediments ranging from Holocene to Miocene in age (SER, pp. 2-20, 2-21 App. Ex. 34(3); Staff Ex. 9· Rr., pp. 662-66).

NRCI-76/5 at 669 Those sentences—taken without alteration from the applicants' proposed findings of fact—may well convey some meaning to one fully versed in the science of geology and thus in the terms which are utilized in that discipline.² Our adjudicatory decisions are, however, written for a far broader audience than the practitioners of one particular technical specialty They should be at least reasonably comprehensible not only to scientists whose expertise lies in other fields but, as well, to persons who lack any technical background whatever yet nonetheless have an interest in the proceeding and what is being decided on the issues under consideration.

This does not mean that the use of technical words of art in an adjudicatory decision is impermissible. It does mean, however, that, when resort is made to technical language which a layman could not be expected readily to understand, there is an obligation upon the part of the opinion writer to make clear the precise significance of what is being said in terms of what is being decided. In this instance, such an explanation is manifestly lacking. Nowhere in the initial decision do we find any indication as to the import of the quoted description of the geologic features of the site—let alone as to what bearing those features might have upon the site's suitability for the construction and operation of a nuclear facility If the described features wholly lack operative significance, either (1) the initial decision should not have been encumbered by a recitation of them or (2) the reader should have been alerted to the fact that he need not understand the description in order to perceive the basis for the result reached in the case.³

² Even a qualified geologist might be puzzled respecting the use of the word "across" at the inception of the second quoted sentence.

Although the responsibility for the content of an initial decision rests, of course, with the tribunal rendering that decision, the foregoing observations should also be borne in mind by parties to our proceedings in connection with their preparation of proposed findings of fact. As previously noted, the findings under discussion here had their genesis in the proposed findings of one of the parties.

It should be further noted that what has been said does not apply to the content of safety analysis and evaluation reports, which are essentially addressed to persons versed in the technical matters discussed therein. See *Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-324, NRCI-76/4 347 360 (April 15, 1976) (Commission review pending).

Subject to the modification noted above, the May 24, 1976, initial decision of the Licensing Board is *affirmed*.

It is so ORDERED.

**FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD**

**Margaret E. Du Flo
Secretary to the Appeal Board**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-337

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. Lawrence R. Quarles
Jerome E. Sharfman

In the Matter of

Docket Nos. STN 50-518
STN 50-519
STN 50-520
STN 50-521

TENNESSEE VALLEY AUTHORITY

(Hartsville Nuclear Plant,
Units 1A, 2A, 1B and 2B)

The Appeal Board accedes to a party's waiver of oral argument and, with the acquiescence of other parties, agrees to treat the appeals taken from the partial initial decision (LBP 76-16) as being submitted on the briefs.

RULES OF PRACTICE. ORAL ARGUMENT (WAIVER)

Any party wishing to waive oral argument should advise the Appeal Board and other parties promptly upon receipt of notification that the Board has scheduled such argument.

**MEMORANDUM
July 7 1976**

1. On April 20, 1976, the Licensing Board issued a partial initial decision in this construction permit proceeding. LBP 76-16, NRCI-76/4 485 Appeals from this decision were taken by the applicant Tennessee Valley Authority and intervenors William N. Young, *et al.* As subsequently amended, the applicant's appeal raises a single narrow issue relating to the propriety of the condition imposed upon it in paragraph 339 of the decision. NRCI-76/4 at 556. In contrast, the intervenors have raised a number of substantive and procedural issues on their appeal.

In our order of June 9 1976, we advised the parties that we intended to hear argument on the appeals in Bethesda, Maryland, on July 8, 1976. A week later, on June 16, we entered another order in which the argument was formally calendared for that date and location. The parties were asked to notify the Secretary to this Board "by letter mailed no later than July 2, 1976, of the name(s) of counsel who will present argument on [their] behalf."

By letters of June 18 and 23 respectively the NRC staff and the applicant furnished the requested information to the Secretary. For his part, intervenors' counsel waited until July 2 before communicating with the Secretary. On that date, he wrote a letter to her which stated the intervenors were electing to "waive" oral argument and "to submit their case on the written record." No reason was assigned for this election. Nor did counsel explain his failure to have earlier advised the Board and the other parties that he did not intend to appear for oral argument.

As of midmorning today less than 24 hours before the argument was to be heard, the letter from intervenors' counsel had not reached the Secretary. Similarly counsel for the applicant had not received his copy of it.¹ It was only when the Secretary telephoned intervenors' counsel in late morning—a call prompted by the absence of any word from him—that the Board learned of his decision not to appear tomorrow for argument.

Apprised of this development, the applicant's counsel elected to submit its own case (both as appellee and cross-appellant) on the briefs. The staff likewise manifested a willingness to forego oral argument. In the circumstances, the Board decided to cancel the scheduled argument.

2. In this Board's view the course pursued by intervenors' counsel was both unprofessional and discourteous in the extreme. As above noted, counsel was made fully aware by the June 9 order that the appeals would be heard orally—most likely in Bethesda on July 8. The formal argument order was issued exactly a week thereafter and presumably was in the hands of counsel by no later than June 21. Yet counsel withheld his notification of his intention not to appear for an additional ten business days. Even then, he resorted to the mails—despite the fact that, by reason of the ensuing weekend and holiday in the best of circumstances the letter could not have been received by the Board or other counsel before July 6 (a mere two days before the argument). The result of this conduct was that both the Board and other counsel were put to considerable inconvenience and, in the case of the applicant, to an unwarranted additional expense.²

True enough, this Board gave the parties until July 2 to notify its Secretary by letter respecting specifically who would be presenting argument. But that scarcely provided intervenors' counsel with a license to wait until then before announcing an intention not to appear at all. Clearly the Board did not need the information it had requested more than a day or two before the argument was scheduled to be heard; indeed, no serious harm would be done even if the Board

NRC staff counsel apparently did receive a copy in this morning's mail.

²The lawyer assigned to present argument for the applicant had already enplaned at Knoxville by the time the Board (and therefore the applicant) finally learned of the intervenors' decision to waive argument.

were not to discover until the morning of an argument precisely who would be representing one of the parties. An uncommunicated decision on the part of the principal appellant to waive argument is quite a different matter.

Intervenors' counsel has given us no reason to assume that, although it was his initial intention to appear for argument, some unanticipated development last Friday required the abandonment of that purpose. But were we to give him the benefit of the doubt on that score, the fact would still remain that—with the argument date then less than a week away—he both could and should have immediately so advised the Board and other counsel by telephone.

3. Although counsel's dereliction is sufficiently serious that we might well be justified in dismissing the intervenors' appeal, we have decided not to take that drastic step in this instance. Instead, we will treat that appeal, as well as the applicant's, as being submitted on the briefs. The Bar is put on notice, however, that a repetition of this occurrence may in the absence of extenuating circumstances, have unfavorable consequences. We have every right to expect, and do expect, that counsel desiring to waive oral argument will promptly inform the Board to that effect upon receipt of notification that the Board either has scheduled or plans to schedule such argument.

**FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD**

**Margaret E. Du Flo
Secretary to the Appeal Board**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-338

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman

Dr. John H. Buck

Michael C. Farrar

In the Matter of

Docket Nos. 50-443
50-444

**PUBLIC SERVICE COMPANY OF NEW
HAMPSHIRE et. al.**

(Seabrook Station, Units 1 and 2)

Upon motion by certain intervenors for a stay pending appeal of the effectiveness of the Licensing Board's initial decision (LBP 76-26), the Appeal Board rules that those intervenors have not demonstrated good cause for granting the extraordinary relief sought.

Motion denied.

RULES OF PRACTICE: STAY PENDING APPEAL

Parties should normally look to the Licensing Board for a stay pending appeal before seeking such relief from the Appeal Board. Although the Appeal Board may take into account a party's failure to do so, it is nevertheless empowered to choose to consider on the merits a stay application which was filed first with it.

RULE OF PRACTICE. STAY PENDING APPEAL

In assessing a request for a stay pending appeal, the Appeal Board considers four factors: (1) has the movant made a strong showing that it is likely to prevail on the merits of its appeal; (2) has the movant shown that without a stay it will be irreparably injured; (3) would issuance of a stay substantially harm other interested parties; and (4) where lies the public interest? *Northern Indiana Public Service Co.* (Bailly Generating Station, Nuclear 1), ALAB-192, 7 AEC 420 (1974); *Virginia Petroleum Jobbers Association v FPC*, 295 F 2d 921 (D. C. Cir. 1958).

RULES OF PRACTICE. STAY PENDING APPEAL

In applying the four *Virginia Petroleum Jobbers* factors in assessing a stay

request, no single factor is of itself necessarily dispositive; rather, the strength or weakness of the showing by the movant on a particular factor influences principally how strong his showing on the other factors must be in order to justify the sought relief.

Messrs. John A. Ritsher and Thomas G. Dignan, Jr., and Ms. Eleanor D. Acheson, Boston, Massachusetts, for the applicants, Public Service Company of New Hampshire, *et al.*

Mr. Robert A. Backus, Manchester, New Hampshire, for the intervenors, Seacost Anti-Pollution League and Audubon Society of New Hampshire.

Mr. Anthony Z. Roisman, Washington, D. C., for the intervenor, New England Coalition on Nuclear Pollution.

Mr. Michael W. Grainey for the Nuclear Regulatory Commission staff.

MEMORANDUM AND ORDER

July 14, 1976

Intervenors Seacoast Anti-Pollution League and Audubon Society of New Hampshire (SAPL-Audubon) have moved for a stay of the effectiveness of the June 29 1976 initial decision of the Licensing Board which, by a divided vote, authorized the issuance of permits for the construction of Units 1 and 2 of the Seabrook Station on the New Hampshire seacoast. LBP-76-26, NRCI-76/6 857 The motion was filed by mail on July 2 and reached this Board on July 7¹ It is supported by another intervenor, New England Coalition on Nuclear Pollution, and opposed by both the Applicants and the NRC staff.

A. The applicants insist that we should not entertain the stay motion be-

¹We take official notice of the fact that, on the latter date, the Office of Nuclear Reactor Regulation issued the construction permits in accordance with the authorization contained in the initial decision. There being then no outstanding stay of the decision, this action was perfectly proper. But it does not, of course, have the effect of rendering moot the pending motion. On a determination that there is warrant for doing so, this Board remains fully empowered to suspend the effectiveness of the construction permits or to restrict *pendente lite* the activities which the applicants may pursue under their authority

cause SAPL-Audubon did not first request like relief from the Licensing Board.² They cite two of our early decisions for the proposition that, in accordance with prevailing Federal judicial practice,³ a stay pending appeal must initially be sought from the trial tribunal unless it is not practicable to do so (e.g., the Licensing Board Chairman is unavailable). *Toledo Edison Co.* (Davis-Besse Nuclear Power Station), ALAB-25 4 AEC 633, 634 (1971); *Wisconsin Electric Power Co.* (Point Beach Nuclear Plant, Unit 2), ALAB-53, 4 AEC 899 fn. 2 (1972).

We adhere to the view reflected in those decisions that normally a party should look to the Licensing Board for a stay pending appeal before coming to us. And the failure without good reason to pursue that course is a factor which this Board may properly take into account in deciding whether it should itself grant the requested relief. We have never held, however, that our jurisdiction to consider a stay application turns upon whether (and, if not, why not) the Licensing Board had been asked to defer the effectiveness of its decision pending appeal. In *Davis-Besse*, ALAB-25 *supra*, this Board denied the stay motion on the principal ground that it lacked merit; the movant's unexplained failure to have requested a stay from the Licensing Board was assigned as a second reason for the denial. Beyond that, we have on several subsequent occasions entertained on the merits a stay application which had been filed with us in the first instance. See e.g., *Commonwealth Edison Co.* (Zion Station, Unit 1), ALAB-112, 6 AEC 249 (1973); *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-131 6 AEC 427 (1973); *Northern Indiana Public Service Co.* (Bailly Generating Station, Nuclear 1), ALAB-192, 7 AEC 420 (1974); *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-320, NRCI-76/3 196 (March 18, 1976).

There is thus no impenetrable barrier to our consideration of the SAPL-Audubon stay application even though it was not preceded by a similar application to the Licensing Board. And, in this instance, we find sufficient justification for the election to come directly and promptly to us following the rendition of the initial decision. As SAPL-Audubon points out in their reply to the applicant's opposition to the stay motion, last November they had moved the Licensing Board to withhold issuance of an initial decision pending the final determination by the Environmental Protection Agency of the question now before that agency respecting whether The Seabrook facility may utilize the proposed once-through cooling system. In a memorandum and order issued on

² Section 2.764 (a) of the Rules of Practice, 10 CFR 2.764 (a), authorizes a Licensing Board to determine that, for good cause shown by a party its initial decision should not become immediately effective upon issuance.

³ See Rule 8 (a) of the Federal Rules of Appellate Procedure.

the same date as the initial decision, the Licensing Board denied that motion. LBP-76-27 NRCI-76/6 950. Although not entirely founded upon the Board's action in deciding the case without awaiting EPA's ruling, the stay application rests in good measure upon the claim that that action was erroneous. We agree with SAPL-Audubon (joined on this question by the staff) that it would be a meaningless exercise for them now to renew before the Licensing Board their already rejected argument that the applicants should not be given the green light to commence construction until EPA has spoken on the cooling system question.

B. It is well settled that, in "determining whether 'good cause exists for staying under 10 CFR 2.764 the effectiveness of an initial decision, we apply the criteria established by the Court of Appeals for the District of Columbia Circuit in its landmark decision in *Virginia Petroleum Jobbers Association v. Federal Power Commission*, 259 F.2d 921, 925 (1958)." *Northern Indiana Public Service Co.* (Bailly Generating Station, Nuclear 1), ALAB-192, 7 AEC 420 (1974), and cases there cited. See also *e.g.*, *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-199 7 AEC 478, 479 (1974); *Diablo Canyon*, ALAB-320, *supra*. Those criteria are:

(1) Has the movant made a strong showing that it is likely to prevail on the merits of its appeal?

(2) Has the movant shown that, without such relief, it will be irreparably injured?

(3) Would the issuance of a stay substantially harm other parties interested in the proceeding?

(4) Where lies the public interest?

1. We consider it virtually impossible at this incipient stage of the appellate process to gauge the likelihood that the Licensing Board's decision will eventually be overturned. That Board was confronted with, and decided, an appreciable number of sharply contested (and in many instances complex) issues of law and fact. And, as above noted, its determination to authorize the issuance of construction permits was not unanimous; one of the technical members of the Board recorded his belief that "at this time" the NEPA cost-benefit balance tips against the facility NRCI-76/6 at 949 Further, the majority determination is unprecedented in one significant respect. After finding that "the Seabrook site is unsuitable for a closed-cycle cooling system,"⁴ the Board expressly concluded:

EPA Determinations under Section 316(a) of [the Federal Water Pollution Control Act of 1972, as amended] which grant Seabrook an exemption from that Act's requirement of closed-cycle cooling and Section 316(b) which approve the Applicants' proposed location and design of the intake

⁴ Par. 174, NRCI-76/6 at 897. See also discussion in Section G of Part III of the initial decision. (Supporting Opinion), *id.* at 926-929.

structure, are presently appealed by Intervenors SAPL and Ross before the Regional Administrator of EPA (*supra*).

It is conceivable that EPA could require closed-cycle cooling for Seabrook as a result of the aforementioned appellate process before the EPA.

Should EPA require closed-cycle cooling for Seabrook, this Board finds such a requirement to be unacceptable for the Seabrook Site and, accordingly in this eventuality denies the application herein.

Conclusion of Law No. 6, NRCI-76/6 at 915

To this point, the only appeal which has been received is that of the NRC staff,⁵ we do not have in hand the exceptions of the other parties deeming themselves aggrieved by the initial decision,⁶ let alone the benefit of full briefing on each of the myriad questions upon the resolution of which the fate of the construction permits may well hinge. Nor have we had sufficient opportunity independently to canvass, much less to analyze closely even those portions of the extensive record adduced below having a bearing upon the matters on which the members of the Licensing Board found themselves in disagreement.

In short, notwithstanding our full consideration of what has been said for and against the decision below in the papers filed with us to date, any judgment we might now make respecting the probable outcome of the prospective appeals in this case would be not merely tentative but essentially uninformed.⁷ It does not perforce follow however, that the stay application must fail. In our view no single one of the four *Virginia Petroleum Jobbers* factors is of itself necessarily dispositive; rather, the strength or weakness of the showing by the movant on a particular factor influences principally how strong his showing on the other factors must be in order to justify the sought relief.⁸ In the context of the

⁵The staff's two exceptions do not bring into question the Licensing Board majority's authorization of the issuance of construction permits. One of them does, however, challenge Conclusion of Law No. 6, quoted in the text above.

Under an extension granted by us, the exceptions of all other parties were due to be filed (*i.e.*, mailed) yesterday They presumably will be received shortly

⁷In many other cases, of course, we have found ourselves able to reach an early opinion on the likelihood of appellate reversal.

⁸Compare *Omega Importing Corp. v. Petri-Kine Camera Company* 451 F.2d 1190 (2nd Cir. 1971). In there reversing the denial of a temporary injunction in a trademark infringement action, the Second Circuit (per Judge Friendly) observed:

Plaintiff's case on appeal hinges on *Semmes Motors, Inc. v. Ford Motor Co.*, 429 F.2d 1197 1204-1207 (2 Cir. 1970). We there held, applying the well-known teaching of Judge Frank in *Hamilton Watch Co. v. Benrus Watch Co.*, 206 F.2d 738, 740 (2 Cir 1953), that a temporary injunction should issue when, in his words, a plaintiff "has raised questions going to the merits so serious, substantial, difficult and doubtful, as to make them a fair ground for litigation and thus for more deliberate investigation" and "the balance of hardships tips decidedly toward plaintiff," even though the plaintiff has not demonstrated a strong likelihood of success.

451 F.2d at 1193-94; footnote omitted.

present case, this means that the entitlement to a stay depends upon whether SAPL-Audubon have made an especially persuasive demonstration that (1) they will suffer irreparable harm if construction activities are allowed to proceed *pendente lite*; (2) no like harm will be suffered by other parties if such activities are halted; and (3) considerations of the public interest militate in favor of a stay⁹

2.a. In support of their assertion that irreparable environmental harm will result from the early stages of construction (*i.e.*, from the work undertaken during the six months or more before an appellate decision is likely to be forthcoming),¹⁰ SAPL-Audubon point first to such activities as the clearing of approximately 40 acres of land, the relocation of an access road and the building of a railroad spur to the site, excavation work and the extension of a municipal water line into the area. The applicants' response is that there was no claim below that any of those activities would have a dire environmental impact and, therefore, we should not take them into account in deciding whether to stay construction pending appeal. See *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-199 *supra*, 7 AEC at 480-81 (1974). Be that as it may the SAPL-Audubon papers before us fall considerably short of demonstrating that the alterations to the site and its immediate environs which will be produced by the specified activities may occasion sufficiently severe and irredressible environmental injury to warrant the extraordinary relief which they request. Nor do we perceive injury of that magnitude and character flowing from the fact, set forth in the Final Environmental Statement (p. 4-3) and emphasized by SAPL-Audubon, that "[t]hroughout construction, much of the site will remain in a disrupted state. During this period (6 to 7 years), problems with dusty or muddy access and work areas are expected, depending upon seasonal climatic trends." This is an ordinary consequence of any major construction project and, by itself, certainly cannot be regarded as giving rise to irreparable harm in a legal sense.

b. SAPL-Audubon also evince concern that the construction of the facility will destroy three archaeological sites. Our attention is directed to what is said to be the direct testimony of one of the applicants own witnesses, Charles E. Bolian, to that effect.

The record discloses that the State of New Hampshire (another intervenor) had submitted a contention which, as interpreted and admitted to the proceeding

As emphasized in *Virginia Petroleum Jobbers*, the public interest factor "necessarily becomes crucial" in "litigation involving the administration of regulatory statutes designed to promote [that] interest." This is because the "interests of private litigants must give way to the realization of public purposes." 259 F 2d at 925.

As the staff reminds us, we are not here concerned with the possible environmental impact of later stages of construction.

by the Licensing Board in its June 18, 1974, third prehearing conference order, alleged that "the construction activities will render unsalvagable archaeologically and anthropologically significant remains of Indian villages located on the site." Prior to the environmental evidentiary hearing, and in accordance with customary practice,¹¹ both the applicants and the staff filed and served in written form their proposed direct testimony pertaining to that issue. At the hearing, attended by counsel for SAPL-Audubon, staff counsel advised the Board that, subsequent to the filing of the testimony New Hampshire had indicated that "its concerns were satisfied on [the archaeology] issue" (Tr. 5851). Staff counsel went on to report that thereafter the staff and the applicants had reached their own agreement on the issue; without objection, a short "position statement" reflecting that agreement was read into the record (Tr. 5851-52). By reason of these developments, the staff and the applicants did not tender their written direct testimony for inclusion in the record and the Board announced that it "consider[ed] the archaeology issue as settled" in view of, *inter alia*, its "understanding that the State is withdrawing" that issue (Tr. 5852-53). And, in paragraph 99 of the initial decision, the Board made an express finding, grounded upon the agreement between the applicants and the staff, that "archeological values on the site will be salvaged or preserved in a reasonable manner." NRCI-76/6 at 883.

It is thus apparent that SAPL-Audubon are here endeavoring to rely upon testimony which not only was never actually introduced into evidence but, more importantly was found by the single party raising the archaeology issue to be wholly responsive to its concerns. If, unlike New Hampshire, SAPL-Audubon were not satisfied by the proposed testimony they could, of course, have made that fact known to the Board and requested leave to adopt themselves the contention which the State had elected to withdraw. Having instead at least tacitly acquiesced in the Licensing Board's statement on the record that the issue was deemed "settled," they are scarcely in a position to urge that construction should be stayed for archaeological reasons.

In any event, the Bolian proposed testimony reflected that the three archaeological sites which will be affected by construction activities have already been investigated and excavated for artifacts at the instance and expense of one of the applicants. SAPL-Audubon note, however, that only with respect to the second of the three sites did Mr. Bolian explicitly state that the excavation had been "thorough" and that, regarding the first site, he had represented merely that "[a]s of late August 1974 part of [it] had been excavated." From this, SAPL-Audubon apparently would have us infer that the archaeological sites may not have been sufficiently excavated. We think such an inference to be

See Section 2.743 (b) of the Rules of Practice, 10 CFR 2.743 (b).

impermissible on the basis of the Bolian proposed testimony taken as a whole—including his representation that “[a] large sample of archaeological data has been recovered from the three sites” and that that “sample is adequate enough to permit an adequate reconstruction of the prehistoric use of this area.” Had the Bolian testimony been introduced into evidence and been subjected to cross-examination, there might have been further light shed on the matter. But, once again, SAPL-Audubon interposed no objection to the record on the issue being closed without receipt of that testimony

c. Additionally the stay application asserted that the construction of a barge unloading and offshore service facility would destroy “some” of the five clam flats in the Hampton-Seabrook estuary. Confronted with the applicants’ reliance in their papers upon the Licensing Board’s finding to the contrary in paragraph 175 of the initial decision (NRCI-76/6 at 897), SAPL-Audubon now tells us by way of reply that “[a]lthough applicants’ witness Bosworth did indicate that the [3.5 acre] intertidal area to be destroyed was not a clam flat, he did point out that there were clams there.” As the portion of the Bosworth testimony quoted by SAPL-Audubon indicates, however, the clams in the area are “at a very low density” and “people don’t go out there and clam” (Tr.10797-98).¹² In these circumstances, we do not regard the building of the unloading and service facility—and its use by the applicants for approximately five years¹³—as threatening serious, irreparable injury

d. Finally Audubon makes reference to its ownership of some 190 acres of salt marsh land, part of which is said to be within the Seabrook exclusion area. Insofar as we can ascertain, however, none of that land would be affected at all by any construction activities contemplated by the applicants.

3. In sum, although the early construction activities will obviously not be totally free of all environmental impact, we agree with the applicants and the staff that it cannot be concluded on this record that a preclusion of those activities *pendente lite* is required to avoid the imposition of substantial and irreparable harm to these intervenors or the interests they claim to represent.¹⁴

²In this connection, the Board found in paragraph 175 that the intertidal area in question has a density of 3 clams per square foot compared with an average density of 16.5 clams in the five areas considered by the Board to be clam flats (which areas hold approximately 85% of the soft-shelled clams resident in the Hampton-Seabrook estuary).

At the end of that period, depending on the wishes of local or State officials, the applicant will either leave the facility for public use or remove it. Par. 175 of the initial decision, NRCI-76/6 at 897

⁴We note in passing that the disagreement between the majority and the dissenting member of the Board below did not concern any of the asserted environmental impacts of early construction cited to us by SAPL-Audubon.

As the applicants and staff observe, there were only four contested issues before the

(Continued on next Page)

Nor is it clear that any nonenvironmental private or public interests which might also be taken into account dictate the issuance of a stay SAPL-Audubon contend that the applicants' own evidence reflects that the electricity to be generated by the facility will not be needed before late 1983, with the consequence that the start of construction could be deferred until the latter part of 1978. They also suggest that, should their position prevail on appeal, the customers of the applicants will have been unnecessarily subjected to the rate increases required to finance any construction undertaken in the interim. On the other hand, the applicants have appended to their papers the affidavit of the financial vice president of the principal applicant, in which it is averred that (1) a total of \$73,000,000 has already been expended by the applicants, the cost of which money exceeds \$19,000 per day and (2) each day of delay in the progress of construction of the facility will add \$333,333 to the total cost of the project, not including "substantial" incremental storage and standby charges.

In the final analysis, then, whether the pecuniary interests of the applicants, their customers and others might be furthered or instead damaged by now halting construction would appear to be totally dependent upon what will be eventually held by us and any higher tribunal on the merits of the case (or by EPA on the cooling system question before it).⁵ This being so, our inability to say at this juncture that there is a high probability that the Licensing Board's result will not stand⁶ precludes the issuance of a stay in the absence of a clear

(Continued from previous Page)

Licensing Board pertaining to the environmental impact of construction activities (as opposed to plant operation). Two of them have been dealt with above: archaeology and destruction of clam flats. The other two—wildfowl disturbance and turbidity/construction runoff—were resolved by the Licensing Board in the applicants' favor (Pars. 100-104 and 138-146, NRCI-76/6 at 883-884, 891-892) and are not specifically addressed in the stay application.

⁵For present purposes, we may assume the correctness of all of the above-summarized assertions respecting the potential *economic* impacts associated with allowing construction to go forward or, alternatively requiring cessation. It should be noted, however, that the staff has expressed doubt respecting the accuracy of the applicants' assertion that the total cost of the project would be increased by over \$300,000 for each day a stay of construction were in effect.

The staff also argues that the \$73,000,000 already expended by the applicants should not be taken into account in passing upon the stay application. We need not and do not decide that point.

Nor, on the basis of what is now before us, can we make a confident prediction regarding the conclusion which EPA will reach on the cooling system question. If EPA rules that once-through cooling is impermissible, we will of course still be confronted with the issue, raised by one of the staff's already filed exceptions (see fn. 5, *supra*), whether the Licensing Board correctly decided in Conclusion of Law No. 6 that a requirement of closed cycle cooling would render the Seabrook site unacceptable.

and convincing showing that early construction activities will cause substantial and irreparable environmental harm.¹⁷

Motion for a stay *denied*.
It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Margaret E. Du Flo
Secretary to the Appeal Board

¹⁷Needless to say the construction of the facility has no claimed or possible radiological health and safety implications.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-339

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Richard S. Salzman, Chairman
Dr. John H. Buck
Michael C. Farrar

In the Matter of

Docket Nos. STN 50-546
STN 50-547

**PUBLIC SERVICE COMPANY
OF INDIANA, INC.**

**(Marble Hill Nuclear Generating
Station, Units 1 and 2)**

Subject to certain conditions, the Licensing Board granted the untimely intervention petitions of the City of Louisville and Jefferson County Kentucky. The City and County as well as the applicant, filed appeals. The Appeal Board rules that (1) the order from which appeals are taken is, as to the City and the County interlocutory and those appeals are thus premature; and (2) the Licensing Board did not abuse its discretion in ruling that the City and County's status as "important local government entities" tipped the balance in favor of their intervention.

Appeals of the City and County dismissed without prejudice. Applicant's appeal denied.

RULES OF PRACTICE. APPELLATE REVIEW

Except where an interlocutory order in effect wholly excludes a petitioner from a proceeding, Commission rules postpone its right to obtain appellate review of that order to the conclusion of the proceeding. See 10 C F R §2.730(f) and 10 C F R §2.714a.

RULES OF PRACTICE: APPELLATE REVIEW

In balancing the four factors listed in 10 C F R §2.714(a) when considering an untimely petition to intervene, a board may take into account a petitioner's governmental nature as it affects the extent to which the petitioner's interest will be represented by existing parties.

Mr. Harry H. Voigt, Washington, D.C., for the Public Service Company of Indiana, Inc., *applicant*.

Mr. Marvin R. O’Koon, Louisville, Kentucky for Jefferson County Kentucky *intervenor*

Messrs. Burt J. Deutsch and Donald L. Cox, Louisville, Kentucky for the City of Louisville, *intervenor*.

Mr. Lawrence Brenner for the Nuclear Regulatory Commission Staff.

DECISION

July 27 1976

The Licensing Board has before it Public Service Company of Indiana’s application to construct the Marble Hill Nuclear Generating Station on the banks of the Ohio River in Jefferson County *Indiana*. Jefferson County *Kentucky* and the City of Louisville lie across the Ohio and about thirty miles downstream from the site proposed for this nuclear plant. The deadline for petitions to intervene in this proceeding, as previously extended, expired November 28, 1975 ¹ The City and the County filed separate intervention petitions on May 28, 1976.

The applicant objected vigorously to letting the City and the County enter the proceeding six months late. The company asserted that there was no “good cause” for the City and the County’s tardiness, that other parties could protect their interests, that the two government units would not materially assist in developing the record, and that their participation would ineluctably broaden the issues and delay the proceedings. Citing the Commission standards governing late interventions, 10 C F R §2.714(a), as construed by the Commission in its *West Valley* decision,² the applicant urged the Licensing Board to deny the petitions to intervene.

The Licensing Board agreed with the applicant that the City and the County’s

Notice of the public hearing, published on October 8, 1975, 40 Fed. Reg. 47219, advised persons whose interests might be affected by the proposed nuclear facility of their right to petition to intervene and fixed November 7, 1975, as the last day for filing such petitions, a deadline which the Licensing Board later extended to November 28, 1975.

Nuclear Fuel Services, Inc. (West Valley Reprocessing Plant), CLI-75-4, 1 NRC 273 (1975).

delay in petitioning to intervene was “inexcusable.”³ Nevertheless, after making an independent assessment of the “four factors” set out in Section 2.714(a),⁴ the Board granted the intervention petitions. In the judgment of the Board below the City and the County’s “status as important local government entities” was the “overriding factor.” In admitting them to the hearing, however, the Board ruled that the City and the County must “take the proceeding as they find it and will not be permitted to delay the proceeding.” Accordingly the Licensing Board (1) admitted (with one limited exception) only those of intervenors’ contentions that coincided with issues previously raised by other parties, (2) ruled that it “is not going to permit parties who have common contentions to offer repetitive direct evidence or to conduct repetitive cross-examination,” and (3) made plain its expectation that the City and the County would either voluntarily “work out a plan with the other parties who have identical contentions” to preclude such occurrences or the Board would do so for them by means of a formal consolidation order under 10 CFR §2.715a.⁵

The City the County and the applicant appeal.

I

The City of Louisville and Jefferson County Kentucky attempt a three-pronged attack on the decision below They argue that the Licensing Board erred,

³ The petitioners, while admitting knowledge of the initial notice for intervention, had attempted to justify their delay in filing on the ground that their elected officials were initially “unaware of the public sentiment against the construction of Marble Hill and of the scientific evidence which strongly militates against its location at the proposed site,” which they said was ascertainable only after public meetings and lengthy investigations that could not be completed in the time allowed for filing intervention petitions. City of Louisville’s Petition for Leave to Intervene, p. 2. Also see Jefferson County’s Petition for Leave to Intervene and the City and County’s responses to papers filed by applicant and staff below, *passim*. The Licensing Board was not impressed by that excuse. See *West Valley supra*, 1 NRC at 275, and ALAB-263, 1 NRC 208, 210, 217 (1975).

Under Section 2.714(a), the “four factors” which must be considered in passing on late intervention petitions (in addition to whether justification existed for the delay) are:

- (1) The availability of other means whereby the petitioner’s interest will be protected.
- (2) The extent to which the petitioner’s participation may reasonably be expected to assist in developing a sound record.
- (3) The extent to which petitioner’s interest will be represented by existing parties.
- (4) The extent to which the petitioner’s participation will broaden the issues or delay the proceeding.

⁵ Licensing Board Order of June 24, 1976, pp. 2-3 (unpublished). In addition to the applicant and the staff, 12 intervenors are participating in the proceeding, including Kentucky and Indiana which have chosen to appear as “interested States” under 10 CFR §2.715(c).

first, in rejecting certain of their contentions, second, by limiting their rights to discovery and, third, in consolidating their participation with other parties espousing similar positions. We do not reach the merits of those arguments, however, because we may not. The aspects of the Board's order about which these parties are concerned are purely interlocutory in nature.⁶ The Commission's rules adopt general Federal court practice and provide that "[n]o interlocutory appeal may be taken to the Commission from a ruling of the presiding officer." 10 CFR §2.730(f).⁷ As we explained in *Boston Edison Company* (Pilgrim Nuclear Generating Station, Unit 2), ALAB-269 1 NRC 411, 413 (1975):

Interlocutory rulings, including ones dealing with proposed contentions, are not exempt from appellate review. It has been long determined, all things considered, that proceedings can be conducted most efficiently if the right to obtain appellate review of interlocutory orders is deferred to an appeal at the end of the case. The Commission's Rules of Practice so provide and we must follow them. (Footnote omitted.)⁸

We are therefore constrained to dismiss the appeals of the City of Louisville and of Jefferson County Kentucky as premature.⁹

II

1. The applicant appeals the Licensing Board's admittance of the City and the County as parties to the proceeding. The nub of applicant's argument is that the

⁶ *Gulf States Utilities Co.* (River Bend Station, Units 1 and 2), ALAB-329, NRCI-76/5, 607 610 (1976)(order admitting less than all a party's contention is interlocutory); *Toledo Edison Co.* (Davis-Besse Nuclear Power Station), ALAB-300, 2 NRC 752, 758-59 (1975)(order denying discovery is interlocutory); 9 *Moore's Federal Practice* ¶110.13[8] (2nd ed. 1975) ("An order granting or denying consolidation is an ordinary nonappealable interlocutory order").

⁷ There are two exceptions to this rule but neither aids these parties. First, a petitioner may appeal from a licensing board order "wholly denying a petition for leave to intervene. 10 CFR §2.714a(b). The intervention rights of the City and the County however, have not been "wholly denied." The second permits parties "other than the petitioner" to appeal an order admitting the petitioner to the proceeding on the grounds that petition should have been wholly denied. 10 CFR §2.714a(c). It is under this second exception that the applicant has taken its appeal.

⁸ *Accord: River Bend* (*supra*, fn. 6), ALAB-329, NRCI-76/5 at 610; *Pacific Gas and Electric Company* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-213, 7 AEC 999 (1974); *Philadelphia Electric Company* (Fulton Generating Station, Units 1 and 2), ALAB-206, 841 (1974); *Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-176, 7 AEC 151 (1974).

⁹ This dismissal on procedural grounds is, of course, without prejudice and intimates no views on the merits of the underlying substantive arguments. *Pilgrim*, *supra*, ALAB-269, 1 NRC 411, 413-14 (1975). Of course nothing we say here precludes these intervenors from asking the Licensing Board to clarify those portions of its order which intervenors find to be of uncertain meaning.

Licensing Board erred in relying on the governmental status of these petitioners in granting them leave to intervene. In the applicant's opinion, "[t]here is nothing in Section 2.714 or in the decisions interpreting it that authorizes preferential treatment for 'local government entities' " in the application of that section.¹⁰ Without that "preferential treatment," the applicant contends, the petitions must be denied for failing to establish "good cause" for their tardiness and because each of the "four factors" listed in Section 2.714(a) militates against them.¹¹

We agree that the question is a close one.¹² The Commission has told us, however, that Section 2.714(a) was written to give "the Licensing Boards broad discretion in the circumstances of individual cases." *West Valley supra*, 1 NRC at 275 Our review of the Board's ruling is, therefore, limited to determining whether that discretion has been abused in this case.

2. Applicant's arguments to the contrary notwithstanding, the decisions interpreting Section 2.714(a) as we read them allow the governmental nature of a petitioner to be taken into account in considering "[t]he extent to which [the petitioners'] interest will be represented by existing parties" (the "third factor"). It was one of the basic tenets of the dissent from the Appeal Board's majority decision in *West Valley* that a local government "might well view the demands of the public interest in a markedly different light than private intervenors," and that accordingly because it is governments, not private parties, who are charged with the responsibility of identifying and protecting the public interest, a private party—even though it may be advancing contentions identical to those proposed by the petitioning government—could not be said to represent adequately the petitioning government's interest.¹³ In reversing the majority's decision in that case, the Commission indicated agreement with this analysis, stating in its own *West Valley* decision that (1 NRC at 275):

We share the view of the dissenting member of the Appeal Board that the private intervenors herein advancing contentions substantially identical to those of the County may not effectively represent the County's presumably broader interests.¹⁴

Applicant's Appeal Brief, page 6.

See fn.4, *supra*.

²We note our agreement with the Licensing Board's conclusion that the City and the County failed to show adequate justification for filing late. The reasons they proffered for their delay (see fn. 3, *supra*) are essentially those given by Erie County in the *West Valley* case, reasons which all three tribunals that reviewed them thought without merit. See 1 NRC at 94-96 (Licensing Board); 1 NRC at 215-17 (Appeal Board); 1 NRC at 275 (Commission).

¹³ALAB-263, 1 NRC 208, 220-21 (1975)(dissenting opinion of Mr. Rosenthal).

Also see *Long Island Lighting Company* (Jamesport Nuclear Power Station, Units 1 and 2), ALAB-292, 2 NRC 631, 646 (1975). That case involved an untimely petition of a private party and Mr. Rosenthal again distinguished this situation from *West Valley* where a local government was involved.

Accordingly it was entirely proper for the Licensing Board to consider the governmental nature of the City and the County in ruling on their intervention petitions. We hasten to add, however, that such status in and of itself does not automatically entitle a local government to have its untimely petition granted, for the extent to which any petitioner's interests may be represented by existing parties is just one of the factors considered in deciding the fate of a late petition. And the Commission's decision in *West Valley* does leave open the possibility that a state or one of its agencies may adequately represent the interest of a petitioning local government unit so as to tip this factor against granting the petition.

In this case, however, we are not persuaded that other intervenors—including other governmental units—will adequately represent the County and the City's interests. We are unimpressed with the applicant's argument that either Louisville Water Company an intervenor in this proceeding, or the Commonwealth of Kentucky participating as an "interested State" under section 2.715(c), will do so. Although the Water Company is owned by the City and its directors appointed by the City and the County its mandate is limited by statute to providing a safe and adequate water supply ¹⁵ Moreover, contentions of the City and the County which the Licensing Board accepted differ from those being advanced by the Water Company ¹⁶ As for the Commonwealth, a state participating under Section 2.715(c) need not file contentions, take positions on issues or even assume an active role in the hearing. To be sure, the Commonwealth apparently intends to be active in this proceeding.¹⁷ As yet, however, it has not taken any position on the desirability of the Marble Hill facility ¹⁸ which the City and the County definitely oppose. In the circumstances—and particularly as we have not been apprised of any other available means whereby their interests will be protected—the Licensing Board can not be faulted for concluding that the interests of the local government units (and their more than 750,000 citizens) will be adequately represented neither by the Water Company nor by the Commonwealth. *Cf. West Valley supra*, 1 NRC at 275

3 The fourth factor, "[t]he extent to which the [petitioners'] participation will broaden the issues or delay the proceeding," does not cut against the City and the County ¹⁹ As originally presented, their petition might well have caused delay because they attempted to raise numerous new contentions. The Licensing Board

⁵ Louisville Water Company's Petition for Leave to Intervene.

Ibid.

Applicant's Appeal brief, page 8.

⁶ See Kentucky's motion before the Licensing Board supporting the County and the City's petitions to intervene.

⁹ We are unsure whether the second factor (developing the record) in this case militates for or against granting the petitions. This is not, however, fatal to the intervenors' admittance. See *West Valley supra*, 1 NRC at 276.

effectively eliminated this possibility by holding the City and the County's participation to issues—with one exception—already in the case. Moreover, the Board's ruling requiring these intervenors to take the proceeding as they found it effectively precludes any disruption of the established discovery and hearing schedules.²⁰ (The hearing is currently scheduled to get underway in September.)

In sum, we perceive neither serious delay nor expansion of the issues in the proceedings flowing from the admission of these intervenors out of time. We therefore do not think it can fairly be said that the Licensing Board abused its discretion in ruling that the City and the County's status as "important local governmental entities" tipped the balance in favor of their intervention. Accordingly we defer to the Board's judgment in this matter.

The appeals of the City of Louisville and of Jefferson County Kentucky are *dismissed without prejudice* as premature.

The applicant's appeal is *denied*.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Romayne M. Skrutski
Secretary to the Appeal Board

²⁰"A tardy petitioner with no good excuse may be required to take the proceeding as it finds it. For, as stated by the dissenting member of the Appeal Board, 'any disadvantage which it might suffer in terms of the opportunity for trial preparation would be entirely of its own making.' *West Valley supra* CLI-75-4, 1 NRC at 276.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-340

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Michael C. Farrar
Dr. W. Reed Johnson

In the Matter of

Docket Nos. 50-461
50-462

ILLINOIS POWER COMPANY

(Clinton Power Station, Unit
Nos. 1 and 2)

Upon appeal by intervenors from the partial initial decision of the Licensing Board (LBP 75-59), and upon review *sua sponte* of uncontested portions of that decision and that Board's initial decision (LBP-76-6), the Appeal Board concludes that, although several determinations of the Licensing Board are of doubtful correctness, there was no error which could have changed significantly the result reached in either decision or which affected substantial rights.

Licensing Board decisions affirmed.

RULES OF PRACTICE. HEARSAY EVIDENCE

An expert may generally rely on scientific treatises and articles, irrespective of their hearsay character.

RULES OF PRACTICE. REQUESTS DURING HEARING FOR PRODUCTION OF DOCUMENTS

Requests to obtain background material from a witness, to supply answers to cross-examination questions which the witness was unable to answer, cannot be denied solely because the material was not earlier requested through discovery

RULES OF PRACTICE. REQUESTS DURING HEARING FOR PRODUCTION OF DOCUMENTS

In considering whether to grant requests for the production of documents made at the time of cross-examination, a board must balance the costs of delay

against such factors as the timing of the request, the particular relationship of the requested information to unresolved questions, and the overall importance of the information.

NEPA. CONSIDERATION OF ALTERNATIVES

The National Environmental Policy Act requires that reasonable alternatives be analyzed to a degree sufficient to assure that there will not be a foreclosure prematurely of options which might enhance environmental quality or have less detrimental effects than the proposal under consideration.

NEPA. COST-BENEFIT ANALYSIS

Once a need for power has been demonstrated, a board must inquire into whether, taking into account all relevant environmental, economic and technical factors, the need can be best met through the proposal under consideration.

NEPA. SCOPE OF INFORMATION REQUIRED FOR LICENSING

A board must examine the effects of withdrawing land from agricultural production in terms both of society as a whole and of the particular owners or users of such land.

NEPA. COST-BENEFIT ANALYSIS

The societal cost of removing agricultural land from production should be calculated in terms of how much it would cost to regenerate, if necessary an equivalent amount of production on other land.

NEPA. COST-BENEFIT ANALYSIS

In performing a benefit-cost analysis, the placing of a monetary value on the benefit of electricity is inappropriate.

NEPA. COST-BENEFIT ANALYSIS

Boards may consider strictly economic differences of project alternatives only to the extent that the environmental impacts of the alternatives vary

NEPA. COST-BENEFIT ANALYSIS

Potential tax revenues are transfer payments resulting in offsetting costs and benefits and therefore may not be included in the cost-benefit analysis of a project.

RULES OF PRACTICE. BURDEN OF GOING FORWARD

Before a board must explore an issue raised by a party the party must at least bring sufficient attention to the issue to stimulate the board's consideration of it.

Messrs. Peter V Fazio, Jr., and Sheldon A. Zabel, Chicago, Illinois (Mr. Christopher B. Nelson with them on the brief), for the applicant, Illinois Power Company

Mr. Robert W. Dodd, Champaign, Illinois, for the intervenors, Salt Creek Association, *et al.*

Mr. Milton J. Grossman (Mr. Charles A. Barth on the brief) for the Nuclear Regulatory Commission staff.

DECISION

July 29, 1976

Before us for review are two decisions of the Licensing Board in this construction permit proceeding involving the Clinton Power Station, consisting of two units with a net power output of approximately 933 MWe each. The reactors are to be located in Harp Township, DeWitt County Illinois, near the confluence of Salt Creek and its North Fork, approximately six miles east of the City of Clinton. In a partial initial decision rendered on September 30, 1975 the Board reviewed the environmental and site suitability aspects of the facility and made the determinations requisite to the issuance of limited work authorizations. LBP-75-59 2 NRC 579 Thereafter, on February 20, 1976, the Board rendered its second decision, which dealt with the remaining radiological health and safety questions and authorized the issuance of construction permits. LBP-76-6, NRCI-76/2 135.¹

Participating jointly as intervenors in the proceeding are the Salt Creek Association and a number of individuals who live, work, or own or rent land in the vicinity of the proposed facility Before the Board below these intervenors restricted their attention to certain environmental issues, and their appeal is confined to the disposition of those issues in the September 30, 1975, partial initial decision. Nevertheless, as is our custom, we have reviewed both decisions

The construction permits have been issued. 41 FR 9425 (March 4, 1976).

in their entirety as well as the full underlying record. We conclude that, although several determinations of the Licensing Board are of doubtful correctness, there was no error which could have changed significantly the result reached by that Board in either decision or which affected substantial rights. We therefore affirm.

I

The Clinton site extends over some 13,535 acres in a rural area. The facility and its construction-related activities will utilize approximately 6135 acres. Of this amount, some 4900 acres are to be inundated for a cooling lake which is to comprise a part of the facility's exhaust steam cooling system. In the recent past, most of this land has been devoted to crop production or employed as pasture (Final Environmental Statement (FES), §2.7.1). There appears to be no dispute that at least a significant portion of it is of high agricultural quality

The thrust of the intervenors' position before the Board below was that a need for the power which would be generated by the facility had not been established; that sufficient consideration had not been given to "coal as an economically viable alternative fuel" and that the cost-benefit analysis of the applicant and the staff did not adequately consider the "adverse agricultural and/or economic impacts" which the taking of such a large quantity of land for the nuclear plant would have upon the Salt Creek Association members residing in DeWitt County. In short, the intervenors opposed construction of the facility on exclusively socioeconomic grounds.

On the basis of what it found to be reasonable forecasts of future demand, the Licensing Board concluded, however, that the power would be required by the date of the scheduled completion of the facility. The Board further determined that the alternative of a coal-fired plant was not economically superior and that, balancing all benefits and costs (including those associated with the diversion of the land from agricultural use), the construction of the facility at the Clinton site was justified.

On appeal, the intervenors do not press the need-for-power issue but do renew their claims on the other issues raised below. Additionally they complain vigorously of two procedural rulings of the Licensing Board. The applicant and the NRC staff urge affirmance.

II

We turn first to the procedural questions presented to us by the intervenors.

A. During the course of the hearing, the Licensing Board struck certain segments of the prepared written testimony of Dr. Michael Rieber, an economist called as a witness by the intervenors. It did so in response to motions of the

applicant and the staff which had different foundations. The applicant's principal claim was that, as an economist, Dr. Rieber was not competent to render an expert opinion in such areas as electric utility load forecasts, site selection and utility system planning, fuel cycle costs, capital costs, and cooling system evaluation. For its part, the staff primarily urged that either hearsay or legal conclusions were involved. The hearsay objection encompassed references made by Dr. Rieber to various articles in newspapers, magazines and other periodicals which he had utilized as source materials for portions of his analysis. It was the staff's argument (particularly as to hearsay) which carried the day (Tr. 1592, 1642, 1664). Subsequently in the partial initial decision, the Board opined that the material which it had excluded not only was hearsay but, additionally was "irrelevant, immaterial and unreliable" (2 NRC at 588).

We do not believe that the stricken parts of the Rieber testimony were either irrelevant or immaterial. Nor does any basis appear in the record for regarding the sources cited by Dr. Rieber to be inherently unreliable. Thus, the Licensing Board's action can be justified, if at all, only on hearsay grounds. In the circumstances of this case, however, there is no compelling need to reach the difficult question of the extent to which an expert witness in an administrative proceeding may make reference to articles in newspapers and other periodicals without running afoul of the hearsay rule.² Insofar as we can determine, none of the contents of the source material pointed to by Dr. Rieber has been challenged by the applicant or staff as either incorrect or inconsistent with other disclosures in the record. Rather, the dispute seems to center on the conclusions which Dr. Rieber drew from the facts asserted in those sources and elsewhere. This being so, we see no impediment to our taking into account the entire Rieber testimony in evaluating those conclusions—including the struck portions, all of which are in our possession. We accordingly have done so.

B. The Licensing Board denied the intervenors' request that it require Seymour Jaye, one of the applicant's witnesses,³ to bring to the hearing in Illinois underlying data on computer models which he had used in forecasting lifetime fuel cycle costs for the Clinton station.⁴ The request was made after the witness was unable to answer certain questions on cross-examination because the necessary data was at his home office in New York City. The intervenors sought the source decks, data decks, computer programs and background documentation upon which the models were based. At no previous time had they formally

An expert may of course, generally rely on scientific treatises and articles, irrespective of their hearsay character. See Rule 803(18), Rules of Evidence for United States Courts.

³ Mt. Jaye was the Vice-President and General Manager of the Utility Division of S. M. Stoller Corp. (SMSC) of New York, a consulting engineering firm which the applicant had engaged to perform the fuel cycle cost analysis of the Clinton units (Tr. 1256-58).

⁴ That forecast was relevant to the comparative economic costs of nuclear and coal alternatives. See further discussion of this subject at pp. 49-51, *infra*.

asked for such material.⁵ And it was apparent that, given the broad scope of the request, its grant would have led to some hearing delay to provide intervenors sufficient time to analyze the data once it had been delivered to them (Tr. 1427-29).

The Licensing Board based the denial upon both the delay factor and the failure of the intervenors to have asked earlier for the material. It referred to the fact that, during the discovery process, the intervenors' expert witness, Dr. Rieber, had been given a copy of a letter from Mr. Jaye to the applicant which had made explicit reference to the model used by him to estimate costs; and that the intervenors had "at least a week's time [before the close of the discovery period] following receipt of that letter" to request additional discovery and did not do so. Further, the Board noted that the intervenors had been given Mr. Jaye's prepared written testimony on June 9 1975, and had not asked for the underlying data during the intervening 17-day period between that date and the time the request was made. It concluded that

information revealing the existence and significance of the models was available to the Intervenors during the discovery process and their failure to follow up and request the detailed backup data at that time required us, in fairness to the other parties and to the public's right to a prompt disposition of this proceeding, to deny their request.

2 NRC at 585.⁶

1. It is clear that Mr. Jaye was unable to answer certain questions on cross-examination because of the absence of some underlying data. The intervenors claim that the accuracy of the models employed by Mr. Jaye—and hence of a substantial portion of his testimony—cannot be evaluated without such data and that their questions were of a type that an expert should have been able to answer from memory (App. Tr. 47). Accordingly they reason, it should not have been necessary to ask Mr. Jaye to bring the information to the hearing, since he should have been familiar with it. Similarly it is argued, they should not have been required to seek the information through discovery in order to be provided with answers to relevant questions on cross-examination.

Whether or not an expert witness such as Mr. Jaye should have anticipated

⁵The intervenors advised the Licensing Board that they had earlier inquired about such material and been informed that "Stoller materials were secret and not available" (Tr. 1414). The applicant denied this to be so (Tr. 1417).

⁶The staff would have us reject the intervenors' exception on the ground that they had submitted a proposed finding essentially paralleling the reasons adopted by the Board. But the proposed finding merely described what the Board had previously done and cannot be taken as a waiver of any objections to the ruling. Moreover, the proposed finding also included a statement as to the deficiencies of Mr. Jaye's testimony and the resulting lack of weight which should be given thereto; the Board did not adopt that portion of the finding.

and been prepared to answer the particular questions involved, it is plain to us that the intervenors were under no obligation to ask for the background data—or anything else—by way of discovery. Discovery is available to assist a party to “obtain adequate factual data in support of his claim or defense, and also [to] learn the substantial basis of the positions asserted by his adversaries.” 4 *Moore’s Federal Practice*, 2d ed., par. 26.02[4]. Failure of a party to take advantage of discovery can in no way preclude its exercise of other rights it may possess.

In this connection, we have previously noted the parallel between our discovery rules and those contained in the Federal Rules of Civil Procedure. *Commonwealth Edison Co.* (Zion Station, Units 1 and 2), ALAB-196, 7 AEC 457 460-61 (1974). The parties have not called our attention to any instance in which a court has declined to allow a subpoena for the production of a document at trial under either Rule 34 or Rule 45(b) for the reason that the requesting party had not earlier sought the same document through discovery.

2. Thus, the correctness of the Licensing Board’s action hinges upon the validity of the other reason it assigned—the avoidance of delay.

Licensing boards have extensive authority to control the course of a hearing. 10 CFR §2.718. And they are under a mandate to insure that proceedings are conducted “as expeditiously as possible, consistent with the development of an adequate decisional record.” 10 CFR Part 2, Appendix A, Section V. Moreover, delay in the hearing is a well recognized basis for limiting or denying requests for the production of documents. 4A *Moore’s Federal Practice*, 2d ed., par. 34.06; *Savannah Theatre Co. v Lucas & Jenkins*, 8 F.R. Serv. 34.12, Case 2 (S.D. Ga. 1944); cf. *Commonwealth Edison Co.* (Zion Station, Units 1 and 2), ALAB-196, *supra*, 7 AEC at 467; *Bernstein v. N.V. Nederlandsche-Amerikaansche Stoomvaart-Maatschappij*, 15 F.R.D. 32 (S.D.N.Y. 1953).

In considering whether, in a particular case, delay should be countenanced to allow a party to obtain additional information, a board must balance the effects of such delay against such countervailing factors as the alacrity with which the information was requested when its materiality became apparent, the particular relationship of the requested information to unresolved questions in the proceeding, and the overall importance of the information to a sound decision. In this instance, it is not clear whether the intervenors asked for the material at the earliest practicable time; we will assume that they did so. But we are satisfied both that the additional data sought was far more extensive than necessary to provide answers to the questions to which Mr. Jaye was unable to respond and, further, that the particular information bearing upon such answers would have been of too little potential worth to justify holding up the evidentiary hearing to await its receipt and analysis.

We have earlier noted (p. 32, *supra*), that the hearing delay incident to the document request would have resulted primarily from the time needed by the intervenors to analyze the material once it had been delivered to them. What was

asked for was extensive—*i.e.*, the source decks, data decks, computer programs and documentation upon which the models used by Mr. Jaye were based. That material would have provided specific details on the entire program utilized by Mr. Jaye in developing his fuel cycle cost forecasts. As we shall see, it was far more extensive than was needed to provide answers to those relatively few questions to which the witness had been unable to respond. In this connection, Professor Moore has observed that “[a] blanket request for production of all ‘books, documents, papers and records which are relevant and relate to the subject matter of [an] examination is obviously without merit.” 4A *Moore’s Federal Practice*, 2d ed., par. 34.07 Thus, in all events, the Board need not have required the production of everything that was sought by the intervenors.

It is significant that the intervenors never modified their request to reduce its scope. The question remains, however, whether the Board nevertheless should have insisted—in the interest of achieving a complete record on the points addressed by Mr. Jaye—that at least some of the requested data be produced (either in the form sought or in a different form). We conclude not. Given the other evidence available to the Board, none of the material was sufficiently significant to the issue of fuel cycle costs to warrant a hearing delay of even modest proportions while it was being obtained and scrutinized.

Mr. Jay’s testimony on projected fuel cycle costs was both clear and comprehensive. His direct testimony (fol. Tr. 1255) included a qualitative description of a series of analytical models used to make cost predictions in each of the phases of the cycle, a series of life-of-the-plant cost projections for each fuel cycle phase, and estimates of upper levels of cost risk both for individual phases of the cycle and for the phases in combination. On cross-examination he was able to answer in substantial detail the vast majority of the questions he was asked regarding the fuel cycle, his assumptions, and specific aspects of his models (Tr. 1261-1346, 1367-1407). At one point, he presented verbally what amounted to a flow diagram of that portion of the analysis dealing with fuel reprocessing costs, stating his assumptions and the numerical input values that were used (Tr. 1341-46). He later offered to deal similarly with each of the other separate phases of the entire program, but was not asked to do so.

Our review of the cross-examination of Mr. Jaye has revealed that, except with respect to one minor matter,⁷ there was only one general area in which the witness could not provide answers to the intervenors’ questions. This concerned the range of error that might be inherent in the models he used.⁸

⁷The witness was unable to say what figure he had factored into his model to represent the percentage of uranium in a particular year coming from open-pit and underground sources (Tr. 1299). He furnished other information in this regard, however, and the intervenors did not specifically pursue the matter (*ibid.*).

⁸See Tr. 1325, 1330-31, 1383-84, 1390-91

Those models assumed the continuation of the historic correlation which was said to have occurred between (1) certain Bureau of Labor Statistics indices used in nuclear power contracting and (2) the gross national product deflator. Mr. Jaye's associates developed estimates of long-term escalation in the general economy and thus projected the future course of the GNP deflator. The analyses involved the utilization of the historic correlation mentioned above to predict, from the projected changes in the GNP deflator, the projected changes in the indices.

Mr. Jaye was able to furnish the projected changes in the GNP deflator (Jaye, p. 8, fol. Tr. 1255 Tr. 1288). And he discussed the historic correlations which had been developed between the movement of that deflator and the particular indices.⁹ But, when the intervenors questioned him concerning the strength of these historic correlations, Mr. Jaye was unable to furnish from memory certain correlation coefficients or standard errors of estimate. Either would have indicated for each index, in mathematical terms, precisely how good the correlation was. He pointed out, however, that those values were not part of the models as such (Tr. 1338) and that they could be calculated on the basis of public information (Tr. 1325 1338) because the intervenors knew which indices were involved (Tr. 1330).

In any event, the answers which Mr. Jaye was unable to provide would have done no more than refine the description of the error ranges of the models. These ranges had been touched upon by him in another fashion. Specifically he had described a number of contingencies or changes in circumstances which might occur in various phases of the fuel cycle and the particular cost differences for each phase likely to eventuate from those contingencies or changed circumstances (Jaye, pp. 13-15). And, in addition, he testified to the cumulative increase in fuel cycle costs which would likely result if all of the potential risks he had mentioned were to occur (*id.*, pp. 15 17). He also evaluated the likelihood of occurrence of the totality of the cumulative increases (*id.*, pp. 15-17). While Mr. Jaye's inability to have provided the mathematical quantities formally related to error might have taken on more than minimal significance in the absence of such analysis, it does not do so here, where the subject of possible error in the models' projections and numerical estimates thereof had been specifically addressed by the witness through another mechanism.

Moreover, in addition to that specific consideration of error, the record provides yet another and quite independent measure of the accuracy of the applicant's fuel cycle cost predictions. Specifically the range of values advanced by the applicant encompassed the fuel cycle cost values prepared by the

⁹ He was not asked to furnish the numerical expression of those correlations, nor was he asked to state precisely what estimated changes in the indices resulted from the use of the correlations.

intervenor's own expert witness.¹⁰ While the applicant was unable to produce specific error-related quantities, the record is quite clear that the fuel cycle cost projections were accompanied by an adequate analysis of possible errors.

In short, we conclude that the Licensing Board acted within the permissible bounds of its discretion in declining to delay the hearing to enable the intervenors to obtain and study the requested material.

III

A. Turning now to the merits, we are confronted at the outset with the intervenors' insistence that the reasonable alternatives to construction of the Clinton facility did not receive an environmental cost-benefit analysis equal in degree to that accorded Clinton itself. Although this may well be so, it is well settled that, in the fulfillment of the NEPA mandate

the discussion of environmental effects of alternatives need not be exhaustive. What is required is information sufficient to permit a reasoned choice of alternatives so far as environmental aspects are concerned.

Natural Resources Defense Council, Inc. v Morton, 458 F.2d 827 836 (D.C. Cir. 1972); see also *Sierra Club v Lynn*, 502 F.2d 43 (5th Cir. 1974); *Environmental Defense Fund, Inc. v Corps of Engineers*, 492 F.2d 1123 (5th Cir. 1974); *Trout Unlimited v. Morton*, 509 F.2d 1276 (9th Cir. 1974).

Both the applicant's Environmental Report and the staff's Final Environmental Statement treat in considerable detail the alternative of building no generating plant at all, as well as the alternatives of employing other kinds of cooling systems, constructing a different type of facility (e.g., a coal-fired plant) and selecting another site. Leaving aside their criticism of the analysis of the coal alternative (which we reach later in this opinion), the intervenors do not point to anything which might suggest that the consideration of any of the reasonable alternatives to the construction of Clinton as proposed was deficient in some material respect. And our independent examination of both the entire record (including the FES) and the Licensing Board decision satisfies us that there is no

¹⁰That witness, Dr. Rieber, prepared detailed fuel cycle cost estimates using certain cost information supplied by SMSC, which was treated as proprietary. The prepared testimony was presented, and cross-examination was conducted, *in camera*. Dr. Rieber's estimates contained some numerical errors, and overestimated the cost of the first core loading because he failed to account for the fact that 3/4ths of the first loading would remain in the core for subsequent cycles. Despite these failings, the basic fuel cycle cost analysis followed standard techniques, yielding an average cost in the range 5.9 to 6.7 mills/kWh. The Jaye testimony concluded that the average cost would be 5.6 to 6.4 mills/kWh and that the upper level cost risk for fuel would be 9.1 to 10 mills/kWh (Jaye, pp. 13-15, fol. Tr. 1255).

merit to the intervenors' claim that the benefits and costs of each such alternative were not developed and analyzed sufficiently to insure, in the words of the guideline established by the Council on Environmental Quality that there would not be a "foreclos[ure] prematurely [of] options which might enhance environmental quality or have less detrimental effects." 40 CFR §1500.8(a)(4).

Nor can we accept the intervenors' assertion that an undue burden of proof was placed upon them. This assertion is founded essentially upon the observation of the Board that Dr. Rieber performed "no other independent studies or analyses" in considering the coal alternative, and that his testimony on that subject was "basically a critique of the Applicant's work and the Staff's work consisting almost entirely of statements of conclusions which are diametrically opposed to the conclusions that the Applicant and the Staff have drawn from the same information" (2 NRC at 599). The intervenors take this to mean that the Board thought them obliged to conduct their own independent studies on the data tendered by the applicant pertaining to the coal alternative and then to present "absolute and unequivocal proof" to support their claims with regard to that alternative. We think such an interpretation of the statement to be unwarranted. In context, the Board was simply describing, accurately insofar as our reading of the record discloses, the technique which Dr. Rieber utilized in endeavoring to counter the evidence adduced by the other parties. Nothing that the Board said can justifiably be taken as implying a belief that that technique is insufficient as a matter of law let alone that the ultimate burden of persuasion on the coal alternative issue rested with the intervenors rather than the applicant. In this connection, it might be noted that the applicant and the staff seemingly recognized where that burden lay since they both responded on the record to the criticisms leveled by Dr. Rieber against their evidence.

B. At the center of the intervenors' opposition to the Clinton facility is their desire to preserve the current predominantly agricultural uses of the land area proposed to be utilized for the facility (including its cooling reservoir). As previously noted (*supra*, p. 30), that opposition took the form of a challenge to three discrete aspects of the cost-benefit analysis of the facility performed by the applicant and staff: the need for the facility; the evaluation of the societal cost of taking prime agricultural land out of production, and the assessment of the relative desirability of the coal alternative.

By failing to challenge the Board's conclusion that the "Clinton units will be needed as presently scheduled" (2 NRC at 594), the intervenors must be presumed to acknowledge that the power which would be provided by the facility must in some manner be produced. For, given a demonstrated need for power, "the alternative of not meeting real demand is unthinkable." *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-179 7 AEC 159 173 (1974), remanded on other grounds, *Natural Resources*

Defense Council, Inc. v U.S. Nuclear Regulatory Commission, 547 F.2d 633 (D.C. Cir. July 21, 1976).¹¹

In any event, our independent examination of the record on need for power gives us no reason to overturn the Licensing Board's findings in this regard. That being so, our consideration of the intervenors' challenges to the cost-benefit analyses undertaken by the applicant, the staff, and then the Board calls for an inquiry into whether, taking into account all relevant environmental, economic and technical factors, the demonstrated power need can be best met by constructing the proposed Clinton units. *Consolidated Edison Co. of New York, Inc.* (Indian Point Station, Unit No. 2), ALAB-188, 7 AEC 323, 350-52, modified on other grounds, CLI-74-23 7 AEC 947 (1974); *Vermont Yankee*, ALAB-179 *supra*, 7 AEC at 175 On this record, that inquiry boils down to ascertaining whether the societal cost of removing a large quantity of prime agricultural land from production outweighs the costs associated with other means of producing the needed power.

1. The intervenors suggest that the "most important benefit" of a coal-fired plant, which they insist would be preferable on balance to Clinton, is the amount of land required: "[a] coal plant would not require the same amount of productive agricultural land." But the record does not indicate that the difference is significant.

The land usage for each type of plant (not including that required for the cooling systems) would be roughly comparable—with a coal facility requiring more land for fuel and waste storage, both plants utilizing the same amount of acreage for the station proper, and the nuclear facility requiring additional land for the exclusion area (FES, table 9.5 at p. 9-11). Further, both the coal and nuclear alternatives may and do utilize comparable varieties of cooling systems. Granted, a coal plant does require less cooling capacity—that type of facility operates at a higher thermal efficiency than the type of nuclear unit here under review and produces only about two-thirds the amount of heat release to cooling water as is produced by a nuclear plant of the same electrical capacity (FES, §9.1.2.5.2). But in terms of land usage, the difference does not appear to be substantial. Thus, assuming use of a cooling lake, the Metcalf site¹²—suitable only for coal and suggested by Dr. Rieber (as well as by the applicant¹³) as an

¹The intervenors do not appear to argue that, if no alternatives existed, the detriments attendant to using large amounts of land somehow outweigh the demonstrated need for electric power. Moreover, the record would not support such a claim.

²That site is located in Edgar County Illinois, approximately 25 miles south-southwest of Danville, Illinois. The site is within the applicant's central service area and is approximately 70 miles from the Clinton site.

³The applicant considered the Metcalf site as the one most appropriate for a coal-fired plant. Environmental Report, §9.4.1.2.2.

appropriate site to analyze—would require a 4,000 acre reservoir (FES, §9.1.2.3) compared to the Clinton reservoir of about 4,900 acres. For reasons that will appear, the value of those additional acres would not be sufficient to tip the balance in favor of the coal and against the nuclear option, given the other cost differentials between coal and nuclear facilities which are analyzed later in this opinion (*infra*, pp. 47-51).

2. In urging that the substitution of a coal-fired plant would avoid the land-use problems assertedly attendant to the use of the Clinton site, therefore, the intervenors' argument appears to be misdirected. In the final analysis, it is the choice between alternative cooling systems rather than the choice between nuclear and coal which bears most heavily upon the amount of land which will be taken. Put another way the appropriate inquiry is into whether this facility "should [be permitted to] employ a cooling lake instead of some alternative cooling method which would not entail the diversion of such a large quantity of land from agricultural pursuits to the generation of electricity" *Commonwealth Edison Co. (La Salle County Nuclear Station, Units 1 and 2), ALAB-193 7 AEC 423, 426 (1974)*.¹⁴

The record in this case indicates that the only viable alternative cooling system which would entail a substantial saving in land usage would be cooling towers (either natural-draft or mechanical-draft) used on a site with sufficient water supply to provide makeup water for that evaporated through use of the towers (FES §9.2.3). The Clinton site does not have an adequate water supply for that purpose, so that the employment of cooling towers on that site would require a cooling reservoir of equivalent size to the proposed cooling lake (FES §9.2.2). Since cooling towers not only have an economic cost but create environmental impacts of their own, it is apparent that cooling towers at the Clinton site represent a cooling system less acceptable than the proposed cooling lake, from both an economic and an environmental point of view (FES, Table 9.6, p. 9-16).

The record also reflects that, among the best alternative sites, the Hennepin and Bath sites¹⁵ could utilize cooling towers without a supplementary water storage facility. Both could obtain their makeup water for the towers directly from the Illinois River. Towers at these sites would have a life-of-plant economic cost of approximately \$37 million (FES, §9.1.2.4 and Table 9.3 p. 9-7). Since the only significant cost of the cooling lake alternative using the Clinton site is that associated with the taking of land (FES §9.2.3.6), resort to that alternative

¹⁴There does not appear to be any other component of the facility which, by resort to an alternative, might consume significantly less land.

¹⁵There are two sites at Hennepin and one at Bath. The Hennepin and Bath sites are located on the Illinois River north and west (respectively) of Clinton. The FES selects these sites as "the most realistic and viable alternative sites" (FES §9.1.2.3).

will be preferable if the costs to society associated with such land taking are less than the economic and environmental costs of towers. Thus, the selection of a proper method for determining the societal costs of removing land from agricultural usage is a necessary ingredient of the comparison of alternatives which must be made.

a. For its part the Licensing Board undertook a two-pronged analysis which led it to conclude that the land-removal costs were acceptable. First, believing that it was following the lead of our *Comanche Peak* decision,¹⁶ it considered whether society as a whole could bear the loss of agricultural production resulting from the diversion of the land to another use. It found that this loss could be sustained, because "preemption of land for the station will have no appreciable effect on food production at the national level now or in the foreseeable future and the land will not be needed for food production in the future" (2 NRC at 602). Then it went on to consider the impacts (both agricultural and economic) of the taking of land on members of the intervenor Salt Creek Association. It concluded that the agricultural impacts (caused by effects of the reservoir on an existing drain tile system) will not be significant as long as the applicant satisfies its commitment to take whatever action is necessary to correct any drainage problems caused by construction or operation of the reservoir,¹⁷ and that there will be no adverse economic impacts since the land owners will receive (through condemnation or negotiated settlement) a fair value for their land (2 NRC at 603-04).

The Board below rightly decided that it had to examine the effects of withdrawing land from agricultural production in terms both of society as a whole and of the particular owners or users of such land. Additionally it appears to have correctly analyzed the impact on the individual members of the Salt Creek Association of the taking of land for the Clinton facility. But we have serious reservations respecting the Board's treatment of the broader societal interest.

If the test were, as the Licensing Board thought, simply whether or not the removal of a particular parcel of land for a cooling lake would significantly affect national levels of food production, the land-use inquiry would indeed be an "empty ritual" with a predetermined result.¹⁸ Given the total of more than 470,000,000 acres of cropland in the United States (Kline, p. 15 fol. Tr. 577), the availability or nonavailability for agricultural pursuits of any individual

¹⁶*Texas Utilities Generating Co. (Comanche Peak Steam Electric Station, Units 1 and 2)*, ALAB-260, 1 NRC 51 (1975).

¹⁷Potential drainage problems were the source of one of the intervenors' contentions, but the contention was settled by virtue of the applicant's commitment.

¹⁸*Comanche Peak, supra*, ALAB-255, 1 NRC 3, 6 (1975).

tract—be it 10,000 acres¹⁹ or even five times that size—will never have a significant impact upon the sum total of food production nationwide. The fact is, however, that it does not follow perforce from such a conclusion that no cost is attendant to the loss of agricultural acreage to the Clinton Station. As John Donne long ago observed:

No man is an island, entire of itself; every man is a piece of the continent, a part of the man; if a clod be washed away by the sea, Europe is the less, as well as if a promontory were, as well as if a manor of thy friends or of thine own were; any man's death diminishes me, because I am involved in mankind; and therefore never send to know for whom the bell tolls; it tolls for thee.

Devotions XVII

The question before us then is how for purposes of performing a reasonable analysis of the environmental costs of available alternatives, should land removed from agricultural production—and in particular the Clinton site—be evaluated. Evidence presented in this proceeding reveals that while land is obviously a necessary element, in the final analysis agricultural productivity is determined as well by a complex combination of other factors such as weather, land management techniques, energy expenditure and market pressures.²⁰ Since here, as in *La Salle*²¹ and *Comanche Peak*,²² the land-use issue focuses upon agricultural productivity (more particularly the generation of food supplies), it seems clear that the removal of land should be considered in terms of losses of that productivity as opposed to any other measure of value that might be associated with the land.

This being so, we entertain some doubt regarding whether the sum paid by the applicant for the land through direct purchases and condemnation proceed-

¹⁹The intervenors first asserted that 15,000 acres would be utilized for the site. This was based on information appearing in the applicant's Preliminary Safety Analysis Report (PSAR, § 2.1.2) and the staff's Safety Evaluation Report (SER, § 2.1.1). Testimony at the hearing refined this figure to reflect that the total land area of the site is to be 13,535 acres, of which approximately 3,083 acres will be available for lease to farmers for farming or grazing (Gerstner, pp. 4, 6, fol. Tr. 272). The exact fraction of the remainder which would be suitable for agricultural use was a matter in dispute at the hearings below for our purposes we will simply consider 10,000 acres as being potentially productive agricultural land.

²⁰For instance, in the United States during the period 1950-1970, average per acre corn yields increased by the factor 2.13. Over the same period, however, the per acre expenditure of energy (*i.e.*, fuel, machinery fertilizer, etc.) was increased by 2.4 (FES, § 11.6.1, Table 4). See further discussion, pp. 43-44, *infra*.

²¹*Commonwealth Edison Co.* (LaSalle County Nuclear Station, Units 1 and 2), ALAB-153, 6 AEC 821 (1973); *id.*, ALAB-193, *supra*.

²²Fns. 16 and 18, *supra*.

ings (\$12,400,000 or somewhat less than \$1,000 per acre)²³ can uncritically be taken as the cost of that land for NEPA evaluation purposes. It may well be, as the Licensing Board suggested, that from the standpoint of the individual land owners the price was fair and reasonable. This does not necessarily mean, however, that it accurately reflects the cost to society of the loss of the agricultural productivity of the land.

Another possible approach to land evaluation appears in the testimony of Dr. Nash, on behalf of the staff, and Dr. Scott, on behalf of the intervenors. Both of them sought to determine the present monetary worth of foregone agricultural production. They employed dissimilar means of doing so, however, and reached markedly different results. In response to the intervenors' claim of an inadequate NEPA analysis of the adverse impacts of land taking on members of the Salt Creek Association residing "in DeWitt County" Dr. Nash focused his inquiry upon the net return of the plant to the county. As a component of that inquiry he attempted to ascertain the present value of the "gross value of farm production (money receipts of farmers)" for the 40-year life of the plant, adjusted by a multiplier to reflect local expenditures of those money receipts (Nash, pp. 23-24, fol. Tr. 444). Using a discount rate of 10%, he concluded that the lost value of agricultural productivity to the county would be 38.4 million dollars, or about \$3000 per acre (*id.*, p. 30). In contrast, Dr. Scott sought to determine the present net worth of lost agricultural production to the farmers. Employing extremely optimistic production and income figures, an unrealistically low level of costs attributable to such production,²⁴ and a lower discount rate than that used by Dr. Nash, he determined the present worth of lost production for 30 years to be \$144 million (Tr. 845-47),²⁵ or somewhat more than \$10,000 per acre.

Theoretically the present net value of foregone agricultural production and the current market value of agricultural property should be one and the same. As Abraham Gerber, a witness for the applicant, pointed out:

The present worth of the net value of agricultural production is reflected in the sale price of the land. When a landowner, or the owner of any capital asset, decides to sell that asset, the minimum price is determined by the

²³ True, p. 6, fol. Tr. 1069.

²⁴ Dr. Scott estimated net income (receipts less all costs except land costs) at 75% of the gross receipts. Tr. 837-38. Evidence of record indicates that the highest percentage of income from 1960-73 was 43.1% (Gerber, p. 15, fol. Tr. 941, Tr. 1048).

²⁵ In his prepared testimony Dr. Scott advanced a figure of \$179,846,000 as the present value of the 30-year net loss of agricultural production (Scott, p. 25, fol. Tr. 659). On cross-examination, he conceded that such figure was erroneous, testifying that it was computed by taking 75% of 30-year gross revenues (Tr. 844), which he had estimated to be \$192,466,693 (Scott, p. 13). Such computation produces a net value for lost agricultural production of about \$144,300,000.

owner's estimate of the present net value of the output expected to be achieved from that asset.

Gerber, p. 13, fol. Tr. 941 Tr. 1048.

Nonetheless, there is a wide disparity not only between the results reached by Drs. Nash and Scott utilizing the value of foregone agricultural production but also between Dr. Scott's result and the fair market value of the land. Even if we were to accept the monetary value of foregone agricultural production as a conceptually valid method of land evaluation, its dependence upon multiple assumptions and projections which incorporate uncertain variables suggests that the results achieved thereby may be suspect. In that regard, Dr. Scott's utilization of input figures which the record indicates are erroneous—*e.g.*, the cost figures—lends substance to this suspicion insofar as his derivation of value is concerned. The wide difference between the fair market value of the land (about \$1000 per acre), the value reached by Dr. Nash (\$3000 per acre), and the value determined by Dr. Scott (more than \$10,000 per acre) is hence not unexpected. And it leads us to reject Dr. Scott's evaluation. For if it were realistic, a vigorous demand for land would develop as persons sought to reap the financial benefits therefrom. This demand would, in turn, be reflected in the market price of land. Since the current market value is well below the intervenors' projection, we must conclude that their future-productivity evaluation overstates the land's monetary value.

More importantly however, we cannot accept that type of evaluation as even conceptually valid. Since theoretically it should produce a value similar to fair market value, it is subject to the same criticism as the fair-market-value evaluation: being founded upon the monetary worth of future production, it does not directly reflect the full impact on society of the loss of agricultural productivity. Since NEPA mandates our consideration of the entire impact of that loss, we must reject the use of the monetary value of future production as an appropriate method for determining the cost of utilizing farmland for a facility.

Rather, it appears to us, the loss associated with the diversion of a particular tract of land from agricultural to nonagricultural use (*e.g.*, the Clinton site) is to be measured in terms of how much it would cost to regenerate, if necessary an equivalent amount of agricultural production on other land. In this connection, the record indicates that agricultural production, at least in quantities equivalent to that lost as a result of the Clinton facility might be recreated in one of two ways: (1) the yield on land now being used for agricultural production might be increased; or (2) land not previously used for agriculture might be so employed (Kline, pp. 14-16, fol. Tr. 577· see also FES, § 11.6.1).

With regard to the first of these options, the FES treats at length the concept of increasing agricultural yields by the expenditure of additional energy on the farm land in the form of machinery fertilizer, herbicides, gasoline,

electricity etc. (FES, §11.6.1). In line with Dr. Scott's portrayal of corn production as the highest and best use of the Clinton land (Scott, Table 3, fol. Tr. 659- Tr. 819), this treatment focuses upon the energy requirements necessary to increase the yield of that commodity.²⁶ It indicates (FES §11.6.1, Table 4) that in 1970 there was an average requirement of about 2.9 million kilocalories per acre in the production of corn in the United States. The FES also discloses that, over the last 20 years, corn yields have increased in almost linear fashion with energy input (*ibid.*).

Assuming the loss of the productivity of 10,000 acres of corn fields (see fn. 19 *supra*), the yield on the approximately 10 million acres of corn-producing land in Illinois would have to be increased by 0.1% to compensate fully for that loss (FES, §11.6.1 Table 1). On the record-supported hypothesis that yield and energy input are linearly related, the additional energy required on a yearly basis to achieve the extra yield would be 2.9×10^{10} kilocalories. This energy value may be converted into an equivalent, more conventional measure of energy—800,000 gallons of gasoline.²⁷

Assuming a gasoline cost of \$0.80 per gallon²⁸ and a 6% discount rate, the present worth of the energy required to recreate the lost corn yield, for an infinite time period, is in the neighborhood of \$10.0 million, or \$1000 per acre of the land taken from agricultural usage by the Clinton facility.²⁹ A similar calculation, using electric power at \$0.02 per kWh as the conversion medium,³⁰ results in a per-acre-yield-regeneration value of about \$1,100. We have used gasoline or electricity to represent any of the possible energy expenditures that might be used to increase agricultural yield. These two are in fact among the most heavily used energy forms employed in corn production (FES, §11.6.1, Table 4).

Turning to the second possible means of recovering lost productivity—the

²⁶The record reflects that corn and soybeans are the predominant crops produced in DeWitt County Illinois (FES, §11.6.1, Table 1). In 1973, an approximately equivalent amount of acreage was devoted to each (*ibid.*).

²⁷1 gallon of gasoline equals 36,227 kilocalories. Table 4 in §11.6.1 of the FES, which lists the various energy inputs to corn production, is taken from an article by Pimentel *et al.*, *Science* 182: 443-449 (1973). The article itself uses gasoline as the medium to express energy inputs in kilocalories in terms more familiar to the reader (*id.* at 447).

²⁸It is, of course, not possible to predict with certainty the price of gasoline at any particular future date. The figure which we have arbitrarily adopted reflects what we consider to be adequate allowance for likely upward price adjustments. To the extent that gasoline is employed in agriculture, it should be noted that it normally is not subject to state and local taxation.

²⁹In making this calculation, we have applied the formula identified as H.2(*sic*) in Appendix G of the FES.

³⁰1 kWh equals 856 kilocalories.

placing of new land into agricultural use – the record reflects that land will be available for such purposes. Testifying for the staff, Dr. Kline cited two independent projections to the year 2000 that indicate that of approximately one billion acres of crop, pasture, and range land available in the United States, only about 400 million is expected to be actually harvested as cropland (Kline, Table 7 and Figure 9 fol. Tr. 577). Dr. Kline also supplied the following breakdown of land use in the United States, as of 1969.³¹

Major Land Use	Millions of Acres
Crop Land ³²	472
Grassland and Pasture	604
Forest Land	732
Special Uses	178
Miscellaneous Other Land	287
Total	<u>2,264</u>

In light of this evidence, it appears that, if necessary additional land clearly could be placed in agricultural production. The exact cost of this conversion, to the point of generating a ready-to-produce farming unit, would depend, of course, upon the nature of the land’s original use, its location and other factors specific to that location.

Although this record does not provide a direct analysis of such costs, there is one revelation which appears to establish a quantitative value for the creation of a productive farm in Illinois. Dr. Scott cited an Illinois Farm Business Record, Circular 1097 which attributed a 1973 average total value of \$592,000 to a 300-acre grain farm in Illinois, including land, machinery buildings, etc. (Tr. 670, 782-3). This figure produces a per acre valuation of approximately \$2,000, about twice that determined both from the value of required extra energy inputs (on the assumptions used) and from the fair market value.

In short, even though not introduced below for that specific purpose, there is sufficient evidence in this record to permit us reasonably to determine that—depending upon what method was employed to accomplish the objective—the lost productivity could be recaptured at a cost in the range of approximately \$1,000 to \$2,000 per acre. To be conservative, we will employ the higher figure

¹ Kline, Table 5, fol. Tr. 577. Although 1969 figures are used, we note that Table 7 and Figure 9 of the Kline testimony independently indicate that relative magnitudes of land devoted to specific uses are not projected to change significantly through the year 2000. See also Kline, p. 14.

³² Table 7 of Dr. Kline’s testimony notes that in 1970 only 344 million acres of cropland were harvested.

in balancing the taking of land for a cooling lake against the utilization of the cooling tower alternative. That figure has the additional advantage of resting on a less theoretical foundation; i.e., it is derived from contemporaneous average worth of Illinois grain farms.

b. Using the value of \$2000 per acre for the withdrawn farm land, the loss of roughly 10,000 acres results in a cost increment to Clinton attributable to agricultural land use of \$20,000,000. That cost is approximately \$17 million less than the economic cost of cooling towers at the river sites. On this basis, we conclude that, taking into account the total cost to society associated with the loss of agricultural land,³³ construction of the facility with the cooling reservoir at the Clinton site is the best of the alternatives considered.

We note that this conclusion rests upon a comparison of the total cost of land with only the economic cost of a cooling tower installation; it does not take into account other environmental costs which might attend use of such towers. The FES (pp. 9-13 to 15) does address this subject, however, citing a number of environmental decrements attributable to cooling towers (such as the visual problems of natural-draft towers and the fogging and icing produced by mechanical-draft towers) and concluding that use of the reservoir is preferable on environmental grounds as well. We accept that determination.

c. One further aspect of the land valuation question warrants our comment. By virtue of the intervenors' focus on the environmental impact of land-taking on farmers in the county one of the staff's witnesses (Dr. Nash) attempted to construct a cost-benefit analysis of the impact of the proposed plant on the county. On the one hand, the benefit side included such items as the substantial increases in income and property taxes which would result from building and operating the plant; on the other hand, the cost side included such items as the removal of land from present uses (primarily agriculture) (Nash, p. 5 fol. Tr. 444). This analysis, in our view is of dubious relevance. For although the value of land removed from agricultural use is a cost which must be factored into a NEPA balance, localized taxes are never a proper offsetting benefit. See *Vermont Yankee*, ALAB-179 *supra*, 7 AEC at 177

Nor are the applicant's and intervenors' analyses any more appropriate. We have already discussed the valuation problems inherent in those analyses. Beyond that, each of them attempts to balance the costs associated with the facility (including land costs) against, *inter alia*, the dollar value of the electricity to be produced (Gerber, pp. 7-8, fol. Tr. 941 Tr. 942-47; Environmental Report, Tables 8.1-7 and 11.6-1 Scott, Table 4 fol. Tr. 659). We have previously expressed our strong disapproval of this practice:

³³ There is testimony in the record to the effect that, at such time as the reservoir were no longer needed to cool the plants, it could be drained and the land restored to agricultural use (Tr. 644-51). We have not taken this possibility into account in arriving at our conclusion as to the acceptability of the Clinton site.

the placing of a monetary value on the benefit of electricity is not mandated either by NEPA or by Commission regulations, and attempting such task serves no useful purpose.

Vermont Yankee, ALAB-179 *supra*, 7 AEC at 172. And we went on to vacate a cost-benefit balance which had that infirmity (*id.*, at 176).³⁴

Despite the presence in the record of these aberrant cost-benefit analyses, the Licensing Board commendably did not adopt any of them. As we have seen, it properly inquired first into whether there existed a real demand for the power to be produced by the Clinton facility. Then, having satisfied itself that there was such a need, it went on to attempt to ascertain the most beneficent means of satisfying that need. Relying on the properly performed balance appearing in the FES (pp. 10-8 through 10-11), it did not endeavor to place a dollar value on electricity but rather confined itself to the determination that the primary benefit of the facility would be the “annual production of about 13.5 billion kwh of electrical energy at the lowest cost among viable alternatives” (2 NRC at 619).

C. We have already seen that, in terms of the intervenors’ prime concern—the use of land— there is little to choose between the nuclear and coal alternatives. A nuclear plant requires a slightly larger cooling lake, but in other respects the land requirements of the two types of facilities are comparable (*supra*, pp. 38-39). Using the land evaluation technique heretofore described, the 900 acre difference between the cooling lakes for Clinton and Metcalf (the site analyzed which appears to be most suitable for a coal plant) produces an additional lifetime plant cost for Clinton of \$1,800,000—which, relatively speaking, is not an appreciable sum.

The intervenors advance still other strictly economic arguments to support their assertion that the alternative of a coal facility—particularly one built at the mouth of an Illinois coal mine—at the very least should have been given closer scrutiny. Dr. Rieber testified that Illinois is “preeminently a coal state” and that a plant using Illinois coal would result in continuing benefits to the state in terms of employment, investment, and taxation. He criticized the applicant’s site-selection procedures as biased against coal since they eliminated (in the interest of minimizing transmission line distances) all potential mine-mouth sites. He also took the applicant to task for not evaluating the coal alternative on the basis of a site best suited to that form of power but rather on the basis of sites (*i.e.*, Clinton and Hennepin) suitable as well for nuclear plants. He seemed to advocate use of the Metcalf site:

In a coal state, one would have expected the Metcalf site to be chosen, if only on the basis of benefits to the State of Illinois.

³⁴Our reasons for disapproving of the placing of a monetary value on the benefit of electricity are explained in ALAB-179, *supra*, 7 AEC at 172-74.

[Rieber, p. III-11, fol. Tr. 1671.] The intervenors further assert that, in the cost comparisons, the costs of coal and its transportation have been overstated.

The Licensing Board rejected the coal alternative on the very ground on which it was advocated by the intervenors: economics. The applicant's evidence indicated that the 1981 present worth of the future revenue requirements of Clinton was some 1.6 billion dollars less than the least costly alternative coal plant. The Board also found that if the difference in generating costs were attributable entirely to fuel, the estimated coal costs would have to be in error by approximately 25% for the generating costs to be equal. It could find no warrant for believing that an error of this magnitude existed. It is true that the nuclear/coal cost comparison found in the FES did not take into account, *per se*, the transportation advantages of the mine-mouth coal plant which the intervenors sought to have considered. The Board found without contradiction, however, that, if all coal transportation charges were eliminated from the cost of the Illinois coal alternative—thus in effect assuming a mine-mouth plant, but without added expense for the transmission of electricity—the coal costs would be reduced by only approximately 11%, still leaving the economic advantage with the nuclear option.

Moreover, the record indicates that, because of the high sulfur content of Illinois coal (and the concomitant need for pollution control equipment) and the necessity of opening new mines if in-state coal were to be used to service a plant with the capacity of the Clinton units, the use of an Illinois-coal-fired plant would be the most costly of the coal alternatives (Weir, pp. 11-12, fol. Tr. 1211). The Board so found.

Although the intervenors' contention encompassed only the economics of coal and nuclear facilities, the Board also considered the environmental aspects of the two types of facilities. It concluded, on the basis of the discussion in the FES, that the environmental costs, though different for the coal and nuclear options, are "not sufficient to negate the economic cost differential between the two alternatives" (2 NRC at 601). On that basis, it selected the nuclear option as preferable.

On appeal, the intervenors do not take issue with the Board's findings as to the environmental impacts of a coal plant. Rather, they simply re-assert most of the economic claims which they had advanced below. We are not authorized, however, to require an applicant to accept or reject an alternative solely on the basis of its economic costs. That is a business judgment which is outside the scope of our NEPA review. See *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-244, 8 AEC 857 862 (1974). Only insofar as environmental impacts of two alternatives vary may we factor strictly economic differences into our evaluation. In this case, the variation in environmental impacts is small: the land-cost differential of \$1,800,000 is the only quantified difference reflected by the record. In these circumstances, the economic cost differences become relevant only insofar as they may serve to

counterbalance the small environmental differences. We shall evaluate the intervenors' claims *seriatim* in that context.

1 In support of their claim that sites chosen for some form of consideration were selected on the basis of their suitability for nuclear use and that the coal plant alternative thereby suffered an inherent disadvantage, they point only to the potential advantages of a mine-mouth coal plant. As we have seen, those advantages boil down to savings in fuel transportation costs; but even if the transportation costs of Illinois coal were eliminated, nuclear remains the economically preferable choice by much more than the \$1,800,000 cooling-lake differential. Thus, to the extent that the Board may have erroneously failed to analyze specifically a mine-mouth plant, the error was harmless.

2. The intervenors' claim that the applicant ignored in its evaluation of alternatives the potential tax revenues to the State of Illinois resulting from the utilization of Illinois coal. While that may be so, the applicant—and the Board as well—were correct in not considering tax revenues from either the nuclear or the coal option as a potential benefit. Like local taxes and local employment, the taxes on coal are in the nature of “transfer payments resulting in offsetting costs and benefits” and, as such, “have no place in the overall evaluation of the appropriateness of the project.” *Vermont Yankee*, ALAB-179 7 AEC at 177 See also *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), ALAB-336, NRCI-76/7 3 (July 1 1976).

3. Finally the intervenors assert that coal costs were stated at their highest figure and nuclear costs at their lowest, “so as to make coal an unattractive alternative.” But in pinpointing this objection, they resort again—insofar as coal is concerned—only to the transportation factor included in the costs of Illinois coal. They criticize John Weir, the only witness to testify on coal costs, for assuming transportation costs “on the basis of the most distant possible Illinois mine site,” a distance of some 200 miles. To reiterate, however, the record indicates, and the Board found, the nuclear alternative to be economically preferable to coal even with the transportation charge from an Illinois mine entirely eliminated. That being so, the intervenors' claim of bias in calculating costs for the Illinois coal-fired plant is unimportant to the result here.

As for the alleged understatement of nuclear costs, the intervenors do not elaborate upon this assertion in their discussion of the coal alternative but do amplify it in conjunction with their discussion of land costs. Since the relevance of possibly understated nuclear costs bears most heavily on the relative desirability of the coal alternative, we are considering the claim at this juncture. Specifically the intervenors point to the following costs arising from the nuclear fuel cycle as allegedly being understated:

a. According to the intervenors, the applicant assumed the price of uranium oxide (U_3O_8) to be \$10 per pound, but Dr. Rieber's assumption that the price would as high as \$20 per pound was more realistic. The \$10 price, however, was

never in fact used by the applicant's witness (Mr. Jaye), but instead appears in the FES as the price at which limited resources could be recovered, along with a qualification that other resources could be recovered only at a greater cost (FES §10.3.4.2). At the hearing, Mr. Jaye updated the fuel cycle costs appearing in the record, using substantially higher figures (Jaye, pp. 6-17 fol. Tr. 1255).³⁵ Using these updated figures, the nuclear costs were still substantially lower than the coal costs.

b. The applicant is said to have utilized a figure for the cost of enriching uranium fuel which assumed no cost increases in the future and which already has been superseded by higher costs. Mr. Jaye used a cost figure of \$42.10 per separative work unit as of January 1975 and escalated it at the rate of 2% per 6 months (as suggested by ERDA)(Jaye, p. 11 fol. Tr. 1255).³⁶ The intervenors refer to ERDA news releases (which appeared after the close of the evidentiary hearings) to indicate that such enrichment costs had already increased to \$53.35/swu³⁷ and that that agency was seeking Congressional authority to increase the charge to a level as high as \$76/swu.

The costs derived by Mr. Jaye do appear to be understated; for, as we can officially notice, ERDA recently established a price of \$59.05/swu (41 FR 8414-15, February 26, 1976). Nevertheless, uranium enrichment cost is not such a substantial component of the nuclear fuel cycle cost as to make a significant difference in the nuclear-coal power cost comparison.³⁸ Moreover, coal costs themselves may well have escalated since the evidentiary hearings here took place.

c. The only other substantial question raised by the intervenors regarding the nuclear/coal comparison is the alleged greater reliability of coal plants. As a basis for this claim, they seize upon Dr. Rieber's passing suggestion—backed by no data whatsoever—that the reliability and power availability of coal plants might be higher than those for nuclear plants (Rieber, p. III-2, fol. Tr. 1671). And they fault the applicant (and by implication the Licensing Board) for not further pursuing the question.

In our view the Board committed no error in this regard. Intervenors have

³⁵Mr. Jaye expressed his fuel costs in terms of mills/kWh levelized costs. On cross-examination, he indicated that the underlying cost of uranium ranged from \$21 per pound of U₃O₈ for 1982 delivery to \$85 per pound for 2020 delivery (Tr. 1267-68).

³⁶See 39 FR 22182 (June 20, 1974).

³⁷The price of 53.35/swu became effective August 20, 1975. It was published on June 20, 1975, prior to the close of the evidentiary hearings (40 FR 26060).

³⁸The new enrichment cost is about 37% greater than the Jaye projection. Taking enrichment to be 25% of the fuel cycle cost (as reflected by the *in camera* testimony), and fuel costs in turn to be 25% of the nuclear power cost (Sarikas, exhibit 3, fol. Tr. 1444; Connor, Table 5, fol. Tr. 926), the enrichment cost increase results in an increase of about 2.5% in the cost of electric power.

some responsibility to provide a basis for inquiring into a question; they must at least bring "sufficient attention to [an] issue to stimulate the Commission's consideration of it" *Aeschliman v. U.S. Nuclear Regulatory Commission*, 547 F.2d 622, ____ (slip op., pp. 12-13)(D.C. Cir. July 21, 1976). Dr. Rieber's oblique reference to the reliability question fails to satisfy even that minimal obligation.

In this instance at least, the economic costs of a coal plant appear to exceed by a wide margin the economic costs of the proposed nuclear facility—even if the costs of Illinois coal are reduced to reflect no transportation charges whatsoever. But the coal versus nuclear cost distinction may not always be so clear. And in a close case, an evaluation of the coal alternative on essentially economic grounds such as here occurred may well prove to be inadequate.

As the intervenors have stressed, a fair evaluation of the coal alternative mandates consideration of a coal plant on the best available site for such a plant. It is not clear that that was done here. The only site evaluated which could serve for a coal but not a nuclear plant was Metcalf. The applicant represented this site as the best for a coal plant and evaluated it in that context (Environmental Report, §9 4.1.2.2 and 9 4.2). But neither the staff in its FES nor the Board in its decision followed suit. Both of them rejected the Metcalf site not because a coal plant located there would be less desirable (economically or environmentally) than a nuclear plant at Clinton, but rather because Metcalf was suitable only for a coal facility. That reason will suffice only where, as here, the record reflects that a coal plant at any reasonable site would be so unfavorable economically compared to a nuclear plant that it would counterbalance any environmental differences.

One additional aspect of the comparison of the nuclear and coal alternatives calls for comment. Reflecting the circumstance that it was not a contested issue, the Licensing Board made only passing reference to the environmental consequences of the coal alternative. The evidence of record on this question was sparse at best (see FES, §9.1.2.5.2 and Table 9.5). On the other hand, the environmental effects of the proposed nuclear plant were canvassed by both the FES and the Board in extensive detail. While identity in treatment of the environmental impacts of the nuclear and coal alternatives is not required (see pp. 36-37 *supra*), some additional attention to the environmental aspects of coal plant operation could be required to strike the final NEPA balance in situations where the economic differentials are less conclusive than they are in this case.

IV

In our *sua sponte* review of the uncontested portions of the two Licensing Board decisions in this proceeding, we have found one matter warranting our comment.

In its partial initial decision, the Licensing Board imposed as a license condi-

tion a requirement carried over from the certification of the State of Illinois pursuant to Section 401 of the Federal Water Pollution Control Act, 33 U.S.C. 1341(a), that “[t]he applicant shall keep the lake open to readily available public access throughout the life of the lake” (2 NRC at 608). In its cost-benefit analysis, the Board also included among the benefits the “development of a recreational facility in a recreational-facility-deficit area” (*Id.* at 619).

We have no quarrel with the Board’s actions in this regard. But we note that a short section of the long narrow lake is contained within the plant’s exclusion area (SER, figures 2.2 and 2.3, pp. 2-3 and 2-4). The SER states that “[a]ctivities unrelated to plant operation within the exclusion area will consist of public recreation activities on the cooling lake.” The staff indicates that it “will require the applicant, at the operating license review stage, to provide assurance that these activities will not interfere with the safe operation of the plant, and that plant operation will not result in any hazard to the public health and safety” (SER, p. 2 5).

Given the strong State interest in the proposed recreation facility and the Licensing Board’s use of that facility as partial justification for its approval of the project, we suggest that planning and review of the facility proceed expeditiously to assure that any proposed recreational activities will not be inconsistent with exclusion-area standards. See *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-248, 8 AEC 957 965-66 (1974); *id.*, ALAB-308, NRCI-76/1 20, 26-30 (January 22, 1976).

V

For the reasons stated, the Licensing Board’s partial initial decision (LBP 75-59) and initial decision (LBP-76-6) are *affirmed*.³⁹

³⁹ A brief note is warranted concerning the applicant’s request that we disregard the intervenors’ appellate brief because of its failure to conform to the Commission’s briefing rules and for “material mischaracterization” of the record and the Licensing Board’s decision. While more specific record references in the intervenors’ brief would have been desirable, most of the criticized portions of the brief merely stress those segments of the record and decision most favorable to the intervenors’ position and represent at worst no more than possibly overzealous advocacy (in which the applicant itself has equally indulged).

Moreover, the applicant’s own brief, which (in keeping with its recommendation that the intervenors’ brief be struck) is directed at the intervenors’ exceptions rather than at their brief, was of relatively little help to us. Intervenors appear to have made a good faith attempt to abide by the briefing standards spelled out in *Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 832-33 (1973) and *Commonwealth Edison Co.* (Zion Station, Units 1 and 2), ALAB-226, 8 AEC 381, 382-83 (1974). It would have better served the resolution of issues in this case if the applicant had focused more on the merits of the issues and less on any asserted deficiencies in intervenors’ brief, and if its brief (as well as that of the staff) had been directed at the matters briefed by the intervenors rather than at the exceptions (some of which were later abandoned).

It is so ORDERED.

**FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD**

**Eleanor E. Hagsins
Secretary to the Appeal Board**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-28

ATOMIC SAFETY AND LICENSING BOARD

Samuel W. Jensch, Chairman
Gustave A. Linenberger
Frederick J. Shon

IN THE MATTER OF
DUQUESNE LIGHT COMPANY
OHIO EDISON COMPANY
PENNSYLVANIA POWER COMPANY

Docket No. 50-334

(Beaver Valley Power Station,
Unit No. 1)

July 1, 1976

Upon application for full-power operating license, the Licensing Board resolves the one remaining issue in controversy concerning the ability of the facility to shut down safely from full power in the event of a loss of the normal plant cooling water system due to a postulated gasoline barge explosion at the plant's river intake structure.

Full-term, full-power operation authorized, subject to certain conditions.

TECHNICAL ISSUES DISCUSSED: Probability of postulated gasoline barge explosion in river; auxiliary river water intake system.

**SUPPLEMENTAL AND CONCLUDING
INITIAL DECISION AUTHORIZING
FULL POWER OPERATIONS**

OPERATING LICENSE

Appearances

Gerald Charnoff, Esq., and Jay E. Silberg, Esq., for
Duquesne Light Company Ohio Edison Company Penn-
sylvania Power Company Applicants

Albert D. Brandon, Esq., and Joseph A. Fricker, Jr., Esq.,
for City of Pittsburgh, Pete Flaherty Mayor Environmental
Coalition on Nuclear Power, Friends of the Earth, *et al.*,
Intervenors

W. W. Anderson, Esq., and Theodore A. Adler, Esq., Deputy Attorneys General for The Commonwealth of Pennsylvania

Michael W. Grainey Esq., for the Regulatory Staff of the U. S. Nuclear Regulatory Commission

1 On the basis of the evidence of record developed over several years in this operating license proceeding, the Atomic Safety and Licensing Board (Board) in three previous decisions, (LBP 74-25, 7 AEC 711 (1974); LBP-76-3, NRCI-76/1, 44 (January 22, 1976); and LBP-76-23 NRCI-76/5, 711 (May 28, 1976)) which are incorporated by reference in this decision, previously has determined that all matters in controversy have been satisfactorily resolved except a question regarding the ability of the subject facility to shut down safely from full power in the event of a loss of the normal plant cooling water system due to a postulated gasoline barge explosion at the plant's river intake structure.

2. To consider this remaining matter, an additional evidentiary hearing session was held on June 21, 1976, at the United States Tax Court Building in Washington, D. C. Testimony was introduced by Applicants and the NRC Staff. In addition, cross-examination and questioning were conducted by counsel for City of Pittsburgh, an Intervenor in this proceeding, and by members of the Board.

3. Applicants currently have under construction an auxiliary river intake structure whose completion is scheduled for December 31, 1976. Completion of that structure would provide adequate cooling in the unlikely event of the postulated barge explosion at the primary intake structure. It was the possibility of a barge explosion during the period between now and completion of the auxiliary river water intake structure and the consequences of such an accident if the plant is allowed to operate at full power during that period which comprised the subject of inquiry. The previous decisions had already approved operation up to 35% of full power.

4. For the interim period pending completion of the auxiliary river water intake structure, Applicants have proposed the installation of an interim alternate cooling system, which could be employed if the postulated barge explosion were actually to occur. The alternate system which Applicants now propose and upon which they now intend to rely involves the use of portable pumps with hoses which, in the event of a barge explosion, could be used to supply water from the Ohio River directly to the plant raw water system through a connection in the turbine building. This system, and the results of tests conducted on it by Applicants and witnessed by the NRC Staff, were addressed in the June 21 hearing and are discussed later in this Initial Decision.

5. As additional assurance that a sufficient margin of safety exists with respect to the postulated barge explosion accident, probability studies were

conducted earlier both by Applicants and by the NRC Staff. The NRC Staff's study concluded that the probability of such event is 1.8×10^{-5} per year. Applicants' analysis resulted in a risk figure of 2×10^{-7} per year. The Board, in the face of the different results by Applicants and the Staff, asked Applicants to obtain another study by "an independent third party" such as A. D. Little or Battelle Memorial Institute. A. D. Little did perform such a study and the results of that study were also addressed at the hearing and are discussed below in this Decision.

6. In the course of the hearing, the following testimony and exhibits on alternate cooling systems and probability of postulated barge explosion were received into evidence:

Testimony of J. J. Carey and J. M. Cumiskey Applicants' June 21, 1976, Exhibit 1, entitled "Description of the Beaver Valley Power Station Alternate Cooldown System Capability" introduced into the record as though read following Tr.1812 (cited hereinafter as "Carey and Cumiskey").

Arthur D. Little, Inc., "An Assessment of the Probability of a Gasoline Barge Striking the Beaver Valley Plant River Water Intake and Exploding," dated June 1976, received into evidence as Applicants' June 21 1976, Exhibit 2, at Tr. 1853 (cited hereinafter as "ADL Probability Assessment").

"Affidavit of John Angelo," Licensing Project Manager, USNRC, dated June 17 1976, introduced into the record as though read following Tr. 1817 (cited hereinafter as "Angelo Affidavit").

INTERIM ALTERNATE COOLING SYSTEM

7 Applicants' witnesses Carey and Cumiskey testified that in the unlikely event there is a loss of capability of the normal cooling water systems due to a postulated gasoline barge explosion at the station waterline, an alternate system can be utilized to provide cooling water in sufficient quantities, even after operation at 100% of full power, to enable the station to be cooled to the cold shutdown condition and maintained in this condition for an indefinite period. (Carey and Cumiskey p. 1.) Generally the system employs portable pumps and hoses which are removed from storage when needed and positioned to pump water from the Ohio River directly to the raw water system in the turbine building. (Carey and Cumiskey p. 3 Angelo Affidavit, p. 2.) The water will be supplied to the turbine building at a location which is below grade and protected by concrete walls and steel grating. (Angelo Affidavit, p. 2.) Components normally used for a cooldown make up the remainder of the system. (Tr. 1818-21.)

8. On June 15, 1976, Applicants conducted and the NRC Staff witnessed a test of this alternate cooling system. During the test, the portable pumps and hoses were moved from their storage location and positioned to pump water from the Ohio River to a temporary connection near the turbine building. This procedure was accomplished in one and one-half hours (Angelo Affidavit, p. 3), far less time than would be available for such an operation in the postulated emergency. The flow delivered by the pumps was measured to be 1750 gallons per minute (Tr. 1821 see Carey and Cumiskey) which is adequately in excess of the 1500 gallons per minute conservatively estimated to be necessary (Testimony of Roger Martin, p. 4, following Tr. 1260.)

9. On the basis of its review of the alternate cooling system and its witness of the system test on June 15, 1976, the NRC Staff has concluded that the alternate cooling system as described by witnesses Carey and Cumiskey in their testimony is an acceptable method of providing for plant cooldown in the event of a loss of the normal plant cooling system due to a postulated barge accident during the interim period until the auxiliary river water intake system is completed and operational. (Angelo Affidavit, p. 3.)

10. The Staff testified that the interim alternate cooldown method provides a sufficient degree of assurance of safety until the auxiliary intake structure is completed and operational, regardless of the precise value assigned as the low probability of the postulated barge accident, that the plant should be licensed for full power at this time. (Tr. 1954-56.) The City of Pittsburgh offered no testimony on the adequacy of the proposed interim alternate system.

11. The Board has reviewed and finds appropriate the Staff's conclusion as to the acceptability of the interim alternate cooling system and adopts for inclusion in any full power license to be issued by the Director, the conditions proposed by the Staff and accepted by Applicants, namely that: (1) Applicants will check monthly the condition of the batteries used to start the portable pumps; (2) Applicants will maintain the equipment in a state of readiness and test it quarterly; and (3) Applicants will include written instructions in the plant emergency procedures to define installation and operation of the interim alternate cooling system. The Board notes that such written instructions have already been prepared (Tr. 1810).

PROBABILITY OF GASOLINE BARGE EXPLOSION

12. Although the availability of the approved alternate interim cooling system described above provides, in itself, reasonable assurance that operation of the facility at full power will not endanger the public health and safety in the event of the postulated barge incident, the Board also considered the A. D. Little study of the probability of such an event introduced by the Applicant in response to the Board's request for an independent study. ADL's study was

sponsored as an exhibit in the hearing by the three ADL employees who did the study and prepared the report—Messrs. Kalelkar, Everett and Brown. (Tr. 1853.)

13 ADL's general approach was to utilize historical data on barge traffic and barge casualties on the Ohio River and combine these data appropriately with engineering analysis and operational parameters indigenous to the problem to develop the needed probability value. The problem was approached in several steps whose individual quantifications were carried out conservatively so as to ensure that the final probability evaluation overestimated the actual probability of occurrence. (ADL Probability Assessment, p. 4.)

14. ADL used two categories of historical data to forecast the probability the first relating to the accidents that have occurred on the Ohio River and the second relating to the exposure on the River to the risk of accidents, *i.e.*, traffic. For the traffic data, ADL utilized *Waterborne Commerce*, (ADL Probability Assessment, p. 20) prepared by the Corps of Engineers; it provides the only reliable and statistically significant barge traffic data for the Ohio River. For accident statistics, U. S. Coast Guard statistics were determined to be the only complete source. (ADL Probability Assessment, p. 21.)

15. In arriving at its quantitative assessment, and its judgment that the quantitative assessment was conservative, ADL considered as "operational factors" the geography in the vicinity of the plant intake structure, the various barge sizes used to carry petroleum products on the Ohio River, and the explosibility of barges. Only empty gasoline barges were considered potentially explosive. (ADL Probability Assessment, p. 23 tr. 1892.)

16. ADL conservatively estimated that the annual probability of a gasoline barge striking the plant intake structure and exploding is 3.2×10^{-7} (ADL Probability Assessment, pp. 1-3, 51 tr. 1841-42.) Moreover, the ADL employees testified, if one were to consider the traffic associated with all potentially explosive petroleum products and not limit the consideration to gasoline barges only the annual probability of a barge striking the intake and exploding would increase to only 4.5×10^{-7} occurrences per year. (Tr. 1857 These conservative assessments are underlined by the complete absence of any recorded or known petroleum product barge explosion of the type postulated anywhere on the Ohio River during the seven year period for which statistics were readily available. Tr. 1903 1921.)

17 The Regulatory Staff testified that for the short term, *i.e.*, a year or two, it would not disagree with the A. D. Little probability values. For a longer term evaluation, *i.e.*, for a period of time extending up to forty years, the Staff observed that further evaluations might be required with respect to the target area assumed by A. D. Little and the assumed probability of an explosion in the event of barge impact and the intake structure. (Tr. 1949-1953.) While the Licensing Board believes that the A. D. Little study is suitably conservative, neither the Applicants nor A. D. Little have offered the A. D. Little study for

purposes of determining the probability of the postulated event over the life of the facility (Tr. 1939-1941.)

18. Considering the foregoing findings of fact, the Board concludes that, while the postulated barge event is most unlikely in any event, there is reasonable assurance that the plant can be shut down safely from full power using the alternate interim cooling system in the event a gasoline barge (or any petroleum carrying barge) impacts the Beaver Valley intake structure and thereby incapacitates the normal cooling system during the interim period preceding completion of the auxiliary river water intake structure. Further, in view of the availability of the alternate cooling system described in the hearing and the very low probability of the postulated event as found by A. D. Little, the Licensing Board agrees that the Applicants may discontinue the use of the towboat provided to guard the intake in accord with the Supplemental Initial Decision dated May 28, 1976. In accordance with the Atomic Energy Act of 1954, as amended, and the Commission's regulations, and on the basis of the entire evidentiary record, including the foregoing findings of fact, all of which are supported by reliable, probative and substantial evidence, the Board concludes that all matters of concern to the Board in this proceeding have been satisfactorily resolved.

19 On the basis of the foregoing findings of fact and the entire evidentiary record in this proceeding, the Licensing Board has determined that all matters in controversy have been satisfactorily resolved. The Licensing Board therefore makes the following findings based upon the record of this proceeding with regard to the above-referenced matters in controversy:

- (1) Construction of the facility has been substantially completed in conformity with the construction permit and the application as amended, the provisions of the Act and the rules and regulations of the Commission; and
- (2) The facility will operate at full power in conformity with the application as amended, the provisions of the Act, and the rules and regulations of the Commission; and
- (3) There is reasonable assurance (i) that the activities at full power authorized by the operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations in this chapter; and
- (4) The Applicant is technically and financially qualified to engage in the activities authorized by the operating license in accordance with the regulations in this chapter; and
- (5) The applicable provisions of Part 140 of this chapter have been satisfied; and
- (6) The issuance of the operating license will not be inimical to the common defense and security or to the health and safety of the public.

20. WHEREFORE, IT IS ORDERED in accordance with the Atomic Energy Act of 1954, as amended, and the Commission's regulations, and based on the findings and conclusions set forth herein, that the Director of Nuclear Reactor Regulation is authorized to amend Operating License No. DPR-66, consistent with the terms of this Initial Decision, to authorize full-term, full power operation, subject to the conditions identified in paragraph 11 *supra*.

21. IT IS FURTHER ORDERED, in accordance with Sections 2.760, 2.762, 2.764, 2.785 and 2.786 of the Commission's Rules of Practice, that this Initial Decision should be effective immediately and shall constitute the final action of the Commission subject to review thereof under the above-cited rules. Exceptions to this Initial Decision may be filed by any party within seven days after the service of this Initial Decision. A brief in support of the exceptions shall be filed within fifteen days thereafter (twenty days in the case of the Staff). Within fifteen days after the service of the brief of appellant (twenty days in the case of the Staff), any other party may file a brief in support of, or in opposition to, the exceptions.

ATOMIC SAFETY AND LICENSING BOARD

Gustave A. Linenberger

Frederick J. Shon

Samuel W. Jensch, Chairman

Issued:
July 1 1976
Bethesda, Maryland

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-29

Marshall E. Miller, Chairman
Daniel M. Head
Andrew C. Goodhope

In the Matter of

Docket No. 50-482A

**KANSAS GAS AND ELECTRIC COMPANY
AND KANSAS CITY POWER AND
LIGHT COMPANY**

**(Wolf Creek Generating Station,
Unit No. 1)**

July 27 1976

Upon joint motion by applicants and intervenor, the Licensing Board approves a proposed settlement agreement, including specified license conditions, in antitrust proceeding and dismisses with prejudice intervenor's petition to intervene.

INITIAL DECISION AND ORDER

Applicants Kansas Gas and Electric Company ("KG&E") and Kansas City Power and Light Company ("KCP&L") and Intervenor Kansas Electric Cooperatives, Inc. ("KEC") having jointly moved the Licensing Board to approve a settlement of the captioned proceeding, which settlement is described in the agreement attached hereto as Exhibit A, and, in connection therewith, to approve and issue the amended KG&E license conditions attached hereto as Exhibit B, and the KCP&L license conditions as proposed by the Department of Justice attached hereto as Exhibit C; and, upon final approval and issuance of such license conditions, to dismiss the captioned proceeding with prejudice; and the Department of Justice having stated that it has no objection to approval of the proposed settlement agreement, and the NRC Staff having stated that it does not oppose acceptance by the Licensing Board of the proposed settlement including the imposition of the proposed license conditions; and

The Licensing Board having satisfied itself that the settlement and dismissal of the captioned proceeding upon the foregoing terms is fair and reasonable in the circumstances;

IT IS ORDERED THAT

1. Pursuant to Sections 2.759 and 2.760(a) of the Commission's Rules of Practice, the settlement set forth in Exhibit A hereto and the KG&E license conditions set forth in Exhibit B hereto are hereby approved.

2. The license conditions set forth in Exhibit B are hereby issued to and imposed upon KG&E in connection with the construction and operation of Wolf Creek Generating Station, Unit No. 1 ("the Project"). The license conditions for KCP&L which appear at 39 Fed. Reg. 44270 (December 23 1974) and are set forth in Exhibit C are hereby issued to and imposed upon KCP&L in connection with the construction and operation of the Project.

3. Intervenor's petition to intervene in the captioned proceeding is hereby dismissed with prejudice, such dismissal to be effective on the date on which this Initial Decision and Order becomes the final action of the Commission pursuant to the Commission's Rules of Practice.

**THE ATOMIC SAFETY AND
LICENSING BOARD**

Daniel M. Head

Andrew C. Goodhope

Marshall E. Miller, Chairman

Dated at Bethesda, Maryland,
this 27th day of July 1976.

[Appendices A, B, and C are omitted from this publication but are available at the NRC's Public Document Room, Washington, D.C.]

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-11

COMMISSIONERS:

Edward A. Mason
Victor Gilinsky
Richard T. Kennedy

In the Matter of

**Docket Nos. 50-329
50-330**

CONSUMERS POWER CO.

(Midland Plant, Units 1 and 2)

August 16, 1976

In accordance with its General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle (41 F.R. 34707 August 16, 1976), the Commission directs that a Licensing Board be reconvened, for the limited purpose of considering whether the outstanding construction permits should be continued, modified, or suspended until an interim fuel cycle rule has been made effective.

MEMORANDUM AND ORDER

In accordance with its General Statement of Policy issued today on the Environmental Effects of the Uranium Fuel Cycle, the Commission directs that an Atomic Safety and Licensing Board for the Midland facility be reconvened, for the limited purpose of considering, in light of the facts and the applicable law whether the construction permits for that facility should be continued, modified, or suspended until an interim fuel cycle rule has been made effective. The Board is directed to call for briefs from the parties on that issue, followed by evidentiary hearings if necessary. No hearing on the merits of the other issues assigned for reconsideration by the court of appeals in the *Aeschliman v NRC* decision will be appropriate until the decision of the court of appeals has become final.

By the Commission

Samuel J. Chilk
Secretary of the Commission

Dated this 16th day of
August 1976 at Washington, D.C.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-12

COMMISSIONERS:

Edward A. Mason
Victor Gilinsky
Richard T. Kennedy

In the Matter of

Docket No. 50-271

**VERMONT YANKEE NUCLEAR
POWER CORPORATION**

(Vermont Yankee Nuclear Power Station)

August 16, 1976

In accordance with its General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle (41 F R 34707 August 16, 1976), the Commission directs that a Licensing Board be reconvened, for the limited purpose of considering whether the outstanding operating license should be continued, modified, or suspended until an interim fuel cycle rule has been made effective.

MEMORANDUM AND ORDER

In accordance with its General Statement of Policy issued today on the Environmental Effects of the Uranium Fuel Cycle, the Commission directs that an Atomic Safety and Licensing Board for the Vermont Yankee facility be reconvened, for the limited purpose of considering, in light of the facts and the applicable law whether the operating license for that facility should be continued, modified, or suspended until an interim fuel cycle rule has been made effective. The Board is directed to call for briefs from the parties on that issue, followed by evidentiary hearings if necessary.

By the Commission

Samuel J. Chilk
Secretary of the Commission

Dated this 16th day of August
1976 at Washington, D.C.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-13

COMMISSIONERS:

Edward A. Mason, Acting Chairman

Victor Gilinsky

Richard T. Kennedy

In the Matter of

Docket No. 50-537

**UNITED STATES ENERGY RESEARCH
AND DEVELOPMENT ADMINISTRATION
PROJECT MANAGEMENT CORPORATION
TENNESSEE VALLEY AUTHORITY**

(Clinch River Breeder Reactor Plant)

August 27 1976

Upon *sua sponte* review of issues raised by an Appeal Board determination (ALAB-330) declining to review an interlocutory Licensing Board ruling (LBP-76-14) admitting into controversy contentions relating to the need for and alternatives to the overall liquid metal fast breeder reactor (LMFBR) program, of which the proposed facility is a part, the Commission rules that (1) NRC's NEPA review of the proposed action shall assume the need for an LMFBR program and for a demonstration-scale facility; (2) the likelihood that the proposed project will meet its programmatic objectives is an issue relevant to the NRC proceeding; (3) alternatives for meeting programmatic objectives and alternative sites are relevant issues, but their consideration need go no further than to establish whether or not substantially better alternatives are likely to be available; and (4) the widespread use of LMFBR's is not an issue to be considered in this proceeding.

RULES OF PRACTICE. APPELLATE REVIEW

A Commission order announcing review pursuant to 10 CFR §2.786 of an Appeal Board decision is comparable to a Supreme Court decision to grant a writ of certiorari and need not contain any reasons for doing so.

RULES OF PRACTICE: APPELLATE REVIEW

Section 2.786(a) of the Rules of Practice states the Commission's ordinary review practice, but it does not limit the Commission's inherent supervisory authority over the conduct of NRC adjudicatory proceedings, including the authority to rule on the admissibility of a contention before a Licensing Board.

NEPA. PROGRAM ENVIRONMENTAL IMPACT STATEMENT

Issues fully addressed in a program environmental impact statement need not be addressed again in a subsequent impact statement concerning only a part of that program.

ENERGY REORGANIZATION ACT RESPONSIBILITIES

The Energy Reorganization Act vests primary responsibility for research and development programs in ERDA, and it gives NRC the narrower responsibility for licensing and related regulatory functions. Under that Act, NRC is not authorized to substitute its judgments for those of ERDA on long-range energy research and development issues.

NEPA. SCOPE OF REVIEW

The legislative history of an authorization act may be taken into account in determining the required scope of NEPA review of a project authorized by such act.

NEPA. SCOPE OF REVIEW

In determining the required scope of NEPA review the prospect of substantial delay may be taken into account and balanced against the prospects of gaining new and useful information.

Appearances

Mr. Guy H. Cunningham, III, for the applicant Energy Research and Development Administration.

Mr. George L. Edgar for the applicant Project Management Corporation.

Mr. Lewis Wallace, for the applicant Tennessee Valley Authority

Mr. Anthony Z. Roisman, for the intervenors Natural Resources Defense Council, Sierra Club, and East Tennessee Energy Group.

Messrs. William B. Hubbard and William M. Barrick, for the State of Tennessee.

Messrs. Milton J. Grossman, Martin G. Malsch, and Geoffrey P. Gitner, for the NRC Regulatory Staff.

MEMORANDUM AND ORDER

The United States Energy Research and Development Administration ("ERDA"), Project Management Corporation, and Tennessee Valley Authority have applied pursuant to Section 202(1) of the Energy Reorganization Act of 1974 for a construction permit to cover the proposed Clinch River Breeder Reactor Plant, a demonstration breeder reactor to be constructed on the Clinch River in Tennessee. The Clinch River facility is described by ERDA as an important milestone in its research and development program to determine the long-range potential of the liquid metal fast breeder reactor ("LMFBR") as an energy source. ERDA has prepared and issued an environmental impact statement concerning its LMFBR program, and, as is detailed within, that statement has been the subject of exhaustive internal and public reviews.¹ In conjunction with this proceeding, the NRC regulatory staff must prepare an environmental impact statement concerning the Clinch River facility; that statement will be part of the basis for the forthcoming evidentiary hearing on the license application.² The hearing will address a range of safety issues previously analyzed by the regulatory staff. The Licensing Board must determine that the facility as proposed will meet stringent safety standards. In addition, the local environmental impacts associated with the facility will be open to scrutiny. The issue presently before us is whether, and to what extent, the National Environmental Policy Act of 1969 ("NEPA") requires this agency in the limited context of this licensing proceeding for the Clinch River facility to address broader environmental issues previously addressed in the ERDA program statement. Some discussion of the factual and procedural background is necessary to place the matter in proper perspective.

Factual and Procedural Background

The present question grew out of the decision of the United States Court of Appeals for the District of Columbia Circuit in *Scientists' Institute for Public Information, Inc. v. AEC*, 481 F.2d 1079 (C.A.D.C. 1973), commonly called the "SIPI" decision. *SIPI* held that the Atomic Energy Commission ("AEC") was required by NEPA to prepare an environmental impact statement covering the LMFBR program. Following that decision, the AEC undertook preparation of a

ERDA Final Environmental Statement, Liquid Metal Fast Breeder Reactor Program, ERDA-1535.

A Draft Environmental Statement related to the Clinch River Plant, NUREG-0024, was published in February 1976.

draft program statement. ERDA, the successor agency of the AEC with respect to research and development programs, issued its final program statement some two-and-one-half years later, in December 1975. None of the parties has taken issue with the applicants' claim that the ERDA program statement "was perhaps the most comprehensive and exhaustive environmental review that has been undertaken by a Federal agency since the enactment of NEPA." Brief, p. 4. The final statement consists of 10 volumes totaling some 5,000 pages.³ It addresses the range of issues associated with possible commercial development of breeder reactors through the year 2020, including alternative energy sources, alternative reactor designs, the economic prospects for commercial LMFBRs, the fuel cycle that would support LMFBRs, and alternative program structures and schedules.

The Natural Resources Defense Council ("NRDC"), an intervenor in this proceeding, participated actively in preparation of the AEC-ERDA programmatic impact statement. NRDC submitted extensive comments on the AEC's draft environmental statement issued in March 1974 (Comments were received from 66 interested individuals and organizations, including numerous Federal agencies.) Thereafter, legislative-type hearings were held on the draft statement before a hearing board drawn from outside the agency. NRDC, with other groups, participated in these hearings and presented its views on the LMFBR program. The AEC then prepared a final environmental statement which included discussion of comments received on the draft and of issues raised at the hearing.

While the AEC's final statement was in the process of preparation, the Energy Reorganization Act of 1974 was enacted, providing for the separate establishment of ERDA and thus agency. In those circumstances, the AEC, with the concurrence of the Council on Environmental Quality recommended that ERDA recirculate the final AEC statement as a "Proposed Final Environmental Statement" in order to give the successor agency an opportunity to review the AEC's analyses and conclusions. That course was adopted. NRDC and other organizations again filed comments on the LMFBR program and the conclusions drawn in the Proposed Final Environmental Statement. Thereafter, ERDA held a second round of public hearings on that statement before an internal review board. NRDC again presented testimony and, within the framework of the procedures established for those hearings, submitted questions on a wide range of subjects. The Administrator of ERDA then reviewed the record of those hearings, a separate report prepared by the internal review board, and views of outside experts; the Administrator issued his findings on the Proposed Final

³The Atomic Energy Commission's "Proposed Final Environmental Statement" on the LMFBR program, WASH-1535 (December 1974) consisted of 7 volumes. The ERDA Final Environmental Statement, ERDA-1535 (December 1975), supplemented the AEC statement in 3 volumes.

Environmental Statement, concluding that additional information was necessary in order to determine whether the LMFBR program should be pursued. After this additional information was obtained, the Final Environmental Statement and the Administrator's Findings based upon it were issued on December 31, 1975. The Administrator found that the LMFBR program, including the Clinch River project, should go forward in accordance with the structure and time schedules set forth in the impact statement.

With specific regard to construction of the Clinch River facility (referred to as the "CRBR") as a part of a "reference plan" program, the Administrator found, on the basis of the impact statement, that:

On balance the issue of plant operation in a utility environment is best addressed by the program plan entitled "reference plan." This plan contemplates construction and operation of the CRBR, a Prototype Large Breeder Reactor (PLBR), and a Commercial Breeder Reactor (CBR-1) on a schedule which calls for operation for three years of a Nuclear Regulatory Commission-licensed CRBR and completion of the design, procurement, component fabrication and testing phases for, and issuance by the Nuclear Regulatory Commission of a construction permit for, the PLBR prior to a commitment to construct the CBR-1. In my judgment, this schedule should provide sufficient experience in design, procurement, component fabrication and testing, licensing and plant construction and operation from CRBR and PLBR taken together to enable ERDA to predict with confidence the successful construction and operation of the CBR-1. This schedule will be periodically reexamined to assure that the experience derived from operation of the CRBR and the preoperation of the PLBR is sufficient before ERDA commits itself to construction of the CBR-1. Administrator's Findings dated December 31, 1975

Neither the NRDC nor anyone else has sought to challenge the ERDA impact statement or the Administrator's findings in Federal court.

Section 202 of the Energy Reorganization Act, which, as we noted previously established ERDA and NRC as separate agencies, confers on this Commission "licensing and related regulatory authority" with respect to four specifically described types of ERDA facilities, including:

Demonstration Liquid Metal Fast Breeder reactors when operated as part of the power generation facilities of an electric utility system ⁴

The Clinch River facility comes within this provision because it would be a demonstration liquid metal fast breeder reactor which would be operated as a

⁴The legislative history of this provision sheds no light on the issues we are addressing in this opinion.

part of the generation facilities of the Tennessee Valley Authority electrical system. An acceptably complete application for a construction permit covering the Clinch River project was filed with this Commission in April 1975. The application was noticed for a construction permit hearing on June 18, 1975. 40 Fed. Reg. 25708. Thereafter, the NRDC, Sierra Club, East Tennessee Energy Group and the State of Tennessee (hereafter referred to as the "intervenors") were admitted as intervenors.⁵

In support of its petition for intervention, the NRDC filed an affidavit identifying 13 contentions it sought to place in issue in this proceeding. The contentions are addressed to the adequacy of the environmental assessments made by the applicants and the regulatory staff. Each of these 13 contentions in turn contains a series of subcontentions. The applicants and, with one qualification, the regulatory staff opposed admission of NRDC contentions 10 and 11, the full texts of which are set forth in the margin.⁶ Contention 10 would place in

⁵The NRDC, Sierra Club and East Tennessee Energy Group have filed papers jointly on the issues presently before us. The State has filed separate papers but its positions are generally consistent with those of the other intervenors.

⁶The parties agreed that a number of NRDC's proposed contentions relating directly to the proposed CRBR facility would be admissible and open to discovery and exploration at the hearing. Others were contested but are not before us. The text of NRDC contentions 10 and 11, as restated by NRDC on May 28, 1976, is as follows:

10. The ER [applicants' environmental report] and DES [staff draft environmental statement] do not include an adequate analysis of the alternatives to the CRBR for the following reasons:

a) A full range of LMFBR program structures and schedules is not presented. Consequently the timing and even the need for the CRBR has not been demonstrated.

b) The alternative of stretching out the LMFBR development and postponing the CRBR is not analyzed.

c) Alternative designs to meet the objections expressed by the Panel on Advanced Nuclear Power of the 'Cornell Workshop on Major Issues of a National Research and Development Program' are not analyzed.

d) Alternative concepts for testing the safety and economic viability of the breeder concept are not analyzed. The analysis must consider the alternatives of reliance upon foreign programs, and full core destructive tests in lieu of CRBR.

e) Alternative methods of ownership and control of the CRBR are not analyzed. The analysis must consider the full spectrum of alternative methods of ownership and control from entirely private ownership and control through entirely government ownership and control.

f) Alternative methods for funding the CRBR are not analyzed. The analysis must consider the full spectrum of alternative methods of funding from entirely private funding through entirely government funding.

g) Alternative sites with more favorable environmental and safety features are not analyzed and the analysis is defective since:

(continued on next page)

issue the pace, structure, funding, and timing of the LMFBR program as it relates to the Clinch River project. Contention 11 raises broader issues; it would challenge the bases for ERDA's conclusions concerning the need for an LMFBR program and the validity of ERDA's environmental assessments.

On April 6, 1976, the Licensing Board ruled that NRDC contentions 10 and 11 were admissible, relying in part on *Henry v FPC*, 513 F.2d 395 (C.A.D.C. 1975). NRCI-76/4 430, 436-442. The Board recognized that these contentions "undertake to question or challenge many of the conclusions reached by ERDA in its LMFBR final environmental statement." The Board read the *Henry* case as

(continued from previous page)

1) Sites with more favorable environmental and safety characteristics were not identified and insufficient weight was given to those values in selecting the site.

2) The site selection criteria unduly restricted the range of alternatives. The analysis of alternatives should not be restricted to either the TVA system or the State of Tennessee. The analysis must encompass all land owned by TVA, including land outside its system, and all land owned by ERDA (and the AEC before it).

11. The staff and applicants rely upon the alleged benefits of a successfully tested breeder as the principal justification for construction of the CRBR without reestablishing the validity of the assumption that widespread use of LMFBRs is a benefit. The applicants' and staff's analyses are inadequate with respect to:

a) The alternative energy options which, if developed, would obviate the need for LMFBRs, or would obviate the need for the current LMFBR program schedule.

b) The projected growth in demand for electricity nuclear capacity additions, uranium supplies and power plant costs, to ascertain whether the breeder could meet any supply gap or even if such a gap will exist.

c) The availability, costs and benefits of a breeder reactor fuel cycle to support the CRBR or a commercial LMFBR economy

d) The environmental and safety risks associated with widespread use of LMFBRs including:

1) The risks of sabotage, terrorism and theft directed against plutonium or sabotage directed against LMFBRs and related fuel cycle facilities at any point in the LMFBR fuel cycle.

2) The health effects associated with radioactive materials, particularly plutonium and other actinides, released from LMFBRs and related fuel cycle facilities and the adequacy of existing radiation exposure standards related to plutonium and other actinides.

3) Waste disposal and other fuel cycle impacts.

4) The probability and consequences of severe accidents at LMFBR sites.

5) The susceptibility of all LMFBRs to shutdown as the result of a generic potential defect found at one.

e) The alleged economic benefits of the LMFBR are highly dependent upon the breeding ratio and construction costs neither of which have been reliably established by the Applicants or the Staff.

The regulatory staff believes that contention 10(g) is admissible.

requiring it to "take into account the environmental costs of the [LMFBR program] as a whole." *Id.* at 440. However, the Board's views of the depth in which broad program issues had to be reviewed were somewhat unclear. At a subsequent prehearing conference, it stated that *de novo* review of issues addressed in the ERDA program statement need not be undertaken. It suggested that the proper scope of review would be similar to the rational basis review undertaken by courts in their review of agency factual determinations. Prehearing conference of May 24 1976, pp. 477 510.

Following the Licensing Board's April 6 ruling, the regulatory staff petitioned the Atomic Safety and Licensing Appeal Board to direct certification to it of the Licensing Board's admission of contentions 10 and 11. The Appeal Board summarily denied the staff's request with the observation that, given the *Henry* decision, the Licensing Board did not appear to be "steering what is bound to be a collision course" with governing legal principles. ALAB-326, NRCI-76/4 406. Thereafter, the regulatory staff and the applicants asked the Appeal Board to reconsider its denial of certification. The Appeal Board again declined to direct certification. ALAB-330, NRCI-76/5 613

On May 28, 1976, the Commission issued an order announcing its election to review the issues which had been presented in ALAB-330. The parties were directed to file written submissions on a series of questions bearing primarily upon the extent to which, if any this Commission is obliged to address issues previously addressed in the ERDA impact statement. Following our receipt of briefs and reply briefs from the parties, we set the matter for oral argument and called for briefing on two additional points. Oral argument was heard on July 16, 1976.

The Commission's Order Directing Review

Before turning to the merits of the basic NEPA issue before us, as framed by the Licensing Board's admission of contentions 10 and 11, we consider NRDC's threshold contention that our Order of May 28, 1976, directing review of ALAB-330 was illegal. The thrust of NRDC's argument, as we understand it, is that 10 CFR 2.786(a) providing for Commission review of Appeal Board orders requires, as a precondition of review that we find and articulate why the matter meets the standards of review expressed in the rule.⁷ NRDC derives from that proposition the further requirement that we make such a finding and spell out

⁷The rule provides that within 20 days of an Appeal Board decision, the Commission "may on its own motion direct that the record be certified to it for review on the ground that the decision (1) is, with respect to an important matter, in conflict with statute, regulation, case precedent, or established Commission policy and (2) (i) could significantly and adversely affect the public health and safety or the common defense and security or (ii) involves an important question of public policy."

the reasons for it in an order announcing a decision to review. Our failure to do so assertedly violates the doctrine that administrative agencies must articulate reasons for their decisions.

Our Order of May 28 did not effect a review of ALAB-330. It merely announced our intention to review ALAB-330 and extended our review time for that purpose. Our rules do not require that such an order contain any reasons. Our decision to undertake review is comparable to the United States Supreme Court's decision to grant a writ of certiorari in a given case. See Supreme Court Rule 19. There is no requirement that the Court announce its reasons in granting certiorari and it usually does not do so. We, of course, spell out the reasons for our action when we review and affirm or modify an Appeal Board decision. We are doing that in this opinion. As will be evident from the following discussion, the Licensing Board's rulings are in conflict with statutory requirements and involve important questions of public policy. Moreover, the rulings appeared to threaten substantial delay in these proceedings—delay which would be unwarranted, offensive to Congressionally established allocations of authority among Federal agencies, and irremediable at any later time.

NRDC also argues that the only issue properly before us now is whether the Appeal Board abused its discretion in denying the staff's request for certification. NRDC contends that the merits of contentions 10 and 11 are not properly before us because the Appeal Board has been delegated authority to review Licensing Board determinations and the Appeal Board has not reached the merits of those contentions. There is no merit in this argument. Even viewing our present review in the narrowest compass, the correctness of the Appeal Board's denial of certification would be before us, and we could review the correctness of admitting NRDC's contentions 10 and 11 to determine whether the Licensing Board was on a "collision course" with reversal in admitting or refusing to admit them.⁸ But the scope of our review is not so limited. While 10 CFR 2.786(a) states the ordinary practice for review it does not—and could not—interfere with our inherent supervisory authority over the conduct of adjudicatory proceedings before this Commission, including the authority to step in and rule on the admissibility of a contention before a Licensing Board. See, *Niagara Mohawk Power Corp.* (Nine Mile Point, Unit 2), 6AEC 995 (1973), *petition for review dismissed sub nom. Ecology Action v AEC*, 492 F.2d 998 (C.A. 2, 1974). See also, *Consolidated Edison Co.* (Indian Point Station, Units 1,

⁸ Further, as the staff points out (staff reply brief, p. 3, n.2), 10 CFR 2.785(d) states that the Commission may direct the Appeal Board to certify to it major or novel questions of law, policy or procedure. The issues we address today clearly meet that test. Since the Appeal Board has the whole record before it in deciding whether or not to certify it is evident that we can proceed to the merits once deciding the questions merit attention. Given sufficient opportunity to the parties to address those issues, any other result is senseless formalism.

2, and 3), 2 NRC 173 (1975). A contrary view could seriously dislocate the adjudicatory process within this agency and would imply a delegation of authority by the Commission difficult to justify

No party has a vested right to the continuing effectiveness of an erroneous Licensing Board ruling which happens to favor it. In the interest of orderly resolution of disputes, there is every reason why the Commission should be empowered to step into a proceeding and provide guidance on important issues of law and policy. To be sure, the delays and confusions which can be produced by interlocutory review argue, as the Appeal Board correctly recognized, for sparing use of this authority. But here the decision of the Licensing Board itself threatened substantial delay for the proceeding, delay which could not be captured by later correction of error. More importantly the Licensing Board ruling raises important issues of our relationship to other Federal agencies and their work product. These issues, arising for the first time in this proceeding, may recur in future licensing of ERDA facilities. Thus, we disagree with the Appeal Board regarding the certifiability of the decisions sought to be reviewed.

NRDC professes to be confused by the Commission's order directing review; they complain that they are being "asked to shoot in the dark at an unarticulated review stand[ard]" NRDC brief, p. 5. We believe that the focus of our concerns was made abundantly clear by the questions we posed to the parties on our Order of May 28. NRDC's brief was responsive to these questions. So were the briefs of the other parties. All parties were given an opportunity to file reply briefs and all did so, except the State of Tennessee. Thereafter, we called for additional briefing directed to the scope of our NEPA obligations in the present context. NRDC filed a responsive brief. At the beginning of the oral argument, we made clear the focus of our concerns and the parties' presentations were responsive to them. We have specifically avoided attempting a detailed analysis of contention 10, in order to permit fuller treatment of that contention by the Licensing Board. In the circumstances, we think that NRDC has been given a fully adequate opportunity to address the basic issues we are deciding today. We turn now to the merits.

The Basic NEPA Issues

NEPA expressly requires that the cognizant agency consider alternatives to a proposed major Federal action.⁹ The courts have found an additional requirement for a cost-benefit analysis in which the need for the proposed action, the satisfaction of which is the benefit side of the scale, is weighed against its environmental costs. See, e.g., *Calvert Cliffs' Coordinating Committee v AEC* 449 F.2d 1109 (C.A.D.C. 1971). When this agency performs a NEPA review for a conventional light-water reactor, the need for the facility is normally a litigable

⁹ Section 102(2)(c)(iii); 42 U.S.C. 4332(C)(iii).

issue.¹⁰ The applicant has the burden of showing that its projections of demand are reasonable and that additional or replacement generating capacity is needed to meet that demand. *Niagara Mohawk Power Corp.* (Nine Mile Point, Unit 2), 1 NRC 347 352 (1975).

In the present case, although the Clinch River facility will produce electricity for the TVA power system, the proposal is not being justified on the basis of the electricity it will generate. As the Licensing Board pointed out, "the primary justification for the project flows from the informational needs of the broader LMFBR program." NRCI-76/4 at 440. Those informational needs were identified and discussed in ERDA's environmental impact statement for the LMFBR program. According to the ERDA environmental statement, the need is for a demonstration facility "large enough to minimize the extent of extrapolation of systems and components to a commercial size plant without too large an extrapolation from the existing technological base." The purpose of such a facility would be:

(1) to demonstrate the technical performance, reliability maintainability safety environmental acceptability and economic feasibility of an LMFBR central station electric power plant in a utility environment and (2) to confirm the value of this concept for conserving important nonrenewable natural resources.¹¹

A basic issue that we will address in this opinion is whether this agency in its environmental review of Clinch River, should also address the need for a demonstration breeder reactor. To put it another way the issue is whether NRC must reexamine the informational goals established by ERDA through its programmatic impact statement, including considerations of timing.

The parties urge varying positions with regard to the proper scope of the NEPA review in this proceeding. It is possible to define six levels of inquiry in the present NEPA analysis, proceeding from site-specific issues to the broadest programmatic issues raised by the possibility of an LMFBR economy:

1. Restrict consideration to site- and facility-related issues, such as whether the facility should be located at the proposed site or at some other place in the Tennessee Valley Authority service area, whether cooling towers should be constructed, or whether the proposed radwaste system is acceptable. More general issues would be taken as established by the ERDA program statement.

¹⁰ NEPA requires that an environmental impact statement accompany any proposal for "major federal action" through the agency review process. Where, as in this Commission's facility licensing proceedings, the agency review process includes an adjudicatory hearing, preparation of the impact statement normally precedes the hearing and the matters addressed in the statement may be ventilated at the hearing.

¹¹ Proposed Final Environmental Statement, WASH-1535, Vol. I, Sec. 3.5-2, -3. These statements were not modified in the Final Environmental Statement, ERDA-1535.

2. In addition to 1, examine whether the Clinch River facility as proposed is likely to meet the LMFBR program informational goals which the ERDA review process determined should be met by a demonstration reactor, within the desired time frame. The validity of those informational goals—the “need” for the project—would be accepted by this agency as given.

3. In addition to 2, undertake limited consideration of possible alternative demonstration facilities and sites to determine, on a rough cost-benefit scale, whether or not alternatives which are substantially better than the Clinch River project, as proposed, are likely to be available to meet ERDA’s demonstration reactor informational goals.

4. In contrast to 3, determine in addition to 2 whether Clinch River, as proposed, is the *best* available means to meet ERDA’s informational goals. This would involve a closer analysis of alternatives than would be involved under paragraph 3.

5. Add to the preceding analyses consideration whether the informational goals and timing identified by ERDA in relation to Clinch River are either reasonable, or (implying closer analysis) complete and correct. This would involve an analysis of the need for the Clinch River project, although it would still be assumed that a research and development program for commercial breeder reactors was desirable.

6. Beyond an analysis of the need for a demonstration project like Clinch River, the Commission could conceivably undertake to examine the desirability of a research and development program for commercial breeders. Such a broad inquiry would include consideration of future alternative energy sources, future uranium supplies, and other broad issues already canvassed in the ERDA impact statement.

NEPA does not deal expressly with situations where one Federal agency has performed an environmental review of a broad, long-range program and another agency is called upon to review a part of that program. The CEQ guidelines do not speak directly to this situation. The briefs of the parties do not cite, and our independent research has not disclosed, any controlling judicial decisions.¹²

¹²The Licensing Board thought that *Henry v. FPC*, *supra*, required some scrutiny of the matters covered by NRDC contentions 10 and 11, and the Appeal Board seemed to agree. Some of the language in *Henry* does appear to point in that direction. However, we do not believe that the case is very directly in point, let alone controlling. It did not involve the relationship between a broad program statement and an individual project within that program. It concerned instead the responsibilities of the “lead agency” and other participating agencies in preparing an impact statement covering a single project. *Henry* stands for the proposition that participating agencies have some duty to assess a project-oriented statement prepared by the lead agency in areas of their special expertise. The decision appears to be inconsistent with those of two other Federal courts. See *Upper Pecos Ass’n v. Stans*, 452 F.2d 1233 (C.A. 10, 1971); *NRDC v. Callaway* 524 F.2d 79 (C.A. 2, 1975). Even assuming its correctness, however, it is distinguishable upon the basis of the factors we discuss herein.

Given the generality of the NEPA mandate, we must be guided largely by the “rule of reason” generally applicable to NEPA issues (see *NRDC v. Morton*, 458 F.2d 827 (C.A.D.C. 1972), by the implications of the Energy Reorganization Act and Congressional consideration of the Clinch River project, and by considerations of practicality¹³

NRDC argues that the issue here is not whether NRC may or must review ERDA’s impact statement, but what an adequate environmental analysis for the Clinch River facility—which NRC *must* perform—requires. On their view the ERDA impact statement as such is irrelevant; it becomes relevant only when the staff and the applicant seek to rely upon it in justifying the Clinch River project. They would have it that were the ERDA statement not introduced in evidence, this agency might scrutinize the need for a demonstration project and alternatives to the project without regard to ERDA’s impact statement. And NRDC contends that when and if the impact statement is relied upon, it is entitled to no more weight than other evidence, and must be subject to the full range of adjudicatory challenge.

By contrast, the applicants would have us rely on the ERDA impact statement as to all questions that would normally be open in an agency NEPA review save for a narrow range of site-specific issues. Most importantly in our view the applicants say that the NRC should not consider alternative ways of satisfying the informational needs disclosed by the ERDA impact statement.

We reject both of these positions. Contrary to the NRDC position, we believe that the ERDA impact statement is dispositive of the issue of need in this proceeding. That is, we believe that the ERDA impact statement and associated processes, in the light of the Energy Reorganization Act, and as confirmed by Congressional consideration of both the LMFBR program and the Clinch River project, must be taken as establishing the need for a demonstration-scale facility to test the feasibility of liquid metal fast breeder reactors when operated as part of the power generation facilities of an electric utility system, and that that need is a present one. On the other hand, we reject the applicants’ contention that we need not give any consideration to alternatives to the Clinch River project, as proposed, that might vary significantly in terms of design features, location, and other factors. NEPA itself requires consideration of alternatives to major Federal actions, and the licensing of Clinch River is, concededly such an action. In terms of the six levels of inquiry we described above, we think that our NEPA review

¹³ The courts recognize substantial room for agency judgment and discretion, especially when novel and complex issues are being addressed. As the Supreme Court recently stated in *Kleppe v. Sierra Club* in a related context:

Resolving these issues requires a high level of technical expertise and is properly left to informed discretion of the responsible Federal agencies. Absent a showing of arbitrary action we must assume that the agencies have exercised this discretion appropriately Slip op. at p. 19.

should extend through the third level. Several avenues of reasoning converge on this result.

1. The Implications of the *SIFI* Decision.

Our analysis begins with the Court of Appeals decision in the *SIFI* case, where the court did provide some guidance concerning the scope of future NEPA review for a part of the overall LMFBR program, at least in the context of a single agency. In this regard, the court stated (481 F.2d at 1093):

To the extent the matter is of any significance, it would thus seem to make more sense to issue a separate statement for the overall [program] ... [and] subsequent statements on major individual actions to cover those localized environmental impacts that were not fully evaluated in the program statement.

This language certainly supports the view that issues fully addressed in a program statement need not be addressed again in a subsequent impact statement concerning only a part of the program. That conclusion is reinforced by the courts' observations that:

The program statement has a number of advantages. It provides an occasion for a more exhaustive consideration of effects and alternatives than would be practicable in a statement on an individual action. It ensures consideration of cumulative impacts that might be slighted in a case by case analysis. *And it avoids duplicative reconsideration of basic policy questions.* (emphasis added) 481 F.2d at 1087-1088.

Apparently all parties, including the intervenors,¹⁴ would agree that had the AEC not been divided into two agencies by the Energy Reorganization Act, the impact statement for the Clinch River facility could be limited to consideration of localized impacts, as suggested by the quoted language from the *SIFI* decision. Were both statements to be prepared by a single agency such as the former AEC, there would be nothing to be gained by going over the same ground twice, particularly where the more narrowly scoped facility statement came close in time after the broader program statement. The question then becomes whether the enactment of the Energy Reorganization Act changes the result, thereby necessitating a duplicative review of certain issues, including the need for a demonstration breeder reactor.

The *SIFI* court decided an issue of first impression—the applicability of NEPA to long-range research and development programs—with reference to the

¹⁴See NRDC Reply Brief, p. 5. The State's position in this regard is less clear. Transcript of oral argument at pp. 71-71.

broad policy objectives it found to underlie NEPA. In attempting to apply a similar approach here, we find persuasive the staff's argument that a limited environmental review in the context of the Clinch River licensing—one which gives appropriate recognition to the conclusions previously reached through the ERDA review process—would promote the objective of coordinated long-range planning under NEPA. It was a central purpose of the Act to promote coordinated government action with an awareness of the long-range environmental implications of Government decisions. The draftsmen of NEPA recognized that “important decisions concerning the use and shape of man's future environment continue to be made in small but steady increments which perpetuate rather than avoid the recognized mistakes of previous decades” and they sought to depart from the old way of doing business.¹⁵ We agree with the staff that “a sound long-range plan will be useless if the merits of the plan must be reconsidered for each subsequent Federal action.” Staff brief at p.11.¹⁶

Here the long-range planning process, whose ultimate goal was the development of technologies to meet this country's demand for energy culminated in a decision that a demonstration-scale facility was needed at this time to test the feasibility of liquid metal fast breeder reactors when operated as part of the power generation facilities of an electric utility system. Under the principles just noted, therefore, reexamination of the need for such a facility in the Clinch River proceedings would not serve to promote NEPA's objectives.

On the other hand, although the LMFBR program statement goes on to describe the contours of the Clinch River project itself, the specifics of the project's design and siting are not analyzed. This limited treatment in the program statement is an indication that what is integral to the overall LMFBR program is not the demonstration project's design and location, but the information which the project's operation will provide. Accordingly consideration in the Clinch River proceeding of alternative demonstration liquid metal fast breeder reactors which might also meet the informational needs posited by the program statement with respect to the Clinch River reactor would not interfere unduly with the long-term planning objectives of that document, nor would consideration of whether, in fact, the facility as proposed is likely to satisfy these needs.

⁵ S. Rep. 91-296, 91st Cong., 1st Sess., at p. 5.

In this regard, the staff cites a Council on Environmental Quality “Memorandum for Agency and General Counsel Liaison,” reproduced at 2 ELR 46162, 46164, which states with regard to the advantages of programmatic environmental impact statements that they will “avoid duplicative reconsideration of basic policy questions.”

In a related context, it has been aptly noted that, as a matter of administrative necessity, agency business must “go forward without an endless reexamination of first principles.” Cramton and Berg, “On Leading a Horse to Water: NEPA and the Federal Bureaucracy” 71 Mich. L. R. 511, 528 (1973).

2. Allocation of Functions Under the Energy Reorganization Act.

A basic purpose of the Energy Reorganization Act was to separate the promotional and regulatory functions previously performed by a single agency the AEC. However, the parties draw different inferences from this broad general purpose with reference to the present issue. The intervenors contend that since ERDA took over the "promotional" functions, its environmental review of the LMFBR program is affected with an institutional bias. They would have our staff, as regulators without "promotional" responsibilities, take a hard look at the issues already canvassed by ERDA to "ferret out and critically examine these unstated premises upon which the [ERDA] conclusions rely" NRDC brief, p. 11.

Acknowledging institutional realities, the courts assume that agencies are not completely neutral; good faith objectivity is all that is required. See *Environmental Defense Fund v Corps of Engineers*, 492 F.2d 1123 1130 (C.A. 5 1974). Moreover, at least in this case, there are other answers to claims of promotional bias. Congress sought to ensure against undue bias in favor of nuclear power development in the way in which it structured ERDA. Various provisions of the Energy Reorganization Act seek to ensure that the Federal research and development effort will be distributed among a range of energy options.¹⁷ Beyond that, the established NEPA process of circulating a draft impact statement for public comment and response by the agency is partly designed to counter the possibility of promotional bias in an agency. As we have noted previously the ERDA impact statement was twice circulated for public comment, and additional public hearings were held before a specially appointed independent Review Board consisting of the ERDA Deputy Administrator and three Assistant Administrators responsible for the development of technologies in competition with the breeder.¹⁸ The Review Board's subsequent report noted the possibility of bias in favor of the LMFBR program in its criticism of the unduly pessimistic treatment of alternative energy sources and technologies.¹⁹ After considering the report, the Administrator determined that additional information on alternatives was necessary to permit a decision on the proposed LMFBR program, and this information was incorporated into the FES.²⁰ Thus, the risk of bias in the LMFBR program statement was considered and efforts were made to enhance its objectivity.

In sum, we do not believe that the "promotional bias" argument advanced by the intervenors affords a significant reason why we should address issues

⁷ Energy Reorganization Act, sections 2(b), 102(c), (d), 103(7).

¹⁸ The three Assistant Administrators headed the offices of Solar, Geothermal and Advanced Energy Technologies; Conservation; and Fossil Energy.

⁹ Report to the Administrator on the LMFBR PFES by the Internal Review Board (June 20, 1975) at 31. The report is reproduced in ERDA-1535, Sec. IV B.

²⁰ Administrator's Findings on the LMFBR FES (December 31, 1975) at p. 7.

already addressed in the ERDA impact statement. As we read it, the more fundamental implication of the Energy Reorganization Act for present purposes is the allocation of statutory responsibilities affected by that statute. The Act vests primary responsibility for energy research and development programs in ERDA. Section 103 of the Act provides that:

The responsibilities of the Administrator shall include, but not be limited to: (1) exercising central responsibility for policy planning, coordination, support, and management of research and development programs respecting all energy sources, including assessing the requirements for research and development in regard to various energy sources in relation to near-term and long-range needs, policy planning in regard to meeting those needs, undertaking programs for the optimal development of the various forms of energy sources, managing such programs

The judgments embodied in the LMFBR statement leading to the conclusion that development of a demonstration breeder reactor is needed at this time are the very paradigm of those entrusted to the Administrator under his authority to plan and coordinate programs for "the optimal development of the various forms of energy sources." By contrast, under the Energy Reorganization Act, the NRC was given the narrower responsibility for the licensing and related regulatory functions of the prior Atomic Energy Commission.²¹ Indeed, with respect to the liquid metal fast breeder reactor program specifically NRC's licensing responsibility was still further circumscribed by Section 202(1) of the Act which authorized NRC to license only those demonstration breeder reactors which are part of an electric utility power grid or otherwise operated to demonstrate the breeder's commercial suitability. The bounds on NRC's authority embodied in this provision—excluding from NRC's mandate the licensing of breeder reactors which are purely research facilities—are a clear indication that Congress intended NRC's review of ERDA's LMFBR program to be a limited one.

Where, as in this case, NRC licensing of a demonstration breeder reactor is mandated, deference to this basic objective of the Act—separation of responsibilities—compels a careful delineation of our role so as to avoid undue interference with ERDA's overall planning functions. If nothing else, the Act makes clear that we must not decide the present issue so as to put the Nuclear Regulatory Commission in the position of scrutinizing afresh the judgments on long-range energy research and development issues made by the agency to which such judgments were primarily confided.

The need to avoid such a result is underscored by the very nature of research and development decisions. The problems of assigning priorities to the

Energy Reorganization Act, Section 201(f).

exploration of different energy options are complex and involve many variables which resist quantification. In the last analysis, the process necessarily becomes highly judgmental. As noted in the oral argument in this case, research and development decisions often amount to deciding which option is a "good bet" under the circumstances. Transcript at p. 61. The Energy Research and Development Administration is best equipped to make such judgments.

Adherence to these principles leads the Commission to conclude that its licensing process must be tailored in this case to avoid the Commission's substituting its judgment for that of ERDA with respect to the broad planning decisions embodied in the LMFBR statement, such as investigating whether LMFBR technology is a worthwhile overall objective, whether a demonstration reactor is a necessary step in this investigation, and whether in view of the needs of the LMFBR program, construction of such a reactor at this juncture is required. Conversely matters of greater specificity such as selection of the Clinch River site and reactor design involve implementation of planning decisions. Although the distinction between "planning" and "implementation" cannot always be made with precision, we believe the division is a useful one here, especially in light of the fact that the LMFBR statement does not examine in depth the details of the Clinch River project.

3. Effect of Congressional Consideration of the Demonstration Project.

Our conclusions as to the proper scope of NEPA review in this proceeding are confirmed by Congressional consideration and action with respect to the need for a demonstration project. The Congress has repeatedly considered the question whether a demonstration breeder reactor is required. In the context of a series of authorization statutes and in other settings as well, the Congress and its cognizant committees have repeatedly determined that a demonstration breeder is necessary and is necessary now

The "project definition phase" of an LMFBR demonstration program—which culminated in the Clinch River proposal—was originally authorized in 1969 P.L. 91-44. More detailed authorizing legislation was enacted in 1970. P.L. 91-273. Even at that time, the importance of moving ahead with the demonstration breeder reactor was recognized by the Congress. The report of the Joint Committee on Atomic Energy accompanying the 1970 authorizing legislation stated that:

The construction of LMFBR demonstration plants is a major and indispensable building block in the accomplishment of the program. The Committee has no doubt of the necessity and urgency of mounting an effective cooperative demonstration project at the earliest practicable time. H. Rep. No 91-1036, accompanying H.R. 17405, p. 24.

Authorizing legislation for the following year was accompanied by similar expressions of urgency ²²

In early 1972, the Atomic Energy Commission accepted as a basis for detailed negotiations a joint proposal of the Commonwealth Edison Company of Chicago and the Tennessee Valley Authority for the construction and operation of a demonstration breeder reactor. As this proposal was developed over time, the reports of the Joint Committee accompanying authorization legislation gave increasing attention to the demonstration project. The report accompanying fiscal year 1975 legislation stated that:

The plant is to be located on the TVA system at a site on the Clinch River near Oak Ridge, Tennessee. The design capacity of the plant will be in the range of 350 to 400 electrical megawatts. The demonstration project is an indispensable part of the overall LMFBR program which has as its objective the development of the breeder concept to the stage of commercial usefulness. Demonstration projects are necessary for key technical and economic determinations, including effects pertaining to environmental safety reliability and other factors. H. Rep. No. 93-969 accompanying H.R. 13919 p. 17

The Joint Committee report accompanying authorizing legislation for fiscal year 1976 also contained extended discussion of the Clinch River project. H. Rep. No. 94-294, accompanying H. Rep. 3474 pp. 33-36.²³ In enacting this legislation, both Houses of Congress rejected, after substantial debate, amendments

²²The Joint Committee report, with regard to the need for a demonstration reactor, stated that it was "imperative that there be no delay in completing the development program and getting such plants on the line." H. Rep. No. 92-325, accompanying H.R. 9388, p. 26.

²³The report had this to say about the NEPA review to be conducted in association with Clinch River (p. 36):

The following additional events which must occur before construction of the demonstration plant can actually begin at the Clinch River site should be noted:

- (1) ERDA must have issued the final environmental statement for the entire breeder program (i.e., through the year 2020).
- (2) The independent Nuclear Regulatory Commission must have issued its final environmental statement on the Clinch River demonstration plant and held public hearings on the statement.
- (3) Construction could not begin until authorized by the Nuclear Regulatory Commission.

The underscored words were italicized for emphasis in the Committee report, thus implying that the Joint Committee on Atomic Energy does not contemplate that this Commission would conduct an environmental review of the entire breeder program.

that would have delayed the Clinch River project and the overall LMFBR program pending further congressional study 121 Cong. Rec. S. 14604-14637 and H. 5833-66.

Authorizing legislation for fiscal year 1977 is pending before a conference committee. Once again, the report of the Joint Committee stressed the need for moving ahead with a demonstration plant. H. Rep. 94-762, accompanying S. 3105 pp. 16-20. The report referred approvingly to a study by the General Accounting Office entitled "The Liquid Metal Fast Breeder Reactor: Promises and Uncertainties" and the Report of the Joint Committee's *Ad Hoc* Subcommittee to Review the National Breeder Reactor Program. Both studies had concluded that the LMFBR program should move forward. The subcommittee in its report (p.10) noted that:

The tendency within the Federal government towards duplicative and redundant reviews of nuclear power and the need for the breeder reactor should be recognized and held to a minimum. Further reviews should be on narrower issues, such as means for improving costs and schedular performance. Their performance should not be on the issue of "should we do the job," but on "how best to get the job done."

And in connection with floor consideration of the pending authorizing legislation, amendments that would have altered the organizational structure and pace of the Clinch River project and the licensing standards applicable to the facility were rejected, again after extended debate and roll call votes.²⁴

We asked the parties to address the relevance of Congressional knowledge and enactment of authorization legislation for the Clinch River project to the required scope of NEPA review for the project. The applicants argue that such Congressional consideration is dispositive and that, in light of it, NRC review must be limited to local environmental impacts. The intervenors urge that the legislative background we have described is irrelevant to the scope of NEPA review: it is their position that only an express amendment of NEPA can effect a change in the scope of review otherwise required. The staff adopts an intermediate position, arguing that such Congressional consideration is not dispositive, but that it serves to confirm the appropriateness of limited NEPA review in this context. We essentially agree with the staff's position on this point.

The intervenors point to several judicial decisions for the broad proposition that enactment of authorizing and appropriations legislation does not affect the scope of NEPA review for a Federal project. In *Committee for Nuclear Responsibility Inc. v Seaborg*, 463 F.2d 783 (C.A.D.C. 1971), plaintiffs challenged the proposed "Cannikin" nuclear weapons test in the Aleutian Islands. The AEC had

²⁴ 122 Cong. Rec. S. 10563-75; H. 4723-41.

prepared an impact statement for the test but it was claimed to be defective because it did not adequately disclose opposing scientific viewpoints. The court rejected the government's argument that enactment of authorization and appropriations statutes for the test "represented a conclusive determination of the sufficiency of the impact statement," saying that (463 F.2d at 785-786):

Congress must be free to provide authorizations and appropriations for projects proposed by the executive even though claims of illegality on grounds of noncompliance with NEPA are pending in the courts. Nothing in the legislative history leads to a different result. On the contrary there is an affirmative indication that at least some of the Congressmen voting for the authorization and appropriations measure specifically contemplated that the claim of illegality remained for resolution by the courts.

A similar Congressional "ratification" argument was considered and rejected in *Environmental Defense Fund, Inc. v Froehlike*, 473 F.2d 346 (C.A. 8, 1972). There, the government argued that enactment of appropriations statutes following the filing of an impact statement represented a determination by Congress (albeit implicit) that the statement's discussion of alternatives was adequate. However, in rejecting the government's argument, the court limited its holding to appropriations statutes, with the implication that a different result might follow in the case of an authorization statute.

In *Environmental Defense Fund, Inc. v Tennessee Valley Authority* 468 F.2d 1164 (C.A. 6, 1972), the agency had not prepared any impact statement to cover construction of a dam, arguing that NEPA did not apply to a project started before its effective date. Rejecting that basic argument, the court gave short shrift to the government's additional argument that appropriations enacted for the project following NEPA's effective date exempted the project from environmental review.

As a general rule, the mere fact that Congress has enacted authorization or appropriations legislation for a particular project does not eliminate or substantially modify the environmental review of that project that would otherwise be required by NEPA. There are some good reasons why this should generally be the case. A basic purpose of NEPA is to ensure that environmental factors will be taken into consideration in major federal construction projects; this is to be done through the preparation and circulation of an impact statement. If the courts were to fashion a rule that authorization and appropriations statutes for a project, in and of themselves, worked an exception to NEPA, then the exception would swallow the rule. For under established governmental procedures independent of NEPA, there must be both authorization and appropriations legislation before any substantial Federal construction project can go forward. Moreover the authorizations and appropriations processes usually are not a realistic equivalent to the NEPA impact statement process. Congress as a body does not typically look at the details of particular construction projects.

Furthermore, Congress has shown that it knows how to place beyond debate whether a project is exempt from NEPA—i.e., by providing an express statutory exemption! It did so in the case of the Alaska pipeline. P.L. 93-153 Section 203(d). See *Wilderness Society v. Morton*, 495 F.2d 1026 (C.A.D.C. 1974).

Nevertheless, the cited cases acknowledge, either explicitly or implicitly that the legislative history of an authorization act might have some effect on the required scope of NEPA review. In the *Seaborg* decision, Congress enacted emergency authorizing legislation apparently believing that the NEPA issue would be resolved separately by the courts. It is understandable that when Congress acts with one eye on a concurrent court case, it would adopt a hands-off approach, as it did there.²⁵ And in the other cited cases, it did not appear that Congress gave any detailed consideration to the aspects of NEPA review later drawn into question before the courts. Moreover in at least one case, a court has held that Congressional consideration of an issue that would otherwise be open to NEPA review was precluded by the legislative history surrounding enactment of appropriations legislation that made no express reference to NEPA.²⁶

In the present case, Congress has repeatedly recognized the requirement for a demonstration project to help in predicting the safety practicality and environmental acceptability of commercial breeder reactors. Year after year, the cognizant committee, the Joint Committee on Atomic Energy has urged rapid progress on the demonstration reactor. Year after year, Congress as a body has enacted the authorization legislation recommended by the Joint Committee. This history supports our conclusion that the need for this facility as we have defined it above, need not be reviewed in this proceeding.

On the other hand, Congress as a body has not focused on the details of the Clinch River project, although the project has been explained in considerable detail to the Joint Committee on Atomic Energy. See *Hearings on ERDA Authorizing Legislation, Fiscal Year 1976*, Part 4. Not only are alternative modes

²⁵By contrast, in the present case there is nothing in the legislative history of the LMFBR demonstration project to indicate that Congress contemplated a comparable independent judicial determination of the scope of NEPA review.

²⁶In *Environmental Defense Fund v. Corps of Engineers*, 492 F.2d 1123 (C.A. 5, 1974), the court held that normally a court could review albeit in a limited way the merits of the agency's choice among alternatives. However, the court held that in the circumstances of that case, where the impact statement had been brought to Congress' attention and debated, "Congress thus became the ultimate decisionmaker." It was accordingly held that the enactment of appropriations legislation for the waterway in question there had the effect of modifying the NEPA review that would otherwise have been performed by the court.

to meet the established need not clearly treated by Congress;²⁷ analysis of such alternatives, as distinct from analysis of "need," is a direct statutory requirement, the "linchpin" of environmental analysis. See *Monroe County Conservation Society Inc. v Volpe*, 472 F.2d 693, 697-698 (C.A. 2, 1972). We should be, and are, reluctant to conclude that analysis of alternatives to meet the established need is not required of us.²⁸

4. Practical Inutility for Reexamining Need for a Demonstration Plant and Broader Issues.

It is clear that if we are to attempt to go over the same ground already covered in the ERDA impact statement, including redetermination of the need for a demonstration facility and long-term issues, such as future energy options, a substantial delay would be involved. For example, the staff, in response to the Licensing Board's admission of contentions 10 and 11 proposed to prepare a supplement to the environmental impact statement. According to the staff, that supplement would have delayed a hearing, at least on broader issues, for some 6-9 months. Staff brief, p. 36. In addition, at the oral argument the staff

²⁷The Joint Committee has expressed some skepticism about the agency's plans for a single demonstration reactor. On two occasions, the Committee has expressed the view that it might be preferable to construct two demonstration reactors instead of one. H. Rep. No. 92-325, p. 25; H. Rep. 93-280, p. 16. While committee reports (see quotation at p. 85, above) and floor debate have on occasion referred to the Clinch River project, such references, taken as a whole, do not reflect Congressional endorsement of the project as specifically proposed, as distinguished from the "need" (as we are using that term) for some demonstration project.

²⁸The applicants contend that the Supreme Court's recent decision in *Flint Ridge Development Co. v. Scenic Rivers Association of Oklahoma*, ___ U.S. ___ (1976), supports their position. The issue there was whether the Secretary of Housing and Urban Development was required to follow NEPA procedures in connection with reviewing and allowing registrations to become effective under the Interstate Land Sales Full Disclosure Act. We do not believe that the *Flint Ridge* decision controls the present situation. It is not possible to say that there is an irreconcilable conflict between authorizing and appropriations legislation for Clinch River and the performance of a conventional NEPA review for Clinch River. The *Flint Ridge* decision only addressed irreconcilable conflicts in statutory commands, and it is clear that Congress contemplates NRC NEPA review here.

It is also worth noting that although it is a coordinate Federal agency, ERDA and its joint venturers are before us now as *applicants* seeking an NRC construction permit. In the case of a conventional light-water reactor, an applicant's submissions are subject to comprehensive review. We think we are obliged to take at least a limited look at alternatives to this applicant's proposal. In this connection, however, we would not go so far as the State of Tennessee urges in pressing an analogy to our review of an application by the Tennessee Valley Authority for a light-water reactor construction permit. State's brief at p. 3. The proper scope of NEPA review in that setting is not before us. We note, however, that that situation is in any event readily distinguishable from the present case with reference to the factors we are discussing.

emphasized that even more extensive delays were portended by inclusion of broad program issues at a hearing. Transcript, p. 41 The staff's experience in the litigation of such cases amply warrants us in concluding that acceptance of NRDC's position would substantially delay a project which Congress has consistently directed to proceed with all lawful dispatch.

To be sure, compliance with NEPA does necessarily involve some delay. The prospect of substantial delay does not justify deviation from NEPA's requirements in and of itself. However, in attempting to fashion a NEPA review appropriate to the unusual circumstances of this case, we believe we are entitled to take such a practical consideration into account when balanced against a limited prospect of gaining new and useful information, and the Congressional allocation of responsibility for the decisions involved. In this instance, we think it quite unlikely that information would be gained that was not available to and considered by ERDA in the preparation of its impact statement. Although we do not think this factor critical, we note that less than a year has passed since the statement was finalized following extensive public participation. ERDA, the agency in the best position to know represents that there is no new information bearing significantly on the conclusions reached in its impact statement (Brief, p. 48), and has already committed itself to further detailed analysis of LMFBR issues before commercialization may begin. FES, Vol. I, IV A-8. The staff knows of no such new information. And the intervenors do not point to any new developments that might alter ERDA's conclusions. The staff stated at the oral argument that it did not think a supplemental impact statement, proposed by it in response to the Licensing Board's order, would serve any useful purpose. Transcript, p. 85.

5. The Availability of Another Forum to Test ERDA's Conclusions.

Although NRDC participated extensively through the submission of comments and participation in the hearings, in the preparation of the ERDA impact statement, they have not sought to challenge that statement before the courts. Instead, they have come to this agency seeking to relitigate the issues addressed in the ERDA impact statement. NRDC points out that the adjudicatory rights available to them in this proceeding were not available in the ERDA proceeding, where legislative-type hearings were held. The adequacy of the procedures followed by ERDA in the preparation of its impact statement could, of course, be tested in court. That forum was and apparently still is available to them. Cf. *Lathan v Volpe*, 455 F.2d 1111 1122 (C.A. 9 1971).

6. Analysis of Alternatives.

We have already indicated our view that, while the need for a demonstration facility may be taken as established and defined by the ERDA LMFBR statement, that conclusion does not excuse NRC from having to examine possible alternatives to the Clinch River facility as means for satisfying those needs.

Examination of alternatives focuses on the particular facility a facility for which NRC bears the principal responsibility of environmental impact analysis. And, as has been seen, little basis exists for asserting that Congress has given so detailed a consideration to alternatives that would warrant concluding that it had already determined the issue.

There remains the question how that analysis should proceed—whether, once alternatives have been discussed, the applicants have the burden of demonstrating that the Clinch River facility is the optimal response to the defined needs, or need only show that the choices made amongst alternative approaches were reasonable ones. In the context of the more conventional type of NEPA review—i.e., one not involving a related program statement prepared by another agency—some courts have held that the agency must select the alternative which cost-benefit analysis shows to be “optimally beneficial.” *Calvert Cliffs’ Coordinating Committee v AEC, supra*, at 1114. Other decisions suggest, at least by implication, that such strict comparison among alternatives is not required. See *Natural Resources Defense Council, Inc. v. Morton, supra*, at 836, *National Helium Corp. v Morton*, 455 F.2d 650, 656 (C.A. 9 1971); *Natural Resources Defense Council v. NRC*, No. 74-1586, slip op., p. 40, note 58 (C.A.D.C. 1976). Whatever may be the proper standard in the more conventional setting, in our judgment the present context does not require a determination by this agency that the Clinch River project as proposed is the “best” or “optimal” alternative. ERDA’s determination that it rests largely upon that agency’s expertise in long-range energy research and development questions. As we noted earlier, such questions are often so judgmental that it is not realistically possible to say in advance which of several alternatives is “best,” but only that the applicant’s preferred approach is reasonable. Therefore, consistent with the statutory allocation of responsibilities between the two agencies, our review of alternatives will be limited by a reasonableness standard.

Conclusion

In light of the foregoing considerations, we now summarize our conclusions and provide guidance for the further conduct of this proceeding.

Our basic conclusion is that the ERDA impact statement and Congressional consideration have resolved for purposes of this proceeding issues that would otherwise be explored under the NEPA rubric of “need” for the proposed action. Similarly ERDA’s prior review of alternatives limits our review of alternatives to a reasonableness standard. We reach these conclusions on the basis of the totality of relevant circumstances in this case, including repeated approval by Congress of the concept of an LMFBR demonstration facility following full debate. We note that while many of these same circumstances may well be relevant to issues that may arise in the future—such as the scope of NRC’s NEPA

review in the context of licensing of ERDA waste storage facilities²⁹—such issues are not before us today

The following principles should govern the further conduct of this proceeding:

1. In determining the admissibility of the NRDC contentions, the Commission directs that the following be assumed as established by the ERDA impact statement and associated processes:

- a. The need for a liquid metal fast breeder reactor program, including its objectives, structure and timing;
- b. The need for a demonstration-scale facility to test the feasibility of liquid metal fast breeder reactors when operated as part of the power generation facilities of an electric utility system, including its timing and objectives.

2. The likelihood that the proposed CRBR project will meet its objectives within the LMFBR program—a “benefit” in the NEPA cost/benefit balance—is an issue relevant to this proceeding.

3. Alternatives for meeting the objectives are relevant to this proceeding, and are to be evaluated in terms of the objectives defined in the ERDA impact statement. Alternative sites outside the Tennessee Valley Authority service area are also relevant to this proceeding.³⁰ In considering alternatives, including non-TVA siting alternatives, in the present proceeding, the following general principle should be observed: consideration of alternatives need go no further than to establish whether or not substantially better alternatives are likely to be available. The Board may limit discovery and cross-examination consistent with this standard.³¹

4. With respect to NRDC contention 10, the Commission directs the Board to seek clarification of the subcontentions, and then to determine their admissibility and the adequacy of the staff’s environmental statement in accordance with the criteria stated in paragraphs 1 through 3 above.

5. NRDC contention 11 is concerned with “the widespread use of LMFBR’s,” which is not an issue in the present proceeding, in view of our determination in paragraph 1 above. In any event, commitment to such

²⁹ See § 202(3), (4) of the Energy Reorganization Act of 1974.

³⁰ Such a limited review of alternative sites outside the Tennessee Valley Authority service area is not predicated on prior consideration of sites in the ERDA program statement; detailed consideration of siting for a demonstration facility was not within its scope. Rather, limiting review of possible non-TVA sites in this context is reasonable, in our judgment, because the Authority is an applicant in this proceeding and an important aspect of the proposed “major Federal action” is for a demonstration facility in its service area. On the other hand, since ERDA is also an applicant and because the demonstration project is part of a national program, it is appropriate to give some consideration to other locations.

See *Northern States Power Co. (Prairie Island Plant)*, 8 AEC 857 868-869 *petition for reconsideration denied*, 8 AEC 1175, *affirmed*, 1 NRC 1 (1975).

widespread use, and further NEPA analysis prior to such use has been explicitly assured. Accordingly the Licensing Board should exclude contention 11.³²

It is so ORDERED

By the Commission

Samuel J Chilk
Secretary of the Commission

Dated at Washington, D.C.
this 27th day of August 1976.

³² See *Kleppe v. Sierra Club*, *supra*, slip op. pp. 9-10, note 14.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-341

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. John H. Buck
Dr Lawrence R. Quarles

In the Matter of

Docket Nos. 50-259
50-260

TENNESSEE VALLEY AUTHORITY

(Browns Ferry Units 1 and 2)

Upon appeal from Licensing Board's denial of untimely petition for leave to intervene, the Appeal Board rules that (1) no contentions have been presented with adequate particularity or basis; (2) no good reason has been shown for the petitioner's tardiness in seeking intervention, and (3) intervention is not warranted as a result of consideration of the four factors which 10 CFR §2.714(a) provides are to be taken into account in passing upon an untimely intervention petition.

Licensing Board order affirmed.

MEMORANDUM AND ORDER
August 25, 1976

A notice of opportunity for hearing in this proceeding involving proposed amendments to the operating licenses for the Browns Ferry Nuclear Plant, Units 1 and 2, located in Limestone County Alabama, appeared in the Federal Register of October 7 1975 (40 F R 46365). Petitions for leave to intervene were to be filed by November 6, 1975. One such petition was filed and thereafter granted in an order entered on March 11 1976. An evidentiary hearing was conducted on August 10 and 11 1976, and an initial decision issued on August 20, 1976 (LBP 76-30, NRCI-76/8 133).

At the evidentiary session on August 10, 1976, Mr. Ward G. Van Orman appeared and requested the opportunity to intervene. He handed the Licensing Board a copy of his telegram dated August 5 1976 (sent to but not previously received by the Board) which stated merely that he lived within "30 air miles" of the facility and desired "admission" to the "hearing." He also handed the Board a four-page statement entitled "Intervenor or Limited Appearance," which requested that certain proposed operating conditions for the facility be brought to the Board's attention and included in the hearing record. Neither the

telegram nor the statement offered any explanation why Mr. Van Orman's intervention request had not been submitted at an earlier date.

The Licensing Board denied the intervention request as "untimely" (Tr. 43, 91). Mr. Van Orman was invited, however to make a limited appearance, and he did so (Tr 92-101). By telegram dated August 16, 1976, Mr. Van Orman filed an appeal from the denial of his intervention and requested an extension of time to file his supporting brief. He was given an extension until August 20, 1976, on August 18 the brief was filed.

We have reviewed that brief and have concluded that Mr. Van Orman has failed to satisfy the criteria specified in the Rule of Practice governing interventions. 10 CFR §2.714(a). Assuming *arguendo* that he has alleged a sufficient personal interest in the outcome of the proceeding, the fact remains that he has not set forth any discernible contentions with sufficient particularity or with an adequate basis to meet applicable requirements.

In any event, Mr Van Orman has not presented a "substantial showing of good cause" for his untimely filing, as required by 10 CFR §2.714(a). Neither document submitted below even alludes to the fact that his attempt to intervene was belated. And his explanation to the Licensing Board provided little elaboration (referring only in vague terms to an alleged "press blackout" (Tr. 40) and to a professed ignorance of the requirements of the rules (Tr. 39)). True, his brief to us (submitted in affidavit form) does indicate that, since June 1975 his employment has caused him to be absent from the area for a total of 30 weeks. But he does not identify the particular weeks involved or explain why he could not have submitted his request during the period he was in the area.

Nor is Mr. Van Orman aided by a consideration of the four factors which 10 CFR §2.714(a) provides are to be taken into account in passing upon an untimely intervention petition. See *Nuclear Fuel Services, Inc.* (West Valley Reprocessing Plant), CLI-75-4, 1 NRC 273 (1975). To the extent his concerns can be discerned from the material he submitted, they seem to have been satisfactorily accommodated by his limited appearance statement. That statement brought these concerns to the Licensing Board's attention—also, it is now before us in connection with our review of the initial decision. Moreover, insofar as Mr. Van Orman attempts to question TVA's technical capabilities, that subject is already covered by the contentions of the existing intervenor, and is extensively treated in the Licensing Board's decision. Still further, there is no indication in the submitted materials that participation beyond that already undertaken by Mr. Van Orman would assist in developing a sound record. Finally while the material submitted might not result in a broadening of the issues, intervention at this stage would perforce delay the proceeding. Indeed, given Mr. Van Orman's asserted need for discovery allowing intervention at the time of the evidentiary hearing would also have delayed the proceeding. See *Virginia Electric and Power Co.* (North Anna Station, Units 1 and 2), ALAB-289 2 NRC 395 400 (1975)

In sum, Mr. Van Orman has neither set forth with adequate particularity or basis any contentions nor provided a showing of “good cause” for the untimeliness of his intervention request. Accordingly the Licensing Board’s denial of his request was proper, and its order hence is *affirmed*

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Romayne M. Skrutski
Secretary to the Appeal Board

Dr. Quarles did not participate in the consideration or disposition of this appeal.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-342

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. John H. Buck
Michael C. Farrar

In the Matter of

Docket Nos. 50-338 OL
50-339 OL

VIRGINIA ELECTRIC AND POWER COMPANY

**(North Anna Power Station,
Units 1 and 2)**

Upon appeal from the Licensing Board's order granting an untimely intervention petition, the Appeal Board determines that "good cause" had been shown for the tardiness of the petition but that final resolution of the appeal should be withheld pending Commission decision on the standing questions previously certified to it by the Appeal Board.

Decision deferred.

ATOMIC ENERGY ACT STANDING TO INTERVENE (INJURY IN FACT)

Potential loss of business reputation is a cognizable injury within the scope of Section 189a. of the Atomic Energy Act.

ATOMIC ENERGY ACT STANDING TO INTERVENE (ZONE OF INTERESTS)

An interest in protecting business reputation and avoiding possible damage claims is not arguably within the "zone of interests" sought to be protected or regulated by the Atomic Energy Act.

ATOMIC ENERGY ACT STANDING TO INTERVENE (ZONE OF INTERESTS)

The Atomic Energy Act and its implementing regulations do not confer standing upon any "party aggrieved" but rather require an additional showing that interests sought to be protected arguably fall within the "zone of interests" protected or regulated by the Act.

ATOMIC ENERGY ACT STANDING TO INTERVENE (ZONE OF INTERESTS)

The directness of a petitioner's connection with a facility bears upon the sufficiency of its allegations of potential injury in fact but not upon whether its interest falls within the zone of interests which Congress was protecting or regulating.

ATOMIC ENERGY ACT STANDING TO INTERVENE

Standing to intervene as a matter of right does not hinge upon the petitioner's potential contribution to the decisional process.

RULES OF PRACTICE. NONTIMELY INTERVENTION PETITIONS

The rule governing consideration of late intervention petitions (10 CFR §2.714(a)) confers broad discretion upon licensing boards in balancing the relevant factors, and review of a board's decision on such questions is limited to determining whether that discretion has been abused in a particular case. *Marble Hill*, ALAB-339

Mr. Michael W. Maupin, Richmond, Virginia (**Mr James N. Christman** with him on the brief) for the applicant, Virginia Electric and Power Company

Mr. John J. Runzer, Philadelphia, Pennsylvania (**Messrs. A. H. Wilcox** and **Richard M. Rindler** with him on the brief) for the petitioner for intervention, Sun Shipbuilding and Dry Dock Company

Mr William Massar (**Mr Daniel T Swanson** on the brief) for the Nuclear Regulatory Commission staff.

MEMORANDUM AND ORDER August 31 1976

Opinion of the Board by Mr. Rosenthal:

We are once again confronted with questions pertaining to the standing of a petitioner to intervene under 10 CFR 2.714(a) in one of our licensing proceedings, as well as to whether "good cause" has been established for the tardiness of the intervention petition. See *Long Island Lighting Co.* (Jamesport Nuclear

Power Station, Units 1 and 2), ALAB-292, 2 NRC 631 (1975). See also, *Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), ALAB-333, NRCI-76/6 804 (June 22, 1976). This time these questions have surfaced in the operating license proceeding involving Units 1 and 2 of the North Anna Power Station, located in Louisa County Virginia.

That proceeding was noticed for hearing in 1973 following the grant of the petition for leave to intervene of Mrs. James C. Arnold. In early 1974 the Commonwealth of Virginia was allowed to enter it under the "interested State" provisions of 10 CFR 2.715(c). What we are now concerned with is an attempt by the Sun Shipbuilding and Dry Dock Company (Sun Ship), initiated by a petition filed in March 1976, to become an additional intervenor. This attempt was resisted below by the applicant on both standing and timeliness grounds. The Licensing Board resolved the dispute in Sun Ship's favor and, in an order entered on June 9 1976, granted intervention. The applicant appeals under 10 CFR 2.714a. Sun Ship and the NRC staff urge affirmance. For the reasons set fourth below decision on the appeal is being deferred.¹

I

A. The relevant allegations of the Sun Ship intervention petition may be summarized as follows:

Sun Ship is a Pennsylvania corporation located in Chester, Pennsylvania. In 1971, it entered into contracts with the applicant by which it undertook to fabricate steam generator and reactor coolant pump supports for the North Anna facility. Assertedly the work was to be done "pursuant to plans and specifications prepared by [the applicant] and/or its agents, and pursuant to welding and inspection procedures approved by [the applicant] and/or its agents." The supports were delivered to and accepted by the applicant in 1972. Subsequent inspections indicated the existence of internal weld defects. This disclosure, in turn, led to the removal by the applicant of all of the welds which had been fabricated by Sun Ship and their replacement with new welds fabricated by someone else. Additionally the applicant has instituted suit against Sun

As appears from their separate opinions, *infra*, pp. 112-131, neither Dr. Buck nor Mr. Farrar would reach this result. In Dr. Buck's view the order below should be reversed at this time; on the other hand, Mr. Farrar believes that it should now be affirmed. Because, however, there is not a majority for present affirmance, Mr. Farrar joins in the deferral of decision as the more acceptable of the other available alternatives.

Despite the three-way division regarding the course which should be followed, each of the conclusions in this opinion has the support of at least a majority of the Board. For this reason, the opinion has been designated as that of the Board. The use of "we" in the opinion has reference to its author together with either (and in some instances both) Dr. Buck and Mr. Farrar.

Ship for breach of contract, seeking damages in the approximate amount of 24 million dollars.

The intervention petition went on to assert that, in the course of preparing its defense against the suit, Sun Ship acquired information respecting the design and construction of the supports which has brought into question "the integrity of these structures in either normal operation conditions or the event of a design basis accident."² In this connection, it was specifically alleged in paragraph 5 that:

(b) The materials from which the supports were fabricated are inherently susceptible to brittle fracture, a phenomenon which would cause the support to shatter at loads less than the design loads, or even under no loads at all.

(c) The materials and design of the supports render them especially susceptible to lamellar tearing, and the actual presence of lamellar tearing in these supports is confirmed by physical specimens obtained by Petitioner.

(d) The confirmed presence of lamellar tearing as well as numerous types of weld defects in these supports, coupled with the general susceptibility of the materials from which these supports are fabricated to fracture, increases the risk that these supports may fracture in a brittle manner at loads far less than their design loads.

It was averred that Sun Ship's participation in the proceeding as an intervenor is necessary to insure that the "record may be fully developed on such matters."

B. The applicant's response to the petition asserted that Sun Ship lacked standing to intervene both because it did not allege "injury in fact" and because its "real interest" — said by the applicant to be "that of gaining an advantage in separate litigation" — is not "arguably within the zone of interests to be protected or regulated by the statute in question" (i.e., the Atomic Energy Act). See *Association of Data Processing Service Organizations v Camp*, 397 U.S. 150, 153 (1970); *Jamesport*, ALAB-292, *supra*, 2 NRC at 637-38. With respect to the untimeliness of the petition, the applicant maintained that Sun Ship had neither offered a good reason for its tardiness nor made the requisite demonstration on the four factors set forth in 10 CFR 2.714(a) which the Commission has held are to be considered in determining whether to accept a late intervention petition. *Nuclear Fuel Services, Inc.* (West Valley Reprocessing Plant), CLI-75-4, 1 NRC 273 (1975).³

C. Following oral argument, at which the NRC staff and intervenor Arnold supported the grant of the petition, the Licensing Board entered its June 9

²It was asserted that this information was "not generally available" and "not known to [Sun Ship] at the time these proceedings were instituted.

³Those factors are set forth in fn. 13, *infra*, p. 107

order. On the question of standing, the Board noted at the outset that, during the course of the argument, Sun Ship had “expanded” its petition to allege that, if the operating licenses issued and an accident occurred because of the failure of the supports, that company might suffer damage to its reputation as well as be subjected to personal injury and property damage claims. Regarding these assertions to satisfy the “injury in fact” test, the Board then moved on to consider whether Sun Ship’s interest in avoiding “financial and reputation” losses was a “protected one.” The Board concluded.

Sun Ship has not alleged that its people or plant will be physically damaged if the questioned supports fail causing an accident. It was a contractor on the project supplying large essential components which were fabricated by it. An unanticipated failure of those components at a critical time could damage the North Anna Plant, injure or kill workmen and cause electrical outages in the VEPCO service area and beyond. That connection with North Anna 1 and 2 brings Sun Ship’s interest within the zone protected by both the Atomic Energy Act and NEPA. The fact that the welds were replaced might mitigate in Sun Ship’s favor if a failure happens but it does not totally destroy its connection with the plant. It may be true that Sun Ship’s primary aim is, as VEPCO alleges, one of pressuring a favorable result in other litigation, but speculation about that does not work to destroy the interest alleged.

Turning to the question of untimeliness, the Board accepted Sun Ship’s explanation that only recently did it (1) learn of the applicant’s “final decision” to use the supports without further modification or repair and (2) obtain tangible evidence of the nature of the purported defects in the repaired welds.⁴ This “late knowledge,” the Board ruled, was “good enough cause to excuse late filing when taken in conjunction with our analysis of the four factors” set forth in Section 2.714(a).

II

In *Jamesport*, ALAB-292, *supra*, a majority of this Board voiced the belief that it was “more probable than not” that both Congress and the Commission intended that judicial standing precepts be applied in determining whether a petitioner for intervention has the requisite “interest [which] may be affected” by the proceeding within the meaning of Section 189a. of the Atomic Energy Act⁵ and 10 CFR 2.714(a). On this basis, we concluded that entitlement to

⁴The Board noted that it “was not until recently that Sun Ship, acting under a court order, was able to obtain core samples of welds from the supports for Unit 2.” It was those core samples which assertedly provided the “tangible evidence” of weld defects.

42 U.S.C. 2239(a).

intervene as a matter of right in an NRC licensing proceeding likely hinges upon whether the petitioner is able to satisfy the “injury in fact” and “zone of interests” tests laid down by the Supreme Court in *Data Processing Service, supra*.⁶

We reiterated this conclusion in the more recent *Pebble Springs* case, ALAB-333, *supra*, which posed the question whether status as a ratepayer of the applicant utility is sufficient, of itself, to confer standing. But although there convinced that at least the “zone of interests” test had not been met, we nonetheless chose not to give immediate effect to the conclusion. This was because of our uncertainty regarding the import of the Commission’s intervening decision in *Edlow International Co.*, CLI-76-6, NRCI-76/5 563 (May 7 1976). More specifically certain language in that decision suggested to us the possibility that the Commission might be of the view that (1) rigid adherence to judicial standing doctrines is not mandatory in a “domestic” (as opposed to “export”) licensing proceeding; and (2) in any event, there may be discretion in the realm of domestic licensing to grant intervention even where standing to intervene as a matter of right is lacking. In the circumstances, it seemed appropriate to seek further guidance from the Commission. We did so by certifying to it the following questions:

1. In determining whether a petitioner for intervention in a domestic licensing proceeding has sufficiently alleged “an interest [which] may be affected by” the proceeding within the meaning of Section 189a. of the Atomic Energy Act and Section 2.714(a) of the Commission’s Rules of Practice, are the adjudicatory boards strictly to apply contemporaneous judicial concepts of standing? If not, what principles are to be applied?

Acknowledging that in “many cases” the “zone of interests” test must be satisfied in order to establish judicial standing, Mr. Farrar nonetheless insists that that test is inapplicable here. This is so, he maintains, because Section 189a. of the Atomic Energy Act should be taken as a “party aggrieved” provision requiring for standing purposes simply a showing of injury in fact.

Section 189a. was enacted in 1954. Insofar as we are aware, it has never been previously suggested by *anyone* (including Sun Ship in this case) that the section should be so interpreted. And with due deference to the contrary opinion of our colleague, we can perceive no good reason for giving it such broad scope. As Mr. Farrar at least implicitly concedes, the legislative history of the Atomic Energy Act is devoid of anything to indicate that, in using the term “interest” in Section 189a., Congress had in mind anything more than those “interests” which it was seeking to regulate or protect in the statute. Nor are there any readily apparent policy considerations which might lead one to infer a legislative purpose to allow persons to intervene in a nuclear licensing proceeding as a *matter of right* on the basis of an asserted interest wholly foreign to the statutory objectives. In this connection, it is necessary to strain to convert Section 189a. into a “party aggrieved” provision to avoid, in Mr. Farrar’s words (p. 115, *infra*), “deny[ing] the Commission the assistance of those who could make a significant contribution toward development of a full record on” an important safety or environmental issue. See discussion, *infra*, pp. 110-111.

2. In circumstances where a petition for intervention in a domestic licensing proceeding does not allege an interest which would entitle the petitioner to intervene in the proceeding as a matter of right, may intervention nevertheless be permitted as a matter of discretion? If so, is the exercise of that discretion reserved to the Commission itself or may it be exercised by the adjudicatory boards as well? If the adjudicatory boards do have that discretion, what are the standards which should govern its exercise generally and in this case in particular?

NRCI-76/6 at 807-08.

The Commission has not as yet responded to those questions. Whether we need its response to enable us to decide the present appeal depends, of course, upon how we should resolve the difference among the parties on the judicial standing and the timeliness questions. If, as both Sun Ship and the staff insist (but the applicant denies), judicial standing exists here, it is of no moment whether either a less rigorous standard governs in our proceedings or this Board might allow Sun Ship to intervene as a matter of discretion. By the same token, should we agree with the applicant that "good cause" for the belatedness of the Sun Ship petition had not been established, the grant of that petition must be reversed no matter what might be decided with regard to standing.⁷

A. Turning first to the matter of judicial standing, we conclude that Sun Ship has alleged sufficient injury in fact but that the interest which it seeks to protect is not even arguably within the "zone of interests" to be protected or regulated by the Atomic Energy Act.

1. As pointed out in *Jamesport*:

Neither the Atomic Energy Act nor the Commission's implementing regulations require, as a precondition to intervention, that it be established that the asserted interest of the petitioner *will* be affected by the licensing proceeding in question. Rather, the standard which has been adopted is whether that interest "may" be affected. Section 189a. of the Act, 42 U.S.C. 2239(a); 10 C F R 2.714(a). The reason seems clear. Prior to the commencement of construction of the facility it is unlikely that any harm could materialize; indeed, some types of harm would occur, if at all, only after construction has been completed and the operational stage has been reached. Consequently at the inception of a licensing proceeding, it will generally not be possible for a would-be intervenor to establish more than the *potentiality* of his sustaining injury

⁷The Commission was not asked by us in *Pebble Springs* to shed additional light upon the discretion residing in adjudicatory boards to grant a tardy petition. There clearly is such discretion and the standards governing its exercise are to be found in Section 2.714(a) of the Rules of Practice, as interpreted in the Commission's decision in *West Valley*, *supra*, and later applied by us in *Jamesport*, *supra*. See pp. 107-110, *infra*.

2 NRC at 636 (emphasis in original). In this instance, it seems quite plain that Sun Ship has alleged sufficient facts to establish that it *may* be injured in fact if the North Anna facility is placed in operation.

For present purposes, we must accept as true Sun Ship's averments that, because of deficiencies in their design and construction, the support structures might fail during the course of normal operation or in the event of a design basis accident. Were this to occur, Sun Ship might well sustain serious damage to its reputation. This is so even though, as stressed by the applicant, all of the welds made by Sun Ship have now been replaced. For, despite this fact, Sun Ship retains a close identification with the supports — having been responsible for their fabrication (including the acquisition of the materials which are still a part of them). In the totality of circumstances, it is idle to suggest the absence of a real possibility that, were the supports to fail with significant adverse and publicized consequences, Sun Ship's reputation for competent workmanship would not go unscathed. And, needless to say loss of business reputation is regarded in law as being a redressable injury. See, e.g., *Diplomat Electric Inc. v. Westinghouse Electric Supply Co.*, 378 F.2d 377 381 (5th Cir.1967).⁸

2. We encounter no greater difficulty in applying the "zone of interests" test here — with the opposite result.

The Atomic Energy Act is, of course, addressed to, *inter alia*, the protection of the radiological health and safety of the public. Thus, beyond doubt, the zone of interests created by that Act embraces an interest in the avoidance of a threat to health and safety as a result of radiological releases from the nuclear facility (either in normal operation or as the result of an accident). And we may also assume, without deciding, that that zone is broad enough to encompass as well an interest in avoiding an economic loss which might be *directly* tied to the radiological releases (e.g., a loss occasioned by the necessity to cease doing business in the area affected by the releases).

But no such interests are involved here. Sun Ship does not assert that its employees or its property might be directly affected in the slightest degree by a release of radioactive materials which might be attributed to a failure of the allegedly defective supports. Nor is there any claim that such releases would, of themselves, have any other type of immediate impact upon Sun Ship's conduct of its business affairs at a considerable distance from the North Anna site.

Rather, as has been seen, Sun Ship's asserted "concern" for the safety of the facility stems entirely from its interest in protecting its business reputation and

⁸ Being of the view that the threat of injury to reputation is here sufficient, we need not go on to consider whether Sun Ship might be subjected to damage suits brought by third parties in the event of an accident attributable to support failure and, if so, whether that too would constitute sufficient injury in fact for standing purposes. Thus, we do not decide, *inter alia*, the sharp dispute among the parties respecting the effect of the Price-Anderson Act upon the institution and successful prosecution of any such suits.

avoiding possible damage claims.⁹ But we have been pointed to nothing in the terms or legislative history of the Atomic Energy Act which might provide even a wobbly underpinning for a suggestion that the statutory health and safety provisions had – even as a secondary purpose – the furtherance of an interest of that character. Nor do we perceive any basis for presuming the existence of such a legislative design.¹⁰

In this connection, it must be borne in mind that it is not alone Sun Ship which possesses an indirect economic interest in assuring the safety of the North Anna facility. Most, if not all, companies engaged in some facet or another of the construction or operation of nuclear power facilities have a heavy economic stake in the avoidance of a serious accident at any one facility which might have the consequence of bringing the entire industry under a cloud. Although acknowledging this to be so, Sun Ship and the staff nevertheless insist that the “zone of interests” test can be found to have been met here without ascribing to Congress an intent to open the door to interventions by everyone whose fortunes might in some way be affected should an accident occur. We were told by Sun Ship at argument that its “direct connection” with the North Anna facility provides a crucial distinction (AB Tr. 43). The staff made much the same point (AB Tr. 68-71).

In our view that distinction is untenable. Sun Ship’s “connection” with the facility of course does have a bearing upon the sufficiency of its allegations of potential injury in fact; indeed, it is precisely because of the role it played in the fabrication of the supports that we have concluded that such injury has been

⁹ For the purposes of this discussion, we shall assume (although as previously noted we do not decide) that Sun Ship might be subject to tort liability in the event of an accident attributable to a failure of the supports.

¹⁰ Since we are concerned here exclusively with the “zone of interests” associated with the Atomic Energy Act, the relevance of Supreme Court decisions applying the “zone of interests” test in the context of other Federal legislation is doubtful at best. Specifically unlike Mr. Farrar (see pp. 117-118, *infra*), we think the resolution of the question now before us is aided not at all by the fact that the Court discerned in Section 4 of the Bank Service Corporation Act an “arguably” implicit purpose to protect not only data processors, but also travel agents, from competition on the part of national banks. *Arnold Tours v. Camp*, 400 U.S. 45, 46 (1970). As is clear from the Court’s opinion in *Arnold Tours*, its decision rested on legislative history suggesting to it that the purpose of that section of the Act was to insure that banks did not engage in a “nonbanking activity” (400 U.S. at 46, fn. 3 and accompanying text); obviously an actual or potential competitor of a national bank involved in such activity would be “arguably” within the “zone of interests” associated with that intended proscription. A similar link between the aims of the Atomic Energy Act and the asserted interests of Sun Ship is patently absent. In this connection, Mr. Farrar’s reliance on the Price-Anderson Act is misplaced. Among other things, unlike the Bank Service Corporation Act in *Arnold Tours*, Price-Anderson has not been invoked here to establish standing or for any other purpose; *i.e.*, Sun Ship does not even purport to assert an interest within its area of protection.

adequately alleged. See p. 105 *supra*.¹¹ Whether the “zone of interests” test has been satisfied does not depend, however, upon how concrete or speculative the threat of injury may be. Instead, once again, the pivotal inquiry in applying that test is whether, assuming the existence of a reasonable possibility of harm to an interest possessed by the would-be intervenor, that interest can be said to be among those interests which Congress was protecting or regulating. Fatal to the claim of standing here thus is the consideration that, insofar as we can see, there is no relationship at all between the legislative purpose underlying the safety provisions of the Atomic Energy Act and Sun Ship’s interest in protecting its reputation and avoiding damage suits.¹²

B. We now move on to the question whether, the matter of Sun Ship’s standing to one side, the petition should have been denied because “good cause” was not established for its untimely filing. Resolution of this question necessitates a consideration of not only the justification advanced by Sun Ship for its failure to have filed its petition at an earlier date but, as well, the four factors listed in 10 CFR 2.714(a). *West Valley* CLI-75-4, *supra*; *Jamesport*, ALAB-292, *supra*.¹³ And since the Commission indicated in *West Valley* that Section 2.714(a) confers “broad discretion” upon licensing boards “in the circumstances of individual cases” (1 NRC at 275), it follows that our “review of the Board’s ruling is limited to determining whether that discretion has been abused in this case.” *Public Service Company of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-339 NRCI-76/7 20, 24 (July 27 1976).

Although the excuse offered by Sun Ship for waiting until March 1976 to

This is not to say that some form of direct involvement with the facility is always a necessary ingredient of a showing of threatened injury in fact. All that we mean to suggest is that where, as here, such involvement is present, there is a greater likelihood that the petitioner will be able to demonstrate that he may suffer a concrete injury

² It may well be that, as the fabricator, Sun Ship would be able to make a particularly significant contribution to the proper resolution of any safety issues involving the integrity of the supports. As will be discussed later in this opinion, that factor is relevant in determining whether a late intervention petition should be accepted (and might also possibly be considered in deciding whether to allow intervention as a discretionary matter). But standing to intervene as a matter of right has never been regarded as hinging to any extent upon an appraisal of how much or little assistance the would-be intervenor might render in the decisional process. See *Allied-General Nuclear Services* (Barnwell Fuel Receiving and Storage Station), ALAB-328, NRCI-76/4 420, 421-22 (April 28, 1976), relying upon *Sierra Club v. Morton*, 405 U.S. 727, 739-40 (1972).

¹³ Those factors are:

- (1) The availability of other means whereby the petitioner’s interest will be protected.
- (2) The extent to which the petitioner’s participation may reasonably be expected to assist in developing a sound record.
- (3) The extent to which petitioner’s interest will be represented by existing parties.
- (4) The extent to which the petitioner’s participation will broaden the issues or delay the proceeding.

file its petition may be of no more than marginal sufficiency¹⁴ we think that in combination the four factors weigh heavily enough in Sun Ship's favor that no abuse of discretion is present here. Beginning with the first factor, it appears manifest to us that this licensing proceeding provides the best, if not the only effective means available to Sun Ship to guard against the contingency of an accident during North Anna operation which might occasion injury to its reputation. Although the pending contract dispute between Sun Ship and VEPCO may present for judicial consideration some of the same issues which have been raised in the intervention petition filed with the Licensing Board, the court will not be directly concerned with the question whether North Anna can be safely operated and will not be empowered to withhold the issuance of operating licenses until corrective action is taken with respect to the supports. Nor, assuming (although the applicant now disputes) that Sun Ship might be subjected to tort suits in the event of an accident, would an ultimately successful defense of such suits necessarily and fully prevent any harm to the reputational and other interests which Sun Ship seeks to protect in the licensing proceeding.

Sun Ship fares particularly well on the second factor. The applicant itself expressly concedes (Br. p. 12) that the participation of Sun Ship "may well assist in the development of the record." In view of the fact that Sun Ship fabricated the supports in the first instance and has since conducted inspections and tests bearing upon their integrity the concession was a necessary one. True, as the applicant maintains, Sun Ship could furnish some measure of assistance without formal intervention "simply by continuing its policy of disclosing relevant information" to the NRC staff.¹⁵ It is not unreasonable to suppose, however, that Sun Ship would be in a position to make a significantly greater contribution if clothed with the full rights of an intervenor — including the

¹⁴ As the Licensing Board itself noted, Sun Ship does not dispute that it was aware of the brittle fracture and lamellar tearing problems quite some time ago. In the circumstances, it seems doubtful at best whether the company was warranted in nevertheless remaining on the sidelines until it had obtained what it deemed to be (1) confirmation of its apparently firmly held view that the repaired welds were defective; and (2) a final decision on the applicant's part not to take further corrective action. A more promptly filed petition would not only have alerted the Licensing Board to the alleged serious safety concern at an earlier time but, additionally could have been subsequently withdrawn if later developments removed that concern.

¹⁵ The applicant implicitly assumes that the safety issue raised by Sun Ship will remain in the proceeding even if we were to direct the denial of the petition. Although this is an operating license proceeding, we make the same assumption. See 10 CFR 2.760a, as amended in January 1975 to reflect the teachings of *Consolidated Edison Co. of New York* (Indian Point Nuclear Generating Unit 3), CLI-74-28, 8 AEC 7 8-9 (1974). See also the Licensing Board's unqualified statement in the order under review that "[t]his question of safety significance having been raised, it is the Board's duty and intent that it be fully explored.

entitlement to present evidence of its own and to cross-examine the witnesses of other parties. In any event, inasmuch as the four factors are addressed exclusively to the question of whether there is good reason to allow one to acquire formal intervenor status belatedly there is little room for doubt that, as used in the second factor, the term "participation" refers to involvement in the proceeding as an intervenor — and that alone.

With respect to the third factor, Sun Ship's interest in avoiding reputational injury and damage suits is, of course, not shared by any other party. But that the untimely petitioner's interest is unique does not *perforce* mean that it will go unrepresented if intervention is not allowed. *Jamesport, supra*, 2 NRC at 650. In this instance, there are, of course, existing parties to the proceeding who, albeit for what may be different ultimate reasons, are just as much concerned as is Sun Ship that the North Anna facility not be placed in operation with unsafe steam generator and reactor coolant pump supports. Those parties may or may not be as qualified as Sun Ship to develop that concern on an evidentiary record. Because what is now before us permits no firm conclusion on that score, the most that can be said is that it is at least possible that Sun Ship's interest will not be fully represented by existing parties.

With regard to the fourth factor, the applicant tacitly acknowledges that Sun Ship's participation will not broaden the issues in the proceeding. It asserts without elaboration, however, its argument below that the grant of the petition "would threaten to delay the proceeding beyond the time reasonably necessary to resolve the safety question" which that petition raises. We content ourselves with the Licensing Board's response to that claim:

On inquiry by the Board the Staff described a schedule for its work that would provide a supplement to the Safety Evaluation Report on about August 13 1976. The Applicant suggested, and the Board concurs, that the hearing should begin as soon as possible after August 13 (Tr. 2042-2044). The Petitioner has asserted that it is prepared to proceed on a schedule based on the requirements of the Staff and the Board. Considering that Sun Ship's interest in the proceeding is limited to questions concerning the integrity of the reactor steam generator and pump supports, the amount of effort already expended by Sun Ship in investigation of these matters, and the time remaining before the staff will be prepared for a hearing, the Board concludes that the admission of Sun Ship as a party need not delay the beginning of the hearing. Participation of Sun Ship and thorough consideration of the issue raised may prolong the hearing but the Board intends to resolve the issue as rapidly as may safely be done.

In short, a minimum of three — and perhaps all four — of the Section 2.714(a) factors point in the direction of a finding of "good cause" for over-

looking the lateness of this petition.¹⁶ The situation here is thus markedly different than that before us in *Jamesport*. There, not only was the justification tendered for the untimely filing totally insubstantial but, in addition, only the fourth factor was determined to be of assistance to the petitioner. 2 NRC at 646-50.

III

Because we have found a lack of judicial standing but also that there is no reason to disturb the Licensing Board's conclusion that "good cause" has been established for the untimeliness of the intervention petition, the proper disposition of the appeal turns upon whether judicial standing concepts are controlling and, if so, whether intervention in the absence of judicial standing can be granted as a matter of discretion. As previously noted, those questions are now before the Commission. It would be inappropriate to attempt to forecast precisely what will be decided on either of them. But it does seem not unlikely that, were the Commission to adopt the views expressed by Mr Salzman in his separate opinion in *Jamesport*, ALAB-292, *supra*, 2 NRC at 654 *et seq.*, and to rule that an intervention petition may be granted on a discretionary basis notwithstanding the lack of judicial standing,¹⁷ that ruling would inure to the benefit of Sun Ship in this instance.¹⁸

As Mr. Salzman pointed out, the end that would be served by such a ruling would be the empowerment of licensing boards to obtain the benefit of the participation of a person or organization able to make a "genuinely significant" contribution to the resolution of an important safety or environmental issue — whether or not that person or organization happened to possess an absolute right to intervene. 2 NRC at 658-59 In this case, it is scarcely open to dispute that the safety issue which Sun Ship has raised in its intervention petition is a most serious one. Without intimating any opinion as to whether in fact the supports

⁶As appears from his dissenting opinion. Dr. Buck's different conclusion rests in substantial measure upon his belief that Sun Ship's real objective in seeking to intervene is other than that stated in its papers; *i.e.*, that its actual objective is to improve its posture in the pending contract suit instituted by VEPCO. The drawing of inferences respecting motive is a course always fraught with considerable peril; in this instance we think there to be insufficient basis for deciding the appeal on the presumption that some hidden and improper purpose underlies Sun Ship's desire to participate in this proceeding.

⁷None of the members of the Board in the present case recommends against such a ruling; indeed, as his opinion reflects, Mr. Farrar affirmatively seeks it should his expansive views on intervention as a matter of right not be accepted.

⁸Were the Commission to hold, contrary to the views expressed by this Board in *Jamesport*, that standing to intervene as a matter of right is conditioned upon injury in fact alone, there would of course be no doubt as to the ultimate result here. This is because all three of us are in agreement that such injury has been adequately alleged.

may be deficient in some respect, plainly that issue must be explored in sufficient depth to permit a confident judgment on it before reactor operation is licensed. And, as we have previously noted in a different context, p. 108, *supra*, it would appear that, given the role that it played in the fabrication of these particular supports, Sun Ship is well equipped to make a "genuinely significant" contribution to that exploration.

In the circumstances, the best course at this juncture is to allow the result reached by the Licensing Board to stand pending the Commission's decision on the *Pebble Springs* certified questions. Following its consideration of that decision when rendered, this Board will determine the appeal in another opinion.

Decision on the appeal *deferred* in accordance with the views expressed in this opinion.¹⁹

It is so ORDERED

FOR THE ATOMIC SAFETY
AND LICENSING APPEAL BOARD

Romayne M. Skrutski
Secretary to the Appeal Board

¹⁹In its brief, the staff directed our attention to Sun Ship's announcement at oral argument before the Licensing Board of its intention to participate actively on all issues raised in the proceeding — whether or not within the scope of its own contentions and asserted interest. Although the staff would have us now impose specific limitations on the ambit of Sun Ship's participation, we decline to do so. The right of intervenors in operating license proceedings to involve themselves on issues not raised by themselves was dealt with by us in *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-244, 8 AEC 857 864-71 (1974), *reconsideration denied*, ALAB-252, 8 AEC 1175, 1178-81 (1975), *affirmed*, CLI-75-1, 1 NRC 1 (1975). We there stressed, *inter alia*, that such involvement is permissible only if the "intervenor has a discernible interest in the resolution of the particular matter." 8 AEC at 868. We have every confidence that the Licensing Board will apply the teachings of *Prairie Island* in resolving any controversy which may arise respecting Sun Ship's entitlement to participate in the proceeding on issues which do not concern the integrity of the supports.

Opinion of Mr. Farrar, concurring in the result:

I agree with Chairman Rosenthal that Sun Ship has demonstrated the existence of sufficient “injury in fact” to establish that it has an interest which may be affected by this proceeding.¹ But my views are significantly different from his on two other fundamental matters related to Sun Ship’s standing to intervene.

As I understand it, the essence of the Chairman’s thinking is this. First, assuming that – as he believes – the tests developed to govern admission into judicial proceedings are controlling on the question of the right to intervene here, Sun Ship has no such right because it fails to meet the “zone of interests” test. But, second, *if* in its domestic licensing proceedings the Commission can permit intervention on a discretionary basis, Sun Ship is a likely candidate for admission because, in the Chairman’s words, it is “well equipped to make a ‘genuinely significant’ contribution” to the exploration of a “most serious” safety issue.

The Chairman is unable to take definitive action either way on the appeal before us, however, because the *Pebble Springs* appeal board recently requested the Commission’s views on two questions: (1) does some standard less rigorous than that of “judicial standing” govern intervention as of right; and (2) may intervention be granted as a matter of discretion if the petitioner has no right to intervene. Accordingly he would defer action on the appeal pending further word from the Commission.

I believe that the appeal should be decided now in Sun Ship’s favor, for, as I explain later (pp. 115-119 *infra*), I am of the opinion that Sun Ship meets even the restrictive “judicial standing” tests. In the first place, the Atomic Energy Act appears to contain a “party aggrieved” provision. Under the judicial standing principles which are brought into play by such a provision, Sun Ship need establish only threatened “injury in fact” to intervene. We all agree it has done so. In the second place, even if the Act not be interpreted as a “party aggrieved” statute, my judgment is that Sun Ship meets the other relevant judicial standing test – “zone of interests” – which would then be controlling.

In short, I would allow intervention because Sun Ship meets whatever judicial standing test is applicable. The other board members disagree, however, so I must turn to the question whether the Commission should utilize a less rigorous standard or allow intervention on a discretionary basis. I recognize that these questions are before the Commission in another case and I thus have no difficulty in joining with the Chairman to defer action on the appeal pending a

Dr. Buck also concurs on this point, as did all the members of the Licensing Board.

Commission ruling.² And, of course, once the Commission speaks, its word will be controlling. I feel free, however, to express my views now. We have always encouraged licensing boards to give us the benefit of their thinking when they send us questions, and I indulge in the assumption that our opinions are likewise useful to the Commission.

For the reasons I set forth below (pp. 113-115 *infra*), my judgment is that the Commission and its adjudicatory tribunals are entitled to admit into our proceedings those who, although they lack judicial standing, meet tests more suited to the Commission's mission.³ Since I agree with the Chairman's appraisal of Sun Ship's ability to contribute to this proceeding, I would allow it to participate.

There are, then, two independent reasons which would justify an affirmation of the decision below in Sun Ship's favor: (1) it has the right to intervene by virtue of its judicial standing and (2) it should at least be allowed in as a matter of discretion. But I join in the result announced by the Chairman, for it will keep Sun Ship in the proceeding until the propriety of its participation is ultimately determined by the Commission.

1. My fundamental difficulty with the Chairman's opinion stems from his insistence that the only approach to standing cases is to apply standards which were established to determine who may bring suits in court.⁴ He sees those standards as furnishing the complete answer to the entirely different question of who can and must be heard in Commission proceedings.

To be sure, those standards furnish an appropriate starting point, for, as our colleague Mr. Salzman has pointed out, it would be senseless to suggest that a party who meets judicial standing tests – and thus could challenge Commission decisions in court – has no standing to appear before our licensing boards. *Long Island Lighting Co.* (Jamesport Station, Units 1 and 2), ALAB-292, 2 NRC 631, 655 (separate opinion) (1975). And, for this reason, our early standing decisions had to do no more than focus on the judicial standing tests in order to rule favorably on the intervention petitions which were before us in those cases.⁵

²Dr. Buck would keep Sun Ship out of the proceeding on another ground, *i.e.*, the lack of good cause to excuse the untimeliness of its petition. I explain why I side with the Chairman rather than Dr. Buck on that point in fn. 23, *infra*.

³Whether this be done by relaxing the restrictions on who has a "right" to intervene or by allowing intervention as a matter of discretion does not take on crucial significance for me. In either case, new standards need to be set.

⁴See also his opinion in *Long Island Lighting Co.* (Jamesport Station, Units 1 and 2), ALAB-292, 2 NRC 631, 636-45 (1975). The Chairman recently joined in an opinion seeking advice from the Commission as to the validity of this approach; as that opinion makes clear, it was prompted by hints contained in a recent Commission decision in the export licensing field. *Portland General Electric Co.* (Pebble Springs, Units 1 and 2), ALAB-333, NRCI-76/6 804, referring to *Edlow International Co.*, CLI-76-6, NRCI-76/5 563.

⁵See, *e.g.*, *Duke Power Co.* (Catawba Units 1 and 2), ALAB-150, 6 AEC 811, 812-13 (1973).

But there is no reason to say that the failure to meet those tests proscribes intervention. On this score, I subscribe fully to Mr. Salzman's conclusion that, because "the stiff requirements for judicial standing were neither conceived nor designed to aid regulatory agencies accomplish their assigned tasks,"⁶ but rather were developed "for reasons largely extraneous to the administrative process,"⁷ those inflexible rules should not be employed here.

There is little to add to the cogent reasons Mr. Salzman assigned for reaching that conclusion.⁸ I would expand on his mention of *Warth v Seldin*, 422 U.S. 490 (1975) by observing that the Supreme Court there again reaffirmed that the "injury in fact" test derives from constitutional limitations on the exercise of the Article III judicial power. And it stressed that other limitations on standing, although "closely related to Article III concerns," are "essentially matters of judicial self-governance" which have to be observed lest the courts "be called upon to decide abstract questions of wide public significance even though other governmental institutions may be more competent to address the questions" 422 U.S. at 498-500. In the Court's mind, these limitations are not undercut by the argument that they may leave no one with the standing necessary to litigate a particular issue. If that were to occur it would simply reinforce the conclusion that "the subject matter is committed to the surveillance of Congress and ultimately to the political process" in that circumstance it would not do to sanction the alternative of oversight of "the conduct of the National Government by means of lawsuits in Federal courts." *United States v Richardson*, 418 U.S. 166, 179 (1974).

Thus, it cannot be denied that the principles which control access to the courts proceed from and hinge upon the limited role which our constitutional system assigns to the judicial branch of the Federal government.⁹ But this

Jamesport, *supra*, 2 NRC at 659.

⁷*Portland General Electric Co. (Pebble Springs Units 1 and 2)*, ALAB-333, NRCI-76/6 804, 808 (supplemental concurring opinion).

⁸I do not endorse Mr. Salzman's recent disclaimer that his position "was rejected by the majority of the board hearing the *Jamesport* appeal" and that subsequent appeal boards are therefore bound to apply judicial standing tests. *Pebble Springs*, *supra*, NRCI-76/6 at 808. As I read the majority opinion in *Jamesport*, and as its author appears to have read it (see his opinions in this case, *supra*, and in *Pebble Springs*, *supra*, NRCI-76/6 at 807 fn. 7) the question of the applicability of a less restrictive test was left undecided there. (The reason for this was that the entire *Jamesport* board agreed that there existed no reason to exercise discretion in the potential intervenors' favor.) All that was indicated in *Jamesport* was that it was "more probable than not" that judicial standing tests applied (2 NRC at 645); the opinion went on to decide against intervention on other grounds, namely that no good cause for the lateness of the petition had been established. Absent a ruling from the Commission, then, the question of discretionary standing would remain an open one for future boards regardless of the existence – or the validity – of the informal "practice" to which Mr. Salzman adverted.

⁹Or, as the Court has put it, the requirement of standing "is founded in concern about the proper – and properly limited – role of the courts in a democratic society." *Warth*, *supra*, 422 U.S. at 498.

Commission has an entirely different role to play. There is, then, little if anything in judicial standing principles which bears on how the Commission should decide whom it will elect to hear in order best to accomplish its unique mission. It is the very business of the Commission to resolve safety matters; it can never be accused of overstepping its bounds when it does so. It is less than useful for us to adopt irrelevant concepts that operate to deny the Commission the assistance of those who could make a significant contribution toward development of a full record on the very matters which the Commission needs to explore. In short, I would not adopt principles which, though perhaps sensible in another sphere, have no place in ours.

2. As just indicated, the heart of my disagreement with the Chairman's opinion is that I would not automatically proscribe intervention as of right by those who do not meet the judicial tests for standing. But I also part company with him on another count, for I believe Sun Ship would qualify for intervention even if the judicial standing tests were applicable. In this respect, there are two points at which I believe the Chairman's opinion goes astray

a. The first involves his insistence that the "zone of interests" test – which was established in *Association of Data Processing Service Organizations v. Camp*, 397 U.S. 150, 153 (1970) and which I discuss below (*infra*, pp. 117-119)—is the one we must apply if we import judicial standing tests into our proceedings. Although that test controls many cases, it has no application where standing "rests on an explicit provision in a regulatory statute" for such a provision can itself confer judicial standing. See *Data Processing Services*, *supra*, 397 U.S. at 153 fn. 1 see also *Sierra Club v. Morton*, 405 U.S. 727 732 fn. 3 (1972).¹⁰ That has been the rule since *FCC v. Sanders Bros. Radio Station*, 309 U.S. 470 (1940) and, while it now may have applicability in even broader circumstances,¹¹ it certainly comes into play – as it did in *Sanders Bros.* – when the particular statute under which suit is brought contains a "party aggrieved" provision. See *Trafficante v. Metropolitan Life Ins. Co.*, 409 U.S. 205 (1972). In that circumstance, a plaintiff need show only that the agency action he wishes to challenge has caused or is likely to cause him "injury in fact" in order to establish his standing.¹² See *Trafficante*, *supra* (where the standing

¹⁰In some other instances, the test of standing requires the existence of a "nexus" between the plaintiff's injury or status and the claim presented, *i.e.*, the injury must result from the allegedly illegal action; but that test, too, is inapplicable in the face of a statute "expressly conferring standing." See *Linda R.S. v. Richard D.*, 410 U.S. 614, 617-18 (1973).

Linda R.S., *supra*, 410 U.S. at 617 fn. 3.

¹²In contrast, where the relevant statute has no "party aggrieved" provision, a plaintiff who wishes to obtain judicial review under the Administrative Procedure Act – which, in 5 U.S.C. 702, grants the right to such review to any "person adversely affected or aggrieved within the meaning of a relevant statute" – must show not only that he is injured in fact but also that the "zone of interests" test is satisfied. *Sierra Club v. Morton*, *supra*, 405 U.S. at 732-33.

dispute under a party aggrieved statute centered on whether two tenants who themselves had not been discriminated against had suffered injury in fact by virtue of discrimination against nonwhite rental applicants); *Simon v Eastern Kentucky Welfare Rights Org.*, ___ U.S. ___ 48 L.Ed.2d 450, 462 fn. 22 (1976); *Warth v. Seldin*, *supra*, 422 U.S. at 501 *United States v. SCRAP* 412 U.S. 669 689 fn. 14 (1973).

None of our prior opinions focused on whether the provision of the Atomic Energy Act related to intervention before the Commission (Sec. 189a.) is analogous to the many judicial review provisions which contain "party aggrieved" language or terms of similar import.¹³ "Party aggrieved" provisions come, of course, in many other versions — e.g., "person aggrieved," "party in interest," "person adversely affected".¹⁴ the precise wording has never been deemed critical. The version which appears in the Atomic Energy Act (and is repeated in the Commission's implementing regulation) — i.e., "any person whose interest may be affected" — is not essentially different from that which Congress has used elsewhere in creating statutory aids to standing (see fn. 14, *supra*, particularly the "person who will be adversely affected" language of 21 U.S.C. 371(f)(1) and 7 U.S.C. 135b(d)). I am aware of no reason why we should construe it any differently

Moreover, reading the Atomic Energy Act the way I suggest insofar as intervention is concerned would lend a certain symmetry to that Act. For its provision governing judicial review of Commission decisions is of the classic "party aggrieved" genre¹⁵ — and as indicated earlier it would be senseless to

Although our prior decisions have referred to the "zone of interests" test, when safety claims were involved the dispute has always been over whether the petitioner was threatened with "injury in fact." (Such disputes would remain alive even under the "party aggrieved" notion of standing.) Accordingly we have never had occasion to examine the validity of the "zone of interests" branch of the judicial standing test in connection with a safety contention under the Atomic Energy Act (*Jamesport*, *supra*, involved NEPA, which plainly lacks a "party aggrieved" provision). This case prompts a more careful look at the Atomic Energy Act before we put our imprimatur on a standing test derived from decisions where there was no "party aggrieved" provision involved.

¹³See, e.g., Sec. 9(a) of the Securities Act of 1933, 15 U.S.C. 77i(a) ("person aggrieved"); Sec. 24(a) of the Public Utility Holding Company Act of 1934, 15 U.S.C. 79x(a) ("person or party aggrieved"); Sec. 313(b) of the Federal Power Act, 16 U.S.C. 825i(b) ("party aggrieved"); Sec. 701(f)(1) of the Federal Food, Drug and Cosmetic Act, 21 U.S.C. 371 (f)(1) ("person who will be adversely affected"); Sec. 4 of the Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. 135b(d) ("person who will be adversely affected"); Sec. 1(20) of the Interstate Commerce Act, 49 U.S.C. 1(20) ("any party in interest").

¹⁴See Sec. 189b. of the Atomic Energy Act (42 U.S.C. 2239(b)) which, by incorporating the judicial review provisions of the Hobbs Act (28 U.S.C. 2341-52), provides for judicial review at the behest of "any party aggrieved" by a final order (28 U.S.C. 2344). And, once suit is brought, the Hobbs Act permits intervention in that suit not only by "any party in interest" who participated in the agency proceeding but also by "communities, associations, corporations, firms and individuals whose interests are affected by the order of the agency." 28 U.S.C. 2348.

suggest that those who are entitled to seek judicial review of our decisions cannot be heard by us (see p. 113 *supra*).

If the intervention provision of the Atomic Energy Act is construed to have the same effect as a "party aggrieved" provision, then those, like Sun Ship, who demonstrate a palpable injury in fact must be allowed to participate on the basis of that showing alone. As I now discuss, however, we can dispose of this case, allowing Sun Ship to intervene under judicial standing principles, without going so far as to adopt such a construction.

b. It appears to me that Sun Ship meets even the "zone of interests" test. After all, although that test is more strict than that applied where there is a "party aggrieved" provision, it requires only that a party show that the interest it seeks to protect is "arguably within the zone of interests to be protected or regulated by the statute in question." *Association of Data Processing Service Organizations v. Camp, supra*, 397 U.S. at 153 (emphasis added).

Those few Supreme Court decisions which have turned on whether the zone of interests test was met demonstrate that the emphasis indeed must be placed on the word "arguably." The most instructive example of what the Court intended to be conveyed by its use of that word is *Arnold Tours v. Camp*, 400 U.S. 45 (1970). Because the Court's brief opinion does not entirely disclose the full import of its holding that travel agents were arguably within the zone of interests of the Bank Service Corporation Act, a fairly lengthy discussion of the case is necessary.

Arnold Tours involved a question closely connected with the one which was resolved in *Data Processing Services*. In the latter decision, the Supreme Court held that the Bank Service Corporation Act,¹⁶ which authorized and regulated banks' joint ventures into the data processing field, included within its protected zone the competitive interest of other data processors who were threatened by the entry of banks into that field.

The Court of Appeals for the First Circuit had reached a similar conclusion in a case decided in the same opinion as *Arnold Tours*.¹⁷ Indeed, *Data Processing Services* quoted extensively from the First Circuit's opinion. But in *Arnold Tours* itself, the court of appeals had found no standing on the part of travel agents to complain of competition in the form of travel services provided by banks allegedly in violation of the "incidental powers" restriction of the National Bank Act.¹⁸ On the heels of *Data Processing Services*, the First Circuit was told to reconsider *Arnold Tours*.¹⁹

On remand, the government urged the First Circuit that there was nothing

¹² U.S.C. 1861-65.

¹⁷ *Wingate Corporation v. Industrial National Bank*, 408 F.2d 1147 1152-53 (1969); certiorari denied, 397 U.S. 987 (1970).

¹⁸ *Arnold Tours v. Camp*, 408 F.2d 1147 1149-52 (1969).

¹⁹ 397 U.S. 315 (1970).

in the Bank Service Corporation Act or its legislative history that in any way indicated that Congress was concerned about the competitive interests of travel agents. The court of appeals agreed. Noting that the Bank Service Corporation Act dealt only with the furnishing of data processing services, it held that there was no indication of any Congressional concern over the competitive interests of travel agents. 428 F.2d 359 361 (1970).

In a brief opinion, the Supreme Court reversed summarily explaining that its decision in *Data Processing Services* “did not rely on any legislative history showing that Congress desired to protect data processors alone from competition” in enacting the Bank Service Corporation Act. 400 U.S. at 46. Thus, even though neither the Solicitor General nor the First Circuit could find any indication of any Congressional concern whatsoever over the competitive interests of travel agents, the Supreme Court thought it so plain that the travel agents were arguably within the protected zone of interests that it was not even necessary to hear oral argument on the point.

The net result was that the plaintiff travel agents, who were alleging on the merits that a national bank’s conduct would violate the National Bank Act’s “incidental powers” restrictions, were found to be arguably within the zone of interests protected by an entirely different statute – the Bank Service Corporation Act – which they did not allege was violated and which regulated only the providing of data processing services, not travel services. This result represents the Supreme Court’s most significant application of the zone of interests test.²⁰

The Court’s decision teaches me that protected zones do not come with sharply defined contours. To the contrary at the outer edges there is room for imprecisely defined interests which, although perhaps not embraced in the primary Congressional purpose, are generally in harmony with a statute’s underlying goals. We must take precaution against circumscribing too narrowly the Atomic Energy Act’s zone of interests and thereby excluding interests which, though peripheral, are arguably worthy of protection.

In this connection, it is at least arguable that Congress was so concerned about safety when it enacted the Atomic Energy Act that it intended to guard against any injury – direct or indirect – that might stem from an accident. As we have said before, Congress structured the Atomic Energy Act “to make certain that public safety was a paramount issue at every stage in processing applications” the Commission itself “has interpreted the Atomic Energy Act to

²⁰This may not have been the last time the Supreme Court had occasion to apply – rather than just recite – the zone of interests test. Cf. *Investment Company Institute v. Camp*, 401 U.S. 617 620-21 (1971). But, at least for the most part, its more recent standing decisions either have involved a different test or have not needed to reach the “zone of interests” question. See *Sierra Club v. Morton*, *supra*, 405 U.S. at 733, fn. 5 (1972); *Schlesinger v. Reservists Committee to Stop the War* 418 U.S. 208, 227 fn. 16 (1974); *Simon v. Eastern Kentucky Welfare Rights Org.*, *supra*, 48 L.Ed. 2d at 461 fn. 19 (1976).

mandate ‘that the public safety is the first, last, and a permanent consideration in any [licensing] decision’²¹

This being so, the applicant and my colleagues are misguided in their efforts to characterize Sun Ship’s interest in a manner that will enable them to excise it, by superficially precise strokes, from the zone protected by the Atomic Energy Act. The simple facts are these – (1) the potential intervenor was involved in the construction of this facility; (2) it has demonstrated that it has an interest in the proceeding; and (3) it would bring before us a contention that the part of the plant which it worked on is unsafe. Sun Ship stands to suffer real – albeit indirect – injury if the design errors which it claims exist in the facility are not corrected and an accident occurs. Just as the Court said that not only data processors are arguably protected from competition, we should hold that not only those in the path of radioactive emissions are arguably protected from the consequences of an accident.

While the Atomic Energy Act’s safety provisions permit me to draw the conclusion that Sun Ship’s interest is arguably within the statute’s protected zone, my conclusion is reinforced by that Act’s Price-Anderson provisions. The financial protection conferred by those provisions extends at least in some measure to fabricators and suppliers. (42 U.S.C. 2210(c), 2014(t); see S. Rep. No. 94-454 94th Cong., 1st Sess., pp. 6, 9 (1975), referring to the protection from liability afforded to contractors.) Although Price-Anderson may not protect them completely²² it demonstrates on its face substantially more Congressional solicitude for their pocketbook interests than a statute dealing with data processing shows for the interests of travel agents. Since the Bank Service Corporation Act was held to confer standing on travel agents to litigate claims dealing with alleged violations of the National Bank Act, the Price-Anderson provisions must be viewed as bringing the interests of fabricators and suppliers within the Atomic Energy Act’s protected zone to the degree necessary to confer standing upon them to litigate their safety claims. In short, in the light of the Supreme Court’s handling of *Arnold Tours*, it is not stretching matters to say that the Atomic Energy Act arguably includes Sun Ship’s interest within its protected zone.

For the foregoing reasons, I would prefer to affirm now the decision of the Licensing Board to permit Sun Ship to intervene. As I stated at the outset, however, I am willing to join Chairman Rosenthal in deferring final action on the

²¹ *Consumers Power Co. (Midland Units 1 and 2)*, ALAB-315, NRCI-76/2 101, 103, quoting *Power Reactor Company v. Electricians*, 367 U.S. 396, 402 (1961), which in turn was quoting from *In re Power Reactor Development Company*, 1 AEC 128, 136 (1959).

²² See the Board’s opinion, *supra*, p. 105, fn. 8.

appeal, for Sun Ship will remain in the proceeding in the interim and may ultimately have its right to intervene recognized.^{2 3}

^{2 3}Dr. Buck would deny intervention outright on the ground that Sun Ship has not established any "good cause" that would permit us to overlook the lateness of its petition. He presents a forceful argument in support of that position. But it is not as clear to me as it is to him that Sun Ship was totally unjustified in waiting as long as it did to intervene. The Schorsch affidavit upon which he places reliance begins its recitation of facts with the statement that Sun Ship "has come to possess information relative to the safety of the North Anna supports" in "the course of preparing to defend itself against" the VEPCO lawsuit. Although the affidavit does not indicate when each particular fact became known, it does not concede they all were known long ago. And, of course, at this stage we ought to construe the pleadings in the light most favorable to Sun Ship. *Conley v. Gibson*, 355 U.S. 41 (1957). If the sequence of events can be fairly characterized in the manner Sun Ship does (see pp. 2-5 of its appellate brief), there was at least some justification for the delay in attempting to intervene.

I should add that I can agree with Dr. Buck to the extent that he believes it likely that Sun Ship is primarily motivated by financial considerations rather than by an altruistic interest in public safety. But, as was pointed out in *Jamesport*, the desire to protect one's financial interests has never been viewed as an improper reason for instituting litigation. 2 NRC at 657 (opinion of Mr. Salzman). And I am unwilling to speculate that Sun Ship's entry into this proceeding, even if financially motivated, is a purely obstructionist tactic designed to obtain for it an improper advantage in its other litigation with VEPCO. For it may well benefit financially if it can demonstrate to us in straightforward fashion the validity of its claim that safety problems exist at North Anna which are attributable to VEPCO's faulty design rather than to any faulty workmanship by Sun Ship.

Opinion of Dr. Buck, dissenting:

The net result of Mr. Rosenthal's Opinion for the Board (hereinafter referred to as the majority opinion) is that — at least until the Commission has ruled upon the standing questions which we certified to it¹ — Sun Ship is to be permitted to participate as an intervenor in this operating license proceeding. Although I have no quarrel with much of the analysis in the majority opinion,² I disagree in one significant respect: in my view Sun Ship has neither shown "good cause" for the tardiness of its intervention petition nor satisfactorily demonstrated that a balance of the four factors specified in 10 CFR §2.714(a) warrants its intervention notwithstanding the lack of good excuse for that tardiness. Indeed, because of the special circumstances attendant to Sun Ship's petition, the relevant factors tend strongly to dictate its rejection. That being so, I would deny outright the Sun Ship petition. *Long Island Lighting Co.* (Jamesport Nuclear Power Station, Units 1 and 2), ALAB-292, 2 NRC 631 (1975). I must therefore respectfully dissent.

1 Late intervention petitions are governed by the requirements of 10 CFR §2.714(a), which provides in relevant part:

Nontimely filings will not be entertained absent a determination that the petitioner has made a substantial showing of good cause for failure to file on time, and with particular reference to the following factors . . .

(1) The availability of other means whereby the petitioner's interest will be protected.

(2) The extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record.

(3) The extent to which petitioner's interest will be represented by existing parties.

(4) The extent to which the petitioner's participation will broaden the issues or delay the proceeding.

The Commission has given guidance on the interpretation of this provision,

¹*Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), ALAB-333, NRCI-76/6 804 (June 22, 1976).

²I agree with Mr. Rosenthal that Sun Ship, despite a marginal injury in fact showing, would not have judicially cognizable standing to participate here. I also recognize that, under normal circumstances, questions of the type raised by Sun Ship might provide a basis for permitting intervention as a discretionary matter, should that course of action be available. The special circumstances of Sun Ship's petition, however, here rule out any intervention on that basis.

noting that it requires the consideration not only of the justification advanced by the petitioner for its tardiness but, in addition, each of the four specified factors. *Nuclear Fuel Services, Inc. (West Valley Reprocessing Plant)*, CLI-75-4, 1 NRC 273 (1975). Although the section is intended to provide a certain amount of discretion to admit a late petitioner, the Commission has stressed that such petitioners “properly have a substantial burden in justifying intervention on the basis of the other factors in the rule is considerably greater where the latecomer has no good excuse.” Further, no one factor is necessarily controlling; and “favorable findings on some or even all of the other factors in the rule need not in a given case outweigh the effect of inexcusable tardiness” (*id.*, 1 NRC at 275).

With that in mind, I turn to Sun Ship’s petition.

2. Sun Ship’s intervention petition was not filed until March 26, 1976, almost three years after the date it was due (June 25 1973).³ As its excuse for the tardy filing, Sun Ship asserted in its intervention petition that, as a result of discovery in a law suit filed against it in November 1974 by VEPCO it became aware of the following new information (petition, paragraph 5):

(a) VEPCO and/or its agents have misrepresented and have not disclosed to the Commission the full extent of VEPCO’s knowledge concerning the presence of subsurface defects in the reactor coolant system supports, arising out of a generic design deficiency in the supports.

(b) The materials from which the supports were fabricated are inherently susceptible to brittle fracture, a phenomenon which would cause the support to shatter at loads less than the design loads, or even under no loads at all.

(c) The materials and design of the supports render them especially susceptible to lamellar tearing, and the actual presence of lamellar tearing in these supports is confirmed by physical specimens obtained by Petitioner.

(d) The confirmed presence of lamellar tearing as well as numerous types of weld defects in these supports, coupled with the general susceptibility of the materials from which these supports are fabricated to fracture, increases the risk that these supports may fracture in a brittle manner, at loads far less than their design loads.

Newly discovered information may of course, serve as a basis for finding “good cause” for the untimely filing of an intervention petition. And on its face, Sun Ship’s intervention petition sets forth assertions which, if true, might well warrant a board giving serious consideration to acceptance of the petition not-

³The notice of opportunity for hearing was published on May 25, 1973 (38 FR 13772), and it required intervention petitions to be filed by June 25, 1973.

withstanding its tardiness. But are these assertions credible? Is newly discovered information in fact involved? In my view the papers presented in support of the petition clearly establish that, insofar as Sun Ship is concerned, the information was not newly discovered in March 1976, but indeed was known to it at an early stage of this proceeding and long before the November 1974 commencement of the judicial action by VEPCO against Sun Ship. Further, those papers show extensive reporting by VEPCO to the Commission on this subject as early as 1973.

I begin with the affidavit of Eugene Schorsch, Vice President, Corporate Science and Technology of Sun Ship, which accompanied the intervention petition. Mr. Schorsch explicitly admits to longstanding knowledge of the very facts that Sun Ship's petition claims were discovered by the company only as a result of the judicial proceeding which began in November 1974. To comprehend the significance of this admission, it will be helpful to review in some detail the pertinent parts of his affidavit.

As background, the affidavit described certain of the design requirements of the North Anna support structures, particularly the specification of A-36 steel, the fact that such steel is not produced to any toughness standards, the availability "for years" of processes to enhance toughness and the lack of a requirement by VEPCO that any such process be used. Specifically Mr. Schorsch stated:

4.⁴ The North Anna supports as designed by VEPCO and its design agent, Stone & Webster, are very rigid structures, composed of thick, heavy members, with massive welded connections. Such a design unavoidably introduces enormous residual welding stresses in the course of fabrication, stresses which undoubtedly often approach the yield point of the material being joined.

5. It is also significant that the primary material required by this design is A-36 steel, in the heaviest available rolled shapes. Indeed, for the designer's selection of A-36 steel was that it was one of the few steels commercially available in such heavy shapes.

6. There are several aspects of such materials that relate to their suitability in structures of this sort. First, being shapes, they are not cross rolled as are plates, but are rolled in one direction only. Furthermore, being heavy shapes, they receive far less working than do lighter shapes. This lesser reduction in cross section area results in greater nonhomogeneity in microstructure, and larger nonmetallic inclusions. These offer sites for internal initiation of cracks. Being larger shapes they have a slower cooling rate than smaller shapes, thus producing a coarser grain with typically lower tough-

⁴ Paragraph numbers refer to those in the affidavit. Emphasis is supplied.

ness. As a consequence of single direction rolling, they are anisotropic — *i.e.*, their properties are not the same in all directions. Particularly in the dimension transverse to the direction of rolling (the “through-thickness” dimension), they are typically of lower yield point and lower toughness.

8. *A-36 steel is one of those steels that is not produced to any toughness standard*, such as a nil ductility transition temperature (NDTT) standard. Again, therefore, it now appears that the designer’s requirement of the use of A-36 steel in heavy rolled shapes introduces elements of uncertainty as to the safety of these structures.

9 Although processes are *and for years have been* available for toughness enhancement of this type of steel, no special processing was specified for this steel.

Mr. Schorsch also described the conditions which must exist to initiate brittle fractures (*i.e.*, a rapid fracturing which may occur when steel becomes embrittled):

36. It is generally agreed that three conditions must coexist in order to initiate a brittle fracture. These are:

(a) a tensile stress;

(b) a notch or stress concentration; and

(c) a temperature below the transition temperature of the steel in question.

He opined that “[a]ll three of these conditions may exist in the North Anna support structures” (*id.*, par. 37).

Mr. Schorsch further indicated that brittle fracture may be induced by lamellar tears (par. 29); he described such tearing and stated that it was a form of cracking known to exist in 1971 and in fact encountered by Sun Ship in its fabrication for VEPCO:

12. Lamellar tearing is a form of cracking that can occur in weldments which have high stresses in the through-thickness dimension. It is characterized by a step-like separation in the area adjacent to and below the heat-affected zone of a weld.

14. *When Sun Ship was fabricating these structures [1971-72] it did encounter cracking which exhibited all the characteristics of lamellar tearing.*

15. At that time, under the specifications to which Sun Ship was working, the only nondestructive examination technique specified for areas susceptible to lamellar tearing was magnetic particle inspection.

16. *Because of its concern regarding lamellar tearing, Sun Ship suggested to*

VEPCO's design agent Stone & Webster early in the course of fabrication [1971-72] that a program be instituted to determine, by ultrasonic inspection, a technique for the detection of subsurface lamellar tearing a possibility which Sun Ship considered very real, in view of the large number of cracks which were propagating to the surface.

Finally Mr. Schorsch went on to state that, after VEPCO had discovered the weld cracks in the support structures and attempted to repair the welds (in 1973), lamellar tearing continued to be experienced.

24. Instead of addressing the basic design problems in these supports, as by changing the base material and/or the joint details, VEPCO proceeded to have all the original welds removed and replaced, at a cost approximately ten times that of the original welding cost.

25. Notwithstanding far more stringent welding and inspection procedures, the fabricators of the repair welds *continued to experience lamellar tearing* in these supports.

The affidavit of William S. Pellini, an outside consultant of Sun Ship, confirms that the fracture problems described by Mr. Schorsch are not unique to the North Anna facility but rather are of a type which generally might be expected to occur in situations such as that existing with respect to structures incorporating A-36 steel:

8. In the absence of [information as to the fracture properties of the North Anna support structures] reasonable estimates that can be made of expected NDT temperatures indicate that brittle behavior of the A-36 and A-572 steel can be expected at ambient temperatures potentially as high as 80°F to 110°F Failure analyses have disclosed that brittle fractures generally develop at temperatures that are equal to or below NDT temperatures. Accordingly this experience indicates that reliability of the structures is in question if the estimates of the NDT temperatures for the steels in these structures prove to be correct.

Despite its present protestations of concern for the public safety Sun Ship accepted the order for steam generator and cooling pump supports in 1971 and shipped the finished fabrications in 1972, apparently fully aware of the insufficiency of the specifications and the likelihood or at least potentiality of fracture problems with the A-36 steel. *Later Sun Ship discovered that, despite all its expressed safety concerns, it had not completed properly the one nondestructive test required by VEPCO.* When VEPCO received notification of this error, it ordered ultrasonic inspection of the structures which “disclosed the existence of numerous cracks in the support structures, and gave indications of internal weld

defects which VEPCO concluded were unacceptable in these supports" (see Sun Ship Petition for Intervention, pars. 3(e) and (f)).

Did Sun Ship, therefore, know about the safety hazards of the support structures due to lamellar tearing, embrittlement and resultant weld cracking prior to the November 1974 lawsuit? Its petition says no, but the sworn statement of its chief scientist (supported by knowledge generally prevalent in the field) contradicts that assertion.

Finally with respect to the allegations of inadequate reporting to the Commission, Sun Ship apparently ties this charge solely to the failure of VEPCO to provide complete information about the lamellar tearing (see Schorsch affidavit, par.23). But the record before us indicates that, when VEPCO learned of potential defects in the support structures, it provided extensive information to the Commission on that subject and also undertook substantial corrective action.

As reflected in its letter of March 3 1976⁵ (which confirmed its prior telephone advice of February 27 1976, to the Commission), VEPCO promptly reported that it had been informed by Sun Ship (1) that the material used in the fabrication of the support structures (the A-36 steel) may not have acceptable nil ductility transition temperature characteristics, and (2) that VEPCO's prior reports to the Commission on this matter failed to mention lamellar tearing as a possible factor contributing to the weld problems. At least in the latter regard, however, Sun Ship's allegation concerning VEPCO's reporting of lamellar tearing appears to have been inaccurate. For the March 3 1976, communication also recounts that VEPCO had notified the Commission on May 25, 1973, of a problem with the weldments, that a further interim report was submitted on June 22, 1973 and that a final report dated November 14 1973, described (1) the deficiencies which had been found (*addressing, among other things, the subject of lamellar tearing*); (2) the immediate actions which were taken; and (3) the repair program that was implemented to correct the situation (involving the replacement of all welds in a manner designed to minimize lamellar tearing). The letter also mentions the knowledge and involvement of NRC inspectors in the support structure problem.

I need not determine the adequacy or completeness of VEPCO's reports, or of the corrective actions taken by the company to be satisfied that VEPCO provided the Commission at least with sufficient information to bring to light the subject matter of Sun Ship's concern, particularly the lamellar tearing, to a degree sufficient to promote an NRC inquiry into any underlying potential safety problems and their resolution. Furthermore, the Commission did not ignore the information but instead investigated the problems involved. That being so, the alleged discovery by Sun Ship of inadequacies in the reports —

⁵ This letter was attached to Sun Ship's March 26, 1976, intervention petition as Exhibit A.

unspecified but apparently related to lamellar tearing, about which the Commission already had been informed—can scarcely be deemed the type of new information which could justify a late intervention.

In its order finding “good cause” for the tardy petition, the Licensing Board acknowledged that Sun Ship did indeed have knowledge of the possible fracture problems at an early date. The majority opinion here also does so (p.108, fn. 14, *supra*). The Licensing Board, however, found the delay to be justified in view of (1) Sun’s report to VEPCO in August 1975 of significant problems with the welds; (2) the more recent confirmation of weld defects through a core sample program; and (3) VEPCO’s indications to Sun Ship in March and April 1976 that further corrective action would not be taken. The majority opinion here characterizes such excuse as “no more than marginal” but nevertheless accepts it on that basis. In my view however, both the Licensing Board and the majority here ignore the fact that Sun reported possible problems to VEPCO long before August 1975 and that it reached the conclusion at an early date that the corrective actions being undertaken by VEPCO would not or could not be successful.

Irrespective of whether that view is correct, Sun Ship, which holds itself out as an expert in the field of heavy steel structures, had an obligation — if it wished the AEC or later the NRC to resolve its questions — to bring its doubts to the Commission’s attention far earlier than it did. If it were truly motivated, as it claims, by concerns for public safety it surely would have done so. As we shall see, however, I believe that Sun Ship’s motivation arises from other, not-so-salutary sources. Furthermore, Sun’s failure to bring its questions to the Commission’s attention earlier makes a mockery of the Commission’s early hearing procedures, which are designed to foster early exposure of potential problem areas. Suffice it to say at this juncture that the excuse accepted by the Licensing Board and to some extent by the majority here is of no validity whatsoever and, in my opinion, should be given no credence.

3. Despite the invalidity of Sun Ship’s excuse for tardiness, the four factors set forth in 10 CFR §2.714(a) must still be weighed. Before doing so, however, I believe it appropriate to consider Sun Ship’s reasons for wishing to intervene in this proceeding. For in weighing the specified factors and exercising the discretion which they entail, the purpose for which intervention is sought and the interest which it seeks to protect become relevant.

Sun Ship purports to represent the public interest in exposing potential safety problems. But were that so, it would not, in my estimation, have waited almost three years to bring these problems to the Commission’s attention. It would have wished to subject any questions it had to public ventilation and scrutiny in order to seek to achieve their proper resolution at an early date — particularly since construction of the plant was in the meanwhile moving ahead and correction of any problems would concomitantly become more difficult.

Why then did Sun Ship wait so long to act? The only plausible reason which

I, perceive stems from its legal dispute with VEPCO Sun Ship, in my view is not motivated by public interest considerations but rather by the existence of that dispute; in simple terms, it appears to be attempting to inject itself into the NRC proceeding in order to give it a tactical advantage in its court dispute with VEPCO. While that circumstance may not, as the Licensing Board opined, act to defeat any legal right which Sun Ship might have in participating in the NRC proceeding, it surely is relevant to our discretionary determination as to whether a late intervention should be permitted. Moreover, it of necessity must color our consideration of the four factors.

In short, Sun Ship appears to be attempting to use the NRC proceeding for a purpose not contemplated by the statute which authorizes such proceeding. The Atomic Energy Act has established a forum for the ventilation of issues bearing upon the public health and safety the common defense and security or the environment. See Section 182a. of that Act, 42 U.S.C. §2232(a), and 10 CFR §2.104(c). It did not create an arena to which private parties could resort for the settlement of essentially private disputes. Sun Ship's invocation of the public interest here seems likely to be motivated by just such a purpose. In my view it is a "mere sham" (see *Eastern R.R. Conference v. Noerr Motor Freight*, 365 U.S. 127 144 (1961)) and must be so treated by us in considering whether to exercise our discretion in favor of letting Sun Ship participate in this proceeding. The "power, strategy and resources" of Sun Ship may not be used to "harass and deter" VEPCO in its participation in the adjudicatory proceedings being conducted with respect to the North Anna license application. Cf. *California Motor Transport Co. v Trucking Unlimited*, 404 U.S. 508 511 (1972).⁶

⁶ Mr. Rosenthal's opinion discounts my conclusions as to Sun Ship's motivation as being founded upon inferences not adequately supported by the record (p. 110, fn. 16, *supra*). Mr. Farrar adds that he is unwilling to speculate that Sun Ship's entry into this proceeding, even if financially motivated, is a purely obstructionist tactic (p. 120, fn. 23, *supra*). I respectfully disagree. Conclusive evidence of improper motivation is not, of course, likely to be obtainable; a party is scarcely likely to advertise any dubious motives which it may be pursuing. To some extent, therefore, reliance upon inferences of motivation not *completely* founded upon record evidence must of necessity be undertaken, assuming that one believes — as I do — that such motivation is relevant to the discretionary determination which we are called upon to make. Taking into account the strong suggestions on this record of an improper motivation — including Sun Ship's longheld belief that problems existed and its failure to take any action to bring such problems to our attention until such time as doing so could benefit it in its court litigation — I feel that I would be remiss if I were not to accord weight in this instance to my views of Sun Ship's motivation, inferred in part though they may be.

Moreover, as should be apparent from the preceding discussion in the text, I do *not* agree with Mr. Farrar's assumption that the "sequence of events can be fairly characterized in the manner Sun Ship does" (*ibid.*). The inconsistencies between the petition and the Schorsch affidavit, and within the affidavit itself (compare passages quoted at pp. 123-125, *supra*, with par. 3, quoted by Mr. Farrar), convincingly undercut that assumption.

4. Given what I view as Sun Ship's improper motive for wishing to participate in this proceeding, the answer resulting from the weighing of the four factors is almost compelled. Taking the first and third factors together — the availability of other means whereby the petitioner's interest will be protected and the extent to which the interest will be represented by existing parties — the short answer is that Sun Ship's interest in improving its litigation posture is not one which should be recognized in an NRC licensing proceeding but rather should be confined to the court having cognizance over the Sun Ship — VEPCO litigation. In that regard, the comment in the majority opinion that that court will not be empowered to withhold the issuance of the North Anna operating licenses, while true, misses the crucial point: to the extent that Sun Ship is attempting to preclude or delay the issuance of such licenses, it appears to be doing so only as a means of improving its stance in the court litigation. That being so, the first and third factors must be weighed against Sun Ship's participation.

The second factor — the extent to which Sun Ship may reasonably be expected to assist in developing a sound record — is somewhat more clouded. As the majority opinion points out, VEPCO itself has conceded that Sun "may well assist in development of the record" (*supra*, p. 108). But given what I view as Sun Ship's true motivation, as reflected in its reluctance to come forward promptly with the safety questions which it had, the possibility of its assistance in developing a sound record is somewhat conjectural. Moreover, before the Licensing Board, the staff (while voicing no objection to Sun Ship's participation) indicated that it too was conducting a thorough investigation of the matters sought to be raised by Sun Ship [answer to intervention petition, pp. 2 3]

The Staff has initiated its own investigation as to the acceptability of the supports for the steam generator and reactor coolant pumps for North Anna. The Commission's Office of Nuclear Reactor Regulation and Office of Inspection and Enforcement are conducting interviews and inspections into this matter, and will evaluate the supports in light of currently accepted techniques and specifications. The Staff's review will include a full effort to elicit the details of Petitioner's allegations and to ascertain whether they have any factual basis. The Staff will report the results of its independent review to the Board

In addition, the Board itself indicated that, irrespective of Sun Ship's participation, it would fully explore the questions which had been raised (see majority opinion, p. 108, fn. 15, *supra*). The Board is empowered, of course, to subpoena as its own witnesses those representatives of Sun Ship who might assist it in the resolution of those questions (10 CFR §2.718(b)). In these circumstances, the inquiry which the staff and the Board are undertaking is likely to

produce an adequate record on the questions raised.⁷ The second factor therefore, appears to be neutral in its effect.

As for the fourth factor – the extent to which Sun Ship’s participation will broaden the issues or delay the proceeding – it appears that the issues are not likely to be broadened, in view of the inquiry which in any event will be conducted. But delay nevertheless may well result. For given what I perceive as its questionable motive for seeking to participate, it is not entirely beyond the realm of possibility that Sun Ship would seek delay-for-delay’s sake in order to better its litigation posture. And as we previously have had occasion to point out, “tactics which necessarily result in delay-for-delay’s sake are not to be tolerated.” *Commonwealth Edison Co.* (Zion Station, Units 1 and 2), ALAB-196, 7 AEC 457 467 (1974). All things considered, the fourth factor weighs against the participation of Sun Ship.

In sum, at least three of the four factors point in the direction of finding “no good cause” for overlooking the lateness of Sun Ship’s petition. When coupled with the insubstantial reasons advanced for the lateness of the petition, it is apparent to me that Sun Ship’s intervention should have been denied and that the Licensing Board’s order should be reversed.

5. One further matter calls for comment. The majority opinion notes that Sun Ship has expressed an intent to participate actively on all issues raised in the proceeding, whether or not within the scope of its own contentions and asserted interest (p. 111 fn. 19 *supra*). It also notes that the staff has asked us to limit Sun Ship’s participation to the “limited area of its interest relating to steam generator and reactor coolant pump supports.” The majority declines, however to adopt that course of action, contenting itself with referring as a matter of guidance to our previous discussion of this subject in *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-244 8 AEC 857 864-71 (1974), *reconsideration denied*, ALAB-252, 8 AEC 1175, 1178-81 (1975), *affd.*, CLI-75-1 1 NRC 1 (1975).

In my view assuming that Sun Ship is to be admitted at all, the staff’s point is well taken. Section 2.714(f) specifically provides that, where a petitioner’s interest is “limited to one or more of the issues involved in the proceeding, any order allowing intervention shall limit his participation accordingly.” As the majority opinion notes, we explicitly referred to this limitation in our *Prairie Island* discussion (ALAB-244 *supra*, 8 AEC at 868, 870). Given the circumstances which gave rise to Sun Ship’s late intervention, and the very narrow area of interest which the majority opinion (with my concurrence) recognizes, the

⁷ If Sun Ship has in its possession or control evidence bearing upon these questions which it believes the parties to this proceeding are not aware of, I would, of course, urge it to make that evidence available to those parties or the Board. See *Consolidated Edison Co. of New York, Inc.* (Indian Point, Units 1, 2 and 3), ALAB-304, NRCI-76/1 1, 7 (January 6, 1976).

condition sought by the staff in my view is compelled and should not be left open to later consideration.

Needless to say the only interest Sun Ship would have in issues not raised by it would be to assist its defense against the VEPCO suit. None of those issues could have any possible bearing on Sun Ship's asserted interest in protecting its reputation. Indeed, before the Licensing Board, Sun Ship admitted that its participation in issues not raised by it was premised upon, if not motivated by its need to develop information relevant to one of the issues in the court litigation (Tr. 2038). It also acknowledged that it then had no information on those other issues (Tr. 2038-9). Sun's participation in the resolution of those issues would therefore appear to have the prospect of delaying the North Anna proceeding without contributing to the informed evaluation of the various issues which must be undertaken. As I earlier indicated, such "delay-for-delay's sake" should not be tolerated.

To reiterate, Sun Ship's petition was unjustifiably late, and weighing of the four specified factors does not in this situation counterbalance such lateness. The petition should be rejected. In any event, if Sun is admitted, its participation should be confined to the limited area on which it bases its belated intervention request.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-30

ATOMIC SAFETY AND LICENSING BOARD

Thomas W. Reilly Chairman
Frederick J. Shon
Dr. Frederick P. Cowan

In the Matter of

Docket Nos. 50-259 O.L.
50-260 O.L.

TENNESSEE VALLEY AUTHORITY

(Browns Ferry Nuclear Plant,
Units 1 and 2)

August 20, 1976

The Licensing Board authorizes issuance of operating license amendments proposed as a result of the March 22, 1975, fire.

GENERAL STATEMENT OF POLICY ON FUEL CYCLE. INTERIM
LICENSING SUSPENSION

Where amendments to an already existing operating license do not require an environmental impact statement, they are exempt from the interim licensing suspension ordered by the Commission's General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle (41 F R 34707 (August 16, 1976)).

TECHNICAL ISSUES DISCUSSED: Fire protection measures; reportable occurrences; abnormal occurrences; NRC inspection program.

INITIAL DECISION
(Amendments to Operating Licenses)

Appearances

David G. Powell, Esq., and William Dunker, Esq., and Bruce Rosenberg, Esq., of Knoxville, Tennessee for the Licensee, Tennessee Valley Authority

William E. Garner Esq., of Scottsboro, Alabama, for himself, as Intervenor *pro se*.

James R. Tourtellotte, Esq., and James M. Cutchin, IV Esq., and Barry H. Smith, Esq., and Lawrence Brenner Esq., of the Office of the Executive Legal Director U.S. Nuclear Regulatory Commission, Washington, D.C., for the NRC Regulatory Staff.

I. INTRODUCTION

On October 7 1975 the U.S. Nuclear Regulatory Commission published in the *Federal Register* a notice of "Proposed Issuance of Amendments to Facility Operating Licenses" (Nos. DPR-33 and DPR-52) for the operation of Browns Ferry Nuclear Plant, Units 1 and 2, located in Limestone County Alabama. 40 *Fed. Reg.* 46365. The holder of the operating licenses is the Tennessee Valley Authority (Licensee or TVA). As set forth in the notice, the proposed amendments would, *inter alia*:

Modify in a number of details and would reinstate the Technical Specifications authorizing operation of Browns Ferry Nuclear Plant, Units 1 and 2, upon satisfactory completion of the work required to restore the plant following the March 22, 1975, fire. This work includes design modifications to provide additional protection against the damage of both redundant components of engineered safeguards equipment from postulated future fires.¹

The notice provided the opportunity for the filing of a request for a hearing with respect to the proposed licensing action by November 6, 1975 in the form of a petition for leave to intervene in accordance with the requirements of 10 CFR §2.714

On November 6, 1975 Mr. William E. Garner (Intervenor), an attorney representing himself, filed a "Petition for Leave to Intervene and Demand for Hearing." The Licensee's answer of November 18, 1975 opposed Mr. Garner's petition and asked that it be denied. The NRC Staff's response of November 26, 1975 also found the petition deficient. However, the Staff's response further suggested that Mr. Garner be given an opportunity to cure the defects because, as stated in Mr. Garner's petition, certain documents relating to the March 22, 1975, fire were not available to Mr. Garner in adequate time prior to the filing date of his petition. In the circumstances, the Board, by its December 24, 1975, "Order Extending Time to Perfect Petition," as supplemented by the Board's

The notice also included various other categories of proposed amendments which are unrelated to the March 22, 1975, fire. No contentions have been admitted with respect to the issuance of proposed amendments other than those related to the fire. Accordingly this proceeding did not deal with the subject matter of those proposed amendments which are not related to the March 22, 1975, fire.

Order of January 15 1976, granted Mr. Garner an opportunity to file an amended or supplemental petition by January 29 1976. The Board expressly deferred taking any position on the original petition, and indicated that if Mr. Garner declined to make a further filing, the Board would base its ruling on the original petition.

On January 29 1976, Mr. Garner filed a "Perfected Petition." Both the Licensee and the NRC Staff responded (on February 10 and 11 1976, respectively) that Mr. Garner's petition for intervention as amended, failed to meet the requirements of §2.714 and should be denied.

On March 11, 1976, the Board issued its "Ruling on Petition to Intervene" which found that Mr. Garner had satisfied the interest and contention requirements of §2.714. As noted in that ruling (pp. 4-5), the Board, in its discretion, included in its consideration of the sufficiency of the petition various unauthorized pleadings filed by Mr. Garner in an extensive analysis which led to the conclusion that Mr. Garner had met the requirements of §2.714.

Subsequent to the Board's order, the parties were able to work out agreed wording for three contentions which would be advanced by the Intervenor in this proceeding. These contentions were read into the record of the April 1 1976, prehearing conference, and were confirmed by a typewritten version provided to the Board and the parties. As reflected in the "Prehearing Conference Order," dated April 26, 1976, the Board accepted and adopted the three agreed-upon contentions as framing the issues in controversy in this proceeding. Those contentions read as follows:

1. Intervenor contends that the presently proposed modifications at Browns Ferry Units 1 and 2, will be inadequate to provide adequate protection against the functional damage of both redundant components of engineered safeguards equipment from postulated future fires, unless the following necessary modifications are also made:
 - A. TVA should be required to have an independent cable spreading room for each reactor unit at Browns Ferry Units 1 and 2;
 - B. NRC should require TVA to have at least one three-foot wide, eight-foot high aisle in each cable spreading room,
 - C. TVA should be required to use cables that do not liberate corrosive gases;
 - D. TVA should be required to have the power supply to the ventilation system for all potential fire areas outside the fire areas;
 - E. All redundant Class IE circuits and the equipment served by these circuits should be separated by a fire barrier wall;
 - F. A standard installation of open-head, water spray sprinklers controlled by an automatic deluge valve and products-of-combustion actuated detectors should be provided in each cable spreading room. The deluge valve should be located outside the room and connected to the plant's annunciator system.

2. Intervenor contends that TVA personnel are not technically qualified and competent to satisfactorily complete the work required to restore Browns Ferry Units 1 and 2, after the fire damage, or to satisfactorily complete the design modifications of Browns Ferry Units 1 and 2, necessary to provide adequate protection against the functional damage of both redundant components of engineered safeguards equipment from postulated future fires, as evidenced by:
 - A. TVA has been guilty of a number of violations of NRC requirements and has experienced an unusually large number of "safety-related occurrences" at the Browns Ferry plant (to be identified by Intervenor by April 23 1976); and
 - B. TVA has had "construction anomalies" in building the Browns Ferry plant and did not adhere to the original AEC construction requirements as identified in the NRC Office of Inspection and Enforcement Report on the investigation of the March 22, 1975, fire, dated July 25, 1975 and in the testimony of NRC officials before the Joint Committee on Atomic Energy hearings on the March 22, 1975 fire. Therefore, it is unrealistic to expect that future NRC requirements or approved modifications will be adhered to.
3. Intervenor contends that NRC's inspection and surveillance program as it relates to Browns Ferry Units 1 and 2, is insufficient to assure that TVA satisfactorily completes the work required to restore Browns Ferry Units 1 and 2, after the fire damage, or to assure that TVA satisfactorily completes the design modifications of Browns Ferry Units 1 and 2, necessary to provide adequate protection against the functional damage of both redundant components of engineered safeguards equipment from postulated future fires, based on NRC's failure to timely detect the deviations from the original AEC construction requirements, as identified in the NRC Office of Inspection and Enforcement Report on investigation of the March 22, 1975 fire, dated July 25, 1975 and in the testimony of NRC officials before the Joint Committee on Atomic Energy hearings on the March 22, 1975 fire.

As reflected in the "Agreement and Stipulation Between Tennessee Valley Authority Nuclear Regulatory Commission Staff and William E. Garner," served on the Board on July 20, 1976, the stipulated contentions were further modified. By this further agreement, Mr. Garner withdrew Contention 1 in its entirety. Contention 2, Part A, was revised to read as follows:

- A. TVA has experienced an unusually large number of abnormal occurrences at Browns Ferry Nuclear Plant, Units 1 and 2.

This agreement further provided that "Part B of Stipulated Contention 2 is included within the abnormal occurrences in Part A." The stipulation and agreement also provided that the Intervenor would present no witnesses on these

contentions, and that the direct case on Contention 2 would consist only of his argument on an agreed statement of facts. His case on Contention 3 would consist solely of cross-examination.

By Orders dated May 21 1976, and August 4 1976, the Board, in response to motions by the Licensee and upon the making of appropriate findings pursuant to 10 CFR §50.57 authorized the Director of Nuclear Reactor Regulation (DNRR) to authorize fuel loading and control rod drive system tests in both Units 1 and 2. These actions were subsequently permitted by amendments to the operating licenses issued by the DNRR, as authorized by the Board orders.

The Notice of Public Hearing was issued by the Board on July 21, 1976. The hearing sessions were held in Huntsville, Alabama, on August 10 and 11 1976. The first day's session was devoted entirely to the reception of limited appearance statements. The record of this proceeding includes the transcript of 492 pages, with the evidentiary session starting on page 336 (August 11). [A list of the documents offered by the parties and received into evidence by the Board is set forth as Appendix A to this decision.]

II. FINDINGS OF FACT

(A) TECHNICAL QUALIFICATIONS OF TVA

1. Intervenor's Contention 2 is as follows:
2. Intervenor contends that TVA personnel are not technically qualified and competent to satisfactorily complete the work required to restore Browns Ferry Units 1 and 2 after the fire damage, or to satisfactorily complete the design modifications of Browns Ferry Units 1 and 2, necessary to provide adequate protection against the functional damage of both redundant components of engineered safeguards equipment from postulated future fires as evidenced by:
 - A. TVA has experienced an unusually large number of abnormal occurrences at Browns Ferry Nuclear Plant, Units 1 and 2.

2. Intervenor's prepared testimony consisted of one and one-half pages which described the procedure he would follow in presenting his case, incorporated the agreed statement of facts (Appendices 1 and 2 of TVA's prepared testimony) and listed a number of pressurized water reactors extracted from the comprehensive list of pressurized and boiling water reactors in the agreed statement of facts (Following Tr. 342). The Board finds that Intervenor presented no additional facts in support of Contention 2.

3. Cross-examination of the Intervenor demonstrated that the Intervenor has had no education, training, or experience (formal or informal) in any field of engineering, and has no experience in the construction or operation of nuclear plants (Following Tr. 343-347). The Board finds that the Intervenor is not qualified to technically evaluate the significance of the abnormal occurrences

specified in the agreed statement of facts with regard to TVA's technical qualifications or competence as alleged in Contention 2.

(a) Construction Deficiencies

4 Five deficiencies specifically relating to plant construction were identified by the Office of Inspection and Enforcement, Region II (IE) during the investigation of the Browns Ferry Fire of March 22, 1975. They were as follows:

1. Penetration seals had not been completed.
2. The physical location of the fire barriers in the penetration did not conform to the approved design drawings.
3. Power cable supplying two of the 480 volt shutdown boards were routed in a common tray in violation of the separations criteria.
4. Cables had been installed in cable trays in excess of that permitted by TVA design criteria.
5. Metal plates installed during construction under the breakout glass in the CO₂ system manual crank stations had not been removed.

5. The only deficiencies which had safety significance concerning the fire were those relating to the penetrations. (NRC Staff Response to Intervenor Contentions 2 and 3, following Tr. 416 (hereinafter Staff Response), p. 2, para. 2)

6. The investigation revealed that many of the seals had not been completed during construction and the integrity of others had been violated subsequent to their completion. This caused the polyurethane, a flammable material which was used as a cable penetration sealing material, to be exposed and contributed to the cause of the fire. (Staff Response, p. 14, para. 4)

7 TVA's restoration plans required the removal of the polyurethane and the substitution of ablative and fire retardant type materials as sealant materials (Silicone RTV Foam, Cerafelt, Cerafibre, Cera Form and Marmite).

8. Region II has verified, by inspecting a large sample, as documented in the inspection reports, that the polyurethane has been removed from Units 1 and 2 and the penetrations resealed in accordance with approved drawings and using approved materials. Additionally the penetrations and cable are required to be coated with a flame retardant compound ("Flamemastic"). A series of tests were conducted by TVA on a mockup of a completed penetration to verify that the penetration would successfully block the spread of fire. (Staff Response, p. 14, para. 5)

9 TVA implemented procedures which required that each step in the rework of the penetrations be inspected by TVA personnel independent of those doing the work and that these inspections be documented. (Staff Response p. 16, para. 7) This type of procedure assured that TVA would have 100% inspection of the restoration work relating to the penetrations.

10. The Board finds that TVA has replaced the flammable material in the

penetrations and properly sealed the penetrations. The Intervenor presented no facts or evidence to indicate otherwise.

11. The location of steel plate bulkheads in the penetration made it difficult to inspect the penetrations and to extinguish a fire in the penetration. (Staff Response, pp. 16-17 para. 8).

12. TVA has not changed the location of the bulkheads. A relocation is not necessary since polyurethane is no longer used in the penetrations, the penetrations now contain fire retardant materials, and the leak detecting methods used by TVA do not now depend upon a flame. (Staff Response, p. 17 para. 9) Therefore, the Board finds that the location of the bulkheads no longer impacts on plant safety

13 During the investigation, it was determined that in one instance, cables supplying power to two of the 480 volt shutdown boards were routed in a common tray in violation of the separations criteria. The failure of these two cables did not have a significant effect on the operation of the plant since both of the shutdown boards had alternate sources of power. (Staff Response, p. 18, para. 10)

14. In two cases, cable had been installed in cable trays slightly in excess of that permitted by the TVA design criteria. The installation of the excess cable had little if any effect on the plant operation during the fire since the trays did not contain cables of redundant systems. (Staff Response, p. 18, para. 11)

15 Metal plates had been installed during construction under the breakout glass in the CO₂ system manual crank stations to protect personnel from the inadvertent release of CO₂. Although the installation of the plates caused a slight delay in the release of the CO₂ in the cable spreading room, the effect on the fire and on plant operation was insignificant (Staff Response, p. 19 para. 12).

16. The five "construction anomalies" were not the cause of the loss of redundant systems due to the fire. Rather, the most significant cause of the loss of redundant equipment was associated with failures of their power sources which were caused by short circuits to breaker indication lamp circuits leading from the control circuits of Reactor Motor Operated Valve (MOV) boards. These lamp circuits have been removed. This was not a "construction anomaly" as these circuits had been installed as shown on the design drawings. (Staff Response, p. 18, para. 10)

17 The inspection activities conducted since the fire have verified that, with the exception of the metal bulkheads, TVA has corrected the construction type deficiencies identified during the IE investigation of the fire. (Staff Response, p. 19 para. 13) As indicated above, the location of the steel bulkheads no longer adversely affects plant safety and their relocation is not necessary. Accordingly the Board finds that there is no support for Mr. Garner's contention that the five construction anomalies show that there is any lack of assurance that subsequent to the fire damage, the modification and restoration work was improperly performed.

(b) Reportable Event Analysis

18. Part A of Intervenor's Contention 2 alleges, in effect, that the abnormal occurrence experience at Browns Ferry Units 1 and 2 demonstrates that the fire-related restoration and modification work cannot be satisfactorily completed. For the reasons detailed below the Board finds this proposition to be without merit. In the first instance, the restoration and modification work has in fact been satisfactorily completed (Staff Response, p. 32, para. 11). Furthermore, as demonstrated by the Staff's analysis, there is nothing in the abnormal occurrence experience in Browns Ferry which shows a lack of technical qualifications or competence on the part of TVA. The Intervenor produced no facts or evidence that would tend to contradict this conclusion.

19 TVA presented prepared testimony on Contention 2 through a panel of four witnesses—H. J. Green, Superintendent of the Browns Ferry Nuclear Plant; Jack R. Calhoun, Chief of TVA's Nuclear Generation Branch; Ben A. Gant, TVA Construction Engineer; and John L. Ingwersen, TVA Nuclear Engineer. (Tr. 352-360; see Prepared Testimony of Tennessee Valley Authority following Tr. 360 (hereinafter TVA Testimony)). Evidence was presented on the qualifications of these witnesses (following Tr. 356), and the Intervenor failed on cross-examination to elicit any significant information that casts any doubt on their qualifications. (See, e.g., Tr. 365-69, 375-76, 380-81, 389) The Board finds that the TVA witnesses are qualified to present evidence and expert opinions regarding the significance and relevance of the abnormal occurrences to TVA's technical expertise and competence in regard to Contention 2.

20. TVA's testimony on Contention 2 was based on computer printouts of abnormal occurrences reported by all United States nuclear power plants as compiled by the Nuclear Safety Information Center, Oak Ridge, Tennessee (NSIC). (TVA Testimony at 2; Tr. 362). The printout provided by NSIC amounted to a total of about 4,000 pages of occurrences reported during the construction, startup, and operating phase of all plants reported (*id.*).

21 TVA's prepared testimony consisted of a document from NSIC describing the scope and content of the printouts (Appendix 1 to TVA Testimony), and a tabulation of the number of occurrences for each category for all plants reported (Appendix 2 to TVA Testimony). These two appendices constituted the agreed statement of facts. (Prepared Testimony of William E. Garner at 1, following Tr. 342) Appendix 3 of the TVA Testimony consisted of graphs depicting the number of occurrences at Browns Ferry in relation to those at other facilities.

22. TVA testimony shows that out of all the reports made on Browns Ferry only two of the events listed by NSIC could be classified as having real safety significance under current NRC criteria for reporting occurrences to Congress. (TVA Testimony at 5 Tr. 361) One of these events, the March 22, 1975, fire, was actually so classified by NRC. (Tr. 473) The other, the discovery during

testing that two level switches were inoperative was conservatively judged only by TVA to be significant—NRC never designated it as such because it occurred before NRC started its present reports to Congress. (Tr. 395) TVA's witnesses reviewed the NRC reports to Congress on abnormal occurrences during 1975 (NUREG-75/090, NUREG-0090-1 and NUREG-0090-2). (Tr. 471-474) From this review it was determined that under the present NRC reporting requirements for abnormal occurrences, there were three single abnormal occurrences, one recurring abnormal occurrence (involving two plants), and three generic problems (involving seventeen plants) reported to Congress in 1975 (Tr. 472, 473) TVA's expert witness concluded that although Browns Ferry was listed as being one of the five plants having individual abnormal occurrences (the March 22, 1975, fire) and was one of seventeen plants having a generic problem, Browns Ferry has not had an unusually high number of abnormal occurrences which would in any way reflect on the technical competence of TVA personnel. (Tr. 473-474) The Board concurs.

23. TVA's testimony on the NSIC information shows that for the construction phase Unit 1 at Browns Ferry had a total of 12 occurrences. Out of 112 plants in the United States, 25 had as many or more occurrences during this period. Unit 2 at Browns Ferry had 14 occurrences while 18 other plants had as many or more. (TVA Testimony at 3 Tr. 363)

24. During the operating phase the comparison shows that Unit 1 at Browns Ferry had an average of 26 occurrences on an annual basis. Out of 53 reactors at other utilities 33 had as many or more. Unit 2 had an average of 9 occurrences on an annual basis. Out of 53 reactors, 50 had as many or more occurrences during the operating phase (*id.*).

25 The other major phase compared the startup and testing of the nuclear equipment. Unit 1 had a total of 120 occurrences during this period. Out of a total of 49 units, one other plant had more than 120. Unit 2 at Browns Ferry had 53 occurrences. Thirteen plants had more (*id.*). A detailed analysis of the Unit 1 occurrences shows that approximately half of them were reports on deficiencies discovered during the formal testing period. (Tr. 364) This number is indicative of a good test program because the purpose of testing is to ferret out equipment and operating deficiencies so that they may be corrected before the plant is placed in commercial operation (*id.*). Included in the 120 total occurrences during this phase are 41 reports on a single problem involving instrumentation setpoints and nonnuclear environmental occurrences concerning the river. In fact, only 14 of these 120 occurrences were caused by personnel or procedural errors. (Tr. 364) The Board finds that there have not been an unusually large number of abnormal occurrences at the Browns Ferry Nuclear Plant.

26. The Intervenor in his direct testimony listed several pressurized water reactors (PWRs) and noted that Browns Ferry is a boiling water reactor (BWR). (Following Tr. 342) In response to the Board's question as to whether there was

any reason for having listed PWRs separately the Intervenor stated that he was laying a basis for drawing a distinction on cross-examination between BWRs and PWRs. (Tr. 348) The Board finds that cross-examination by the Intervenor (Tr. 372-74), failed to draw any such distinction. The Board further finds that the Intervenor presented no facts upon which to base any distinction. It is true that the number of installations having as many or more reported occurrences as the Browns Ferry plants is less if only boiling water reactors are considered (Tr. 372-374). However, the occurrence rates are still quite comparable, and there is no evidence to suggest that boiling water reactors are inherently less prone to abnormalities than pressurized water reactors. Therefore, we find no basis for distinguishing between boiling water reactors and pressurized water reactors in comparing the number of abnormal occurrences at nuclear facilities.

27 TVA's testimony showed that for several reasons the number of abnormal occurrences does not provide a criterion for judging the competence of personnel to construct or operate a nuclear plant. The NSIC reports on abnormal occurrences do not indicate the safety significance of an occurrence. (Tr. 361) In addition, the testing and reporting requirements placed on each plant by NRC vary from facility to facility and differing interpretations by operators can lead to a wide variance in each plant's reports. (Tr. 362) The Staff's testimony in response to the Board's question (Prehearing Conference Tr. at 18) supported TVA's testimony that a comparison of the number of reportable events by category is not meaningful in determining technical competence. (Tr. following 416) Furthermore, on cross-examination Intervenor testified that one conclusion that could be drawn from the reported discovery of numerous abnormal occurrences at a facility was that the facility might have a first-rate quality assurance program. (Tr. 345) Intervenor also testified that if a facility reported no abnormal occurrences one could just as easily conclude that either the plant was perfectly run or that the plant operators did not look for abnormal occurrences or did not report them (*id.*). Since the evidence shows that more than one conclusion can be drawn from the number of abnormal occurrences at a facility the Board finds that the number of abnormal occurrences as reported does not provide any criterion for determining the technical competence or qualifications of TVA personnel to restore the Browns Ferry plant.

28. It might be helpful to our discussion to explain the various terms applied to the concept of reporting certain occurrences at nuclear power plants.

29 The reporting requirements for the occurrences that are set forth by Appendices A and B of the Operating License Technical Specifications are the bases for the reportable events that are analyzed in this section. Appendix A specifications relate to health and safety and Appendix B specifications relating to environmental impact. The term "abnormal occurrences" was used, in the past, to designate any unscheduled or unanticipated operational event that was reportable under the requirements of Appendix A specifications. These occurrences included events having significance from the standpoint of public

health or safety and events reported for the purpose of performances evaluation of trends. The term "reportable occurrence" has replaced the original "abnormal occurrence" for this definition, and the term "abnormal occurrence" is now limited to events that are determined by the NRC to be significant from the standpoint of public health or safety (Staff Response, p. 71 para. 1-2)

30. Items of noncompliance are sometimes identified by the licensee in some of the event reports and these are evaluated by NRC as part of the internal inspection program. An item of noncompliance is defined as a failure to comply with regulatory requirements. (Staff Response, p. 71 para. 3)

31. Since the above definitions for Appendix A Technical Specifications reporting requirements were not implemented until late 1975 the majority of the events in the evaluation of Browns Ferry Units 1 and 2, have been designated "abnormal occurrences" even though they may have had no significance from the standpoint of public health or safety (Staff Response, p. 72, para. 4)

32. Ninety-three environmental events have been reported. These events were related to fish impingement on the intake screens or water temperature of Wheeler Reservoir. These events do not relate to nuclear safety (Staff Response, p. 72, para. 5) The Board finds that these events are not evidence that TVA lacks the technical qualification to restore Browns Ferry, Units 1 and 2.

33 The majority of the 203 reportable reactor events for both units, about 52%, reported up to April 1976, were caused by component failures. About 15% of the events were related to design errors and a like quantity (15%) were related to personnel errors. The fourth category of note is defective procedures, which made up 10% of the events. The remaining 8% include items where the cause was not clearly identified or the cause was external. (Staff Response, p. 73-74, para. 11)

34. The initial 6 months of operation of Unit 2 showed only about one-half the number of reportable events as did the initial 6 months of operation of Unit 1. In this period, significantly lower total numbers were attributed to defective procedures and component failure. (Staff Response, p. 74 para. 12)

35 With respect to the evaluation of design errors, the category shows a marked reduction as the testing program progressed for each unit. One-half, 15 of 31 of the events were identified either during the routine surveillance program or during the startup tests. This suggests that the test program was rigorous and effective. (Staff Response, p. 74 para. 13)

36. The defective procedures problems were related to procedures and check lists during maintenance and return to service after maintenance, administrative procedures, and operating procedures with approximately 1/3 in each of these groups. The number of events was much less for Unit 2 because the same procedures were used for both units. (Staff Response, pp. 74-75 para. 14)

37 As for the evaluation of personnel errors, of the 31 occurrences reported, 22 were caused by nonoperating personnel such as licensee instrumentation, maintenance or construction personnel and vendor personnel. In a

comparison of personnel errors for Unit 1 and Unit 2, there was evidence that the number of events was reduced for the second unit. This indicated the favorable impact of additional training and experience, and the improvements in procedures which more clearly defined areas that could lead to personnel errors. (Staff Response, p. 75 para. 15-16)

38. Of the 106 occurrences reported as component failures, 38 were associated with the emergency core cooling system, 36 were associated with the primary coolant system and the remainder were associated with miscellaneous safety related systems or auxiliary systems. (Staff Response, p. 75 para. 17)

39 As demonstrated by the Staff's analysis of the reportable occurrences, they do not show a lack of technical competence by TVA personnel. Indeed, a large number of the occurrences took place during a period when the units were in a testing phase. (Staff Response, pp. 77-79) The reduction of reportable events in the categories that occurred during the progress of the test program demonstrates the merits of a rigorous test program at the outset of operation to identify and correct potential problems before there is a significant event from the standpoint of public health or safety (Staff Response, p. 78, para. 25)

40. Five of the reportable occurrences involved inoperability of more than one emergency cooling system at the same time. The most notable of these events is the March 22, 1975, fire where several of the emergency cooling systems were put out of service at various times during the fire and the licensee demonstrated that he could still maintain the core in a safe condition. Another event involved concurrent inoperability of the high pressure coolant injection system (HPCIS) and one division of the core spray system; during this event the licensee initiated a reactor shutdown as required. The three remaining events involved the HPCIS and the reactor core isolation cooling system (RCICS); in each instance, the licensee initiated appropriate shutdown action. The remainder of the events reviewed did not involve concurrent inoperability of redundant emergency core cooling systems, and therefore, effective core cooling and safe shutdown of the reactor were always possible. (Staff Response, pp. 78-79 para. 26)

41. The Intervenor, Mr. Garner, in his opening statement and in his direct case, consisting of a total of one and one-half pages, told this Board that the TVA's and the NRC Staff's testimony was "a matter of opinion" and it was this Board's function to decide what the opinions meant. (Tr. 338) Mr. Garner then told us that he was going to reserve the rest of what he was going to say for his closing statement. (Tr. 340) Mr. Garner assured us that his approach to this proceeding was to "avoid burdening the record." (Tr. 337) When the Board inquired whether Mr. Garner was going to give us a closing statement for the purpose of giving the Board a summary of what he believed his cross-examination had developed, the response of Mr. Garner was that "it was on the record." (Tr. 482) The Board has examined the record and agrees with Mr. Garner that the record speaks for itself, and the record clearly demonstrates that

TVA supported its position by offering witnesses who, in effect, said that the abnormal occurrences experienced at Browns Ferry were just about average. This is the same testimony that was elicited both by Mr. Garner's cross-examination and by this Board's questioning of the NRC witnesses. Mr. Garner introduced no contradictory facts, evidence or testimony

42. Mr. Calhoun summarized the testimony of TVA by saying that the number of abnormal occurrences is not unusual, that there were only two significant abnormal occurrences and this is not unusual when you consider the broad scope, or the broad number of plants in operation (Tr. 361, 363 364).

43. The results of the comparison were explained in detail by TVA, and the cross-examination by Mr. Garner failed to establish either that the witnesses were professionally unqualified or that the abnormal occurrences were in any way substantially different from those experienced at plants in other parts of the United States.

44. One apparent objective of Mr. Garner in his cross-examination was to demonstrate that the abnormal occurrences were calculated in such a way that time of operation was not properly considered. The response of the witnesses to his questions and those of the Board showed this was not the case. (Tr. 386-388)

45 In short, regarding TVA's witnesses, Mr. Garner failed to refute their position that the number of abnormal occurrences at Browns Ferry was acceptable and not unusual, and his cross-examination failed to elicit any information which might be construed as offering probative contrary evidence in support of his allegation.

46. Mr. Garner is of the opinion that the evidence on the number of abnormal occurrences is susceptible to differing interpretations. (Tr. 480) The Board cannot rely on Mr. Garner's opinion since he is not an expert witness (Tr. 343), nor does any of the argument offered by him point to an interpretation helpful to his position that has any evidentiary basis in the record. This Board finds that only one interpretation is clear from the record, and that is that the number of abnormal occurrences at Browns Ferry is not unusual and does not demonstrate a lack of technical qualifications or competence on the part of TVA.

47 The Board is of the opinion that it is unreasonable to expect that Browns Ferry (or any power plant for that matter) can function totally without problems. The NRC has properly provided the procedure by which a licensee can report certain events in order that NRC and other licensees can evaluate problems and detect possible trends. A licensee should not be penalized for reporting these events (even minor ones), nor should the NRC be bound to find a licensee lacking the requisite technical qualifications solely on the basis of these events. The Board finds the Office of Inspection and Enforcement's analysis of these "abnormal occurrences" and their enforcement philosophy one that will bring, when necessary prompt corrective action on the part of the licensee, and provide a means of determining whether a licensee lacks the technical

qualifications to safely operate a nuclear power plant. In the instant case the Board finds that the NRC Staff has properly determined that TVA is technically qualified to operate Browns Ferry Units 1 and 2.

48. Intervenor did not adduce any evidence showing that any specific individual occurrence demonstrated a lack of assurance that the licensee can safely operate the reactors. It appears that the gravamen of Intervenor's contention is that the total number of events demonstrates a lack of technical competence on the part of the licensee. However, as testified to by both the Staff and Licensee, simple numerical comparisons between different licenses and different power plants, cannot be properly or meaningfully made. (NRC Staff Response to Board Question, following Tr. 416; TVA testimony following Tr. 260, at pp. 5-6) In any event, as evidenced by the Licensee's data tables and the Staff's testimony there is nothing in the collective history of TVA's performance, or any single event, which demonstrates that TVA is not qualified to restore Browns Ferry in accordance with the approved restoration plan or to operate the plant. (TVA testimony pp. 1-6 and Appendix 2; Staff Response, p. 83, para. 2) In fact when the Board questioned Mr. Seidle on the frequency of occurrences at Browns Ferry Units 1 and 2, he responded they were average in number. (Tr. 454)

49 More important than the numbers which have been presented is the evaluation of whether or not TVA has the ability to correct deficiencies and whether their management is responsive to problems. As demonstrated by the Staff testimony TVA has been responsive to problems and has taken, when necessary corrective measures to bring them into compliance with regulatory standards. (Staff Response, p. 35 para. 20; pp. 82-84)

50. Mr. Garner cross-examined Staff Witnesses Moseley and Long on alleged statements made by these men in an interview published in an article of the Union of Concerned Scientists entitled—*Browns Ferry—A Regulatory Failure* (Tr. 442, 444). This report is not evidence in this proceeding and the Board recognizes that the witnesses testified that they were not accurately quoted. (Tr. 445 L. 5 Tr. 452, L. 4) However, the Board thought that the Staff's comments on the QA attitude of TVA would be beneficial.

51 The Staff's witness acknowledges that many utilities were having a difficult time adjusting to the QA/QC system as defined in Appendix B and TVA was not unique regarding this matter. (Tr. 445 452) The Board does not find any evidence to support a claim that TVA had a negative attitude towards quality assurance.

(B) NRC INSPECTION PROGRAM

52. By Contention 3, set forth at page 136 above, Mr. Garner alleges that the NRC inspection program at Browns Ferry Units 1 and 2, is insufficient to assure that the fire-related restoration and modification work has been satisfactorily

completed by the Licensee. The apparent point to Mr. Garner's contention is that the NRC's failure to detect the deviations from construction requirements identified in the fire investigation provides a basis for the proposition that the inspection program is insufficient to assure that the licensee has properly performed the modifications necessary to provide protection from future fires.

53 Intervenor presented no witnesses or testimony on Contention 3 but relied solely on cross-examination of the Staff's witnesses. The Staff presented prepared testimony giving a comprehensive description of the inspection and enforcement program of the NRC, presented through William C. Seidle, Chief, Reactor Project Section 1 NRC Office of Inspection and Enforcement, I&E (position at the time of his involvement with Browns Ferry); Norman C. Moseley Director of Region II, I&E, Charles E. Murphy Chief of the Reactor Construction and Engineering Support Branch, I&E, and Francis J. Long, Chief of the Reactor Operations and Nuclear Support Branch, I&E. (Tr. 409-416)

54 The NRC Staff offered the testimony of the above four (4) qualified inspectors from Region II, Office of Enforcement and Inspection, to refute the allegations contained in Contention 3. Mr. Garner attempted by cross-examination to challenge the professional qualifications of these witnesses. (Tr. 423-426) The Board has examined the professional qualifications and it finds that all of the witnesses by training, education or work experience are qualified to testify as expert witnesses in this processing.

55 As testified to by the Staff, the March 22, 1975, fire had two broad causes. These were: (1) the failure of TVA to recognize the nuclear safety significance of the penetration sealing work being performed, and (2) the failure of the NRC, TVA, and the entire industry to fully recognize the extent of the potential damage from an electrical fire. (Staff Response, p. 82, para. 1) It is clear that as a result of the fire and the subsequent investigation, these two broad causes no longer exist. Thus, these two broad causes of the fire are therefore no longer relevant to the overall adequacy of NRC's inspection program subsequent to the fire to assure that the modification work has been satisfactorily completed. In fact, as detailed in the Staff's testimony the restoration and modification work has been extensively covered by the NRC inspection program, and the NRC inspection program has verified that it has been satisfactorily completed. (Staff Response, p. 28, para. 3 p. 33, para. 11)

56. The Staff, in the document entitled *Investigation Report of the Browns Ferry Fire*, identified deficiencies in TVA's management administrative control systems for control of safety-related activities and inadequacies in the implementation of the TVA Radiological Emergency Plan and the State of Alabama Radiation Emergency Plan. (Staff Response, p. 20, para. 1) IE has conducted inspections and it has determined that: 1) TVA has improved the review process for procedures governing all safety related activities (Staff Response, pp. 20-21 para. 3); 2) Major revisions have been made by the TVA to its administrative procedures for documenting conditions adverse to quality and the ultimate cor-

rective actions (Staff Response, pp. 21-22, para. 4); 3) TVA's program of audits to measure effectiveness of the management systems has been broadened to include some areas not previously considered to be safety-related (Staff Response, p. 22, para. 6); 4) TVA has taken appropriate action to assure greater emphasis on emergency procedures (Staff Response pp. 22-23 para. 7); 5) TVA and the State of Alabama conducted a successful test of the TVA Radiological Emergency Plan and State of Alabama Radiation Emergency Plan (Staff Response, p. 23 para. 8).

57 The Board finds that during restoration of the plant, the IE inspection program verified that the restoration of Browns Ferry, Units 1 and 2, was being accomplished in accordance with the TVA Restoration Plan, and that the commitments made by TVA and the requirements regarding construction work, placed on TVA by NRC, were met. This was accomplished by IE inspecting the soot-contaminated structures and components to ascertain whether they had been properly replaced, repaired or restored to their original operating condition; fire damaged trays, conduit and electrical cables were identified, repaired or replaced; and records of the QA inspection and restoration activities verified that the work was performed and that the licensee QA inspection efforts were adequate. (Staff Response, p. 28, para. 3)

58. The IE inspection program identified during restoration and reconstruction that the initial Quality Assurance (QA) program established for the restoration plan was not effective. (Staff Response, p. 32, para. 10) TVA was responsive and established a separate Quality Assurance/Quality Control organization for the restoration activities. (Staff Response, p. 32, para. 10)

59 IE also identified during restoration and reconstruction two other items of noncompliance. (Staff Response, p. 33, para. 10a) These items did not have immediate safety significance and they were corrected by TVA. (Staff Response, p. 33, para. 10a)

60. IE's inspection program was not only concerned with the adequacy of the reconstruction but also concentrated on operational safety during this time period. With respect to operational safety during restoration, IE identified five items of noncompliance relating to operations during restoration. (Staff Response, p. 36, para. 19) These items did not affect the safety of the plant. (Staff Response, p. 37 para. 21) TVA took the necessary corrective actions. (Staff Response, p. 36, para. 19) With regard to these five items of non-compliance, IE found that TVA corrective action brought them into compliance with regulatory requirements.

61. TVA conducted a preoperational testing program after the restoration and reconstruction for Browns Ferry, Units No. 1 and 2. During IE's inspection of the preoperational testing, no deficiencies were found and the systems and components tested have met the stated acceptance criteria. (Staff Response, p. 39 para. 25, 27)

62. The Board finds for the reasons set forth below that NRC's inspection

and surveillance program is adequate to assure that TVA satisfactorily completed the work required to restore Browns Ferry Units 1 and 2, and that TVA satisfactorily completed the design modifications necessary to provide adequate protection against the functional damage of both redundant components of engineered safeguards equipment from postulated future fires.

63. The Board has reviewed the IE inspection program and finds that the licensee is required to inspect up to 100% of its activities in order to verify that significant actions are properly done and it is the licensee's responsibility to design, construct, and restore and operate Browns Ferry, Units 1 and 2, in compliance with all regulatory requirements. (Staff Response, p. 3, para. 2, 3) In order to accomplish this, the Applicant/Licensee must have a quality assurance program to test the adequacy of its inspections. (Staff Response, p. 3 para.3) The NRC recognizes that there could be occasional failures, either in their inspection efforts or those of the Applicant/Licensee. Therefore, there is a "defense in depth" concept which employs multiple barriers and redundancy in equipment and operating options. (Staff Response, p. 4, para. 4)

64. The IE inspection program is a selective audit, or sample program to determine whether the licensee is meeting regulatory requirements and commitments. (Staff Response, p. 4, para. 1 p. 5) The sampling identifies problems which are corrected. The sampling program did not identify the use of flammable materials and certain construction deficiencies because of the previous, but now remedied, failure to recognize the extent of the potential damage from a fire.

65 The IE audit or sample program is not a statistical random sample. The specific areas reviewed in detail are selected from those considered to be most important from a nuclear safety standpoint. By specific spot checking and sampling review of QC actions, IE can determine whether a licensee's QA program is working and it provides an accurate assessment of the Licensee's performance in meeting regulatory requirements. (Staff Response, pp. 6-7 para. 3)

66. IE inspection programs will assure that the plant is operated in a manner that will not adversely affect the public health and safety The IE enforcement program is not intended to be punitive. Its purpose is to obtain prompt corrective action by licensees of the identified deficiencies. (Staff Response, p. 11, para. 12) The corrective action results in an upgrading of the licensee program, therefore continued reliance can be placed on the validity of IE's inspection. (Staff Response, p. 16, para. 13)

67 During the restoration activities of Browns Ferry, Units 1 and 2, IE utilized the inspection program for construction and preoperational testing. (Staff Response, p. 8, para. 6) The sample size was increased in the inspection of penetration sealing, fire protection activities, and direct observations of work activities. (Staff Response, p. 8, para. 9)

68. IE had, when warranted, personal direct discussions with high level TVA

officials to discuss matters which collective inspection reports identified as problems needing immediate attention. (Staff Response, p. 82, para. 1) These discussions have resulted in TVA responding to IE's concerns by stopping these activities. (Staff Response, p. 64, para. 6)

69 During the restoration and reconstruction, IE inspected the penetration to verify that the penetration would successfully block the spread of fire. (Staff Response, p. 14, para. 5) IE has verified through direct discussion, witnessing of tests, and review of documents that the QA program has been improved. (Staff Response, p. 20, para. 2; p. 22, para. 5) IE also engaged an independent fire consultant to evaluate the overall adequacy of the Browns Ferry fire protection systems (Staff Response, p. 24, para. 9), and IE verified QA improvements, upgrading of TVA Emergency Plan, TVA Radiological Emergency Plan and State of Alabama Radiation Emergency Plan. (Staff Response, p. 23 para. 8)

70. IE recognized that a basic cause of the March 22, 1975, fire, was the failure to recognize the extent of the potential damage from an electrical fire. The inspection program has remedied this deficiency by the issuance of IE Bulletins modifying fire prevention/protection items and a continual upgrading of the program. (Staff Response, p. 84 para. 1, p. 85)

71. Mr. Garner attempted to show in his cross-examination of the Staff's witnesses that their inspection program was not adequate because there was a delay by other officials in responding to certain memoranda written by one of the witnesses and another inspector. (Tr. 435 L. 22, Tr. 442, L. 6) Although the response of officials to these memoranda was not immediate, Mr. Garner did not demonstrate how this delay substantially impacted the inspection program, nor can the Board find that those memoranda had any effect on the inspection program.

72. On the basis of the above, the Board concludes that the NRC inspection program as it relates to Browns Ferry Units 1 and 2, since March 22, 1975, has been sufficient to provide reasonable assurance that the Licensee has, in fact, satisfactorily completed the fire-related restoration and modification work.

73 Intervenor, in his proposed finding 16, asks the Board to find that, " .until a full study of the environmental impact of handling radioactive waste and reprocessing spent fuel is made, Browns Ferry 1 and 2 could not be permitted to operate at more than 1% of full power in any event." The Board assumes Mr. Garner's reference there is to recent decisions of the U.S. Court of Appeals for the D.C. Circuit (*NRDC v. NRC*, Nos. 74-1385 and 74-1586, and *Aeschliman et al. v NRC*, Nos. 73-1776 and 73-1867 July 21, 1976) and to the Commission's Statement of General Policy with respect to those decisions (August 13, 1976), as indicated by his proposed finding 6. The Board does not believe that the cited decisions and the Commission's response in any way preclude issuance of the amendments at bar. The Commission's statement specifically exempts certain licensing actions from the general suspension, including licenses for less than 1% operation, but also including " .licensing

that is not dependent upon an environmental impact statement.” The Staff’s testimony includes a determination that, to comply with 10 CFR 51.5 “ .an environmental impact statement, negative declaration, or environmental impact appraisal need not be prepared in connection with the issuance of the proposed amendments.” (SER at p. 27 §13) The Board sees nothing in the record to controvert that conclusion. The instant proceeding does not concern the issuance of an original construction permit or operating license, but only amendments to an already existing license (see 10 CFR §51.5(a) & (b)).

III. CONCLUSIONS OF LAW

74. The Board has reviewed the entire record of this proceeding, including the proposed findings of fact and conclusions of law submitted by the parties. All of the proposed findings and conclusions submitted which are not incorporated directly or inferentially in this Initial Decision are herewith rejected as being either unsupported by the weight of credible evidence or as being unnecessary to the rendering of this Initial Decision.

75. The Board concludes that the application for amendments, as amended, and the record of the proceeding contain sufficient information, and that the review of the application by the Staff has been adequate to support the following finding:

76. The Board finds that in accordance with the provisions of 10 CFR §50.91 and 10 CFR §50.57

- (1) Construction of the facility has been substantially completed, in conformity with the application as amended, the provisions of the Act, and the rules and regulations of the Commission; and
- (2) The facility will operate in conformity with the application as amended, the provisions of the Act, and the rules and regulations of the Commission, and
- (3) There is reasonable assurance (i) that the activities authorized by the proposed operating license amendments can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations in this chapter; and
- (4) The Applicant is technically qualified to engage in the activities authorized by the operating license in accordance with the regulations in this chapter; and
- (5) The issuance of the proposed license amendments will not be inimical to the common defense and security or to the health and safety of the public.

IV ORDER

77 Based upon the Board's findings and conclusions, and pursuant to the Atomic Energy Act of 1954, as amended, and the Commission's regulations, IT IS ORDERED that the Director of Nuclear Reactor Regulation is authorized to issue proposed amendments to the Browns Ferry Units 1 and 2, Operating Licenses (DPR-33 and DPR-52) consistent with the notice of "Proposed Issuance of Amendments to Facility Operating Licenses" (40 *Fed. Reg.* 46365, October 7 1975).

78. IT IS FURTHER ORDERED, in accordance with 10 CFR §2.760, §2.762, §2.764, §2.785 and §2.786 that this Initial Decision shall become effective immediately and shall constitute with respect to the matters covered therein the final action of the Commission forty-five (45) days after the date of issuance hereof, subject to any review pursuant to the Commission's Rules of Practice. Exceptions to this Initial Decision may be filed by any party within seven (7) days after service of this Initial Decision. Within fifteen (15) days thereafter [twenty (20) days in the case of the Staff] any party filing such exceptions shall file a brief in support thereof. Within fifteen (15) days of the filing of the brief of the appellant [twenty (20) days in the case of the Staff] any other party may file a brief in support of, or in opposition to, the exceptions.

IT IS SO ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Frederick J Shon, Member

Dr. Frederick P Cowan, Member

Thomas W Reilly Chairman

Issued at Bethesda, Maryland
this 20th day of August 1976.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-31

ATOMIC SAFETY AND LICENSING BOARD

Marshall E. Miller, Chairman
Gustave A. Linenberger
Dr. Cadet H. Hand, Jr

In the Matter of

Docket No. 50-537

PROJECT MANAGEMENT CORPORATION
U. S. ENERGY RESEARCH
AND DEVELOPMENT ADMINISTRATION
TENNESSEE VALLEY AUTHORITY

(Clinch River Breeder Reactor Plant)

August 26, 1976

The Licensing Board denies untimely motions and petitions for leave to intervene of a number of municipalities and counties, because (1) no good reason has been shown for the petitioners' tardiness in seeking intervention; (2) intervention is not warranted as a result of consideration of the four factors which 10 C F R §2.714 (a) provides are to be taken into account in passing upon an untimely intervention petition; (3) petitioners have not submitted sufficient factual bases for their contentions; and (4) the supporting affidavits and the unverified petition have not been signed by persons who have the direct, personal knowledge necessary to state the interests or bases for the contentions of each petitioner.

Motions and petitions for leave to intervene denied.

ATOMIC ENERGY ACT - PAYMENTS IN LIEU OF TAXES

The NRC has no authority to order payments in lieu of taxes; under Section 168 of the Atomic Energy Act, ERDA has sole discretion as to the amount and manner of such payments.

**ORDER DENYING MOTION FOR LEAVE
TO INTERVENE OUT OF TIME AND
PETITION FOR LEAVE TO INTERVENE
FILED BY LENOIR CITY ET AL.**

On July 7 1976 thirteen municipalities and counties filed a motion for leave to intervene out of time and a petition for leave to intervene, supported by the affidavit of Jack A. Thomas. Similar documents were filed by Anderson County on July 28, 1976. The Board entered an order granting the Petitioners

leave to file supplemental intervention petitions and affidavits on August 4, 1976, addressing six questions stated by the Board. On August 20, 1976, the Petitioners filed an unverified response in compliance with order granting leave to file supplemental intervention petitions and affidavits dated August 4, 1976, accompanied by an affidavit of Dr. Jack A. Thomas and a number of unsworn documents entitled "Verification of Intervention and Designation of Counsel."

The supplemental intervention petition filed by or on behalf of the fourteen Petitioners is wholly insufficient to cure the defects in the original petition and affidavit, which were pointed out in our order of August 4 1976. In fact, very little effort appears to have been made to comply with that order. Nontimely intervention petitions are not entertained as a matter of right under 10 CFR 2.714. As the Appeal Board has noted, it is "entirely proper for the Licensing Board to consider the governmental nature of the City and the County in ruling on their intervention petitions. We hasten to add, however, that such status in and of itself does not automatically entitle a local government to have its untimely petition granted, for the extent to which any petitioner's interests may be represented by existing parties is just one of the factors considered in deciding the fate of a late petition."¹

The prior order directed the Petitioners to provide "clarification of the ambiguous relationship between each entity and the Tennessee Energy Office (TEO), and the precise legal status and function of the latter" (par. 2). This request for clarification of status is totally ignored by the response of the Petitioners. The issue does not involve a mere *pro forma* matter, as the Applicants' response challenges the petition as seeking "to expand the State of Tennessee's role from one addressing educational funding impacts to issues relating to a broad spectrum of socioeconomic impacts" (Applicants' Response, p. 5). Similarly the Staff has observed that the relationship between TEO and the Petitioners is not clear from either the motion or the petition. They state that TEO is performing the function of a "coordinator," but the motion and petition (as well as the instant response) are signed by a TEO attorney and the only affidavits are by a TEO employee. The question is thus squarely raised whether the Petitioners are the real parties in interest (Staff's Response, pp. 5-8, 12).

We also take note of our own record, which indicates that Mr. William B Hubbard, Assistant Attorney General for the State of Tennessee, signed the following documents in that capacity: Petition for leave to intervene by the State and his own supporting affidavit (July 17 1975); amendment to intervention petition (September 11 1975); motion for leave to amend intervention petition, attaching amendment and Shore affidavit (March 12, 1976); and stipulation withdrawing contentions 1-4 and September 11, 1975, amendment.

Public Service Company of Indiana, Inc. (Marble Hill Nuclear Generating Station), ALAB-339, NRCI-76/7 25 (July 27 1976).

The effect of this stipulation was to withdraw all safety environmental and socioeconomic impact contentions except "the significant environmental impact which the school children of the construction workers of the plant will have on the State education system." In its motion for leave to amend, the State observed that "The City of Oak Ridge has raised the issue of the social economic impact, which will be felt by local *communities* " (Emphasis supplied)

On September 23, 1975 Mr. William B. Hubbard, in accordance with 10 CFR 2.713 entered his Notice of Appearance for State of Tennessee, designating himself as "Assistant Attorney General, Counsel for State of Tennessee." On March 17 1976, Mr. William M. Barrick entered his notice of Appearance with the following information: "Name of Party: Attorney General of the State of Tennessee."² There is no notice of appearance in our files which purports to designate either attorney as counsel for any of the 14 Petitioners.

On July 7 1976, the Petitioners filed a motion for leave to intervene out of time and a petition for leave to intervene, together with the affidavit of Jack A. Thomas. These unverified pleadings were signed by William B. Hubbard, Assistant Attorney General, Attorney for Tennessee Energy Office, and William M. Barrick, Staff Attorney Tennessee Energy Office. Under these circumstances, it was small wonder that the Staff and the Applicants raised the issue of the real party in interest and questioned whether the State of Tennessee at this late date was attempting to expand the issues and the parties, not only untimely but contrary to its earlier stipulation. It was an insufficient answer for these attorneys merely to express their shock and surprise at the question being raised (Response of Lenoir City *et al.*). In any event, this Board in its order of August 4 clearly directed the Petitioners to clarify the ambiguous relationship between each of them and the Tennessee Energy Office, and to furnish "the precise legal status and function of the latter." Not even the slightest attempt has been made by the Petitioners or any counsel to comply with this direction. Ignoring par. 2 of our prior order is no more an adequate response than the statement of these counsel with reference to par. 1, that "Counsel for Lenoir City *et al.*, take strong exception to the Board's Order, especially those provisions asking verification of the governmental entities (sic) authorization to intervene and designation of counsel" (Response In Compliance With Order Granting Leave To File Supplemental Intervention Petitions and Affidavits, p. 1). The so-called authorizations consist of short unsworn statements signed by various persons not otherwise identified than by typed signature lines bearing the title "Mayor" or "Judge." No attempt is made to describe the source of any authority which these persons purport to possess to bind the governmental entities. These unverified documents state that the entity has authorized intervention in this pro-

²We are at a loss to understand how the Attorney General became a party to this proceeding, but there it is.

ceeding, and “has further authorized the Tennessee Energy Office to coordinate its intervention and representation in the proceeding with other local governmental entities similarly situated.” This fuzzy language regarding the authority of TEO to “coordinate” intervention and representation of the entity does not amount to a clear-cut “designation of counsel empowered to represent each entity” as required by the Board in par. 1 of its prior order. In view of the explicit nature of the questions previously raised, it must be regarded as evasive and unresponsive. Section 2.713 permits a person to appear either on his own behalf or by an attorney who shall file a notice of appearance. One method or the other must be followed and designated.

The only clue as to the legal relationships among the 14 governmental entities, the TEO and the State of Tennessee is contained in the elliptical reference to “the existing agreement between TEO and each of the Petitioners,” at page 2 of the Petitioners’ response in compliance with our order. As we noted in our order of August 4 as well as prior orders in this proceeding, the mere unsworn assertion of facts by counsel in a pleading or brief is no substitute for the verified pleadings required by 10 CFR §2.714. Even more significant is the fact that this purported agreement with TEO is neither attached to the Petitioners’ response nor otherwise described.

Taking into consideration all of the petitions, affidavits and other documents filed by or on behalf of the 14 Petitioners, we hold that an untimely intervention is not justified under Section 2.714. Good cause has not been shown for such a tardy filing. The notice of hearing was issued over a year ago, and the Environmental Report and Draft Environmental Statement were duly noticed and widely disseminated. The City of Oak Ridge and Roane County have filed similar socioeconomic contentions in a timely manner, and the State of Tennessee has actively participated for more than a year. None of the Petitioners states that it did not have knowledge of these proceedings; their only assertion is made generally and collectively by TEO counsel, that they were not familiar with the nature of the proceeding. No credible excuse for such an untimely filing has been presented by any of the cities or counties.

In determining whether the Petitioners have made a substantial showing of good cause for an untimely intervention, the Board must consider both the excuses for tardiness along with the four factors listed in Section 2.714(a).³ The first factor relates to the availability of other means whereby the petitioners’ interest will be protected. The Staff has an obligation to insure that local socioeconomic impacts are adequately considered in the environmental impact statement. The Staff’s DES evaluates the impacts of CRBR on all of the Petitioners

Nuclear Fuel Services, Inc. (West Valley Reprocessing Plant), 1 NRC 273 (1975); Public Service Company of Indiana, Inc. (Marble Hill Nuclear Generating Station), ALAB-339, NRCI-76/7 (July 27 1976).

except Morgan and Campbell County (DES, Sec. 4.5). Although the Petitioners failed to take advantage of the opportunity to comment on the DES, they will be able to comment on the FES when it is filed, probably on September 30. (We hereby request the Staff to serve copies of the FES on all of these named Petitioners.) In addition, the Petitioners may make limited appearances under Section 2.715 to make the Board fully cognizant of their concerns regarding potential impacts of CRBR. On balance, we believe these means are adequate to protect the Petitioners' interests.

The second factor concerns the extent to which the Petitioners' participation will assist in developing a sound record. The issue of socioeconomic impacts is already in this proceeding, as the City of Oak Ridge and Roane County have been admitted as parties to raise such contentions. Roane County has contended that:

The socioeconomic impact of the Clinch River Breeder Reactor on the area in which [it] is to be located, is not adequately assessed in the application. Impacts on schools and demands for local services during the construction phase of the Clinch River Breeder Reactor are understated in Chapters 8 and 11 of the applicant's environmental report.

The State of Tennessee in its motion for leave to amend petition to intervene, dated March 12, 1976, stated, "The City of Oak Ridge has raised the issue of the social economic impact which will be felt by local communities " It may reasonably be expected that a sound record will also be developed in this regard by the Staff, together with the Petitioners' comments on the FES and their opportunity to make limited appearances discussed above.

The third factor involves the extent to which Petitioners' interests will be represented by existing parties. To the extent that the Petitioners' contentions go to the fact of local socioeconomic impacts and to their extent limited to considerations involved in a NEPA cost-benefit balance, their interests will be reasonably represented by the Staff, City of Oak Ridge and Roane County for the reasons set forth in factors one and two, above. However, if the Petitioners seek to raise issues involving the manner and amount of payments in lieu of taxes which ERDA might make to these entities, such questions are beyond the scope of these proceedings. The Applicants have previously contended that NRC and this Board lack jurisdiction to order or otherwise effect payments in lieu of taxes.⁴ The Board has not previously found it necessary to rule on this jurisdictional question, but we believe that its resolution now may have a bearing on the instant intervention motion and petition.

Applicants' Amended Answer to Oak Ridge Amendment To Petition For Leave To Intervene, pp. 3-10 (February 2, 1976); Applicants' Answer To Amendment of Petition Of State of Tennessee, p. 2-3 (March 19, 1976); Applicants' Response To Instant Motion For Leave To Intervene, p. 4 (July 19, 1976).

The Constitution establishes a broad immunity of Federal property from taxation by state or local governments, and in the absence of a Congressional waiver of such immunity the CRBR cannot be taxed by local governments.⁵

Section 168 of the Atomic Energy Act⁶ authorizes ERDA to make payments in lieu of taxes to local communities with respect to ERDA-acquired property. Such payments are presently made by ERDA to Roane and Anderson Counties and the City of Oak Ridge.⁷ These payments are not to exceed the taxes payable on the property as of the time of acquisition, except where "special burdens" are imposed upon the community by the activities of ERDA. However, such payments "may be in the amounts, at the times, and upon the terms [ERDA] deems appropriate."⁸

Inasmuch as these payment provisions constitute a waiver of the sovereign immunity from taxation, and they are made pursuant to an express and narrow Congressional mandate, the amounts paid are determined in ERDA's sole discretion. Payments in lieu of taxes are also subject to a requirement for both authorization and appropriation by Congress.⁹ Accordingly we hold that Congress has created an exclusive remedy for payments in lieu of taxes, allocating sole discretion as to amounts and manner of payment to ERDA, and that NRC and this Board do not have authority to order or otherwise effect such payments.

The Supreme Court has held that NEPA does not repeal by implication any other statute. Thus the specific statutory grant of ratemaking powers lodged exclusively in the ICC was not repealed by implication.¹⁰ Similarly the land development procedures of HUD under the Disclosure Act were held to be in conflict with the environmental impact statement requirements of NEPA, and therefore HUD was not required to comply with NEPA in violation of its other statutory obligations.¹¹

The courts have held that in making a NEPA cost-benefit analysis considering alternatives reasonably available, an agency is not limited to the scope of its

McCulloch v. Maryland, 17 U.S. (4 Wheat.) 318 (1819); *United States v. Boyd*, 378 U.S. 39 (1964).

42 U.S.C. Section 2208.

⁷ Statutory power to make such payments to the City of Oak Ridge is provided in the Atomic Energy Community Act of 1955, 42 U.S.C. Sections 2301-94.

⁸ 42 U.S.C. Section 2208.

42 U.S.C. Section 2312.

Aberdeen and Rockfish R. Co. v. SCRAP 95 S. Ct. 2336 (1975); *U.S. v. SCRAP* 412 U.S. 669 (1973).

Flint Ridge Development Co. v. Scenic Rivers Association of Oklahoma, 44 U.S. L.W. 4954 (1976). See also *NRDC v. TVA*, 502 F.2d 852 (CA 6, 1974), holding TVA was not required to prepare individual EIS for every coal purchase contract, since this would conflict with Section 9(b) of the TVA Act requiring competitive bidding of such contracts.

own authority but should consider measures beyond its jurisdiction to adopt.¹² This principle is subject to a rule of reason where alternatives would involve significant legislative changes. As the *NRDC v. Morton* court stated, "We do not suppose Congress intended an agency to devote itself to extended discussion of the environmental impact of alternatives so remote from reality as to depend on, say the repeal of the antitrust laws."¹³

Applying these principles to the instant case, we hold that the issue of socioeconomic impacts is properly cognizable in this case, for the purpose of making a NEPA overall cost-benefit analysis. However, since the applicable statute (42 U.S.C. Section 2208) gives ERDA sole discretion of the amount and manner of payments in lieu of taxes, NRC does not have jurisdiction or authority to order such payments. Such an interpretation is necessary to harmonize NEPA with this statute, thereby avoiding an irreconcilable statutory conflict.

The situation regarding the contentions as to payments in lieu of taxes is not unlike the situation presented when hearing boards consider the environmental effects of cooling water discharges. In the latter situation, boards are prohibited by Section 511(c)(2) of the Federal Water Pollution Control Act Amendments of 1972 from imposing any conditions on a license in respect to the cooling water discharge. The sole purpose of their consideration of the environmental effects of that discharge is to determine whether they tip the cost-benefit balance against licensing the plant.¹⁴

In the instant case, the provisions of the Atomic Energy Act discussed above require this Board to abstain from conditioning any construction permit subsequently authorized in respect to payments in lieu of taxes. We are, therefore, limited to considering the adverse socioeconomic effects of the proposed plant and the mitigating effects of those payments in striking the final cost-benefit balance for the plant.

We recognize that the Appeal Board has held that in the usual case the Commission is not limited to considering environmental consequences in the overall cost-benefit balance, but may also impose license conditions to minimize environmental harm.¹⁵ However this is not the usual case in that regard. The statute conferring sole discretion on ERDA with respect to payments in lieu of taxes bars NRC from imposing license conditions which determine or order the

NRDC v. Morton, 458 F.2d 827 834, 836 (CA DC, 1972); *Henry v. FPC*, 513 F.2d 395, 406 (CA DC, 1975).

¹³*NRDC v. Morton*, *supra*, at p.837

An example of this may be found in *Public Service Company of New Hampshire, et al.* (Seabrook Station, Units 1 and 2) LBP-76-26, NRCI-76/6, 857 at 915 where the hearing board concluded that, should EPA require a cooling system other than that proposed by the Applicant, the construction permit should be denied.

Kansas Gas and Electric Company and Kansas City Power and Light Company (Wolf Creek Nuclear Generating Station), ALAB-321, NRCI-76/4, 293, 307-309 (April 7 1976).

amount or manner of such payments. To the extent that socioeconomic impacts may be considered in a cost-benefit balance, the Petitioners' asserted interests can be adequately represented by existing parties such as the Staff, the City of Oak Ridge and Roane County within the meaning of the third factor discussed above.

The fourth factor under Section 2.714 concerns the extent to which the Petitioners' participation will broaden the issues or delay the proceeding. The addition of 14 full parties at this late date would almost necessarily produce some delay. This result might be somewhat minimized if the Petitioners took the proceeding as they find it, as suggested in par. 6 of our prior order. However, the tone of their response somewhat dims this prospect. The Petitioners have stated: "Lenoir City et al., takes strong exception to this Board delaying on the allowance of its full participation in these proceedings and at the same time, requiring it to accept the discovery and hearing schedules as they find it. This would have been acceptable at the time they filed their petitions, however, this ruling may effectively foreclose these parties from any discovery."

The Petitioners have no excuse justifying their tardiness, and therefore they have a greater burden in justifying intervention on the basis of the factors listed in Section 2.714(a). *West Valley* supra, at 275. This Board has previously cautioned all parties that the acceptance of the City of Oak Ridge's untimely petition should not be seen as a precedent (Memorandum and Order of March 4, 1976). Upon an examination of all the facts and documents, we conclude that the Petitioners have not made a substantial showing of good cause for their failure to seek timely intervention, and their motion and petition should be denied.

Apart from the timeliness issue, Section 2.714(a) requires a supporting affidavit setting forth with particularity the facts pertaining to a petitioner's interest, and the basis for his contentions with regard to each aspect on which he desires to intervene. While this affidavit requirement may be met by a properly verified petition, the Appeal Board has held that:

The purpose of the affidavit requirement would seem to be fully served by the inclusion of the factual averments relating to interest in the petition—*so long as the petition is verified by one or more persons who have direct, personal knowledge of the truth of those averments*. Normally this would be either the petitioner or (if the petitioner is an organization and not an individual) officers or members thereof possessing the requisite familiarity with the facts. (Emphasis in original)¹⁶

¹⁶ *Northern States Power Company* (Prairie Island Nuclear Power Plant), ALAB-107 6 AEC 188, 190 (1973).

In the instant case neither Mr. Jack A. Thomas, who signed the supporting affidavits, nor Messrs. Hubbard and Barnick, who signed the unverified petition, appear to have the direct, personal knowledge requisite to state the interests or bases for the contentions of each petitioner. Nowhere do we find the direct voice of a responsible and knowledgeable official of each entity describing with particularity the specific factual representations required of each entity¹⁷ Con- clusory opinions involving 14 entities lumped together, with no adequate dif- ferentiation of specific facts, are insufficient. In addition, the Petitioners have not submitted sufficient factual bases for their contentions. These tardy requests for intervention come at a time when specific facts are available from Staff and Applicants' documents, such as the ER and the DES. The Petitioners should have been able by this time to set forth their individual concerns and, with reasonable specificity to identify the areas which they contend the Staff has not properly evaluated.

Inasmuch as the Petitioners' motion for leave to intervene out of time, petition for leave to intervene and supporting affidavits are insufficient to meet the requirements of Section 2.714, such motion and petition must be denied.

In accordance with the provisions of 10 CFR §2.714a of the Commission's "Rules of Practice," this Order may be appealed to the Atomic Safety and Licensing Appeal Board of the United States Nuclear Regulatory Commission within five (5) days after service of the Order.

IT IS SO ORDERED

**THE ATOMIC SAFETY AND
LICENSING BOARD**

Marshall E. Miller, Chairman

Dated at Bethesda, Maryland
this 26th day of August 1976

Allied-General Nuclear Services (Barnwell Fuel Receiving and Storage Station), ALAB-328, NRCI-76/4, 420, 423 (April 28, 1976).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-14

COMMISSIONERS:

Marcus A. Rowden, Chairman
Edward A. Mason
Richard T. Kennedy

In the Matter of

Docket No. 50-271

**VERMONT YANKEE NUCLEAR
POWER CORPORATION**

(Vermont Yankee Nuclear Power Station)

CONSUMERS POWER COMPANY

Docket Nos. 50-329
50-330

(Midland Plant, Units 1 & 2)

September 14, 1976

Pursuant to its *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* (41 Fed. Reg. 34707 (August 16, 1976)), the Commission ordered the reconvening of licensing boards to consider whether the licenses for Vermont Yankee and Midland, Units 1 & 2, should be continued, modified, or suspended until an interim fuel cycle rule has been made effective (CLI-76-12 and CLI-76-11 respectively). The licensees in each proceeding moved the Commission to recall and reconsider the order affecting its plant. In addition, intervenors in the *Midland* proceeding moved the Commission to halt construction of the Midland units or, alternatively to clarify the August 16 order as to the matters to be considered by the Licensing Board.

The Commission rules that (1) in view of the issuance of the court's mandate, *Aeschliman v NRC*, Nos. 73-1776 and 73-1867 (D.C. Cir. July 21 1976) is fully effective and hearings on the issue of suspension of the Midland permits should be promptly held; (2) at those hearings, consideration of all issues remanded should be undertaken; and (3) even though the mandate in *NRDC v NRC*, Nos. 74-1385 and 74-1586 (D.C. Cir. July 21, 1976) has not issued, it is nevertheless appropriate for the Commission to proceed to consider the remanded fuel cycle issues promptly.

Motions of Vermont Yankee and Midland licensees denied; motion of Midland intervenors granted in part and denied in part.

NUCLEAR REGULATORY COMMISSION: ADJUDICATORY RESPONSIBILITIES

The NRC must act promptly and constructively in effectuating the decisions

of the courts, and therefore it is correct for the Commission to proceed to implement a decision without awaiting the receipt of the court's mandate.

GENERAL STATEMENT OF POLICY INTERIM LICENSING SUSPENSION

The question of modification or suspension of licenses under the *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* (41 Fed. Reg. 34707 (August 16, 1976)), is not appropriate for summary disposition and should be decided in formal proceedings.

ADMINISTRATIVE PROCEDURE ACT NOTICE AND COMMENT PROCEDURES

Notice and comment procedures are not required for issuance of a policy statement which is not a rule. 5 U.S.C. §553(b) (A); *Noel v Chapman*, 508 F.2d 1023 (2nd Cir. 1975), *cert denied*, ___ U.S. ___, 46 L. Ed. 2d 40 (1975).

RULES OF PRACTICE. ORAL ARGUMENT

Oral argument on a motion is granted only at the discretion of the Commission. 10 CFR §2.730(d).

MEMORANDUM AND ORDER

On August 23, 1976, Vermont Yankee Nuclear Power Corporation ("Vermont Yankee") moved this Commission to recall and reconsider its order of August 16, 1976, directing the reconvening of an Atomic Safety and Licensing Board ("ASLB") for the limited purpose of considering whether the operating license for its facility should be continued, modified, or suspended until an interim fuel cycle rule has been made effective. On August 26, 1976, Consumers Power Company filed a similar motion in connection with the Commission's August 16 order reconvening that proceeding. On September 3 1976, the Saginaw and Mapleton intervenors in the Consumers Power proceeding moved this Commission to halt construction of the Midland plants, or alternatively to clarify the Commission's August 16 order as to the matters to be considered by the ASLB. The Vermont Yankee and Consumers Power motions are hereby denied for the reasons discussed below. The intervenors' motion is denied in part and granted in part as discussed below.

Vermont Yankee holds a full-term operating license for its nuclear power plant near Vernon, Vermont. Consumers Power holds construction permits for the construction of two power plants at Midland, Michigan. These licenses were among the subjects considered in two opinions handed down by the United

States Court of Appeals for the District of Columbia Circuit on July 21 1976. *Natural Resources Defense Council, et al. v U.S. Nuclear Regulatory Commission*, Nos. 74-1385; 74-1586 (“NRDC case”); and *Nelson Aeschliman, et al. v U.S. Nuclear Regulatory Commission*, Nos. 73-1776; 73-1867 (“Aeschliman case”). In those cases the court of appeals remanded Consumers Power’s permits and Vermont Yankee’s license to this Commission for further proceedings. Common to both cases was a ruling by the Court that the issues of nuclear waste disposal and fuel reprocessing had not been sufficiently considered by the AEC either in the individual licensing proceedings involving the Vermont Yankee and Consumers Power plants, or in a Commission rulemaking proceeding which examined the environmental effects of the uranium fuel cycle and set them forth in Table S-3, 10 CFR 51.20(e) of the Commission’s rules. In the *Aeschliman* case, the Court also held that remand was necessary for further consideration of the issue of energy conservation as a partial or complete substitute for construction, and also for clarification of a report by the Advisory Committee on Reactor Safeguards (“ACRS”).

After receipt of the court of appeals’ decisions, this Commission on August 13, 1976, released a General Statement of Policy (“GSP”), the purpose of which was to indicate how the Commission intended to conduct its licensing activities pending resolution of the legal issues raised by those decisions. 41 Fed. Reg. 34707 (August 16, 1976). The GSP announced the Commission’s conclusion that no new full-power operating license, construction permit or limited work authorization should be issued pending an acceptable substitute for those portions of Table S-3 which the court of appeals set aside, called for a staff review of the reprocessing and waste management literature, and directed the reopening of the rulemaking on the overall effects on the uranium fuel cycle. With regard to the Vermont Yankee and Consumers Power licenses, the Commission decided to reconstitute ASLBs to consider the initial question of whether the Vermont Yankee and Consumers Power licenses should be continued, modified or suspended until an interim rule becomes effective. 41 Fed. Reg. 34709 The reconvening of the ASLBs was directed by the Commission in the August 16, 1976 orders which are challenged here.

Vermont Yankee’s challenge is based on the grounds that no mandate has yet issued from the court of appeals, and it argues that the Commission acted improperly in issuing the GSP and in reopening the Vermont Yankee proceeding without first asking for comments from the parties. Consumers Power takes objection to the reopening of its proceeding on similar grounds, emphasizing that the possibility of Supreme Court review of the court of appeals’ decision still exists. Consumers Power also argues that the GSP was a rule or regulation which, under the Administrative Procedure Act and the Commission’s regulations, 10 CFR Part 2, Subpart H, should not have been issued without prior notice and opportunity for comment.

The intervenors argue that "fairness and logic demand" that construction at Midland be halted pending completion of the ASLB hearing and, in the alternative, ask that the August 16 order to the ASLB in the Midland proceeding be clarified to indicate that the ASLB is to consider the issues of energy conservation and the ACRS report, as well as the waste and reprocessing issues. The GSP indicated (41 Fed. Reg. 34709 n.2) that the hearing on those issues would not be commenced until the Midland decision became final.

Whatever merit there might have been to arguments based on the non-issuance of the mandate, those arguments have been mooted in the *Aeschliman* case by the court's issuance of the mandate on September 3. The *Aeschliman* decision is now fully effective and binding on the Commission, and it must proceed to implement it. The fact that the court denied the motions for a stay of mandate pending certiorari also indicates that the court expects the Commission to proceed with all remanded issues promptly and without awaiting Supreme Court disposition of whatever petitions for certiorari may be filed.¹

The court of appeals has not yet issued its mandate in the *NRDC* case and has not yet ruled on several motions before it, including one filed by this Commission, requesting a stay of that mandate. However, whether a mandate has or has not issued should not overshadow the real question of how this Commission should act in these cases. It is this Commission's responsibility to act promptly and constructively in effectuating the decisions of the courts.² The GSP and the orders of August 16 carried out this responsibility and we adhere to them today. We decline to terminate the re-opened Vermont Yankee and Consumers Power proceedings.

In setting the Vermont Yankee license for hearing on the waste issue, the Commission is treating Vermont Yankee in the same manner which it said in the GSP it would treat all issued licenses which had not yet become final in the Commission. In the GSP the Commission made it clear that the issue of suspen-

¹ Consumers Power Company argues in response to the Intervenors' motion that issuance of the mandate by the Court of Appeals leaves in the Commission's sound discretion the questions when to resume hearings on the issues other than the fuel cycle issue, and whether suspension of the existing construction permit on these grounds must now be considered. While the Commission does possess broad discretion in implementing judicial mandates, and the mandate in this case recognizes that discretion by leaving the question of suspension to decision by the Commission, we cannot disregard the court's issuance of its mandate despite Consumers Power's arguments to it along lines similar to those offered here. Hearings on the issue of suspension are immediately ripe and should be addressed by the hearing board. The question of scheduling hearings on the merits of the remanded questions is left to the discretion of the hearing board on a consideration of all relevant factors.

² The relationship between the Commission and the court of appeals is quite different than that between an inferior and a superior court. As the Supreme Court said in a somewhat similar context: technical rules derived from the interrelationship of judicial tribunals are taken out of their environment when mechanically applied [to administrative agencies]" *F.C.C. v. Pottsville Broadcasting Co.*, 309 U.S. 134, 141 (1940).

sion of those licenses might arise and if it arose, it would have to be resolved in the interim before promulgation of the new rule. 41 Fed. Reg. 34709 Such proceedings, in fact, have already begun in other cases. Since Vermont Yankee was one of the cases that led to issuance of the GSP and since counsel for intervenors prior to issuance of the GSP requested by letter immediate termination of Vermont Yankee's license, the issue of interim suspension had clearly arisen in the Vermont Yankee proceeding. It would be most unusual if the Commission did not have the discretion to treat Vermont Yankee in the same manner it is treating all others similarly situated.

Vermont Yankee filed on August 20 a motion with the Court of Appeals asking for a stay of its mandate and describing the action of the Commission in reconvening the ASLB. Should the Court grant the motion filed by Vermont Yankee, it would of course be at liberty to renew its motion herein.

As to intervenors' motion, in the GSP the Commission announced (41 Fed. Reg. 34709) that the question of modification or suspension of the Consumers Power and Vermont Yankee licenses is not appropriate for summary disposition and should be decided "in formal proceedings in light of the facts and the applicable law." Intervenors offer no reasons for altering the policy announced in the GSP and their motion to halt construction of the Midland facility is therefore denied in that regard.

With regard to the alternative relief requested by intervenors, however, the court of appeals' action of September 3, in issuing its mandate, alters the situation from what it had been when the GSP was issued. Now the decision in *Aeschliman* is final and consideration of all issues remanded to the Commission by the court of appeals is appropriate. Intervenors' motion in that regard is hereby granted and a new order to the ASLB in the Midland proceeding will be issued today directing it to consider those issues as well as the waste issue.

The only remaining question is that raised by Vermont Yankee³ and Consumers Power as to whether notice and comment were required before issuance of the GSP. Since that document was a policy statement rather than a rule, it is exempt from notice and comment procedure. See 5 U.S.C. § 553(b) (A) and *Noel v Chapman*, 508 F.2d 1023 (2nd Cir.); *cert. denied*, ___ U.S. ___, 46 L.Ed.2d 40 (1975).

In its motion, Consumers Power requested oral argument before the Commission. Oral argument on motions is granted only at the discretion of the

³Vermont Yankee also calls our attention to the GSP's reference to "the views expressed by the Commission's staff" (41 Fed. Reg. 34709) and argues that its views should have been solicited as well. The GSP reference is simply to an August 3 letter from Mr. Rusche to Mr. Roisman which rejected a request to immediately terminate Vermont Yankee's operating license. As such it does not constitute a solicitation of views by the Commission from the parties. And in any event Vermont Yankee received a copy of Mr. Rusche's letter before the GSP was issued.

Commission. 10 CFR § 2.730(d). In view of the disposition of Consumers Power's motion herein, no purpose would be served by such argument and the request is therefore denied.

Accordingly the motions made by Vermont Yankee and Consumers Power are denied. The motion by intervenors is granted in part and denied in part.

By the Commission

Samuel J. Chilk
Secretary of the Commission

Dated this 14th day of September,
1976 at Washington, D.C.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-343

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. John H. Buck
Dr. W. Reed Johnson

In the Matter of

Docket Nos. 50-282
50-306

NORTHERN STATES POWER COMPANY

**(Prairie Island Nuclear Generating
Plant, Units 1 and 2)**

Upon *sua sponte* review of the issue of the integrity of the facility's steam generator tubes, as considered by the Licensing Board in its initial decision (LBP-74-17) and later in its supplemental initial decision (LBP-75-27), the Appeal Board found it necessary to conduct a further evidentiary hearing on that issue. On the basis of the record developed, the Appeal Board concludes that there is the requisite reasonable assurance that the operation of these units' steam generators will not endanger the health and safety of the public.

Outstanding operating licenses left in effect; Appeal Board jurisdiction over the operating license proceeding terminated.

TECHNICAL ISSUE DISCUSSED: Steam generator tube integrity

Messrs. Gerald Charnoff and Jay E. Silberg, Washington, D.C. for the applicant, Northern States Power Company

Ms. Sandra S. Gardebring, Roseville, Minnesota, for the intervenor, Minnesota Pollution Control Agency

Messrs. Joseph Scinto and O. Gregory Lewis for the Nuclear Regulatory Commission staff.

DECISION
September 2, 1976

This is an operating license proceeding involving Units 1 and 2 of the Prairie Island Nuclear Generating Plant, two pressurized water reactors (PWRs) constructed by the Northern States Power Company (NSP) on the Mississippi River near Red Wing, Minnesota. The proceeding first came before us on appeals taken

from the Licensing Board's initial decision in April 1974 which authorized the issuance of operating licenses for both units. LBP 74-17 7 AEC 487 The issues presented by those appeals long since have been resolved in the applicant's favor. ALAB-244, 8 AEC 857 (1974). What has continued to occupy our attention, however, is an additional question which, although raised before the Licensing Board, was not embraced by the appeals. That issue pertains to the integrity of the tubes in the facility's steam generators.

Our *sua sponte* review of the findings in the initial decision on this important safety question, and of the record underlying those findings, prompted a remand to the Licensing Board for the taking of further evidence and the rendition of a supplemental initial decision. ALAB-230, 8 AEC 458 (1974). In May 1975, that supplemental decision issued. LBP 75-27 1 NRC 501 Although no appeal was taken from it, we requested the views of the parties respecting whether that decision reflected a sufficiently complete analysis of all facets of the steam generator tube integrity issue. ALAB-275 1 NRC 523 (1975). Following receipt of those views, we determined that a still further evidentiary hearing was required and that it should be conducted by ourselves. ALAB-284, 2 NRC 197 (1975).

That hearing was held in early January of this year. Witnesses testified on behalf of the applicant and the NRC staff and were cross-examined by other parties¹ as well as subjected to extensive questioning by the members of the Board itself. Additionally several documentary exhibits were received into evidence at the hearing and, by agreement of the parties, the record was held open for a substantial period thereafter to allow the inclusion of still further documents. Once the record had closed, proposed findings of fact were filed by the applicant and the staff.²

For the reasons set forth in this opinion, we conclude on the basis of the present record that there is the requisite reasonable assurance that the operation of the Prairie Island steam generators will not endanger the health and safety of the public. 10 CFR 50.57(a). Accordingly the outstanding operating licenses are being left in effect.³

I. INTRODUCTION

With respect to nuclear power plants, this Commission has determined that "the reactor coolant pressure boundary shall be designed, fabricated, erected, and tested so as to have an extremely low probability of abnormal leakage, of

¹ The intervenor Minnesota Pollution Control Agency (MPCA) was full participant in the hearing although it did not adduce any evidence of its own.

² MPCA endorsed the staff's proposed findings.

³ Not perceiving the existence of any imminent safety hazard, we had left those licenses in effect during the course of our review.

rapidly propagating failure, and of gross rupture." 10 CFR Part 50, Appendix A, General Design Criterion No. 14. In the case of pressurized water reactors such as Units 1 and 2 of the Prairie Island facility the tubes of the steam generators provide a portion of the primary system boundary. On the basis of the evidence adduced at the initial hearing, the Licensing Board could and did conclude that, if their condition at the time of installation were maintained, the Prairie Island tubes would retain their integrity both in normal operation and in the event of a postulated accident such as a loss-of-coolant accident. 7 AEC at 507

But the evidence at that hearing further indicated that the original condition of the tubes might not be maintained during the course of plant operation. Specifically environmental conditions exist on the secondary side of the steam generator which might occasion corrosion of the tubes over a period of time. The operating history of several reactors has revealed that the most common consequence of tube degradation by corrosion has been leakage of radioactive primary coolant into the secondary system. This contamination of the secondary system, and the action necessary to detect and eliminate tube leaks, result in plant operating personnel being exposed to increased radiation.

Insofar as the public health and safety is concerned, tube leakage—even to the extent of a complete rupture of one tube—has been determined upon analysis to present of itself no significant danger.⁴ The public health and safety might be endangered, however, were one or more corroded tubes to fail as a result, and during the course, of a loss-of-coolant accident or a secondary system break. Thus, the question remains whether there are adequate safeguards to preclude such an occurrence.

The applicant and the staff have maintained throughout the proceeding that there is a very low probability of tube failure being brought about by an accident. This is principally so, they insist, because of both the characteristics of the Prairie Island facility and operating procedures which have been adopted. Specifically the plant is to be operated using secondary water chemistry techniques which are expected to reduce, if not eliminate, tube corrosion. If corrosion does occur, it is asserted, detectable primary-to-secondary leakage will herald the degraded state of tubes long before their condition has reached the point at which they might fail under accident conditions. And, finally it is claimed that routine surveillance of the tubes using eddy current techniques will provide additional assurance of tube integrity by identifying those tubes which may not be leaking, but which are degraded to an unacceptable level—as determined by application of accident-strength criteria.⁵

⁴ Prairie Island Nuclear Generating Plant—Final Safety Analysis Report, Section 14.2.4, Amendment 20 (8-4-72), p. 14.2-23.

⁵ The unacceptable tubes would be removed from service by plugging; *i.e.*, by closing off the tube to primary coolant flow. This is done during the eddy current surveillance period by inserting plugs into the ends of the tubes at the tube sheet. These plugs are then either welded in place or, more commonly, explosively expanded to seal off that particular tube.

Our review of both the initial decision and the supplemental initial decision, as well as of the record underlying them, left us with unresolved questions in a number of areas. Those questions were related to the potential for steam generator tube corrosion and to the conclusion of the applicant and the staff that the occurrence of tube failure concurrent with a loss-of-coolant accident or a secondary system break is of sufficiently low probability that it need not be analyzed as a design basis accident. Accordingly we concluded that further evidence should be taken. Specifically as indicated in ALAB-284, we perceived a need to explore in greater depth:

- (1) The need for requiring condensate demineralization as a means for minimizing tube corrosion.
- (2) Whether minor primary-to-secondary leakage will invariably provide an early warning of the existence of conditions which may require plant shutdown and tube inspection.
- (3) The efficacy of eddy current surveillance of steam generator tubes as a means of determining the state of their integrity
- (4) The need for additional requirements for the monitoring of secondary water chemistry
- (5) The acceptability of the analyses and data used by the staff in developing the criteria for determining when a tube has become degraded to the point that its wall thickness is no longer acceptable and it must be taken out of service by plugging.

In addition, on December 4, 1975 we issued an order directing the staff to present evidence on the possible effects of the concurrent failure of steam generator tubes on the course of a loss-of-coolant accident or secondary-side break.

II. REVIEW OF TECHNOLOGY AND HISTORY OF STEAM GENERATOR TUBE INTEGRITY

It was understood early in nuclear power plant development that the maintenance of steam generator tube integrity is of prime importance. However, the complexity of maintaining the integrity of these tubes was recognized only after some years of nuclear facility operating experience. We therefore believe that it would be helpful to review briefly the technology and power plant experience relating to the corrosion of steam generator tubes.⁶

⁶Our review is based largely on information provided by staff witness Weeks in the Appendix to his direct testimony and by applicant witness Fletcher in Northern States Power Appeal Board Exhibit 5. The reader is also referred to similar papers, one by Weeks and one by Fletcher, in *Nuclear Technology*, March 1976 (NUTYBB 28 (3), pp. 348 and 356).

The major focal point of efforts to insure the long-term integrity of steam generator tubes has been the chemical treatment which should be utilized for the secondary side (feedwater-steam-condensate) water. Chemistry control of the steam-cycle water is necessary to reduce equipment corrosion and to minimize fouling of heat transfer surfaces (NSP-ABI, p. 49· NSP-AB4 p. 13).⁷ In the context of maintaining steam generator tube integrity the need for special chemical treatment is due primarily to the fact that impurities in the water become concentrated in the steam generator. This can lead to corrosive attack on steam generator tube surfaces.⁸ Corrosion may result from locally high concentrations of impurities (Weeks, Appendix, p. 1) which enter the secondary system through condenser leakage or from corrosion of secondary system components such as the turbine, condenser and feedwater piping (Weeks, Reference 1, p. 323; Fletcher, AB Tr. 215).

The mechanical design of the steam generator and secondary system is also an important factor in the tube corrosion process. Regions of low flow velocity and high heat flux in the generator tube bundle have been found to be associated with the environment necessary for the concentration of impurities (NSP-AB4, pp. 43-46). The flow and heat flux characteristics of the generator are determined to a great extent by its mechanical design. In addition, the materials used in construction of the secondary system components have been found to be important in that they can effect the amount and type of impurities that are generated through corrosion of these components (AB Tr. 212-15).

A. Chemical Treatment for Corrosion Control

There are basically three methods of chemical treatment that have been used to control corrosion in pressurized water reactors—namely (1) phosphate treatment; (2) all-volatile treatment (AVT); and (3) zero-solids (condensate

⁷The exhibits and prepared testimony introduced into the record at our hearing are referred to in this opinion as follows:

Applicant's exhibits	"NSP-AB _____"
Staff's exhibits	"NRC-AB _____"
Applicant's prepared testimony	"NSP-T _____"
Staff's prepared testimony	"[Name of sponsor]"

The transcript of the hearing is referred to as "AB Tr. _____"

A complete list of the exhibits and prepared testimony is set forth in an Appendix to the opinion.

⁸Virtually all PWR's today use steam generator tubes which are made of a corrosion resistant nickel alloy Inconel-600. Even though investigations are continuing to determine if there are other materials which show better corrosion resistance than Inconel-600, this material "continues to show acceptable resistance to concentrated impurities, compared with other candidate materials, although it is not immune to corrosion attack." (NSP-T2, p. 33).

demneralization) treatment (ZST).⁹ In the case of Westinghouse nuclear power plants,¹⁰ the utilization of treatment methods has gone through several evolutionary stages.

1. In general, the phosphate treatment uses mixtures of disodium and trisodium orthophosphates which are added to the secondary coolant. These materials react with dissolved solids to form soft phosphates of the solids (often iron or calcium) which will, in theory be removed by steam generator blow-down (Weeks, Appendix, p. 3).

a. The first stage of secondary water treatment methods encompassed operation of the early commercial reactors such as San Onofre and Connecticut Yankee beginning in 1967 and continuing on until early 1972 (NSP-AB5, pp. 4-5). The secondary water chemistry used during this period was called "coordinated phosphate control" (*id.* at p. 4). Under this method of phosphate control, sodium phosphates were generally added in batch fashion and the dissolved solid impurities contained in the resulting soft precipitates were at least partly removed by periodic blow-down of the steam generators (*id.* at p. 5 NSP T3, p. 19).¹¹

Phosphate treatment was thought to provide reliable buffered pH control and to help in minimizing the formation of hardness scale deposits on steam generator tubes (NSP-AB1 p. 52). However, impurities from condenser in-leakage and corrosion products from the secondary system tended to deposit as sludge on the tube sheet in low flow areas (AB Tr. 112-20). Phosphates were found to accumulate in the sludge piles, with higher concentrations possible in regions of high heat transfer (AB Tr. 110-15). The environment thus formed was conducive to corrosive attack (NSP-AB5 page 5 Weeks, Appendix, page 2).

Intergranular stress corrosion cracking¹² of the steam generator tubes and primary-to-secondary leakage were observed at several plants using the coordinated phosphate control method; *e.g.*, Point Beach 1, Connecticut Yankee and H.B. Robinson 2 (NSP-AB5 pp. 4-5). A study of the chemistry control

⁹ These terms will be expanded upon as they are considered. Detailed discussions of these various methods can be found in Northern States Power Appeal Board Exhibits 1 through 5.

¹⁰ The two Prairie Island reactors and steam generators were supplied by the Westinghouse Electric Corporation.

"Steam generator blowdown" is used to describe a process for removing solids which are dissolved and suspended in the secondary water. The process involves bleeding off a small portion of the secondary coolant through a line from the lower portion of the steam generator tube bundle region. The blowdown fluid may be radioactive due to primary-to-secondary leaks and must be monitored and controlled as such. The blowdown process may require a relatively complex or a simple system, depending upon whether the blowdown fluid is recycled or rejected.

¹² "Intergranular stress corrosion cracking" is often used to describe a process of localized attack of tube surfaces; the Term "intergranular" reflecting the fact that the attack takes place along grain boundaries.

records of these plants led to the conclusion that this attack was due to the presence of local concentrations of sludges together with free caustic. This was summarized by an applicant's witness as follows:

Slug-fed phosphate additions were followed by rapid consumption of the phosphate; a pH value in excess of that expected for the given phosphate-Na/PO₄ combination or pH values depressed by boron buildup in the steam generator. Apparently free caustic was being released as phosphate was being consumed in reactions with alkaline forming salts or corrosion products; the concentration of free caustic was then enhanced locally beneath sludge deposits or hardness scale where it could initiate cracking of the tubes (NSP-AB5 p. 5).

b. The next step in the evolution of secondary water control, developed in an attempt to combat the undesirable results described above, began in early 1972 with the establishment of "sodium phosphate congruent control" (NSP-AB5 p. 5). This treatment was similar to "coordinated phosphate control" but called for the maintenance of specific ranges of phosphate concentration and sodium-to-phosphate molar ratios and, further, required the disodium phosphate injection and steam generator blowdown to be continuous (*ibid.*). These requirements were imposed to prevent large fluctuations in sodium-to-phosphate ratios. Studies had shown that, if the ratio exceeded 2.6, free caustic might be formed. (NSP-AB1 pp. 52-53). As noted above, free caustic had been implicated as the probable cause of intergranular cracking of steam generator tubes (NSP-AB5 p. 5).

Operating experience using the congruent control method indicated that it would control intergranular cracking. But in late 1973 and early 1974, a new mode of steam generator tube attack—namely thinning of the tubes³—was observed in several reactors (NSP-AB5, p. 6).

c. The occurrence of tube thinning led to the third stage in the evolution, actually only a variation of the second. The lower limit of the range of sodium-to-phosphate ratios was raised from 2.0 to 2.3 as a result of laboratory studies which indicated lower ratios might produce solutions aggressive to Inconel-600 (NSP-AB3, pp. 18-21 NSP-AB4, p. 35). However, continued thinning of generator tubes was detected during inspections of several plants. As a result, in 1974 Westinghouse recommended against further use of any of the phosphate treatment schemes. In place of the phosphate treatment, there was initiated the fourth, and current, stage of secondary water chemistry control, AVT (NSP AB5, pp. 6-8).

³This second type of corrosion, thinning, is a more general attack sometimes referred to as wastage or transgranular corrosion (Weeks, Reference 1, p. 326). According to a staff witness, this type of attack "has always been associated with local concentrations of sodium hydrogen phosphates" (Weeks, Appendix, p. 1).

2. The AVT method achieves pH control by addition of ammonia or a volatile amine such as morpholine or cyclohexamine (NSP-AB4, p. 13). Hydrazine is also added to scavenge the oxygen (*ibid.*). Under AVT solids contained in the coolant are removed by continuous steam generator blowdown (*id.* at p. 15). The volatile chemical additives do not collect in the generator but are carried with the steam through the secondary cycle.

Since AVT does little to remove impurities, a principal requirement for the successful use of that method is the minimization of contaminants in the steam generators (NSP-AB5, p. 12). Therefore, condenser leakage must be restricted and corrosion within the secondary system itself held to a minimum (*id.* at pp. 11-13).

Nearly all of the plants using Westinghouse-designed steam generators have now switched to AVT. As of November 1, 1975, the changeover had been implemented in 17 out of 20 operating plants which had previously utilized phosphates. Three plants continued to employ the phosphate treatment and, since August 1974, four new plants have begun operation with AVT. NSP-T2, p. 2.

3. The third water treatment technique, ZST involves the inclusion of a full or partial-flow condensate demineralizer in the secondary system as an adjunct to the AVT. This provides a reliable means for removing impurities from the secondary water system (Weeks, pp. 4-5). Whereas only one Westinghouse reactor is reported to use condensate demineralization (NSP-AB5, p. 15), all PWRs which employ the "once through" steam generator must, by reason of their design, utilize ZST (Weeks, p. 5). To date, the units of this type which have been inspected have shown no tube corrosion or buildup of sludge deposits (Weeks, Appendix, p. 9).

B. Metallurgical and Mechanical Considerations

In parallel with developments in water chemistry to reduce corrosion, there have been continuing research programs aimed at producing better flow patterns in steam generators and identifying more corrosion resistant materials for both the steam generators and condensers (NSP-T2, p. 32).

1. The Inconel-600 being used in the Prairie Island steam generators and in virtually all other PWR plants appears to be as resistant to corrosion as other materials that have been tested. One of the applicant's witnesses stated his belief that present research holds no promise of the development of a more satisfactory material in the near future. NSP-T2, p. 33.

Apart from considerations of the material used in the steam generators themselves, it has been recognized that the corrosion resistance of, and corrosion products from, other parts of the secondary water system are important. Although a careful selection of material is necessary to maintain a very low leakage rate in the condenser, those materials should also be such that they do not result in the introduction of significant quantities of corrosion products in the

secondary water. In particular, it has been found that the use of copper in the condenser tubes adds to the amount and corrosiveness of the sludge (NSP-T3, pp. 9 AB Tr. 212-13). Because of this, stainless steel and titanium are now considered more desirable materials for condenser tubes¹⁴ (NSP-AB4, pp. 23-14 AB Tr. 233-34).

2. The pattern of secondary liquid flow in steam generators, particularly near the tube sheet, is another important factor affecting tube corrosion. In his discussion of steam generator operating experience, applicant witness Fletcher testified that, after several years of operation with phosphate-treated water, the San Onofre steam generators “showed no significant change in eddy current indications of corrosion” (NSP-T2, p. 11). He went on to state that “[t]he favorable results of San Onofre are attributed to probable effects of better flow distribution across the tube sheet and lower operating temperatures” (*id.* at p. 12). Under Board questioning (AB Tr. 117-19), the witness explained that the San Onofre plant has small steam generators (primarily because of its low power rating) which have a higher velocity of water sweeping across the tube sheet and a better flow distribution than the larger modern steam generators. In addition, the San Onofre generators tend to operate at a somewhat lower temperature. It appears, therefore, that the trend toward higher power has resulted in larger steam generators which, because they operate at higher temperatures and have imperfect flow distributions, are more likely to produce sludge piles—hence a more corrosive environment.

Westinghouse has recognized this problem and is well into a program to modify the larger steam generators to produce more satisfactory flow characteristics. Following a laboratory development program, modifications on existing steam generators were begun in March 1975. As of February 1976 these modifications had been completed on the steam generators of ten operating reactors (AB Tr. 130-31). Prairie Island 2 was modified prior to its initial operation.

Although results from flow measurements in modified steam generators indicate improved flow patterns, no long-term results on sludge formation are yet available. However, according to Mr. Fletcher, Westinghouse intends to continue this steam generator study with a view toward further improving the flow characteristics (AB Tr. 131).

C. The Point Beach Tube Failure Incident

The urgency of the need to solve the generator tube corrosion problem became clear when, on March 7 1975 the staff furnished the Licensing Board and the other parties with a copy of its February 28, 1975 “Notification of an Incident or Occurrence” in connection with the Point Beach 1 facility—a West-

¹⁴ Both Prairie Island units use stainless steel condenser tubes.

inghouse pressurized water reactor located at Two Rivers, Wisconsin, which the record reveals has a steam generator design similar to that of Prairie Island (Kintner, following Tr. 1878, at p. 1 Weeks following Tr. 1878, at p. 7).⁵ The incident report reflected that on the night of February 26-27 1975 while the facility was operating in a steady state at full power, a severe failure of a steam generator tube occurred. This was followed by a primary-to-secondary leakage flow of approximately 125 gpm. It was further stated in the report that the tubes had been inspected last in April-May 1974 and that in November 1974 the phosphate treatment method had been supplanted by the AVT method.

During the subsequent eddy current (EC) investigation of the Point Beach 1 steam generator, a number of tubes were found having defects that were almost through-wall (NSP T3, p. 11). There is also testimony that the vertical extent of these EC defect indications was, in general, on the order of 1/2 to 1 inch (AB Tr. 570-76).

Based on their review of this incident, witnesses for the applicant opined that rapid and widespread growth in corrosive penetration in the tubes had occurred between May 1974 and February 1975 (NSP-T3, pp. 12-13). They pointed out that conditions for accelerated caustic corrosion attack (a sludge layer containing both phosphates and impurities) were present most of this time. Thus, they concluded that the corrosion experienced was intergranular in nature (*id.* at pp. 13-14).

The record indicates that, immediately prior to the February 27th incident, there was virtually no primary-to-secondary leakage at Point Beach. The sudden, major failure of a single tube was an occurrence unique in the operating history of PWR steam generators in the United States. The Point Beach incident, thus far the outer boundary of corrosion-induced loss of steam generator tube integrity served to intensify the Board's concerns on this issue. For on its face the incident appeared to contradict or cast doubt upon certain of the factors upon which assurances of tube integrity were based.

III. DISCUSSION OF THE EVIDENCE AND FINDINGS OF THIS BOARD

We now proceed to a consideration of the specific areas of inquiry which were designated in ALAB-284 and in our order of December 4, 1975. Because these areas are in general separable, our discussion of the pertinent portion of the evidentiary record in each area will culminate with our findings relating to the particular matters in question. We depart slightly from the alignment of the issues as presented in Part I of ALAB-284 by considering under the broad heading of secondary water treatment the questions of (1) the need for condensate demineralization and (2) requirements for monitoring of secondary water chemistry (ALAB-284, 2 NRC at 198-205).

⁵"Tr." refers to the transcript of the original hearing.

A. Secondary Water Treatment

It is clear from the discussion in Part II, *supra*, that the integrity of steam generator tubes is greatly dependent upon the conditions of the environment in which they must operate and, therefore, upon the methods which are used to control and monitor that environment.

With regard to the Prairie Island facility Unit 1 operated using a phosphate control method from December 1973 to October 1974 when it was converted to AVT on the other hand, Unit 2 has operated only under AVT (NSP-T2, Table 1). For reasons stated to be related solely to plant reliability and economics (see p. 183, *infra*), NSP has committed itself to the installation of condensate demineralizers for both units.

The Licensing Board found in its supplemental initial decision that:

*** [t]he reactor experience with AVT steam generator chemistry without condensate demineralization gives confidence that the Prairie Island steam generators can be operated without any significant corrosion *** (LBP 75-27 1 NRC at 504).

The Board based this finding upon the operating experience of the Maine Yankee, Shippingport and Fort Calhoun plants, as well as West Germany's Obrigheim plant (*ibid.*). Our review of the record adduced below left us unconvinced that it contained adequate justification for the finding (ALAB-284 2 NRC at 198-200). At the hearing before us, however, the applicant and the staff provided further significant information on the operating experience of these facilities and several other PWRs.

We turn now to the evidence relevant to the secondary water chemistry control methods. We will summarize separately the pertinent parts of the record on this subject concerning: (1) water treatment experience, (2) whether other secondary water monitoring specifications are required, (3) the need for condensate demineralization, and (4) plant design features and operational characteristics of the Prairie Island facilities related to water chemistry. We conclude with our findings.

1. The record provides a basis for comparing the pertinent experience of plants which have operated under various secondary water treatments with the experience at Prairie Island to date. Steam generator tube inspection results and data on primary-to-secondary leakage for various PWRs were introduced into evidence by the applicant (NSP T2). The applicant has catalogued these results in three categories depending on the length of time the plant had operated using a phosphate control method before switching to the AVT method (*id.* at p. 2). These are: (a) extended phosphate operation (in excess of one year), (b) limited phosphate operation (up to one year), and (c) no phosphate operation (*i.e.*, having made use of AVT only).

a. The record indicates that most of the plants within the extended opera-

tion category which have been inspected since conversion to AVT show evidence of some continued thinning and caustic corrosion cracking. We have been told that this is due to the presence of phosphates concentrated in localized piles of sludge which accumulated on the tube sheet during extended operation using phosphate chemistry control methods. Neither of the Prairie Island units is in this category (NSP T3, pp. 18-20).

b. Although the applicant's testimony identifies seven plants in the category of limited phosphate operation, it discusses only Prairie Island Unit 1 and Ringhals Unit 2 (NSP-T2, p. 10).

Ringhals Unit 2 uses sea water for cooling and does not employ condensate demineralization. A steam generator inspection was made in June 1975, seven months after conversion to AVT. No reportable defect indications¹⁶ were found and there had been no primary-to-secondary leakage.

Results from eddy current inspection of Prairie Island Unit 1 performed during March 24-28, 1976 have been recently submitted.¹⁷ These tests disclosed no tube degradation; but there were indications of limited areas of sludge build-up to a maximum height of one inch. A total of 200 pounds of sludge and oxides were removed from both steam generators in Prairie Island Unit 1 as a result of the tube sheet cleaning programs performed in September 1974, April 1975 and March 1976 (*id.* at pp. 1-3).

c. Four plants have used only AVT from the beginning of operation (NSP T2, p. 2). These plants came on line after August 1974; hence little data have been accumulated from them. However, no steam generator tube leaks have been observed in any of these plants (*id.* at p. 11).

Prairie Island Unit 2 began operation in December 1974 and has had no experience with phosphate chemistry except during pre-operational "wet layup" and hot functional testing (NSP T2, fn. * at p. 11). A report of the EC inspections during January 5-8, 1976 was submitted in evidence on March 4, 1976.¹⁸ Of 422 tubes inspected, none was found degraded (*i.e.*, with penetration greater than the reportable defect depth of 20% of the tube wall thickness; see fn. 16, *supra*). Sixteen of 294 tubes inspected for sludge deposits gave positive indications of sludge with a maximum measured depth of 2 inches. The applicant decided that tube sheet cleaning was not necessary at that time. *Id.* at pp. 1-2.

2. In ALAB-284, we pointed out that virtually all of the witnesses before

¹⁶ See Section C.7.d of Regulatory Guide 1.83, *Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes*; Revision 1, July 1975.

Northern States Power Company, Prairie Island Nuclear Generating Plant; Inservice Inspection Summary—Eddy Inspection of Unit 1 Steam Generator Tubes; March 24-28, 1976.

Northern States Power Company, Prairie Island Nuclear Generating Plant; Inservice Inspection—Eddy Current Inspection of Unit 2 Steam Generator Tubes; January 5-8, 1976.

the Licensing Board acknowledged that high purity water is the first echelon of defense against corrosion (2 NRC at 203). This testimony coupled with the fact that there exist no data on the long-term efficacy of AVT led us to suggest that, as a partial means of insuring that the secondary system be maintained at a high state of purity there might be a justification for a technical specification on secondary system water quality. Further, we noted that monitoring of the secondary water possibly should be supplemented with periodic chemical monitoring of the steam generator blowdown (*id.* at pp. 202-03).

The staff has taken this suggestion further. It proposes revisions to the technical specifications which would impose several secondary water chemistry monitoring requirements upon the Prairie Island facility (Maccary Appendix A). These revisions include monitoring of the steam generator blowdown chemistry and the chemistry of the condensate. The proposed specifications also set forth corrective actions which must be taken when chemistry limits are not maintained.

This issue produced the only major conflict in position between the parties during the hearing before this Board. The arguments presented by each side may be summarized as follows:

a. The staff argued that control by technical specification of secondary water chemistry is necessary because of the lack of operating experience with the AVT method. In this regard, the senior staff witness stated that:

*** [t]he limitations of AVT water chemistry and its tolerance for impurities that may be introduced into the secondary coolant before steam generator corrosion results have not yet been established over the long term because of the limited service experience with AVT *** (Maccary p. 18).

The staff further asserted that secondary water chemistry monitoring requirements are needed to assure that aggressive conditions, such as existed at Point Beach, do not occur at Prairie Island. Such assurance is important, it claimed, because if extensive cracking took place, with multiple cracks appearing on individual tubes prior to development of a through-wall defect, the concept of limited leakage as an early warning of degraded tube conditions could be jeopardized.¹⁹ Dr. Weeks testified that:

*** [i]f we initiate, because of greatly exceeding the limits in Mr. Maccary's testimony a large number of cracks, it is conceivable to me that at least one of those definitions of extensive stress corrosion damage, that is, initiation of 25 to 50 cracks in various tubes, could occur and could develop before the leakage *** (AB Tr. 336).

¹⁹ The leak-before-break concept is discussed in detail in section III B of this decision, *infra*.

Thus, in the staff's view the worth of the leak-before-break concept is dependent upon maintenance of the secondary water chemistry technical specifications recommended by the staff.

Dr. Weeks also testified that, although the Prairie Island steam generators have not developed deep sludge beds, if there were a high caustic concentration (from condenser in-leakage) a boiler scale could form on the steam generator tubes which, in time, could promote caustic areas on the tubes (AB Tr. 368). A mild version of this type of occurrence was experienced at the Obrigheim facility in which stress corrosion cracking and small amounts of leakage were noted in a plant with assertedly good water chemistry and no apparent sludge formation on the tube sheet.²⁰ (NRC-AB4, p. 115/4).

b. In distinction, the applicant argued that technical specifications on secondary water chemistry are not necessary from a safety standpoint (NSP-T10, pp. 2-3). In this connection, it stated that:

* * * although we do not believe it is necessary NSP would not object to a Technical Specification requiring the establishment of secondary water quality standards which could be monitored by the NRC Office of Inspection and Enforcement personnel; such standards, however, should not themselves be the subject of Technical Specifications (NSP-T10, p. 6).

The applicant follows secondary water chemistry guidelines proposed by Westinghouse. But these guidelines do not, of course, carry the force of requirements imposed by technical specifications. Further, Westinghouse has recently withdrawn its recommendation for condensate conductivity monitoring (AB Tr. 193-96, 338).

In opposing the requirement of a technical specification on condensate conductivity the applicant noted that the most sensitive indication of water chemistry degradation would be obtained from the steam generator blowdown, in which a concentration of the impurities in the system would be encountered (AB Tr. 488-89). It asserted that monitoring condensate conductivity would be less accurate, and subject to errors resulting from the presence of dissolved gases in the condensate.

Further, it was maintained that a specification which might require corrective action (e.g., shutdown of the plant) within a specified relatively short time if the condensate conductivity exceeded a set limit would be unjustified. The reason assigned was that there has been shown no direct or immediate

²⁰The Schenk paper (NRC-AB4) is not particularly clear on the subject of sludge. Stating that "there is no indication of large sludge deposits on the tube plate" the paper immediately discusses sludge deposits on the tubes above the tube plate (*i.e.*, tube sheet) "to a height of about 25 cm." Dr. Weeks interpreted this use of the term "sludge" to mean that boiler scale had formed on the tubes which would act in much the same fashion as sludge on the tube sheet in its ability to promote intergranular corrosion (AB Tr. 376-77).

impact on tube integrity hence on plant safety of continued operation with high condensate conductivity ²¹

3. In view of the desirability of high water purity in the secondary system as a defense against corrosion, we asked the parties why there should not be a requirement that condensate demineralization be employed at Prairie Island. As noted in Part II, *supra*, pressurized water reactors using steam generators of the "once-through" design must use this water treatment technique (as must all boiling water reactors).

Based upon its own independent review the applicant has committed itself to the installation of condensate demineralization systems for the Prairie Island Units. Both systems are expected to be in operation by the summer of 1977 (NSP-T1, pp. 1-2).

The applicant presented three main reasons for this decision (NSP-T1 pp. 4-5). Briefly these are:

- a. To reduce the cost of replacement power which is needed when the plant is shut down for condenser repair;
- b. The flexibility provided by having such a system available;
- c. The option of using it at times when it can contribute to the maintenance of good secondary water chemistry such as during startup and load changes.

In commenting in its supplemental initial decision upon the applicant's election to install a condensate demineralization system, the Licensing Board found that:

*** [t]he choice of installing condensate demineralizers is basically an economic decision resulting from a balancing of the cost of downtime needed to maintain condenser integrity against the cost of installing demineralizers (1 NRC at 505 reference omitted).

As indicated by our query to the parties in ALAB-284, this Board took a somewhat broader view of the benefits that might result from the use of demineralization.

In the interest of (1) assuring the highest practicable degree of safety of the plant throughout its lifetime; (2) minimizing radiation exposure to the public and to plant personnel; and (3) maximizing the potential for reliable operation of the plant to the end of its projected lifetime, why should not condensate demineralization be required in conjunction with the all-volatile water treatment method? (2 NRC at 206.)

¹There was apparent agreement between the staff and the applicant that the significance of an input of impurities to the system depends in the ultimate on the magnitude of that input, the chemical nature of the impurities, and how long such an input lasted (AB Tr. 264-66, 346-53).

In our view since the use of demineralizers tends to minimize the conditions leading to corrosion, it would, *ipso facto*, tend to reduce the possibility for tube corrosion. Such a reduction would reduce concomitantly the chance of an accident involving tube failure. Moreover, minimizing tube corrosion would also reduce radiation exposures to plant personnel which would result from frequent EC tests and the tube plugging operation. Finally primary-to-secondary leakage, even from minor tube failures, adds radioactive materials to the normally "clean" secondary system. This contributes to the potential for radiation exposure to plant personnel and slightly to the offsite release of radioactive materials. NSP-T7 pp. 3-4.

Staff witnesses at our hearing suggested that there would be a general reduction of impurities in the condensate by a factor of about 10 as a result of demineralization (AB Tr. 286). This would substantially affect the potential for buildup of impurities within the steam generators that arise from corrosion products produced in the condenser. At the same time, however, the staff acknowledged that the corrosion-produced impurities from the feedwater lines and certain auxiliary steam lines would bypass the turbine-condenser-condensate train, and thus would not be affected by the action of the demineralizer (Weeks, p. 5, AB Tr. 281).

Further, the staff and the applicant asserted that, while the demineralizer would remove impurities due to condenser in-leakage and some corrosion products, these same benefits may be realized without demineralization by maintaining a very low condenser leakage and a low system corrosion rate (Weeks, pp. 4-7; NSP-T1, pp. 1-4).

Finally the applicant raised the possibility of sodium "slippage" from the ion exchangers of the demineralizers into the secondary system (NSP-T1 p. 5 AB Tr. 145-47 160). The magnitude of this potential problem is uncertain; none of the applicant's witnesses manifested any serious concern over it. Indeed, in response to questions by the applicant's own counsel, one of those witnesses stated that:

[t]he condensate policy seems to us to be a good investment. We think that it will enhance reliability and enhance our flexibility of operation. Such things as * * * sodium ion slippage, are things that we must be prepared for. We can monitor for sodium slippage. We can take the polisher off the system if necessary (AB Tr. 217).

4. Certain aspects of the secondary system design of a nuclear power plant may have an indirect effect on the water purity within the steam generator. Three such design features which were identified at the hearing and which have particular significance to the Prairie Island plant are: (a) the materials of secondary system construction, (b) the flow characteristics of the steam generator and (c) the design of the condenser.

a. Most of the material that makes up the sludge in steam generators has

been identified as system corrosion products (AB Tr. 215). An important characteristic of the Prairie Island units is that, unlike many other PWRs operating today they use all ferrous materials in their secondary systems (e.g., the condenser tubes are stainless steel instead of a copper alloy) (AB Tr. 214). This allows operation with secondary water in a higher pH range; thereby minimizing corrosion of the ferrous materials and the contribution to sludge formation made by corrosion products (NSP-T6, p. 2).

b. We have previously discussed in this opinion (p. 177 *supra*) the effect that the flow pattern within the steam generator, and particularly regions of low or stagnant flow in that pattern, may have in promoting sludge deposition.

Efforts by Westinghouse to improve the local thermal-hydraulic characteristics in operating steam generators have resulted in several modifications being made in the steam generators of four nuclear power plants—including Unit 2 of the Prairie Island facility (NSP-AB5 pp. 16-17).²² The modifications involved (1) mechanical changes affecting feedwater and bypass flow distributions; and (2) the orientation of the blowdown suction to maximize blowdown flow in the central region of the tube bundle. Their purpose was to decrease sludge accumulation by increasing local flow velocities, reducing the number of tubes exposed to low flow and shifting deposition sites toward the center of the bundles where the modified blowdown suction might remove the sludge more effectively (*ibid.*).

c. The applicant pointed out that, after being forced to shut the units down several times because of condenser tube leakage, modifications were made in March-April 1975 to eliminate the vibrations which were causing the leaks. Subsequent to these alterations, no significant condenser leakage was encountered (NSP-T1, pp. 2-3). Since the condenser modifications were made, the secondary water chemistry has always met the Westinghouse recommended limits during power operation (*id.* at pp. 3-4).

5 On the basis of the disclosures of record summarized above, we make the following findings regarding secondary water treatment:

a. An environment conducive to tube corrosion may result from the inflow of impurities to the steam generator from secondary system corrosion or condenser inleakage. Minimization of that inflow may be achieved under AVT by maintaining a low secondary system corrosion rate and a tight (low-leakage) condenser.

b. The creation of aggressive conditions in a steam generator hitherto free of corrosion would normally be a relatively lengthy process involving a period of

²²The other plants were Ginna, Turkey Point 4 and Surry 2. The modifications were installed in all four plants as of May 1975 (*id.* at p. 17). We note that, since this testimony was submitted, the modification program has been expanded to include a total of 10 reactors as of January 1976 (see p. 177, *supra*).

weeks or months. Thus, any specifications (e.g., on condensate or blowdown conductivity) which might be imposed to control such conditions would have to take this time scale into account. Any corrective action which might be decreed by technical specification would also have to take into consideration the nature and severity of the unacceptable condition to which that action was addressed.²³

c. Condensate demineralization would add a margin of control for those impurities resulting from condenser in-leakage and corrosion in the condenser.

d. Mechanical factors which may cause impurities either to collect on the tube sheet as a sludge or to deposit on tubes as scale are of major importance in the development of tube corrosion.

e. Sludge and scale deposits contribute to intergranular corrosion, and their presence should be taken as *prima facie* evidence that an aggressive environment exists.

f. The materials used in fabricating the various components of the secondary system (especially the condenser) are significant as potential sources of secondary water impurities. Freedom from corrosion should be a design consideration for secondary system components.

B. Detectable Leakage Before Tube Failure

We now turn to the proposition that early notice of significant steam generator tube degradation will result from the monitoring of the leakage between the primary and secondary coolant systems. The staff and applicant both claim that there is a significant margin of safety against large scale tube failure because a steam generator tube will experience some primary-to-secondary leakage from a through-wall intergranular crack before becoming degraded to such an extent that it could be expected to fail under normal usage or accident conditions. In its supplemental initial decision the Licensing Board accepted this claim, finding that:

The proposed 1.0 gpm leak rate limit provides an adequate margin to maintain the primary to secondary boundary under design basis accident conditions (1 NRC at 506).

The Board's finding was based on testimony that (1) a leak rate of 1 gpm corresponds to a through-wall crack of less than 0.6 inches in length, and (2)

²³We expect that the generation of technical specifications for secondary water chemistry control will take into account information developed through industrial research programs such as those described in the paper by Louis J. Martel and Wesley L. Pearl entitled, *The EPRI-ASME Program to Study PWR Secondary Water Chemistry*. This paper was published in Vol. 37 of the Proceedings of the American Power Conference (1975) at pp. 767-771.

even though possessing a through-wall crack 0.6 inches long, tubes similar to those used in the Prairie Island steam generators have been shown to resist failure at normal operating pressures and under stresses greater than those calculated to result from postulated steam line breaks and loss-of-coolant accidents (*ibid.*).

The staff's current position on this matter was embodied in the testimony of its senior witness:

[i]n the absence of wastage corrosion, corrosion attack in the form of intergranular stress corrosion cracking will be detectable as leakage from the primary to secondary systems by means of the secondary water radiation monitors (Maccary at p. 15).

Further, that witness stated:

[o]f significant importance is the fact that the leakage limit permits detection of a through-wall crack of a size at which there is still a wide margin below tube bulge pressure and an additional margin to burst or collapse pressure. This permits focusing upon those conditions required to limit intergranular stress corrosion attack and also on the conditions that assure detection and correction of any such attack well before it reaches proportions which could jeopardize the safety of the facility (*ibid.*).

The relevant evidence points in two different directions. On the one hand, the record contains some experimental and operational data tending to support the thesis of the applicant and the staff. But there is other operational experience which tends to refute that thesis.

1 a. Intergranular cracks in steam generator tubes have been found, through operational experience, to have a length-to-depth ratio of 4 or 5 to 1 (AB Tr. 499 NSP T9 p. 20). Accordingly for the 0.050 inch wall thickness of the Prairie Island steam generator tubes, this means that through-wall penetration— and leakage—will occur when the crack length is about 0.20 to 0.25 inches.

Westinghouse has conducted a series of experiments which have a bearing upon the effect of intergranular cracking on tube strength. Experimental test data for tube bulge pressure²⁴ as a function of through-wall slot length indicate that slot (*i.e.*, crack) lengths of 0.6 to 0.8 inches would be required before a tube

²⁴Staff witness Maccary describes tube bulging as "a localized limited plastic bulge of metal adjacent to a crack tending to increase the flow area at the crack opening (Maccary p. 10). At pressures up to the bulge pressure, the tube responds elastically in that there is no permanent tube distortion; *i.e.*, when pressure is relieved, the tube will return to its original position (Knight, p. 15). An equally specific definition of burst pressure has not been provided but, in the staff's testimony the term "bursting" was associated with "complete rupture from internal fluid pressure loads or collapse from external fluid pressure" (Maccary p. 3).

would bulge under the full primary system pressure of 2200 psi. Under a nominal operating primary-to-secondary differential pressure of 1500 psi, failure by bulging would occur only for a crack which exceeded 0.9 to 1.1 inches in length. NSP-T9 p. 27 Figure 2.

Tests were also performed using new 7/8 inch diameter tubing with cracks partially (80% 90%) through the wall and of various lengths. These were burst tests as opposed to the bulge tests for through-wall defects described above. In general it was observed that, all other factors being equal, if 10% of the wall remains, the burst pressure will be about 1000 psi greater than the pressure necessary to cause bulging for a through-wall crack. *Id.* at pp. 7-8.

In other experiments, service-exposed tubes with substantial EC indications were pressurized. One tube leaked at 4300 psi after two small (1/16 inch and 1/8 inch long) surface cracks opened up. A second tube held 5000 psi for 10 minutes without rupturing or leaking. An unflawed tube bursts at 11,000 psi. *Id.* at p. 8.

Finally a series of tests have been performed to establish the leak rate through various crack configurations as a function of pressure. These tests were made at temperatures and pressures typical of operating conditions. Once again, 7/8 inch diameter Inconel tubes were used which had tight fatigue cracks of various lengths grown in them. A representative result was a leak rate of 1.5 gpm through a 0.6 inch long crack at the reactor operating pressure differential of 1500 psi. *Id.* at p. 18.

b. Beyond the experimental data just discussed, it was asserted by the applicant and the staff that the bulk of relevant reactor operating experience demonstrates that measurable leakage will be detected before the occurrence of a leak of sufficient size to require emergency procedures. In this connection, our attention was directed, *inter alia*, to leaks discovered at the Ginna, Beznau 1 and H.B. Robinson 2 facilities. These leaks apparently were rectified using normal procedures. Weeks, pp. 11a-14 NSP-T2, pp. 27-31.

2. The primary operational evidence countering the leak-before-break concept is the Point Beach 1 occurrence. As previously noted, p. 178, *supra*, at that facility a steam generator tube burst during normal steady-state operations despite the apparent absence of any prior measurable primary-to-secondary leakage (AB Tr. 507). Additionally the Obrigheim facility (under AVT chemistry) experienced on several instances the unheralded appearance of rather severe leakage (NRC-AB4 Table 3 p. 115/11).²⁵

It is quite clear that the conditions within the steam generator at Point Beach 1, a facility which had operated for an extended period of time using

²⁵The sudden, significant (about 16 gpm) leaks at Obrigheim were in tubes having a tight U-bend radius, and were in the vicinity of the U-bend. Also, those leaks were not positively identified as being the result of intergranular stress corrosion (AB Tr. 482-84). On the other hand, no small leak warning was given prior to the incidents, whatever may have been their cause.

phosphate chemistry prior to switching at AVT were not the same as might be expected at Prairie Island. The fact remains, however, that the corrosive attack at Point Beach which led to failure of a single tube has been characterized as intergranular corrosion cracking (NSP T3, p. 13). Yet the attack progressed to the point that a single tube failed under normal operating pressure without prior leakage.

Both the staff and the applicant maintain that the Point Beach incident was aberrational and cannot be taken as indicative of what normally can be expected. But they do not offer the same explanation.

a. The staff hypothesizes that the Point Beach tubes, having experienced long periods of phosphate chemistry had become wasted (*i.e.*, reduced in wall thickness) to the extent that a small intergranular crack was able to grow rapidly in depth and length to the point of sudden failure. Such a phenomenon, according to the staff, would be possible only in the case of tubes which were already of diminished wall thickness as a result of a prior phosphate wastage attack (AB Tr. 555-57).

b. For its part, the applicant theorizes that the extremely corrosive conditions present in the deep sludge layer on the Point Beach tube sheet produced a number of intergranular cracks, each sufficiently short as to preclude through-wall penetration and subsequent small leakage. According to this theory a sudden coalescing of these small cracks gave rise to a single crack of a length great enough to cause the tube to burst (AB Tr. 477 79· 507-09). The data presented by the applicant regarding burst pressure as a function of crack length reflected that a crack approximately one-inch long would result in tube failure under the primary-to-secondary pressure differential which existed at Point Beach at the time of the incident (NSP-T9 Figure 3, p. 28).

In the applicant's view coalescence of a number of short cracks to form a single long crack could only occur if there existed extremely aggressive corrosion conditions such as those at Point Beach. It is its position that, given the less aggressive conditions which are likely to exist in a steam generator under AVT water chemistry intergranular cracks, if they were to form at all, would be created randomly at widespread locations on the tube surface. Thus, so the argument goes, under AVT the likelihood of coalescence of a number of cracks would be extremely low. As a result, individual small cracks would lead to through-wall penetration and detectable amounts of primary-to-secondary leakage before a crack reached the critical length of 0.6 inches.

3. Neither of these theories explains the reported experience at the Obrigheim reactor. The intergranular stress corrosion cracks found just above the tube sheet at that facility were described in a staff exhibit as follows:

The cracks start from the secondary side and run in the longitudinal direction of the tube with ramifications. The crack field has an *extension of approximately 20 mm* length and a few millimeters width; the remaining tube surface is free of cracks (NRC-AB4 at p. 115/6; emphasis added).

In short, at Obrigheim there were crack networks of relatively great length despite the fact that an aggressive water environment was apparently not present and there was no evidence of a sludge pile (see p. 182, fn. 20, *supra*).

4. The staff has recommended that a more stringent primary-to-secondary leak rate limit be imposed (Maccary pp. 21-22). It maintains that a reduction of the leak rate limit from the existing limit of 0.5 gpm per steam generator to 0.4 gpm per steam generator is achievable based on actual operational experience and is desirable in light of the limited data concerning crack growth rates in Inconel-600 tubing (*ibid.*). The applicant disagrees with this recommendation, insisting that a leak rate limit based on a 0.6 inch crack size is sufficiently conservative (NSP T9 pp. 7 11-12). The existing limit in the Prairie Island technical specifications is 0.5 gpm per steam generator (Maccary p. 21). Tests show the leak rate for a 0.6 inch long crack under the typical operating conditions is 1.5 gpm (NSP-T9 p. 18).

5. On the basis of the disclosures of record summarized above, we make the following finding regarding the leak-before-break concept:

The results of the Westinghouse experiments and most operating experience are, in general, supportive of the concept that small, through-wall cracks will result in measurable primary-to-secondary leakage before such cracks might grow to the extent that the tube would rupture under accident stresses. The total validity of the concept is brought into question, however, by the operational experience at the Point Beach 1 and Obrigheim facilities. The explanations offered by the applicant and the staff with regard to the cause of the Point Beach incident cannot serve to explain the observation at Obrigheim of lengthy crack fields. Thus, it cannot be said that serious tube degradation will *invariably* be heralded by minor leakage.

C. Efficacy of Eddy Current Surveillance

Because the record established that EC testing is the only presently available method for ascertaining the state of integrity of steam generator tubes *in situ* (NSP-T4, p. 9), the efficacy of this testing technique is a matter of legitimate concern. In this connection, as we pointed out in ALAB-284, 2 NRC at 202, the steam generators at Point Beach had undergone an EC examination in April 1974, only nine months prior to the tube failure which occurred in February 1975. At the time of that examination, only two tubes were found to have had more than 20% wall thinning; they were promptly plugged (*i.e.*, taken out of service) (NSP-T3, pp. 5-6). Following the tube failure the next February another EC examination revealed 148 tubes with defects of depth greater than 50% of their wall thickness (many were in the 80-90% penetration depth

bracket).²⁶ This disclosure implied either a very high rate of corrosion attack or the ineffectiveness of the earlier EC surveillance (2 NRC at 202). We further suggested in ALAB-284 that the visual observation of thinning on tubes pulled at Beznau-2 after an EC inspection that had revealed only "minor" flaws also reflected adversely on the effectiveness of EC testing.

1 According to witnesses for the applicant, the disparity in the results of the two Point Beach EC examinations was due to extremely aggressive environmental conditions which occasioned rapid corrosion between April 1974 and February 1975—rather than to a deficiency in the EC technique itself (NSP-T4 pp. 7-8). Insofar as the Beznau-2 situation is concerned, they testified that the EC technique had actually identified the minor flaws which were shown by observation to be thinned regions of about 8% reduction in wall thickness (*id.* at p. 8). The witnesses' ultimate conclusion was that:

* * * the EC technique is an effective means of identifying and characterizing tubing defects in steam generators. This can be done with good reproducibility and sufficient accuracy to assure that corrosion effects are highlighted during in-service inspections and tubes are removed from service with adequate margin remaining (*ibid.*).

The staff noted its reliance on EC as an effective in-service inspection technique (Maccary p. 16). Although sharing his colleagues' general approval of EC testing, one staff witness expressed some reservations regarding the ultimate capabilities of the method:

[w]hile it is generally true that * * * certain types of defects in steam generator tubes, such as stress corrosion cracks, pits, or general wastage, give characteristic signals on the eddy current monitors, it is not always possible to differentiate conclusively between them. The proximity of a tubing support, external deposits of a magnetic substance (Fe_3O_4), or the presence of more than one kind of defect in a given area can influence the shape of the signal on the monitor, and provide erroneous conclusions. For these reasons, I do not believe that the Prairie Island Technical Specifications should specifically attempt to require that the equipment be capable of making such a differentiation. However, I do feel that there should be definitive test procedures followed for conducting the eddy current testing program. These would be very helpful in assuring a reliable indication that a defect is present (Weeks, p. 15).

²⁶At Point Beach, the distribution of tube flaws according to their depth was roughly Gaussian, centered about a flaw depth of about 75% of the tube wall thickness (NSP-T3, p. 11). During the hearing, the parties were asked what might be the cause of such an unusual distribution (AB Tr. 313-316, 174-179). The Board would have expected the flaws to be so distributed that the number of defects decreased as their individual depth increased. No explanation of the peculiar distribution was forthcoming.

2. In the course of the evidentiary hearing conducted by us, another concern bearing upon the efficacy of EC testing was raised. This was the possibility that material plating out on the steam generator tubes might mask the EC signals and thus give misleading results (AB Tr. 419-21 550-53). Evidence on this matter was developed primarily as a result of questions by this Board and by way of an affidavit submitted by the applicant subsequent to the close of the hearing.²⁷ In that affidavit Mr. Fletcher affirmed his observation at the hearing that no fill-in of such materials has ever been observed in operating reactor experience or in laboratory tests (AB Tr. 420).

On the other hand, staff witnesses Cook and Weeks expressed some reservations concerning whether there is sufficient information respecting the possibility that copper deposition might mask EC signals (AB Tr. 594-600). They did state, however, that depositions of copper or copper oxide could give high conductivity EC signals that might hide at least small defects (AB Tr. 598).

3. In response to questions by this Board, a witness for the applicant stated that EC testing can only detect sludge if it contains some iron oxide (AB Tr. 404-05). He further stated that, if the sludge is less than 25 thousandths of an inch thick, the signal will not necessarily be clearly characteristic of sludge, although some signal will be present (*id.* at p. 405).

In this connection, the same witness testified that, for EC testing to be responsive to boiler scale deposits on the steam generator tubes, the scale would (1) have to contain iron oxide, (2) be relatively thick (*e.g.*, 25 to 30 thousandths of an inch thick) and, (3) be non-uniformly distributed along the tube (*ibid.*).

4. On the basis of the disclosures of record summarized above, we make the following findings regarding the effectiveness of eddy current surveillance:

a. Although the EC testing method is generally reliable, its accuracy in terms of determining flaw depth, length, and nature is not assured.²⁸ See p. 198, fn. 40, *infra*.

b. Eddy current signals may be obscured if flaws occur in the proximity of tube supports or if copper is deposited in or near the flaw. It is reasonable to expect that EC signals from flaws close to the tube sheet will be affected in the same manner as signals from flaws close to the tube supports.

²⁷ Affidavit of W.D. Fletcher, March 9 1976, submitted on March 10, 1976.

²⁸ It might be noted in passing that this finding is supported by a report recently issued by one of the staff's technical support contractors. This report, entitled *Evaluation of the Eddy-Current Method of Inspecting Steam Generator Tubing*; BNL-NUREG-50512; March 31, 1976, J.H. Flora and S.D. Brown (Battelle Columbus Laboratories), and J.R. Weeks (Department of Applied Science, Brookhaven National Laboratory), points out the difficulties in detecting small volume signals (*e.g.*, cracks of less than a certain length and depth). The report also refers to the difficulties in detecting corrosion in the presence of interference due to tube support structures.

We fail to understand why a copy of the report was not provided to this Board as soon as it was issued. We did not learn of its issuance until its presentation to the combined meeting of the U.S. and Canadian Nuclear Societies in Toronto, Canada in June 1976.

c. The record developed on the reliability of detection of boiler scale by EC testing is inconclusive. However, the evidence indicates that boiler scale can be consistently detected only if it is deposited non-uniformly and is at least 25-thousandths of an inch thick.

d. Subject to the qualifications noted on p. 192, *supra*, an eddy current survey at 25 KHz appears to be a reliable method of detecting sludge deposits.^{28a}

D. Tube Plugging Criteria

When steam generator tubes are found by EC surveillance (or otherwise) to be degraded, a decision must be made regarding the acceptability of the tube for continued operation. If the tube is judged to be unacceptable, it is "plugged" - i.e., taken out of service by closing off the tube to primary coolant flow. The bases for making this judgment have been provided in Regulatory Guide 1.83 (RG-1.83).²⁹

In its supplemental initial decision the Licensing Board found that the application by the NRC staff of the standards set forth in RG-1.83 to the Prairie Island facility would:

Adequately protect the integrity of the steam generator tubes against forces associated with postulated loss-of-coolant accident, steam-line breaks and accidents of lesser severity (1 NRC at 511).

This finding rested largely upon the testimony of staff witness Knight, which testimony in turn, had been founded upon a Westinghouse report (WCAP-7832)

^{28a}One additional observation respecting eddy current surveillance is in order. In ALAB-275, *supra*, we called attention to the fact that Regulatory Guide 1.83 did not itself appear to describe precisely enough what is required for effective eddy current testing (1 NRC at 529). We referred specifically to the absence of an express requirement that the internal sensing probe be properly centered. The record now before us reflects that, in the case of the Prairie Island facility, the probes used for EC testing have been equipped with centering devices (NSP-T4, p. 2). While we thus need not pursue the matter further here, we think that the staff should consider a revision of the regulatory guide to provide greater specificity with respect to EC testing procedures.

²⁹That guide, entitled "Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes" was revised (Revision 1), in July 1975. Under the standards established in RG-1.83, the staff has proposed a plugging limit for Prairie Island such that a tube with an indicated through-wall flaw of 40% or greater is unacceptable (Maccary pp. 22-24). This standard reflects the judgment that a minimum of 50% tube wall thickness is acceptable from the standpoint of the structural integrity of the tube, and incorporates an additional margin of 10% of the tube wall to account for corrosive attack that may take place between EC tests (*ibid.*).

not then introduced into evidence (see ALAB-284, 2 NRC at 204).³⁰ In ALAB-275³¹ and again in ALAB-284,³² we raised several questions regarding the foundation of the findings by the Licensing Board. In essence those questions were:

- (1) The analyses in WCAP-7832 having been done for the Model D Steam generators, are the results nevertheless applicable to the larger tubes used in the Series 51 steam generator design installed at Prairie Island?
- (2) Were the dynamic forces associated with a steam line break adequately explored in the analyses?
- (3) Did the analyses consider the fact that intergranular attack due to flow stagnation and mechanical stresses under accident conditions may both be concentrated near tube support members?
- (4) Did the analyses consider the possibility of effects of cyclic loading forces, embrittlement and ovality of tubes?

We now set forth in summary fashion the evidence adduced at our hearing on each of the questions.

1 The applicant's prepared testimony provided a generally convincing justification for applying the analyses contained in WCAP-7832 to tubes of a 51-series steam generator, such as are installed at Prairie Island (NSP-AB7 pp. 1-6; AB Tr. 639-43). The only concern pertaining to the structural capability of the thinned 51-Series tubes that was left unanswered by that testimony was satisfactorily resolved by applicant witness Conway in his response to Board questions regarding the nature of the load imposed on the tubes by the "Rarefaction wave" which results from a LOCA. He explained that, for the bending load conditions produced by the rarefaction wave, the degraded 51-Series tube (7/8-inch outside diameter thinned to 0.021 inches) is equivalent in strength to the degraded Model D tube (3/4-inch outside diameter thinned to 0.026 inches) (AB Tr. 639-43).

2. The question of the dynamic forces associated with a secondary side break, either a steam line or feedwater line, was also addressed in the applicant's prepared testimony (NSP-T8, pp. 6-10). Further, aspects of this problem, related to leakage flows and the associated reaction forces resulting therefrom, were addressed by witnesses Von Hollen and Conway in response to questions of this Board at the hearing (AB Tr. 633-39).

The Board was disturbed by statements in the Final Safety Analysis Report (FSAR) for the Prairie Island facility to the effect that certain tubes would be

³⁰ The document in question (NSP-AB6) plus additional information in this area was introduced into evidence in these proceedings at the evidentiary hearing on January 8, 1976.

³¹ 1 NRC at 523.

³² 2 NRC at 197

stressed beyond the elastic limit under steam line break conditions.³³ The applicant's testimony noted, however, that these stresses result from the fact that the tubes resist a flow-induced rotation of the tube support plate—a rotation assumed to occur without regard to the restraining effects of the tubes themselves (NSP-T8, p. 9). Flow-induced forces on the tubes under secondary break conditions are low and the applicant's analysis indicates that a 51-Series tube, thinned to 0.019 inches (*i.e.*, 62% reduction), would be sufficient to meet the Faulted Condition Stress Criteria of the ASME Code, Section III for either type of secondary break, in combination with the forces imposed by a safe shutdown earthquake (*id.* at p. 10).

Moreover, the applicant's witnesses satisfactorily met the concerns of the Board with regard to the possibility of asymmetric loading due to a feedwater line break. It was pointed out that the internal flow would be symmetric and similar in direction (but lower in magnitude) to that during a steam line break, as the fluid exit path would be through holes in the feed-water sparger ring above the tube bundle (AB Tr. 634-35).³⁴

3 The applicant's exhibits (NSP-AB5 pp. 4-5 and NSP-AB1 p. 56) reveal that the bulk of the data reported on tube failures as a result of intergranular attack have shown that these cracks are found in the region just above the tube sheet, *i.e.*, at the bottom of the tube bundle. On the other hand, the analyses presented by the applicant indicate that the maximum accident induced stresses occur at the top of the bundle, in the region of the top support plate (NSP-AB6, Figure 3.1-11 NSP-AB8, pp. 10-11). Thus, as a general rule there would not be coincidence of tube flaws and accident stresses.

The record contains experimental results which show that even seriously flawed tubes have a considerable load margin before they would fail as a consequence of the static internal or external loadings that might be expected under accident conditions (NSP-T9 Figures 1, 2 & 3 NSP-AB7 p. 19 Table III-3).

A question that remains unanswered is—what might be the effect of a corrosion mechanism which worked selectively at the level of the top support plate? Although there is no direct evidence of intergranular attack in this region, the recently encountered tube-diameter-reduction phenomenon has appeared in the region of upper support plates and has been accompanied by tube leakage.³⁵ To date, this phenomenon has been observed exclusively in plants with more extensive previous experience with phosphate secondary water chemistry than that of Prairie Island Unit 1 it is therefore not expected to be encountered at this facility. While there now appears to be no reason to suspect corrosive attack

³³ Final Safety Analysis Report, (Amendment II; September 20, 1971), p. 4.3-6.

³⁴ The response of a Model D steam generator with feedwater entrance through an asymmetrically placed internal preheater was not addressed.

³⁵ "Preliminary Evaluation of the Steam Generator Localized Tube Diameter Reduction Phenomenon and its Safety Impact" December, 1975 (submitted as NSP-AB12 following AB Tr. 236).

selectively (or at all) at the upper tube support plate elevations, EC inspection results in this sensitive region should be carefully scrutinized for signs of impending problems.³⁶

4. Staff witness Knight testified respecting the problems of cyclic loading and embrittlement of steam generator tubes (Knight, pp. 19-20). As a result of a loss-of-coolant accident, a cyclic loading of high stress, but lasting for only a few cycles, may result. This condition, combined with the effect of seismic oscillations, has been investigated by the applicant (NSP-AB6; NSP-T8, pp. 12-16). The results of this investigation indicate that there is adequate margin to preclude tube failure by fatigue even when subjected to this combination of events.

The applicant cited the fact that laboratory examinations and testing of service-exposed tubes without intergranular cracking indicate no signs of embrittlement (NSP T8, p. 15 NSP-AB7 p. 24). Service-exposed tubes in which there was intergranular attack showed some loss of burst strength in laboratory tests, and there is a possibility of some loss of ductility in the cracked material (NSP T8, pp. 16 & 17 Knight, p. 20). It was emphasized that loss of ductility due to cracking at the location of the top tube support plate would exacerbate the problem of potential tube failure under accident loading in the sensitive upper support region. In this region, as above noted, there is no reason to expect corrosion at Prairie Island.

With regard to the effect of the ovality of a steam generator tube as it pertains to its ability to resist external loading, the record clearly indicates that a departure from roundness (*i.e.*, ovality) results in a marked reduction in the collapse pressure (NSP-AB7 p. 2, Figures 5 & 6). While there are some minor inconsistencies in the results of experiments reported by the staff and the applicant,³⁷ there nonetheless seems to be adequate evidence that there is not a serious likelihood that reductions in collapse pressure, attributable to tube ovality will occasion tube failure. Specifically tube collapse due to external pressure loading must be considered under loss-of-coolant accident (LOCA) conditions in which the primary side is reduced to containment pressure while the secondary side pressure could be as high as 1100 psi. The resultant pressure differential is considerably lower than the collapse pressures experimentally determined for tubes with 5% or 10% ovality See fn. 37 *supra*.

Further, the record discloses that tube ovality of greater than 1% is not expected, except in the U-bend region of the tubes (NSP-T8, p. 16). On the other hand, the collapse pressure of bent tubes is greater than for straight tubes, given the same degree of ovality in both (*id.* at p. 17).

³⁶ Staff witness Weeks pointed out that tubing support structures can interfere with EC signals (AB Tr. 551).

³⁷ Compare the results given by the applicant in NSP-AB7 with those given by staff witness Knight in his prepared testimony at pp. 20-21.

5 On the basis of the disclosures of record summarized above, we make the following findings regarding tube plugging criteria:

a. The criteria set forth in RG-1.83 which are now used to determine whether a steam generator tube should be plugged as a result of its being flawed are based upon a reasonable analysis of the stresses to which such tubes might be exposed under normal operating conditions or in the event of any of the design basis accidents.

b. There is insufficient information now available to determine whether the recently identified "diameter reduction" phenomenon might create situations, particularly in the region of the upper tube support plates, in which existing stress analyses for accident conditions would be invalid.

E. Loss of Coolant or Steamline Break Accident with Concurrent Steam Generator Tube Failure

As earlier noted, in our order of December 4, 1975 we directed the staff to present evidence on the effects of steam generator tube failures resulting from and concurrent with primary and secondary system pipe breaks. Testimony in this area was presented at the hearing by staff witnesses. Following the conclusion of the hearing, this testimony was supplemented, at the Board's request, by affidavits of two of those witnesses.

1. In the event of a loss-of-coolant accident (LOCA), flow from the secondary system into the primary system through broken tubes would increase steam binding, having the effect of decreasing the rate at which the core would be reflooded by ECCS water after the accident (Ross Affidavit, p. 2). The staff offered a graph which showed, as a function of the leakage flow rate, the peak operating linear heat rate that could be tolerated in the core without exceeding the 2200°F clad temperature limit during the accident (*id.*, Figure 1 at p. 5). At the hearing Mr. Ross testified that, because Prairie Island normally operates with a peak heat rate some 30% below the technical specification limit, the clad temperatures after a LOCA would be less than 2300°F³⁸ even if 3 or 4 tubes were to undergo guillotine-like severance (AB Tr. 684-88). He went on to testify that, if the tube failures were of the type that occurred at Point Beach (*i.e.*, having a leakage flow area smaller by about a factor of 10 than the double-ended, guillotine-like, tube break), the number of failed tubes that could be accommodated before the 2300°F temperature was exceeded would be increased to 30 or 40.

³⁸ Although the post-hearing staff analysis was related to 2200°F Mr. Ross testified during the hearing itself that, even if the clad temperature went to 2300°F the cladding would not be brought to the autocatalytic region (AB Tr. 684).

The other consequence of tube failure during a LOCA—that of additional pressurization within the containment—was determined by analysis not to be significant, amounting to approximately one psi in the event of double-ended breaks in 3 or 4 tubes.

2. In the event of a secondary system break which resulted in the failure of a modest number of tubes, there would be no serious consequences for the reactor.³⁹ However, in such an accident sequence the leakage flow associated with a single completely severed tube would increase the calculated maximum containment pressure from 44 psi to about 45 psi (Jensen Affidavit, p. 3). A two-tube failure would increase the calculated maximum containment pressure from 44 psi to 46 psi and the complete failure of 8 tubes would result in a further increase in the containment pressure up to its test level of 52 psi (Jensen Affidavit, p. 4).

3. The staff emphasized that the assumptions made in performing the calculations just described are the very conservative ones outlined in Appendix K to 10 CFR 50 for use in ECCS performance calculations. Thus, the consequences associated with leakage from failed tubes should be lower than those calculated (Ross Affidavit, pp. 3-4).

4. On the basis of the disclosures of record summarized above, we make the following finding regarding the potential consequences of tube failure concurrent with various accidents:

As brought out in earlier sections of this opinion, the totality of the evidence presented indicates that there cannot be complete assurance of the integrity of each steam generator tube.⁴⁰ However, the staff has provided a reasonable preliminary analysis which indicates that the Prairie Island system has the ability to accept some steam generator tube failures concurrent with a LOCA or steam line break.⁴¹

³⁹ A Single tube double-ended break results in a total flow area of one square inch. Thus, the severance of five tubes during a steam line break would appear to the primary system as a relatively minor LOCA that is terminated by accumulator flow before any of the core is uncovered (AB Tr. 699).

⁴⁰ In response to Board questions, staff witnesses stated that no analysis had been performed to determine the probability that a tube, flawed beyond the limits of acceptability might escape detection by EC surveillance performed in accordance with the provisions of the Prairie Island technical specifications (AB Tr. 538-41).

In this regard, we take notice that the staff has made a commitment in another pressurized water reactor licensing proceeding to conduct a "generic appraisal of the likelihood and consequences of the customary transient and accident analyses, with assumed tube failure" In particular, see p. 2, *Affidavit of Denwood F. Ross, Jr. Concerning Steam Generator Tube Integrity* May 3, 1976, Joseph M. Farley Nuclear Plant, Units 1 and 2, Docket Nos. 50-348-OL and 50-364-OL.

IV CONCLUSIONS

A. Conclusions Relative to the Prairie Island Facility

1. Secondary Water Treatment

On the basis of the specific findings heretofore made (see pp. 185-186, *supra*), we conclude: (1) all volatile treatment of the secondary system water in these units will provide reasonable assurance of steam generator tube integrity and (2) there is no necessity from a safety standpoint to impose a condition upon the operating licenses requiring the use of full flow condensate demineralization. In reaching these conclusions we are principally influenced by the following factors:

a. The Prairie Island reactors use an all-ferrous secondary system. See pp. 184-185 *supra*.

b. Condenser leakage has been minimized by reducing vibration of the condenser tubes. See p. 185, *supra*.

c. Unit 2 has incorporated mechanical modifications in the steam generators which are designed to improve flow velocity and distribution across the tube sheets, thus reducing the potential for sludge deposition. Unit 1 can be expected to have similar modifications to its steam generators following the Unit 2 test period. See p. 185, *supra*.

In view of the history of past water treatments which initially have appeared satisfactory only to be proven inadequate after some years of experience, we believe that the AVT method must be considered to be "on probation" for the next few years. During that time it is essential that careful monitoring be maintained of water conditions, sludge and boiler scale formations, and corrosion of steam generator tubes.

Our conclusion that AVT provides reasonable assurance that steam generator integrity will be maintained does not decrease the importance of the applicant's voluntary decision to proceed with the installation of full flow demineralizers. This decision, we believe, will add reliability and valuable flexibility of operation to the Prairie Island facility. Also, even if used only part of the time, this equipment will decrease further the ingress of impurities to the steam generators and thus add an increment of protection against the development of tube degradation.

2. Technical Specifications Related to Secondary Water Quality

The water quality technical specifications proposed for Prairie Island by the staff (Maccary Appendix A) appear to demand an overly precipitous response (*i.e.*, 24-72 hrs.) to modest levels of water quality degradation. We have found that technical specifications on secondary water quality the purpose of which is

to preclude the creation of corrosive conditions within the steam generator, should be framed to reflect the fact that the onset of such conditions is a relatively long-term process, dependent upon the degree to which acceptable limits are exceeded. They should be applied with reasonableness, recognizing that there is little direct information now at hand relating a particular water quality to the development of a corrosive condition within the generator.

We are aware, however, that the staff has recently imposed different secondary water quality specifications in connection with another PWR plant (Beaver Valley Unit 1 Docket 50-334, Facility Operating License No. DPR-66, Amendment #6, July 9 1976); which specifications embody varying levels at which corrective action must be taken and seemingly more appropriate time periods in which to take corrective action (*i.e.*, 4-14 days). The Prairie Island technical specifications should be modified in a similar fashion.⁴²

3. Detectable Leakage Before Tube Failure

As we have found, serious tube degradation will not invariably be heralded by minor leakage. See p. 190, *supra*. This being so, we see no basis for the staff's position that safety would be enhanced by a reduction of the present leak rate limit from 0.5 gpm to 0.4 gpm per generator. On the other hand, we see no reason at this time to raise the limit to 1.5 gpm per generator as suggested by the applicant.

4. The Efficacy of Eddy Current Surveillance

As previously observed, EC testing is the only now available method for detecting flaws in steam generator tubes *in situ* and for detecting sludge and boiler scale buildup around those tubes. See p. 190, *supra*.

We have noted that eddy current indications may be obscured or completely lost under certain conditions. We therefore conclude that the limits of acceptability for steam generator tubes must continue to be determined conservatively. The technical specifications proposed by the staff (Maccary Appendix B) appear to be acceptable.

EC testing is a reliable method of detecting sludge deposits if those deposits contain iron oxide and if they reach a thickness of 0.025 inches or more around a steam generator tube. Boiler scale on the other hand, which may also provide a corrosive environment, is detectable only if, in addition, it is non-uniformly distributed along the tube. In this connection, we note that the surveillance

⁴²Of course, the staff should continue its effort to establish a rational technical basis for secondary water quality specifications which can be related directly to the potential for producing corrosive conditions.

program now being utilized by the applicant appears to be too rigid. For example, indications of sludge are not followed up to ascertain the full extent and greatest depth of the sludge deposit. Since the sludge deposit provides a concentrating mechanism for corrosive elements, the EC program for sludge detection must make allowance for additional runs to explore fully the extent and maximum depth of any sludge detected. Similarly areas in which flawed tubes are found should be extensively investigated.

5. Tube Plugging Criteria

Subject to the reservation noted in our findings (See p. 197 *supra*), we conclude that the tube plugging criteria presently used by the staff and applicant are satisfactory. The diameter reduction phenomenon, however, should be the subject of continuing investigation.

6. Loss of Coolant Accident or Steamline Break with Concurrent Steam Generator Tube Failure

While preliminary analysis by the staff indicates the Prairie Island reactors can accept some steam generator tube failures concurrent with a LOCA or steamline break, the additional analyses now being undertaken by the staff (see p. 198, fn. 41, *supra*), should be expedited to provide a more complete evaluation of this matter.

B. Additional Generic Observations

The Prairie Island facility is the only one before us for consideration in this proceeding. However, it is obvious that many of our findings apply in some degree to all PWRs, especially to those with the type of steam generators utilized by Westinghouse and Combustion Engineering, Incorporated.

For those plants we emphasize the following general findings:

1. In view of the past history of secondary water treatment, AVT should be considered as "on probation" for the next few years and tube plugging criteria must therefore be set conservatively.

2. Formation of either sludge piles or boiler scale must be considered as *prima facie* evidence of a corrosive environment. The presence of phosphates in the sludge appears to produce general wastage type corrosion.

3. Steam generator flow patterns should be such as to minimize sludge depositions.

4. Since corrosion products from other parts of the secondary water system concentrate in the steam generators, materials used in the system should be selected to minimize corrosion.

5. Serious tube degradation may not always be heralded by minor leakage.

6. EC testing is the only technique presently available for *in situ* tube surveillance but it is not infallible. Efforts to improve equipment and methodology should be expedited.

For the foregoing reasons, we hold that, insofar as this particular facility is concerned, the steam generator tube integrity issue has now been satisfactorily resolved; *viz.*, there is present reasonable assurance that the public health and safety will not be endangered as the consequence of tube failure during operation of the Prairie Island facility ⁴³ We therefore *terminate* the jurisdiction over the operating license proceeding which was retained by us in ALAB-244, *supra*, 8 AEC at 871-72, for the sole purpose of considering further that issue.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Romayne M. Skrutski
Secretary to the Appeal Board

⁴³Notwithstanding this determination, in the interest of reinforcing the assurance of safety we assume that the staff and the applicant will give effect to the several recommendations in this opinion bearing upon the various areas of concern discussed herein.

**PREPARED TESTIMONY AND EXHIBITS
LISTED BY REFERENCE SYMBOL USED
IN THIS OPINION**

APPLICANT'S TESTIMONY

NSP T1—"NSP Testimony on the Need for Condensate Demineralizers at Prairie Island" Sponsored by Messrs. Leddick and Watzl. Introduced into evidence at AB Tr. 41.

NSP-T2—"NSP Testimony on Steam Generator Operating Experience, Test Programs and Modifications" Sponsored by Mr. Fletcher. Introduced into evidence at AB Tr. 43

NSP T3—"NSP Testimony on Point Beach Unit #1 and Prairie Island Steam Generator Experience" Sponsored by Messrs. Duhn, Watzl and Von Hollen. Introduced into evidence at AB Tr. 44.

NSP T4—"NSP Testimony on Eddy Current Testing and Other Non-Destructive Testing" Sponsored by Messrs. Denton and Fletcher. Introduced into evidence at AB Tr. 45

NSP-T5—"NSP Testimony on Pressure and Leak Tests" Sponsored by Mr. Von Hollen. Introduced into evidence at AB Tr. 46.

NSP-T6—"NSP Testimony on Chemical Monitoring of Steam Generator Conditions" Sponsored by Mr. Watzl. Introduced into evidence at AB Tr. 47

NSP-T7—"NSP Testimony on In-Plant Personnel Radiation Exposure" Sponsored by Mr. Watzl. Introduced into evidence at AB Tr. 48.

NSP T8—"NSP Testimony on Analyses for Steam Generator Tube Plugging Criteria" Sponsored by Dr. Conway and Mr. Von Hollen. Introduced into evidence at AB Tr. 49

NSP-T9—"NSP Testimony on Bases for Technical Specifications to Assure Steam Generator Tube Integrity" Sponsored by Mr. Von Hollen. Introduced into evidence at AB Tr. 50.

NSP-T10—"NSP Testimony on Technical Specifications for Secondary Water Quality" Sponsored by Messrs. Leddick and Watzl. Introduced into evidence at AB Tr. 51

All of the above testimonies (1-10) were admitted into evidence at AB Tr. 52.

Fletcher—Affidavit of Mr. W.D. Fletcher dated March 9 1976, regarding the possibility that high conductivity material could mask an eddy current indication of a steam generator flaw This affidavit was requested by us at AB Tr. 420. The affidavit was submitted by mail via a letter from Jay E. Silberg to this Board dated March 10, 1976.

APPLICANT'S EXHIBITS

NSP-AB1—"The Westinghouse Steam Generator Symposium" April 1973 Admitted into evidence at AB Tr. 53.

NSP-AB2—"The Westinghouse Steam Generator Symposium Supplement No. 1, July 1973. Admitted into evidence at AB Tr. 55

NSP-AB3—"The Westinghouse Steam Generator Symposium" Supplement No. 2, December, 1973. Admitted into evidence at AB Tr. 55

NSP-AB4—"Steam Generator Report on Design, Operations and Chemistry Requirements" February 1975. Admitted into evidence at AB Tr. 56.

NSP-AB5—"Operating Experience with Westinghouse Steam Generators" by W.D. Fletcher and D.D Malinowski. Presented at the International Conference on Materials for Nuclear Steam Generators. (This conference was held in Gatlinburg, Tennessee during September 9-13 1975). Admitted into evidence at AB Tr. 56.

NSP-AB6—"Evaluation of Steam Generator Tube, Tube Sheet and Divider Plate Under Combined LOCA plus SSE Conditions" WCAP-7832. Admitted into evidence at AB Tr. 56.

NSP-AB7—"Additional Information for WCAP-7832 Review" Attached to a letter dated October 31, 1974 from R. Salvatori (Manager, Nuclear Safety Department) to Mr. D.B. Vassallo (of the, then, U.S.A.E.C.). Admitted into evidence at AB Tr. 57

NSP-AB8—"Text of Westinghouse Nuclear Service Division Bulletin, Localized Steam Generator Tube Diameter Reductions" November 17 1975. Admitted into evidence at AB Tr. 57

NSP-AB9—"Eddy Current Inspection of Unit No. 1, Steam Generator Tubes" September 16-23, 1974 by Northern States Power Company Admitted into evidence at AB Tr. 59

NSP-AB10—"Inservice Inspection Eddy Current Inspection of Unit 1 Steam Generator Tubes" April 27 May 2, 1975, by Northern States Power Company Admitted into evidence at AB Tr. 59

NSP-AB11—"Baseline Examination of Steam Generator Tubing at Prairie Island Unit 2" Admitted into evidence at AB Tr. 60.

NSP-AB12—"Preliminary Evaluation of the Steam Generator Localized Tube Diameter Reduction Phenomenon and its Safety Impact" December, 1975. Admitted into evidence at AB Tr. 236.

NSP-AB13—"Inservice Inspection-Eddy Current Inspection of Unit 2 Steam Generator Tubes, January 5-8, 1976" by Northern States Power Company Submitted to this Board as a delayed exhibit (See AB Tr. 31-32, 105) by letter from Jay E. Silberg dated March 4, 1976.

NSP-AB14—"Inservice Inspection Summary-Eddy Current Inspection of Unit 1 Steam Generator Tubes, March 24-28, 1976" by Northern States Power Company Submitted to this Board to Supplement the record by letter from Gerald Charnoff dated May 7 1976.

NRC STAFF'S PREPARED TESTIMONY

The staff's prepared testimony was admitted into evidence as a total package at AB Tr. 67-68. This testimony is identified in this opinion by the names of the individual authors. The authors of the testimony are listed below with a brief summary of what their testimony covered.

Maccary—General review of issues raised in ALAB-284 together with discussion of staff's reassessment of it's regulatory position in regard to the steam generator tube integrity issues.

Knight—Discusses concerns related to tube plugging criteria.

Frank—Discusses concerns related to current experimental programs in the area of water chemistry treatment, adequacy and sensitivity of eddy current testing, radiation exposures to plant personnel incurred in eddy current testing and clarification of the Beznau experience.

Weeks—Discusses the questions raised in ALAB-284 related to corrosion of PWR steam generator tubing and secondary coolant chemistry

- Cook—Discusses eddy current testing and corrosion related experiences in the field observed by him in the course of his duties as a Reactor Inspector in Region III, notably at Palisades, Point Beach and Prairie Island.
- Ross—"Possible effects of concurrent failure of steam generator tubes on the course of a LOCA or secondary side break" This testimony was provided, together with a supporting affidavit dated March 9 1976, to supplement the oral testimony given at our hearing on January 8, 1976 (see AB Tr. 676-704). This supplemental testimony and affidavit was attached to a letter from staff counsel O. Gregory Lewis to this Board Dated March 9 1976.
- Jensen—"Possible effects of steam generator tube failure concurrent with certain accident events on containment integrity" This testimony was provided, together with a supporting affidavit dated March 9 1976, to supplement the oral testimony given at our hearing on January 8, 1976. (See AB Tr. 676-704). This supplemental testimony and affidavit was attached to a letter from staff counsel O Gregory Lewis to this Board dated March 9 1976.

NRC STAFF'S EXHIBITS

- NRC-AB1— Drawing of the appearance of the steam generator tube crack which occurred at the Point Beach facility Admitted into evidence at AB Tr. 72.
- NRC-AB2—Composite of some fiber optics photographs of the Point Beach steam generator tube crack. Admitted into evidence at AB Tr. 73
- NRC-AB3—Graph of leak rate versus tube wall crack length. Admitted into evidence at AB Tr. 74.
- NRC-AB4—"Tube Defects in KWO Steam Generators and Results of Their Investigation" H. J Schenk (April, 1975). Admitted into evidence at AB Tr. 383.
- NRC-AB5—Description of condenser operating experience at KWO, attached to a letter from Dr. H. Schenk to Dr. John R. Weeks, dated April 29 1975 Admitted into evidence at AB Tr. 293.
- NRC-AB6—Diagram, Steam Generator Tube Examination Program for Two Steam Generators and Plant. Admitted into evidence at AB Tr. 515.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-344

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Michael C. Farrar, Chairman
Dr Lawrence R. Quarles
Richard S. Salzman

In the Matter of

Docket Nos. 50-329
50-330

CONSUMERS POWER COMPANY

(Midland Plant, Units 1 & 2)

Upon petition by the staff for directed certification of the Licensing Board's interlocutory order denying the staff's motion for an extension of briefing time (to await issuance of an Appeal Board decision on a similar subject in a different proceeding), the Appeal Board finds no good reason to grant the extraordinary relief requested.

Petition denied.

Mr. Martin G. Malsch for the Nuclear Regulatory Commission staff.

MEMORANDUM AND ORDER
September 3, 1976

The staff has requested us to tell the Licensing Board that it cannot now call for briefs on the question whether the *Midland* construction permits should be suspended. We have been furnished no good reason why we should review the Board's interlocutory procedural order refusing to defer the briefing schedule, and we decline to do so.¹

1. In the wake of its General Statement of Policy (41 F.R. 34707 August 16, 1976) dealing with the recent Court of Appeals decision on the waste management aspects of the uranium fuel cycle,² the Commission directed the Licensing Board to call for briefs from the parties on whether the *Midland*

The staff's petition was received by us on Thursday, September 2, 1976. Because the time was at hand for filing briefs in response to the challenged order, that same morning we considered and decided the matter and informed the parties of the outcome, advising them that a written order reciting our reasons for the action taken would follow shortly

Natural Resources Defense Council v. NRC, ___ F.2d ___ (D.C. Cir., Nos. 74-1385 and 74-1586, July 21, 1976), followed in *Aeschliman v. NRC*, ___ F.2d ___ (D.C. Cir. Nos. 73-1776 and 73-1867 July 21, 1976).

construction permits "should be continued, modified or suspended until an interim fuel cycle rule has been made effective." See August 16 Memorandum and Order; see also 41 F.R. at 34709 The Commission issued a similar directive with respect to the *Vermont Yankee* operating license. It also indicated that similar suspension questions might arise in other cases.³ (A suspension request was shortly thereafter filed with the Appeal Board which is considering appeals from the decision authorizing construction permits for the *Seabrook* facility). The Commission indicated that in all cases the suspension question would turn on well-established equitable factors, a number of which it set out in its policy statement.

Both the *Midland* and the *Vermont Yankee* Licensing Boards called for the filing of briefs on the suspension question by September 7 1976. The *Seabrook* Appeal Board called for the filing of responses to the suspension motion by September 2, 1976, and set the case down for oral argument on September 8, 1976.

The matter now before us originated when the staff asked the *Midland* Licensing Board to extend the briefing time for all parties to September 17 1976. In support of that request, the staff drew the Board's attention to the scheduled *Seabrook* oral argument and asserted that a decision in that case "may offer extremely useful guidance" here and in *Vermont Yankee*. Apparently the September 17 date was selected for two reasons: (1) the *Vermont Yankee* intervenor had asked for an extension of briefing time to that date (owing to counsel's vacation plans); and (2) at the time it filed its motion, the staff expected a decision in *Seabrook* before then.⁴ The staff represented that the applicant supported its request and that the intervenors vigorously opposed it.

The Licensing Board denied the motion, thus adhering to the September 7 briefing date. It set forth its view that Appeal Board resolution of the pending question in *Seabrook* would not be controlling on what it thought was the substantially different question involved in *Midland*.

The staff thereupon petitioned for directed certification. It argues that the Licensing Board is clearly wrong in its belief that the questions in *Seabrook* and *Midland* are different. In a similar vein, it suggests that the *Seabrook* decision may be controlling in *Midland* and that, at least, *Seabrook* may "offer guidance regarding the legal framework" for deciding *Midland*. It attempts to justify the invocation of the extraordinary certification remedy on the ground that "the development of a consistent legal framework for resolution of the suspension question is clearly required in the public interest."⁵

³ 41 F.R. at 34709: see fn. 7, *infra*.

⁴ See p. 2 of the order entered by the *Seabrook* Appeal Board on August 24, 1976.

⁵ Perhaps because it now appears that the *Seabrook* decision will not be issued by September 17 (see the August 24 *Seabrook* order, p. 2), the staff petition now before us is vague as to the precise relief requested. We assume it wishes us to order deferral of the *Midland* briefs until after *Seabrook* is decided, rather than just to September 17. In either case, we would reach the same result.

2. As the foregoing statement makes clear, the Board below has not decided the suspension question; it has not even indicated when it expects to decide that question. It has done nothing more than call for the filing of briefs. Absent any due process considerations, it would be a wholly unwarranted interference with the legitimate prerogatives of the Licensing Board for us to preclude it from finding out at its own pace what the parties' positions are on the matters before it. Moreover, here the Commission—in direct implementation of a court of appeals decision—expressly told the Board to call for briefs. In that circumstance, we would have even less justification for telling the Board that it may not begin its inquiry

Our natural—and deep seated—reluctance to interfere with a Licensing Board's decision to set a briefing schedule is not overcome by the staff's claim that the "public interest" would be served by granting the requested extension. We perceive no public interest considerations. For, in substantial measure, the "legal framework for resolution of the suspension question"—which the staff would like to see before it files its *Midland* brief—was established by the Commission when it set forth in its policy statement a number of the factors to be considered in each case. Each board which is presented with a suspension question must apply those factors to the situation before it.

The staff suggests, however, that our *Seabrook* opinion may furnish additional useful guidance. To be sure, analysis of some of the relevant factors may turn out to be substantially the same for all facilities, and in that respect *Seabrook* may prove helpful in subsequent cases. But just as plainly analysis of other factors will depend on circumstances peculiar to the particular nuclear project under attack. Thus, regardless of what we may say in *Seabrook*, other boards will still have to grapple with the particular facts presented to them. Learning at an early date of the parties' views as to the significance of the factors in this case and on whether there are any factual disputes that need resolution should assist the Board in determining what subsequent steps to take.

We do not say of course, that the Board was compelled to act precisely as it did, but only that it had the freedom to do so. That much is made abundantly clear by the fact that the Commission specifically avoided deciding the suspension question on a generic basis. Instead, it left the matter for case-by-case resolution. The staff would have it, however, that, contrary to the Commission's apparent expectation, our decision in *Seabrook* will necessarily have such generic significance that all other cases should be stopped in their tracks until we decide *Seabrook*.⁶ This cannot be. The Commission's policy statement contemplates that any number of suspension proceedings might have to be heard at the same

As indicated earlier (see fn. 5, *supra*), it is now unlikely that an opinion in *Seabrook* will be issued by the date of the requested extension here (*i.e.*, by September 17). A two-week delay beyond that point is likely

time, before both licensing boards and appeal boards.⁷ In light of this, we cannot say that the Board was *required* to grant the requested extension and to let one case go forward before another. And whether it *should* have altered its schedule was a matter for it, not us, to decide. There is no warrant for us to step in.

In sum, the Board's call for prompt briefing was permissible. The staff's real complaint is not with the Board's order, but with the case-by-case procedure established by the Commission's policy statement. We have no right to impose a procedure different from that which the Commission has selected.

Petition *denied*.

It is so ORDERED

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Romayne M. Skrutski
Secretary to the Appeal Board

Mr. Salzman, dissenting:

The court decision invalidating the Commission's fuel cycle rules has cast a shadow of potential invalidity on every construction permit and operating license issued in reliance on those rules. Proper implementation of that decision raises difficult questions and will require the making of hard choices. Notwithstanding the need to move cautiously in uncharted areas, the Board below refused to accede to a staff request to defer its briefing schedule by ten days to allow all parties to take account of impending appeal board action in the *Seabrook* case. That matter also involves a request to suspend a construction permit and (although the Licensing Board did not think so) presents the identical question: how to implement the court's decision in light of the subsequent Commission Policy Statement.

⁷Specifically the policy statement indicates that there are three categories of proceedings which the suspension question could come up: (1) licenses already on direct appeal within the Commission (e.g., *Seabrook*), where "the issue of suspending activity under the license in question may be resolved" at this time (by the appeal board or Commission); (2) the licenses which were the subject of the court test (i.e., *Vermont Yankee* and *Midland*), where "the initial question on remand" to the licensing boards will concern suspension; and (3) "any other nuclear power plant license," where the suspension question can be raised by a request for a show cause order. Policy Statement, pp. 8-9; 41 F.R. at 34709

I differ from my colleagues because, in my judgment, the *Seabrook* decision will surely be guiding (if not controlling) precedent for this case. The Commission guidance in its Policy Statement is given in broad terms that make interstitial interpretation a virtual necessity. The staff's motion therefore made eminent sense and the Board's failure to grant it was ill-considered. At best, that refusal means unnecessary extra work for all parties because, sooner or later, *Seabrook* will have to be factored into their positions. More seriously the Board below may be led into deciding important issues before *Seabrook* is rendered. To be sure, that Board can then take *Seabrook* into account—in theory. But as we have had previous occasion to acknowledge, “there is a natural reluctance upon the part of decision makers to depart from even tentative prior conclusions unless compelled to do so.” *Potomac Electric Power Co.* (Douglas Point, Units 1 and 2), ALAB-277 1 NRC 539 552, 555 (1975).

With all deference to my colleagues, too much is at stake in this case for us to stand by while the Board below marches to some distant drummer and disregards imminent appeal board decisions manifestly relevant to the matter before it.¹ I would grant the relief requested because it is part of our obligation to insure at the outset that a proceeding of this importance at least is initially launched on the proper course. *Energy Research and Development Administration* (Clinch River Breeder Reactor Plant). CLI-76-13, NRCI-76/8 75-76 (decided August 27 1976).

For the reasons stated I respectfully note my dissent.

The Commission's August 16th order reconvening the *Midland* Licensing Board did not fix a day certain for filing briefs. The *Midland* construction permit was issued in 1972, the cause having thereafter reposed in the judicial bosom until but a short time ago. In the interim, any environmental damage from constructing the plant has been done; millions committed to its building have been spent. In these circumstances it cannot seriously be argued that a brief respite before relaunching the *Midland* administrative proceedings might in any way “tilt” the ultimate decision.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-345

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. John H. Buck
Richard S. Salzman

In the Matter of

Docket No. 50-537

PROJECT MANAGEMENT CORPORATION
U.S. ENERGY RESEARCH AND DEVELOPMENT
ADMINISTRATION
TENNESSEE VALLEY AUTHORITY
(Clinch River Breeder Reactor Plant)

Lenoir City and certain other Tennessee local governments have previously been granted an extension of time to perfect an appeal from the Licensing Board's order (LBP 76-31) denying their late petition to intervene. Upon motion by the State of Tennessee for a similar extension of time to perfect its appeal from the same Licensing Board order, the Appeal Board rules that Tennessee has no right to its own appeal but may file a brief within five days after the localities submit their brief.

Motion denied and appeal dismissed.

RULES OF PRACTICE. APPELLATE REVIEW

Only the petitioner may appeal from an order denying it leave to intervene. 10 C.F.R. §2.714a(b). Other parties may file a brief in support of or in opposition to the appeal. 10 C.F.R. §2.714a(a).

MEMORANDUM AND ORDER

September 9, 1976

On September 2nd we received a motion by telegram dated August 31st from Lenoir City and certain other Tennessee municipalities and counties. Those local governments asked us to extend until September 21 1976, their time to perfect an appeal under 10 C.F.R. §2.714a from the Licensing Board's order denying their late petition to intervene. We granted the motion the day it was received.

Now before us is the State of Tennessee's motion for a similar extension of

time to perfect its appeal from that very same order. The State's motion was delivered to us only yesterday although it, too, is in telegraphic form and was transmitted on September 1st. In the circumstances, we treat the State's motion *nunc pro tunc*.

We presume that the State intends to support the position of the local governments. Thus it may do under our Rules of Practice without the need to go through the formality of taking an appeal itself. Those Rules provide that "[a]ny other party may file a brief in support of or in opposition to the appeal [under 2.714a] within five (5) days after service of the appeal." 10 C.F.R. §2.714a(a). The State thus has five days after the localities submit their brief to file and serve one of its own.

We suspect that the State noted an appeal out of an abundance of caution to make sure it will be entitled to place its arguments before us. Strictly speaking, however, it has no right to its own appeal from the order in question. Under the Rules, "[a]n order wholly denying a petition for leave to intervene and/or request for a hearing is appealable *by the petitioner* on the question whether the petition and/or hearing request should have been granted in whole or in part." 10 C.F.R. §2.714a(b) (emphasis added). It was solely the petition to intervene of Lenoir City and the local governments associated with it that the Board below rejected and only they may appeal from that ruling.¹ The State as a party may act to vindicate its own rights in the proceedings; it has no standing, however, to assert the rights of others. We need not belabor the point. The appeal of Lenoir City *et al.* is properly before us and, as noted, the State has the opportunity to support their position with its own brief if it so chooses.

The motion of the State of Tennessee for an extension of time to perfect its appeal is *denied* and its appeal is *dismissed*.

It is so ORDERED

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Romayne M. Skrutski
Secretary to the Appeal Board

¹"The applicant's objections [to the intervention petition] apparently arise in the context that the applicant presumes that the State of Tennessee is petitioning to intervene. This is obviously not the case." *Response of Lenoir City, et al.*, July 28, 1976, p. 8.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-346

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Richard S. Salzman, Chairman
Dr. W. Reed Johnson
Jerome E. Sharfman

In the Matter of

Docket Nos. STN 50-483
STN 50-486

UNION ELECTRIC COMPANY

(Callaway Plant, Units 1 and 2)

Upon review of papers filed by applicant in response to intervenors' motion for suspension of construction permit, the Appeal Board determines that the applicant failed to address relevant factors and gives it opportunity to supplement its response. Intervenors also given additional time to submit reply brief and counter-affidavits.

**GENERAL STATEMENT OF POLICY INTERIM LICENSING SUSPENSION
(BURDEN OF PROOF)**

In a motion by intervenors for suspension of a construction permit, founded upon the Commission's *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* (41 Fed. Reg. 34707), the applicant has the burden of proof. See *Toledo Edison Co.* (Davis-Besse Nuclear Power Station), 4 AEC 801 802 (1972).

**GENERAL STATEMENT OF POLICY INTERIM LICENSING SUSPENSION
(BURDEN OF GOING FORWARD)**

An applicant faced with a motion for suspension of a construction permit pursuant to the Commission's *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* (41 Fed. Reg. 34707), which is based on the pendency of an appeal raising fuel cycle questions and allegations that continued construction would tilt the cost-benefit balance, stands in jeopardy of having the motion summarily granted where it does not make an evidentiary showing or even address the relevant factors in its response to the motion.

Mr. Gerald Charnoff, Washington, D. C., for Union Electric Company Applicant.

Mr. Dennis J. Tuchler St. Louis, Missouri, for Coalition for the Environment and Utility Consumers Council of Missouri, Joint Intervenors.

MEMORANDUM AND ORDER

September 9, 1976

Joint Intervenors moved for suspension of the construction permit and other relief on or about August 25 1976, on the basis of *Natural Resources Defense Council v NRC*, ___ F 2d ___, No. 74-1586 (D. C. Cir. filed July 21, 1976). That decision invalidated portions of the Commission's fuel cycle regulation (10 C.F.R. §51.20(e)) upon which the decision below rests in part. Applicant answered Joint Intervenors' motion on September 2, 1976. By order of September 7 1976, we granted the staff's request for an extension of time until September 17 1976 to answer that motion.

We have examined the papers filed by the Joint Intervenors and the applicant. Neither has attempted to make an evidentiary showing or even to address the factors which the Commission directed be considered on a motion such as this. See, *General Statement of Policy* Docket No. RM-50-3, *Environmental Effects of the Uranium Fuel Cycle*, 41 Fed. Reg. 34707 at 34709 (August 16, 1976). As the applicant has the burden of proof on this motion,¹ it stands in jeopardy of having it summarily granted.

The applicant apparently did not appreciate its burden. Because the relief requested might have serious consequences for the applicant and because the Commission's Policy Statement makes resolution of suspension motions like this one turn in part on evidentiary factors, we will permit the applicant to supplement its answer to the Joint Intervenors' motion. In those papers, the applicant may call attention to evidence already in the record which bears on the issues in question, or supplement that record with affidavits based on personal knowledge of those matters. That supplementary filing must be made no later than September 17 1976, when the staff's answer to the Joint Intervenors' motion is also due. Requests for further time to respond will not be looked on with favor.

Fairness requires that Joint Intervenors then be permitted to submit a reply brief and counter-affidavits if they so choose; that reply should be filed and served no later than September 27 1976. If Intervenors do not intend to reply this Board (and the other parties) should be informed in writing of that fact promptly to avoid delaying unnecessarily our consideration and disposition of the pending motion.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Romayne M. Skrutski
Secretary to the Appeal Board

¹See *Toledo Edison Co.* (Davis-Besse Nuclear Power Station), 4 AEC 801, 802 (1972).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-347

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Richard S. Salzman, Chairman
Dr. W. Reed Johnson
Jerome E. Sharfman

In the Matter of

Docket Nos. STN 50-483
STN 50-486

UNION ELECTRIC COMPANY

(Callaway Plant, Units 1 and 2)

Upon appeal by intervenors from the Licensing Board's partial initial decision (LBP-75-47) and initial decision (LBP 76-15) authorizing the grant of a construction permit, the Appeal Board rules that (1) as required by the *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* (41 Fed. Reg. 34707 August 16, 1976), consideration of certain issues regarding reprocessing and waste management must be deferred, pending further action by the Commission, and (2) there is no requirement that an applicant for a construction permit have a long-term contract for the supply of nuclear fuel.

Licensing Board decisions affirmed in part; decision on reprocessing and waste management issues deferred.

ATOMIC ENERGY ACT: ASSURANCE OF ADEQUATE FUEL SUPPLY

Neither the Atomic Energy Act nor Commission regulations require a construction-permit applicant to have a long-term contract for the supply of nuclear fuel.

NEPA. SCOPE OF INFORMATION REQUIRED FOR LICENSING

While the availability and price of nuclear fuel are factors to be considered in the balancing of environmental costs and benefits under NEPA, that consideration may be based upon expert testimony and does not require that the applicant demonstrate that it has a long-term contract for the supply of such fuel.

Mr. Gerald Charnoff, Washington, D. C., argued for Applicant Union Electric Company *appellee*; with him on the briefs was **Mr. Thomas A. Baxter**.

Mr. Dennis J. Tuchler, St. Louis, Missouri, argued for Joint Intervenors Coalition for the Environment and Utility Consumers Council of Missouri, *appellants*.

Mr. Milton Grossman argued for the Nuclear Regulatory Commission Staff; with him on the briefs were Messrs. **David E. Kartalia** and **O. Gregory Lewis**.

PARTIAL DECISION

September 16, 1976

This is an appeal by Joint Intervenors Coalition for the Environment and Utility Consumers Council of Missouri from both the partial initial decision¹ and the initial decision² of the Licensing Board authorizing the grant of a permit to the applicant Union Electric Company to construct the Callaway nuclear-powered generating plant in Callaway County Missouri, 80 miles west of St. Louis. For the reasons which follow we affirm certain aspects of those decisions and defer action on others.

I. THE EXCLUSION OF CERTAIN OF INTERVENORS' CONTENTIONS

1. Intervenors' exceptions to the partial initial decision take issue with a Licensing Board order³ excluding certain of their contentions from the hearing as impermissible challenges to section 51.20(e) of the Commission's regulations (10 C.F.R. §51.20(e)).

Section 102(2) (C) of the National Environmental Policy Act ("NEPA")⁴ requires the balancing of the environmental costs against the expected benefits of any major federal action significantly affecting the environment. In section 51.20(e), the Commission quantified the adverse environmental effects of uranium fuel cycle activities and set out in tabular form (Table S-3) the portion of those overall environmental consequences attributable to individual nuclear power facilities. The regulation directs these values to be factored into the "Environmental Report" which each construction permit applicant must submit to the Commission, and specifies that "no further discussion of such environmental effects shall be required" Section 51.23(a) of the Commission's regulations (10 C.F.R.) requires the draft environmental impact statement prepared by the Commission staff to "include the matters specified in §51.20(a), (e), and (g)

LBP-75-47 2 NRC 319 (1975).

² LBP-76-15, NRCI-76/4, 445 (April 8, 1976).

³ Special Prehearing Conference Order of February 19, 1975 (unpublished).

⁴ 42 U.S.C. §4332(2) (C).

” and section 51.26(a) mandates that the final environmental impact statement be prepared by the staff “in accordance with the requirements in §51.23 for draft environmental impact statements”

Those regulations were construed in prior decisions, *first*, to limit consideration of the environmental effects of the uranium fuel cycle in individual licensing proceedings to the values set out in Table S-3, and, *second*, to exclude from such proceedings contentions that challenge those values, the Commission having withheld jurisdiction from the licensing boards to entertain attacks on the validity of Commission regulations in individual licensing proceedings except in certain “special circumstances.”⁵ Intervenors did not assert any facts which might bring them within the exception.

While this appeal was pending, the Court of Appeals for the District of Columbia Circuit handed down its decision on a petition for review of the rulemaking proceeding in which section 51.20(e) was promulgated. The Court invalidated the Commission’s adoption of those parts of the regulation dealing with waste disposal and reprocessing on the grounds that they were unsupported by the record and adopted under unsatisfactory procedures. It therefore set them aside and remanded the proceeding to the Commission for further consideration. *Natural Resources Defense Council v. NRC*, ___ F.2d ___, No. 74-1586 (July 21 1976). On August 13, 1976, the Commission issued a *General Statement of Policy* in Docket No. RM-50-3, *Environmental Effects of the Uranium Fuel Cycle*, 41 Fed. Reg. 34707 (August 16, 1976), indicating how it intends to proceed in the conduct of its affairs in light of the Court’s decision and giving direction and guidance to the appeal boards and the licensing boards regarding the treatment of uranium fuel cycle issues in pending cases. The Policy Statement said that the Commission’s staff had been directed to produce on an expedited basis “a revised and adequately documented environmental survey on the probable contribution to the environmental costs of licensing a nuclear power reactor that is attributable to the reprocessing and waste management stages of the uranium fuel cycle.” *Id.* at 34708.⁶ It expressed the Commission’s intention to reopen the rulemaking proceeding which was the subject of the District of Columbia Circuit’s decision for the purpose of supplementing the

⁵ See *Potomac Electric Power Company* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79 88-89 (1974); *Philadelphia Electric Company* (Limerick Generating Station, Units 1 and 2), ALAB-262, 1 NRC 163, 204 (1975); 10 C.F.R. §2.758(a)-(d). See also *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-74-32, 8 AEC 217 219 (1974), *rev’d in part on other grounds sub nom. York Committee for a Safe Environment v. Nuclear Regulatory Commission*, 527 F.2d 812 (D.C. Cir. 1975). The Commission did provide other avenues by which one seeking to challenge the validity of a Commission rule or regulation may proceed. See *Douglas Point*, *supra*, 8 AEC at 89, and 10 C.F.R. §2.758(e).

⁶ The Commission noted that it expected the revised survey to be available on or about September 30, 1976.

record on the reprocessing and waste management issues and determining whether or not Table S-3 of Section 51.20(e) should be amended. It stated that the Commission might promulgate an interim regulation on the subject and that this might be done as early as December 1976. However, it declared that, in the meantime, no new full-power operating license, construction permit or limited work authorization will be issued. 41 Fed. Reg. at 34708. The Policy Statement provides that, in contested proceedings before licensing boards, "reprocessing and waste management issues should be deferred pending completion of the interim rulemaking, unless the evidentiary record on those issues has already been completed and is adequate for decision." *Ibid.* Where, as in this case, a license has been issued but is subject to review by an appeal board, the Policy Statement directs that final action on reprocessing and waste management issues should be deferred pending publication of the staff's new environmental survey but that other issues may be resolved in the interim. 41 Fed. Reg. at 34709

Accordingly in this opinion, we are deciding which issues should be deferred and resolving the remainder.⁷

2. The contentions which the Licensing Board excluded are as follows:

I-6. The Environmental Report of the Applicant and the proposed Environmental Impact Statement of the Staff indicate inadequate consideration of the problems of the uranium fuel cycle. Of particular concern is the assumption inherent in Commission requirements and the Applicant's report that a safe, economic and environmentally acceptable method and place for waste disposal exists. No such structure or method exists nor has one been officially approved. In addition there is an assumption implicit in the Staff's and Applicant's approach to the problem of the uranium fuel cycle, which is unsupported, that it is or is foreseeably possible to remain in control of waste disposal facilities for fissionable materials for from 800 to 100,000 years.

I-8. The Staff's and Applicant's environmental impact analyses do not adequately consider the radiological hazards of criminal acts and sabotage in relation to:

* * *

(c) storage at reprocessing plants of wastes from the Callaway plant.

(d) storage of plutonium reprocessed from wastes produced at the Callaway plant.

⁷It is unclear to us why the Policy Statement should have directed the licensing boards to defer reprocessing and waste management issues "pending completion of the interim rulemaking" while directing the appeal boards to defer such issues "pending publication of the environmental survey" 41 Fed. Reg. at 34708-09. We suspect that this discrepancy was an oversight which will be corrected by the time that the environmental survey is published or shortly thereafter.

(e) shipment of plutonium reprocessed from wastes produced at the Callaway plant.

Contentions I-6 and I-8(c) and (d) are clearly the type of waste management issues as to which the Policy Statement requires us to defer action.

Contention I-8(e) deals with transportation of plutonium from the reprocessing plant.⁸ At the time section 51.20(e) was promulgated, the Commission contemplated that plutonium recovered from spent fuel would be stored at the reprocessing plant.⁹ Accordingly Table S-3 did not factor in any environmental costs for such transportation. This may have meant that section 51.20(e) was intended to preclude consideration of the environmental effects of such transportation. However, we need not decide that issue. The Commission has directed that we defer consideration of waste management issues for the time being. In the meantime, a new environmental survey will be issued which in all likelihood will touch on the Commission's current plans for plutonium storage. It makes little sense to attempt to deal with intervenors' contention regarding the environmental consequences of transporting plutonium away from reprocessing plants in this proceeding in advance of the imminent issuance of the new survey and any interim regulations which may follow. Accordingly we defer consideration of this contention.

II. FAILURE OF THE APPLICANT TO HAVE A LONG-TERM FUEL SUPPLY CONTRACT

As the Licensing Board explained in its initial decision, its findings as to the cost and availability of nuclear fuel in its partial initial decision were "based in part on the existence of a contract between the Applicant and Westinghouse providing *inter alia* for a 21-year supply of uranium for the plant," which con-

⁸ Intervenors did not specify whether they were concerned with transportation the purpose of which is movement to another storage facility or with transportation the purpose of which is the employment of the plutonium for some productive use. We therefore are assuming that both are encompassed within the contention.

⁹ See the Commission staff's April 1974 report entitled *Environmental Survey of the Uranium Fuel Cycle* (commonly called "WASH-1248" after its publication number) at F-13. However, WASH-1248 also stated (at F-14):

As the rate of plutonium generation increases due to additional LWR's being in operation, other more economical means could be provided for the storage of the larger inventories of recovered plutonium product. At that time, bulk quantities of plutonium nitrate solutions could be stored in vessels within confinement structures specifically designed and constructed for that purpose, or the plutonium nitrate solution could be converted to plutonium dioxide, a solid, which can be sealed in containers and stored in vaults specifically designed and constructed for that purpose.

tract Westinghouse later renounced unilaterally NRCI-76/4 at 468-69¹⁰ The Licensing Board thereafter reopened the case and “both Applicant and Staff presented additional evidence on projected fuel costs based on their evaluations of the current U₃O₈ market conditions and their current predictions of the future prices for uranium.” *Id.* at 469 The Board then evaluated that evidence and found that the increase in fuel costs over a twenty-year period would be “insignificant in relation to overall costs” that the cost advantage of a nuclear plant over a coal plant, “although smaller, remains substantial” and that “the amounts of uranium in the ‘reserves’ and ‘probable resources’ categories, even allowing for possible (and likely) inaccuracies, are sufficient to assure with a reasonable probability that adequate fuel will be available for this facility considering the needs for all of the 236 reactors presently operating, under construction, and planned.” *Id.* at 470-71

Intervenors took the following exception to the Licensing Board’s initial decision:

The Board erred in part V of its decision with respect to the cost and availability of fuel to Union Electric Company Applicant, in that it held in findings/conclusions 90 and 91 at pages 59 and 60 of the decision that a construction permit may be issued in the absence of a showing by the applicant of a nuclear fuel contract assuring a supply of fuel at a stated price

¹⁰ In this connection, the Licensing Board stated (*ibid.*):

The estimates of fuel cycle costs given by the Applicant in its earlier testimony were based on the firm prices (plus escalation) provided in the contract for the first twelve years of operation and on estimates (based on industry models) developed by its fuel consultant for the balance of plant life. On September 8, 1975, Westinghouse announced that it considered itself ‘legally excused’ from a portion of its obligation to deliver uranium. Westinghouse announced that it intended to perform its contracts to the extent of its uranium presently in inventory or on order by distributing it fairly and equitably among its customers. Westinghouse also announced its intent to invest substantial funds in exploration and production of uranium which would be made available to its customers on favorable terms. Applicant has subsequently filed a civil action against Westinghouse to compel performance of the fuel contract. In an Order entered in that action on February 3, 1976, by the U.S. District Court for the Eastern District of Virginia, Westinghouse was directed to deliver to Applicant (among others) an allocated percentage of Westinghouse’s existing uranium supply at the times and prices specified in the contract. While the precise quantity of uranium to be delivered was to be determined after a report was made to the Court on February 16, 1976, the allocation formula set forth in the Order would provide Applicant with 2.0 million pounds of uranium, to be delivered at the times and prices specified in the contract, until the allocated amount is reached. This amount of uranium will be sufficient to fuel the complete first core of Unit 1 of the Callaway Plant, and at least half of the first core of Unit 2 of the Callaway Plant. All or a part of this uranium, however, is not yet in the hands of Westinghouse and its delivery by Westinghouse to its customers is dependent on its receipt [by] Westinghouse from its suppliers.

or a price derived from a stated formula, over all or part of the lifetime of the proposed nuclear powered electricity-generating facility

This exception tracks the views expressed in the dissenting opinion of the Chairman of the Licensing Board. NRCI-76/4 at 476.

The exception is not well taken. There is nothing in either the Atomic Energy Act, the Commission's regulations or NEPA which requires an electric utility to have a long-term contract for uranium fuel before receiving a construction permit for a nuclear power plant.^{1 1}

The only section of the Atomic Energy Act relied upon by the intervenors and the dissenting opinion below is Section 182a (42 U.S.C. §2232(a)). It provides (insofar as is relevant):

In connection with applications for licenses to operate production or utilization facilities, the applicant shall state such technical specifications, including information of the amount, kind, and source of special nuclear material required, the place of the use, the specific characteristics of the facility and such other information as the Commission may by rule or regulation, deem necessary in order to enable it to find that the utilization or production of special nuclear material will be in accord with the common defense and security and will provide adequate protection to the health and safety of the public.

To begin with, this provision by its terms applies to applications for operating licenses, not to applications for construction permits such as the one at bar. Moreover, even with respect to applications for operating licenses, the Commission's regulations do not currently require applicants to identify the source of the special nuclear material required. See 10 C.F.R. Part 50. Were such disclosure required, however, we find nothing in the Atomic Energy Act or its legislative history -- and we have been cited to nothing -- which suggests that the "source" referred to in Section 182a was intended in all cases to be a long-term private fuel supply contract. Indeed, the fact that the only source of uranium fuel at the time of this section's enactment was the Government^{1 2} strongly suggests to us that Congress had no such intention. Neither the Private Ownership of Special Nuclear Materials Act^{1 3} nor its legislative history (which is relied on in the dissenting opinion) lends support to the intervenors' position. The Act itself contains no provision making a long-term fuel supply contract a prerequisite for a license. What the dissent has done with the legislative history is

Even the possession of such a contract does not provide certainty as to the supply and price of fuel, as the applicant's experience with Westinghouse in this case demonstrates.

² See sections 52 and 53a of the Atomic Energy Act of 1954, Pub. L. No. 83-703, 68 Stat. 919 at 929-30.

³ Pub. L. No. 88-489, 78 Stat. 602 (1964).

to convert Congress' hope and expectation that private long-term fuel supply contracts would be forthcoming into an Atomic Energy Act requirement that such a contract be entered into before a construction permit may be issued. Such a rewriting of the Atomic Energy Act would be both unjustified and improper.¹⁴

Admittedly the availability and price of fuel are factors to be considered in the balancing of environmental costs and benefits under NEPA. And Westinghouse's renunciation of its fuel supply contract was relevant to that analysis. However, as we noted above, the Licensing Board reopened the NEPA hearing to receive new evidence about the consequences of Westinghouse's action and a more current appraisal of the availability and cost of uranium fuel in light of the changes that had occurred in the uranium market. We have previously held that a licensing board may rely on expert testimony in deciding whether uranium fuel will be available over the projected life of a nuclear plant. *Gulf States Utilities Co.* (River Bend Station, Units 1 and 2), ALAB-317 NRCI-76/3, 175 (1976). We see no reason why that same kind of evidence may not also serve as a basis for determining the cost of such fuel. Indeed, the Commission's regulations contemplate as much; they expressly permit an applicant to estimate fuel cycle costs in exhibiting its financial qualifications. See 10 C.F.R. §50.33(f).¹⁵

For these reasons, the majority of the Licensing Board was correct in holding that there is no requirement that an applicant for a construction permit have a long-term contract for the supply of nuclear fuel.

In any event, the Private Ownership of Nuclear Materials Act is scarcely relevant to the correct construction of section 182a, which was enacted ten years earlier by a different Congress as part of the Atomic Energy Act of 1954. See *Rainwater v. United States*, 356 U.S. 590, 593 (1958); 68 Stat. 919 at 953-54.

At oral argument (App. Tr. 43-45), counsel for the intervenors argued that the Licensing Board's findings as to the availability and cost of uranium fuel during the lifetime of the plant were not supported by the evidence. Our Rules of Practice provide that appeals from initial decisions must be taken by the filing of exceptions and that each exception shall "state concisely, without supporting argumentation, the single error of fact or law which is being asserted in that exception." 10 C.F.R. § 2.762. Neither intervenors' single exception to the initial decision nor their brief in support thereof challenged the sufficiency of the evidence to support the finding on availability and cost of fuel. Not surprisingly, therefore, neither the applicant nor the staff briefed the question. The issue is thus not one which the intervenors may properly raise before us. See *Northern Indiana Public Service Co.* (Bailly Generating Station, Nuclear-1), ALAB-207 7 AEC 957 (1974); *Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 832-33 (1973).

Nevertheless, as is customary this Board has reviewed *ex mero motu* those parts of both decisions which were not the subject of exceptions, and is satisfied that they contain no errors warranting correction.

III

On August 27th, we received a motion from intervenors for suspension of the construction permit.¹⁶ Our consideration of such a motion is consistent with the Policy Statement. See 41 Fed. Reg. at 34709 The time for action on the merits of this motion is not ripe because all parties have been given additional time to file responsive papers. See our order of September 7 1976; ALAB-346, NRCI-76/9 214 (September 9 1976); and our order of September 10, 1976. We will therefore deal with it at a later time.

The decisions of the Licensing Board are *affirmed* except insofar as they excluded intervenors' contentions I-6 and I-8(c), (d) and (e). Evaluation of the exclusion of those contentions is *deferred* pending further guidance from the Commission in accordance with its Policy Statement. 41 Fed. Reg. at 34709

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Romayne M. Skrutski
Secretary to the Appeal Board

⁶ We note that this motion was undated and unaccompanied by proper proof of service in any of the alternative forms required by the Commission's Rules of Practice. See 10 C.F.R.. § 2.709(c) and 2.712(e). Failure to observe these simple and customary rules of procedure is not a merely formal discourtesy. For one thing, it inconveniences other counsel and this Board, who must calculate response time from those motion papers. We trust that this will not happen again but, if it does, we may be constrained to refuse to accept the defectively filed papers. See 10 C.F.R. § 2.709

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-348

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Richard S. Salzman, Chairman
Dr. W. Reed Johnson
Jerome E. Sharfman

In the Matter of

Docket Nos. STN 50-483
50-486

UNION ELECTRIC COMPANY

(Callaway Plant, Units 1 and 2)

The Appeal Board previously ruled that on a motion to suspend a construction permit under the *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* (41 Fed. Reg. 34707 (August 16, 1976)), the applicant has both the burden of proof and the burden of going forward with the evidence (ALAB-346). The applicant then moved the Board to reconsider ALAB-346 or, in the alternative, to certify to the Commission the question whether intervenors must make "a threshold showing" in order to have their suspension motion considered. The Appeal Board rules that (1) the intervenors do not have the burden of going forward with evidence; (2) the intervenors' motion states sufficient grounds to call for the imposition of that burden on the applicant; (3) the intervenors need not have invoked show cause procedures to seek suspension; and (4) in the absence of substantial doubt by the Appeal Board as to the conclusions it has reached, certification to the Commission is not warranted.

ALAB-346 adhered to; request for certification denied.

**GENERAL STATEMENT OF POLICY INTERIM LICENSING SUSPENSION
(BURDEN OF GOING FORWARD)**

On a motion to suspend a construction permit under the *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* (41 Fed. Reg. 34707 (August 16, 1976)), the applicant has the burden of going forward with evidence, as well as the ultimate burden of proof. *Aeschliman v. NRC*, Nos. 73-1776 and 73-1867 (D.C. Cir. July 21, 1976); *Toledo Edison Co. (Davis-Besse Nuclear Power Station)*, 4 AEC 801 802 (1972).

RULES OF PRACTICE. AUTHORITY OF APPEAL BOARD

The Appeal Board, ancillary to its appellate jurisdiction, has authority to suspend a decision authorizing issuance of a construction permit. *Toledo Edison Co.* (Davis-Besse Nuclear Power Station), ALAB-25, 4 AEC 633 (1971).

NEPA. SUFFICIENCY OF CONTENTIONS

At least under NEPA, no evidentiary showing need be made by an intervenor to invoke the agency's duty to entertain a motion for suspension of a construction permit. *Aeschliman v NRC*, Nos. 73-1776 and 73-1867 (D.C. Cir. July 21 1976).

GENERAL STATEMENT OF POLICY INTERIM LICENSING SUSPENSION (ADEQUACY OF GROUNDS ADVANCED)

Where an intervenor seeking suspension of a construction permit pursuant to the *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* (41 Fed. Reg. 34707 (August 16, 1976)) asserts that its motion is founded on the D. C. Circuit's fuel cycle decisions, that it had previously attempted unsuccessfully to raise fuel cycle issues, and that continued construction would tend to tilt the cost-benefit balance in favor of the plant, its motion provides the requisite reasonable specification of its grounds required by 10 C.F.R. §2.730(b).

Mr. Gerald Charnoff, Washington D. C., for Union Electric Company Applicant.

Mr Dennis J. Tuchler, St. Louis, Missouri, for Coalition for the Environment and Utility Consumers Council of Missouri, Joint Intervenors.

Mr. Auburn L. Mitchell for the Nuclear Regulatory Commission Staff.

OPINION AND ORDER ON RECONSIDERATION

September 29, 1976

Intervenors moved for suspension of applicant's construction permit and other relief on or about August 25 1976, on the basis of *Natural Resources Defense Council v NRC*, ___ F.2d ___ 9 ERC 1149 (D.C. Cir., filed July 21,

1976). That decision invalidated portions of the Commission's regulation pertaining to the environmental effects of the uranium fuel cycle (10 C.F.R. §51.20(e)) upon which the decision below awarding that permit rests in part. After receipt of applicant's answering papers and before staff's response was due, we issued ALAB-346, NRCI-76/9 214 (September 9 1976) in which we stated:

We have examined the papers filed by the Joint Intervenors and the applicant. Neither has attempted to make an evidentiary showing or even to address the factors which the Commission directed be considered on a motion such as this. See, *General Statement of Policy* Docket No. RM-50-3, *Environmental Effects of the Uranium Fuel Cycle*, 41 Fed. Reg. 34707 at 34709 (August 16, 1976). AS the applicant has the burden of proof on this motion,¹ it stands in jeopardy of having it summarily granted.

The applicant apparently did not appreciate its burden. Because the relief requested might have serious consequences for the applicant and because the Commission's Policy Statement makes resolution of suspension motions like this one turn in part on evidentiary factors, we will permit the applicant to supplement its answer to the Joint Intervenors' motion. In those papers, the applicant may call attention to evidence already in the record which bears on the issues in question, or supplement that record with affidavits based on personal knowledge of those matters.

See *Toledo Edison Co.* (Davis-Besse Nuclear Power Station), 4 AEC 801, 802 (1972).

Applicant has not moved us to reconsider ALAB-346 or, in the alternative, to certify to the Commission the question whether intervenors must make "a threshold showing" in order to have their suspension motion considered. Although applicant concedes that it has the ultimate burden of proof,¹ it argues that it does not have the initial burden of going forward with the evidence.²

Intervenors oppose the motion to reconsider on the grounds that "the proceedings that led to the order issuing the construction permit are defective as a matter of law" and that "information concerning the costs of the nuclear fuel cycle is far more available to the Nuclear Regulatory Commission Staff and to Applicant than to Joint Intervenors." The Nuclear Regulatory Commission staff does not agree with applicant that intervenors must make an affirmative evidentiary showing in order to have their motion to suspend the construction

Footnote 3 at p. 9 of the motion for reconsideration.

Applicant correctly understands ALAB-346 as holding that it has the burden of going forward, as well as the burden of proof.

permit considered. But the staff does believe that a party seeking such relief should be required to explain clearly the reasons why he believes himself legally entitled to it – for example, by addressing “some of the public interest factors on the basis of the evidentiary record already made in the construction permit proceeding.”³ In essence, the staff asks that we clarify ALAB-346 to make that obligation manifest.

I. THE BURDEN OF GOING FORWARD

1. Applicant's Basic Position

Applicant's thesis is that intervenors should have the burden of going forward with evidence, *i.e.*, of making a threshold evidentiary showing.

This position is contrary to the recent court of appeals decision in *Aeschliman v. NRC*, Nos. 73-1776 and 73-1867 (D.C. Cir., filed July 21, 1976).⁴ In *Aeschliman*, the Commission had affirmed a licensing board's refusal to consider energy conservation as an alternative to the construction of a nuclear power plant, holding that intervenors “have a burden of coming forward with some affirmative showing if they wish to have these novel contentions explored further.” *Consumers Power Co.* (Midland Plant, Units 1 and 2), 7 AEC 19 32 (1974). The Court reversed, stating, insofar as is here relevant (slip opinion at 11-13):

In *Calvert Cliffs* [449 F.2d 1109 118-19 (D.C. Cir. 1971)] the Commission proposed to limit consideration of environmental issues under NEPA to those “which parties affirmatively raise.” *Id.*, 1118. This court reversed, pointing out “it is unrealistic to assume that there will always be an intervenor with the information, energy and money required” to investigate environmental issues. *Id.* The court held that the “primary responsibility” for fulfilling NEPA must lie with the Commission, which may not merely “sit back, like an umpire, and resolve adversary contentions at the hearing stage.” *Id.* See also *Greene County Planning Board v. FPC*, 455 F.2d 412, 420 (2d Cir.), *cert. denied*, 409 U.S. 849 (1972). The same considerations

Although the staff is of the view that the movants need not come forward with evidence, it continues to refer to movants' obligation to present reasons why the Board should inquire further as a “threshold burden.” That evidentiary term, however, is inappropriate in this context. We understand the staff's position but prefer to reserve the use of that term to situations in which evidence is required.

⁴The precursor of *Aeschliman* was *York Committee for a Safe Environment v. NRC*, 527 F.2d 812, 816 n. 13 (D.C. Cir. 1975). There, the Court found erroneous an appeal board decision holding that intervenors had the burden of going forward with evidence on one of their contentions. However, it did not reverse because it found that the error had been harmless.

persuade us that the Commission may not refuse to consider energy conservation alternatives unless an intervenor first brings forward information satisfying the strictures of its "threshold test."

* * *

In our view, an intervenor's comments on a draft EIS raising a colorable alternative not presently considered therein must only bring "sufficient attention to the issue to stimulate the Commission's consideration of it."

The Court explained the last quoted sentence in the following footnote:

The phrase is drawn from our recent decision in *Indiana & Michigan Elect. Co. v. FPC*, 502 F.2d 336, 339 (D.C. Cir. 1974), *cert. denied* 420 U.S. 946 (1975), a case concerned with the requirements of §313(b) of the Federal Power Act, 16 U.S.C. §8251(b) (1970), that objections be presented in an application for rehearing. The form of words used is not all important. The Commission's opinion in this case suggested a standard which would probably suffice as well: a "showing sufficient to require reasonable minds to inquire further." RAI-74-1-19 at 32 n. 27 I J.A. 71. *This does not, however support the imposition of the burden of an affirmative evidentiary showing.* [Emphasis added] (Slip opinion at 13 n. 13).

The applicant's motion for reconsideration (at p. 5) simply ignores the last sentence of this footnote in arguing that the earlier test adopted by this Board in *Midland*,⁵ "(evidence sufficient to cause a reasonable licensing board to inquire further)" is virtually identical to the language cited by the Court of Appeals in *Aeschliman v. NRC*, Nos. 73-1776 and 73-1867 slip op. at p. 13, fn. 13 " While the phraseology may be similar, the footnote makes clear that, at least under NEPA, no "evidentiary showing" need be made by an intervenor in order to invoke the agency's duty to consider a relevant contention. Applicant's suggestion that the Court was holding that evidence was required for that purpose stands *Aeschliman* on its head, for it ascribes to that decision a meaning precisely opposite to its explicit *ratio decidendi*.⁶

Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-315, NRCI-76/2, 101, 112 (1976).

⁵While applicant does argue, in a footnote at p. 7 of its motion for reconsideration, that intervenors "did not even meet the reduced threshold showing approved in *Aeschliman*" it does not appear that applicant acknowledges, as does the staff, that the showing need not be evidentiary. See applicant's motion at p. 5. However, if applicant is really arguing, as a fallback position, that the non-evidentiary requirement of *Aeschliman* was not met, we disagree. See the ensuing paragraphs of this opinion.

Applicant also relies on our decision in *Midland*, ALAB-315, *supra*, note 5, at 111-12. However, the portion of that decision dealing with the burden of going forward rested on the very Commission decision which the Court of Appeals reversed in *Aeschliman*. See *id.* at

Continued on next page.

Our holding that intervenors are not initially required to go forward with evidence does not mean that they may not do so. Indeed, if they have relevant evidence, it obviously would be the better course for them to present it. Moreover, it may be necessary for them to do so in order to rebut material in affidavits presented by other parties with which they disagree.

We agree with the staff (and did not mean to imply otherwise in ALAB-346) that an applicant's burden of going forward with evidence is not triggered by a motion to suspend its construction permit which states no reasons which might support the grant of the motion.

We hold that intervenors' motion in this case does contain a statement of reasons which is sufficient to call for the imposition of that burden. The motion states that it is grounded upon the authority of *Natural Resources Defense Council v NRC, supra*, *Aeschliman v NRC, supra*, and the Commission's policy statement of August 13 1976.⁷ We know that intervenors raised fuel cycle issues in a timely fashion in their contentions before the Licensing Board, that those issues were excluded, and that the appeal pending before us puts in question the propriety of that exclusion. See *Union Electric Co. (Callaway Plant, Units 1 and 2)*, ALAB-347 NRCI-76/9 216 (Sept. 16, 1976). The motion papers certainly imply if they do not expressly state, that *Natural Resources Defense Council v NRC, supra*, would require us to overturn that exclusion. Moreover, the motion papers allege: "As the construction of [the] plant continues, the cost of cessation of construction and abandonment of the plant increase, causing an arguable increase on the cost side of a cost-benefit analysis with respect to the construction and operation of this plant." This allegation relates to one of the factors upon which the Policy Statement says that the resolution of motions such as this should turn. See 41 Fed. Reg. at 34709 While it undoubtedly would have been better practice for intervenors' motion to have addressed all of those factors, we conclude that their motion is "sufficient to require reasonable minds to inquire further" into whether the construction permit should be suspended. It

Continued from previous page.

111. *Midland's* continued value as precedent for the proposition that intervenors have an initial burden of going forward in a situation like the one at bar is therefore problematical at best.

In addition, applicant relies (motion for reconsideration, pp. 6-7) on a line of Commission and Appeal Board cases allegedly holding that an intervenor has the initial burden of going forward with respect to his contentions. To the extent that these cases stand for the proposition that an intervenor must make an evidentiary showing to have his NEPA contentions considered, they were overruled by *Aeschliman* and *York Committee for a Safe Environment v. NRC, supra*, note 4.

⁷This was published as the General Statement of Policy in Docket No. RM-50-3, *Environmental Effects of the Uranium Fuel Cycle*, 41 Fed. Reg. 34707 to 34709 (Aug. 16, 1976) (hereinafter "the Policy Statement").

must be remembered that the question here is not whether to grant the motion but only whether to entertain it.

As applicant perceives, ⁸ if this motion were made in the federal courts, its sufficiency would be governed by Rule 7(b) of the Federal Rules of Civil Procedure. That rule requires that a motion "shall state with particularity the ground therefor, and shall set forth the relief or order sought." The Commission's rule governing the content of motions is essentially the same. It requires that a motion "shall state with particularity the grounds and the relief sought " 10 C.F.R. §2.730(b). In discussing Federal Rule 7(b), Professor Moore states: "Reasonable specification is all that the requirement of particularity imposes." 2A MOORE'S FEDERAL PRACTICE, par. 7.05 at 1543 (2d ed. 1975). We believe that intervenors' motion for suspension provides "reasonable specification" of its grounds. "The courts have generally given a liberal interpretation to the requirement that a motion 'state with particularity the grounds therefor. " *Hawkins v Ford Motor Co.*, 437 F.2d 276 at n. 1 (3rd Cir. 1970). It hardly behooves an administrative tribunal to be more restrictive than the courts in such matters.

Another reason for our conclusion that the burden of going forward is on the applicant⁹ (assuming the sufficiency of the motion to suspend) is that most of the factors which the Commission has said should govern requests for suspension of licenses such as this one¹⁰ turn either on evidence which is in applicant's possession or on knowledge which the applicant is much more likely to have than are any intervenors.¹¹ Thus, it is neither arbitrary nor irrational to require the applicant to make the initial showing and to give the intervenors opportunity to respond. On the contrary it is the most effective way to make sure that the record is adequately developed and the issues fully discussed. To accept applicant's position would be to establish a cat-and-mouse game in which applicant could hold back its knowledge and information, waiting instead to capitalize on intervenors' relative lack of familiarity with these matters. We decline to countenance such a procedure; the time when important issues are decided on the basis of that type of legal maneuvering is (or ought to be) long past.

⁸ Motion to Reconsider, p. 11, n. 4.

⁹ To the extent that the staff opposes the suspension motion, it naturally would share that burden.

¹⁰ We have in mind the following factors: "whether it is likely that significant adverse impact will occur until a new interim fuel cycle rule is in place," "whether reasonable alternatives will be foreclosed by continued construction or operation," "the effect of delay " "the possibility that the cost/benefit balance will be tilted through increased investment" and "the need for the project." See the Policy Statement, 41 Fed. Reg. at 34709.

The staff is also better qualified than the intervenors, by reason of knowledge and expertise, to make an affirmative showing on these factors. The staff itself recognizes that certain of the factors "may well involve information within the particular knowledge of the licensee or the Staff." For this reason it takes the position that movants for suspension need not "fully address" such factors.

2. Other Arguments of Applicant Which We Reject

A. The Applicability of Show Cause Procedures

Applicant's motion papers appear to suggest that intervenors' request for suspension of the construction permit should have been made under the "show cause" procedure of 10 C.F.R. §2.206. This regulation requires a decision by a high-ranking non-judicial Commission official¹² whether a new proceeding looking toward suspension of a license should be instituted. It has never been necessary however, to invoke this procedure in a pending case. Rather, it is well established that "the Appeal Board has the authority to grant a stay of a decision authorizing issuance of a construction permit, ancillary to its appellate jurisdiction" *Toledo Edison Co.* (Davis-Besse Nuclear Power Station), ALAB-25, 4 AEC 633 (1971); *accord, Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-338, NRCI-76/7 10, 11-13 (July 14, 1976); *Northern Indiana Public Service Co.* (Bailly Generating Station, Nuclear-1), ALAB-200, 7 AEC 483 (1974); *Wisconsin Electric Power Co.* (Point Beach Nuclear Plant, Unit 2), ALAB-85, 5 AEC 375 (1972).

In Applicant's view the Policy Statement at least favors, if it does not require, the application of show cause procedures to all requests for suspension of licenses in cases other than *Midland* and *Vermont Yankee*. It bases its position on the following sentence: "The same question would arise on a request for a show cause order seeking the suspension or modification on fuel cycle rule grounds of any other nuclear power plant license." 41 Fed. Reg. at 34709. In previous paragraph, however, the Commission said:

Similarly where a license has been issued, but the action has not become final within the Commission because of pending appeal or possible Commission review final action or review should be deferred pending publication of the environmental survey. *other issues, including as appropriate the issue of suspending activity under the license in question, may be resolved in the interim.* [Emphasis added]

We do not see how this can be fairly read other than as recognition of our jurisdiction over motions to suspend licenses in appeals pending before us. The reference to "show cause" proceedings in the next paragraph must therefore refer to other situations -- for example, a case in which there has been final Commission action.¹³

¹²Either the Director of Nuclear Reactor Regulation, the Director of Nuclear Material Safety and Safeguards or the Director of the Office of Inspection and Enforcement.

¹³We need not decide what kinds of allegations intervenors would have to make or who would have the burden of going forward in such a show cause proceeding until the issue comes before us in an appropriate case.

B. The Revelance of the Former Appendix D to Part 50

Our decision in ALAB-346 rested on the authority of *Toledo Edison Co.* (Davis-Besse Nuclear Power Station), 4 AEC 801 (1972). The Commission's decision in that case implemented and interpreted Part E of the former Appendix D to 10 C.F.R. Part 50 (1972). Appendix D was promulgated to give effect to the *Calvert Cliffs* decision¹⁴ which, like *Aeschliman*, held Commission procedures not to be in accord with NEPA. Part E of Appendix D required a licensee to make an initial factual submission to show why it should not lose its license. Applicant contrasts this with the Policy Statement which contains no such requirement, suggesting the inference that the Commission thus indicated that it did not want licensees to have the burden of going forward on motions to suspend licenses. But it does not follow from the mere fact that the Policy Statement is silent about the burden of going forward on such a motion that the burden must fall on the movants.¹⁵ It simply means that the Commission entrusted us to decide this and any other question which might arise on the basis of reason and applicable precedent. That is what we have done.

C. Alleged Unfairness to the Applicant

As applicant sees it, placing the burden of going forward upon its shoulders is unfair because it would not "be told at the outset, with clarity and precision, what arguments are being advanced" In support of this point, it cites *Kansas Gas & Electric Co.* (Wolf Creek Generating Station, Unit No. 1), ALAB-279 1 NRC 559 576 (1975). In that decision, we held an intervention petition in an antitrust proceeding impermissibly vague under a Commission regulation¹⁶ which requires, *inter alia*, that the petition be "accompanied by a supporting affidavit setting forth with particularity both the facts pertaining to [the petitioner's] interest and the basis for his contentions with regard to each aspect on which he desires to intervene." We noted (1 NRC at 574-76) that we were interpreting this regulation in light of a prior Commission decision stressing that antitrust intervention petitions must be specific and lucid. We indicated that these high standards of pleading would not necessarily carry over to non-antitrust cases involving technical matters or where counsel is "new to the field." 1 NRC at 576-77 All these things distinguish *Wolf Creek* from the case at bar. Moreover, requiring applicant in this case to make an initial factual showing is hardly unfair. This is because the Policy Statement, which is referred to in the motion papers, sets forth the factors that should be considered in a case such as

449 F.2d 1109 (D.C. Cir. 1971).

¹⁵ Cf. *Sampson v. Murray* 415 U.S. 61, 78 (1974), quoting from *Scrapps Howard Radio v. FCC*, 316 U.S. 4, 11 (1942).

10 C.F.R. § 2.714(a).

this. See 41 Fed. Reg. at 34709 Thus, applicant is well aware of the issues it is obligated to address.

II. CERTIFICATION TO THE COMMISSION

Applicant requests, in the alternative, that we certify the question of who has the burden of making a threshold evidentiary showing to the Commission.¹⁷ The ground advanced is that this is a novel question of policy law and procedure. What we said in *Consumers Power Co. (Midland Plant, Units 1 and 2)*, ALAB-152, 6 AEC 816, at 818-19 (1973) is equally appropriate here:

In order to certify we would first have to withdraw our resolution of the question. Such a withdrawal would carry with it an implication that we entertain substantial doubt as to [the question] —an implication which would be entirely unwarranted.

Accord, Maine Yankee Atomic Power Co. (Maine Yankee Atomic Power Station), ALAB-166, 6 AEC 1148, 1150 (1973). As we have shown, the authorities all point clearly to the conclusion at which we have arrived. We therefore decline to certify the question. Even assuming *arguendo* that the applicant is correct in asserting that the question is an important one, we find no indication anywhere that the Commission intended to restrict the jurisdiction of its appeal boards to trivia. The Commission, of course, remains free to review our decision on its own motion. 10 C.F.R. §2.786(a).

On reconsideration, ALAB-346 is *adhered to*. The request for certification is denied.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Margaret E. Du Flo
Secretary to the Appeal Board

¹⁷The staff opposes this request.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-349

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. John H. Buck
Michael C. Farrar

In the Matter of

Docket Nos. 50-443
50-444

**PUBLIC SERVICE COMPANY OF
NEW HAMPSHIRE** *et al.*

(Seabrook Station, Units 1 & 2)

Upon motion by intervenors to suspend construction permits, on the basis of factors specified in the *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* (41 Fed. Reg. 34707 (August 16, 1976)), the Appeal Board rules that (1) the NRC has jurisdiction to deal with the instant motion, despite pendency in court of an appeal of ALAB-338, which denied on disparate grounds a motion for suspension of the construction permits *pendente lite*; (2) ALAB-338 does not have *res judicata* effect here; and (3) while no single factor is decisive, in combination the equities in this case dictate the suspension of the construction permits (except with respect to limited protective activities) pending further order of the Commission or Appeal Board.

Motion granted in accordance with opinion; construction permits suspended.

NUCLEAR REGULATORY COMMISSION: JURISDICTION

The NRC has jurisdiction to deal with supervening developments in a case which do not bear directly on any question which is pending before a court.

ATOMIC ENERGY ACT: FINAL ORDER

Even though subject to appeal within the Commission, an immediately effective licensing board initial decision is a "final order" within the meaning of Section 189b. of the Atomic Energy Act, 42 U.S.C. 2239(b), and Section 2 of the Hobbs Act, 28 U.S.C. 2342, unless its effectiveness has been administratively stayed pending the outcome of further Commission review. See Section 10(c), Administrative Procedure Act, 5 U.S.C. 704.

COMMISSION PROCEEDINGS: RES JUDICATA/COLLATERAL ESTOPPEL

Res judicata does not apply when the foundation for a proposed action arises after the prior ruling advanced as a basis for *res judicata*, or when the party seeking to employ the doctrine had the benefit, when he obtained the prior ruling, of a more favorable standard with respect to burden of proof than is later available to him.

GENERAL STATEMENT OF POLICY INTERIM LICENSING SUSPENSION

In considering suspension motions arising under the *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* (41 Fed. Reg. 34707 (August 16, 1976)), an adjudicatory board cannot presume that a new fuel cycle rule will be set in place by any particular date but rather must give due regard to the uncertain duration and outcome of the Commission's reevaluation of the reprocessing and waste disposal issues.

GENERAL STATEMENT OF POLICY INTERIM LICENSING SUSPENSION

The equitable factors to be considered in ruling on suspension motions arising under the *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* (41 Fed. Reg. 34707 34709 (August 16, 1976)) require that emphasis be given to the individual circumstances in each case.

GENERAL STATEMENT OF POLICY INTERIM LICENSING SUSPENSION (BURDEN OF PROOF)

The burden of proof rests with the licensee with respect to a board's determination whether to suspend a license on the basis of the factors specified in the Commission's *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* (41 Fed. Reg. 34707 (August 16, 1976).)

GENERAL STATEMENT OF POLICY INTERIM LICENSING SUSPENSION

Replacement costs may be appropriately considered part of the costs of abandonment if construction of a substitute facility could reasonably be expected as a consequence of abandonment. *Union of Concerned Scientists v AEC*, 499 F.2d 1069 1084 fn. 37 (D. C. Cir. 1974).

GENERAL STATEMENT OF POLICY INTERIM LICENSING SUSPENSION (MAGNITUDE OF NEPA VIOLATION)

Since NEPA contemplates a full and proper review of the environmental impact of both construction and operation prior to the initiation of construc

tion, the failure to analyze acceptably an important and conceivably crucial impact at that threshold point gives rise to a NEPA violation of some magnitude.

NEPA. COST-BENEFIT ANALYSIS

The fact that a proposed plant will provide employment opportunities can have no place in the decision whether or not to authorize plant construction. But in evaluating the suspension of construction, that impact must be borne in mind.

GENERAL STATEMENT OF POLICY INTERIM LICENSING SUSPENSION (EFFECTS OF DELAY)

In evaluating the possible adverse effects of delay adjudicatory boards should consider the need for the project, the additional financial cost likely to result, and the impact of suspension of construction on the workers currently employed.

Mr. Thomas G. Dignan, Jr., Boston, Massachusetts, (with whom **Ms. Eleanor D. Acheson** was on the briefs), for the Public Service Company of New Hampshire, *et al.*

Mr. Anthony A. Roisman, Washington, D. C., for the New England Coalition on Nuclear Pollution.

Mr. Robert A. Backus, Manchester, New Hampshire, for the Audubon Society of New Hampshire and the Seacoast Anti-Pollution League.

Ms. Ellyn R. Weiss, Assistant Attorney General of Massachusetts, Boston, Massachusetts, filed a brief for the Commonwealth of Massachusetts.

Mr. Martin G. Malsch (with whom **Ms. Jane A. Axelrad** and **Mr. Michael W. Grainey** were on the briefs) for the Nuclear Regulatory Commission staff.

MEMORANDUM AND ORDER

September 30, 1976

Opinion of the Board by Messrs. Rosenthal and Farrar:

Pending before us are several appeals from the June 29 1976 initial decision

of the Licensing Board authorizing the issuance of permits for the construction of Units 1 and 2 of the Seabrook Station on the New Hampshire seacoast. LBP 76-26, NRCI-76/6 857 In mid-July we denied the motion of two of the appellants for a stay of the effectiveness of that decision *pendente lite*. ALAB-338, NRCI-76/7 10 (July 14, 1976). On entirely separate grounds and founded upon events occurring subsequent to the rendition of ALAB-338, another appellant has now moved for a suspension of the construction permits.¹ For the reasons set forth in this opinion, we believe the motion to be meritorious and grant it.

I

The setting of the motion to suspend is thus:

A. In June 1972, this Board held that, in carrying out its responsibilities under the National Environmental Policy Act in a licensing proceeding involving an individual reactor, a licensing board need not consider the environmental effects of (1) "the reprocessing of irradiated nuclear fuel, and the disposal of wastes resulting from reprocessing" or (2) "the disposal of low and high level solid wastes" *Vermont Yankee Nuclear Power Corporation* (Vermont Yankee Nuclear Power Station), ALAB-56, 4 AEC 930, 939² The following November, making direct reference to that holding, the Atomic Energy Commission³ gave notice of the institution of a rule-making proceeding for the purpose of considering possible amendments to its environmental review regulations which would "specifically deal with the question of consideration of environmental effects associated with the uranium fuel cycle in the individual cost-benefit analyses" for light water reactors. 37 Fed. Reg. 24191 (November 15, 1972).

The culmination of the rule-making proceeding [Docket RM-50-3] was the promulgation in April 1974⁴ of a new regulation, which became effective on June 6, 1974 and is now codified in 10 CFR 51.20(e). Reflecting the Commission's conclusion that the environmental effects of the fuel cycle, including reprocessing of spent fuel and waste disposal, were "relatively insignificant" but

As noted in ALAB-338, NRCI-76/7 at 11, fn. 1, the construction permits were issued on July 7 1976 in accordance with the authority contained in the initial decision.

²The environmental effects of other phases of the uranium fuel cycle (e.g., transportation of spent fuel from the reactor to a reprocessing plant or other destination) were held by this Board to be within the ambit of the NEPA review in an individual case. *Ibid*.

³The regulatory functions formerly performed by the Atomic Energy Commission have resided in the Nuclear Regulatory Commission since January 19 1975. Energy Reorganization Act of 1974, 88 Stat. 1233, 42 U.S.C. 5801 *et seq*. In connection with events occurring after that date, the term "Commission" is used in this opinion to refer to the NRC.

⁴See 39 Fed. Reg. 14188-91 (April 22, 1974).

nonetheless should be taken into account,⁵ the regulation in substance required the introduction of quantified environmental effects of the uranium fuel cycle into the cost/benefit analysis for each individual reactor—and went on to stipulate that “[n]o further discussion of such environmental effects shall be required” The particular numerical values to be factored into the analysis for various stages of the fuel cycle (including reprocessing of spent fuel and waste disposal) were set forth in an accompanying Table, identified as S-3. These values were derived from the “Environmental Survey of the Nuclear Fuel Cycle” issued by the Commission’s staff in November 1972, as subsequently revised in a staff document entitled “Environmental Survey of the Uranium Fuel Cycle” (WASH-1248, April 1974) which incorporated comments and recommendations offered during the course of the rule-making proceeding.

One consequence of the new regulation was that ALAB-56 no longer controlled on the question whether the environmental effects of spent fuel reprocessing and waste disposal were to be considered as part of the NEPA analysis in individual licensing proceedings.⁶ But although those effects were henceforth to be taken into account by licensing boards in deciding whether the cost/benefit balance tipped in favor of or against the licensing of the particular reactor, the numerical values assigned in Table S-3—and they alone—were to be employed for that purpose. For this reason, shortly after the new regulation was promulgated, we upheld the denial of a petition for intervention which sought simply to attack the validity of the Commission’s quantification in Table S-3 of the environmental costs associated with the uranium fuel cycle. *Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79 (1974).

B. Although not open to attack before a licensing or appeal board, the new regulation both could be and was challenged in the courts. On July 21 1976, the Court of Appeals for the District of Columbia Circuit rendered two decisions which addressed that challenge. *Natural Resources Defense Council v NRC* (Nos. 74-1385 and 74-1586); *Aeschliman v NRC* (Nos. 73-1776 and 73-1867). The court held, *inter alia*, that (1) the regulation was inadequately supported insofar as it treated the reprocessing of spent fuel and the disposal of radioactive wastes; and (2) NEPA requires that, before a nuclear power plant is licensed for construction or full-power operation, there be a valid analysis of the environmental effects of those two phases of the fuel cycle—either in a generic rule-making proceeding or in the individual licensing proceeding pertaining to that reactor.

In the wake of these decisions, the Commission issued on August 13, 1976 a General Statement of Policy (hereinafter “policy statement”) with respect to how it “intends to conduct its licensing activities pending resolution of the

Id. at 14190.

⁶ See 39 Fed. Reg. 14188.

several legal questions raised by the decisions.” 41 Fed. Reg. 34707 (August 16, 1976).

The policy statement indicated (41 Fed. Reg. at 34708) that the Commission:

1. had directed its staff “to review the existing literature thoroughly and to produce on an expedited basis a revised and adequately documented environmental survey on the probable contribution to the environmental costs of licensing a nuclear power reactor that is attributable to the reprocessing and waste management stages of the uranium fuel cycle”
2. expected the availability of the revised survey on or about September 30, 1976,
3. planned to reopen the prior uranium fuel cycle rule-making proceeding for the limited purpose of (a) supplementing the record on the reprocessing and waste management issues and (b) determining on the basis of the supplemented record whether (and, if so, in what respect) Table S-3 should be amended;
4. would later decide upon the precise procedures which will govern the reopened proceedings.⁷

In addition, the Commission noted its belief that, “[i]f the revised environmental survey justifies, notice and comment rulemaking can provide the basis for an interim rule which would be an adequate substitute for Table S-3 pending issuance of the final rule” *Ibid*; emphasis supplied. Such an interim rule “might be promulgated as early as December 1976,” although the process looking to the issuance of the final rule “could take fully a year” *Ibid*.

Most importantly insofar as the matter now at hand is concerned, the policy statement dealt in some detail with the matter of the issuance of new licenses and the status of existing licenses during the interval before a final (or interim) rule issued. On the first score, the Commission concluded that, pending further developments, no new full-power operating license, construction permit or

⁷In this regard, the Commission stated:

We understand the court to regard the procedures originally used as capable of fully ventilating the issues involved, permitting a reasoned Commission discussion and producing a valid rule. These procedures, which include an oral hearing and questioning of witnesses by the presiding panel, are set forth at 38 Fed. Reg. 50, January 30, 1973. Alternative procedures, modeled on those to be employed by the Commission in its forthcoming GESMO hearings, have been suggested by the Natural Resources Defense Council in the petition for rulemaking referenced above. An election of procedures to be followed will be made in a forthcoming notice of hearing, following the comment period on that petition, which closes August 31, 1976.

Ibid; footnote omitted.

limited work authorization should be issued. *Ibid.* This conclusion was based on a:

recognition that the grant of each of those authorizations, permits, or licenses is premised upon the completion of an adequate environmental impact statement, and that under the subject decisions, absent an acceptable substitute for those portions of Table S-3 which the court has found inadequately supported, the basis for a complete environmental impact statement will not be in place.

Ibid. And it was reached notwithstanding the Commission's further recognition that it might have "significant impacts on the availability and costs of nuclear power facilities" *Ibid.*

With regard to outstanding licenses, the policy statement gave effect to the Commission's judgment that the question of "suspending activity under the license" should be resolved on a case-by-case basis rather than generically 41 Fed. Reg. at 34709 Such resolution, the Commission added, is to turn upon equitable factors well established in prior practice and case law Such factors include whether it is likely that significant adverse impact will occur until a new interim fuel cycle rule is in place; whether reasonable alternatives will be foreclosed by continued construction or operation; the effect of delay and the possibility that the cost/benefit balance will be tilted through increased investment. See *Coalition for Safe Nuclear Power v. AEC*, 463 F.2d 954 (D.C. Cir 1972); *San Onofre*, Units 2 and 3, 7 AEC 986, 996-97 (June 1974). General public policy concerns, the need for the project, the extent of the NEPA violation, and the timeliness of objections are also among the pertinent considerations. See, e.g., *Conservation Society of Southern Vermont Inc. v Secretary of Transportation*, 508 F.2d 927 933-34 (2d Cir. 1974), *vacated on other grounds and remanded*, 423 U.S. 809 (1975); *Greene County Planning Board v FPC*, 455 F.2d 412, 424-25 (2d Cir.), *cert. denied*, 409 U.S. 849 (1972); *City of New York v United States*, 337 F Supp. 150, 163 (E.D. N.Y.) (three-judge court).

Ibid.; footnote omitted.

C. In the case of a facility such as Seabrook, which has received a limited work authorization, construction permit or full-power operating license under the aegis of an initial decision which "has not become final within the Commission" because on appeal to this Board, the policy statement empowers us to entertain upon request of a party to the proceeding "the issue of suspending activity under the license in question." 41 Fed. Reg. at 34709 The motion at bar is such a request. Filed by the intervenor New England Coalition on Nuclear Pollution and supported by the Audubon Society of New Hampshire, the Seacoast Anti-Pollution League and the Commonwealth of Massachusetts, the

motion asserts that the equitable factors identified in the policy statement call for the suspension of the Seabrook construction permits now. The applicants, Public Service Company of New Hampshire *et al.*, and the Nuclear Regulatory Commission staff do not agree.

II

We are confronted at the outset with the applicants' assertion, advanced for the first time at oral argument, that we lack jurisdiction to grant the relief sought by the Coalition. The applicants point out that the Court of Appeals for the First Circuit now has before it a petition for review of ALAB-338, *supra*. Even though ALAB-338 was addressed to a motion which had been filed by different parties and based upon considerations having nothing to do with the uranium fuel cycle,⁸ the applicants urge that the effect of the pendency of the petition for review is to strip us of the power to suspend Seabrook construction activities *on any ground*. Indeed, according to the applicants, we are even without jurisdiction to decide the merits of the numerous appeals from the initial decision which now reside on our docket. This is so, we are told, because of Section 9(a) of the Hobbs Act, 28 U.S.C. 2349(a), which provides with respect to court of appeals jurisdiction over an administrative proceeding:

The court of appeals has jurisdiction of the proceeding on the filing and service of a petition to review. The court of appeals in which the record on review is filed, on the filing, has jurisdiction to vacate stay orders or interlocutory injunctions previously granted by any court, and *has exclusive jurisdiction to make and enter on the petition, evidence, and proceedings set forth in the record on review, a judgment determining the validity of, and enjoining, setting aside, or suspending, in whole or in part, the order of the agency* [Emphasis supplied.]

1. The Hobbs Act, 28 U.S.C. 2341 *et. seq.*, was enacted in 1950. In its original form, it vested exclusive jurisdiction in the courts of appeals to review

As is reflected by ALAB-338, the motion was that of the Seacoast Anti-Pollution League and the Audubon Society of New Hampshire and sought a stay pending appeal of the Licensing Board's initial decision authorizing the issuance of construction permits. It was considered by us on the basis of the now well-established standards set forth in *Virginia Petroleum Jobbers Association v. Federal Power Commission*, 259 F. 2d 921, 925 (D.C. Cir. 1958). In denying it, we relied primarily on the absence of a clear and convincing showing by the movants that early construction activities would cause *substantial and irreparable* environmental harm. More specifically we concluded that the potentiality of such harm had not been demonstrated with regard to the several alleged impacts of construction specifically relied upon in the motion.

We discuss later in this opinion the question of whether ALAB-338 has any *res judicata* effect here.

certain final orders of the Federal Communications Commission, the Maritime Commission and the Secretary of Agriculture. It was later amended to bring within its ambit final orders of the Atomic Energy Commission and the Interstate Commerce Commission as well.

The legislative history of the Act reflects that its basic purpose was to reallocate review functions among the federal courts. Prior to 1950, judicial review of final orders of the three agencies initially encompassed by the Act were "prescribed by many provisions scattered throughout different statutes."⁹ Most required that "the controversy in relation to the orders complained of [be] heard and decided de novo in a district court."¹⁰ Moreover, in cases where a party affected by the agency's order sought to restrain it or set it aside as being illegal, the Urgent Deficiencies Act of 1913 (and other statutory provisions adopting the procedure of that Act) required the case to be heard by a three judge district court with right of review by appeal to the Supreme Court.

Congress viewed this use of three judge courts to involve an inefficient expenditure of judicial resources. At the district court level, such courts tied up three judges, all of whom needed to participate in every phase of the proceeding.¹¹ Further, the right of appeal to the Supreme Court necessitated review by that Court of lengthy and technical records which often involved questions of only minor importance.¹² In addition, Congress was of the opinion that, because the Administrative Procedure Act required the development of an administrative record sufficient to ensure full protection of all parties upon appellate review there was no need to make a second record before a district court.¹³

Nowhere in the history of the Hobbs Act is there the slightest indication of even a secondary purpose to reshape court-agency relationships. Thus, it would do no violence to any articulated legislative objective to read the "exclusive jurisdiction" provision in Section 9(a) as meaning only that a *district court* is not empowered to render "a judgment determining the validity of, and enjoining, setting aside or suspending * * * the order of the agency "

⁹House Report No. 2122, 81st Cong., 2nd Sess. (1950), U.S. Code Cong. Ser. 4303, 4305 (1950).

Ibid.

¹The committee referred to practical difficulties that arise when three judges are used to conduct a hearing; e.g., the necessity to hold a conference to rule on questions such as the admissibility of evidence. *Id.* at 4306.

²"The provisions of the Urgent Deficiencies Act for review of certain agency orders by special district courts of three judges, with an appeal as of right directly to the Supreme Court, had often not only disrupted the ordinary conduct of litigation by the district courts, by requiring the services of three judges in these cases, when in ordinary litigations only one judge is needed; but, also, as Chief Justice Stone pointed out, it had forced the Supreme Court to review many cases where the questions involved were of only minor importance, but where lengthy records and extreme technicalities had added heavily to the burden of the Court." *Id.* at 4304.

Id. at 4306.

Such an interpretation of Section 9(a) derives support from the terms of the Administrative Procedure Act. Section 10(d) of the APA, 5 U.S.C. 705, expressly provides that "when an agency finds that justice so requires, it may postpone the effective date of action taken by it, pending judicial review" No time limitation has been imposed with respect to the exercise of that authority. *i.e.*, Section 10(d) permits the issuance of an administrative stay either before or after the petition for review is filed.

2. As the Commission recently pointed out:

The relationship between the Commission and the court of appeals is quite different than that between an inferior and a superior court. As the Supreme Court said in a somewhat similar context: "*** technical rules derived from the interrelationship of judicial tribunals *** are taken out of their environment when mechanically applied [to administrative agencies]" *F.C.C. v. Pottsville Broadcasting Co.*, 309 U.S. 134, 141 (1940).

Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station) and *Consumers Power Co.* (Midland Plant, Units 1 & 2), CLI-76-14, NRCI-76/9 163, 166, fn. 2 (September 14, 1976). On analysis it is clear that an acceptance of the applicants' jurisdictional argument here would fly in the teeth of that admonition.

Even though subject to appeal within the Commission, a licensing board initial decision is undoubtedly a "final order" within the meaning of Section 189b. of the Atomic Energy Act⁴ and Section 2 of the Hobbs Act⁵ unless its effectiveness has been administratively stayed pending the outcome of further Commission review. This is because the Rules of Practice specifically provide that an "initial decision directing the issuance of [e.g.] a construction permit shall be effective immediately upon issuance" in the absence of such a stay 10 CFR 2.764. Thus, there can be little question that, this Board having declined in ALAB-338 to stay the initial decision authorizing the issuance of Seabrook construction permits, the review jurisdiction of the court of appeals now comes into play.

It may well be that the proper method of invoking that jurisdiction was the filing of a petition for review directed to the initial decision itself. For present purposes, however, it is not important whether the petition for review actually filed was technically infirm because it was addressed instead to ALAB-338 (which might be deemed to be an interlocutory order not subject to judicial review independently). For no matter how that petition was cast, the most that the petitioners could reasonably expect to obtain from the court of appeals at this juncture is what they have specifically asked for: namely a stay of the effectiveness of the initial decision pending the determination of this Board on

⁴ 42 U.S.C. 2239(b).

⁵ 28 U.S.C. 2342.

the several appeals from that decision which are now before us. To be sure, Section 10(c) of the APA, 5 U.S.C. 704, allows judicial review of immediately effective, final agency action notwithstanding the existence of appellate procedures within the agency which have not been exhausted. But, as Professor Davis has pointed out, notwithstanding Section 10(c) most courts have insisted upon the exhaustion of administrative remedies before undertaking to review themselves the merits of initial agency action. Davis, *Administrative Law Treatise* (1976 Supp.), §20.08. We would think that a court of appeals would be especially inclined to refrain from moving ahead itself on the merits in circumstances where, as here, the agency appellate process in fact has been invoked by the judicial petitioners (among others) and is being carried out.

Accordingly a holding that a petition for review divests the agency of all power to act with respect to the agency action in question would work a marked change in existing relationships between agency and court. That change would appear to make little enough sense as applied to our ability to move forward on the appeals taken to us from the *Seabrook* initial decision. It would be even more difficult to justify as applied to the matter of our consideration and disposition of the Coalition's motion. We can perceive of no good reason, and applicants have assigned none, why Congress might have thought it desirable to restrict an agency's power to deal promptly and effectively with supervening developments which do not bear directly upon any question which has been put before the court for early judicial consideration. If the concept of administrative flexibility has any content at all, that power must exist in full measure.

For the foregoing reasons, we reject the applicants' jurisdictional argument at least insofar as it relates to the motion now under consideration and the pending appeals from the initial decision.¹⁶

III

In addition to their jurisdictional argument, the applicants advance as a defense in bar the claim that our refusal, in ALAB-338, to grant a stay of the effect of the initial decision is *res judicata*. We find no occasion here to enter

⁶We also have before us a motion for reconsideration of ALAB-338. In view of the fact that what is squarely before the court of appeals is the correctness of that decision, it may be that we cannot determine that motion without obtaining leave of court to do so. We need not and do not decide that question now, for we are not passing upon the motion at this time.

into a lengthy discussion of the fine points of *res judicata* and other doctrines, such as collateral estoppel, which are related to it. We need not even pause to set out their basic elements, which make familiar reading.¹⁷ For there are several fundamental factors at work here which unquestionably preclude the operation of any of the so-called doctrines of repose in connection with the matter before us.

In the first place, as already noted, the foundation of the Coalition's motion is different from that of the stay motion of the Seacoast Anti-Pollution League and the Audubon Society of New Hampshire which was denied in ALAB-338. To be sure, when *res judicata* applies, it not only bars relitigation of matters which *were* earlier raised but also consideration of matters which *could* then have been raised. But the basis now assigned by the Coalition for a stay could not have been put forth on July 2, 1976 when SAPL-Audubon filed their motion. That basis did not become available any earlier than July 21 when the Court of Appeals issued its decision invalidating portions of the uranium fuel cycle rule—and perhaps not until as late as August 13, when the Commission issued its policy statement.¹⁸

Secondly *res judicata* does not apply when the party seeking to employ it had the benefit, when he obtained the prior ruling, of a more favorable standard with respect to burden of proof than is later available to him. For example, a judgment in favor of the government in a civil action cannot later be used against the defendant in a criminal prosecution arising out of the same conduct;¹⁹ similarly a verdict of acquittal of an alleged crime cannot be used by the defendant to protect against the imposition of liability in a subsequent civil proceeding.²⁰ This principle applies in full measure here.

On the prior stay motion, SAPL-Audubon had the burden of affirmatively showing that the criteria for the grant of a stay established in *Virginia Petroleum Jobbers* were met; our decision denying the stay was based on a determination that that burden had not been satisfied. See p. 242, fn. 8, *supra*. On the present motion, in contrast, it is incumbent upon the applicants to bear the burden of proving that the factors to be taken into account militate against a suspension of

¹⁷ See, e.g., *Alabama Power Co.* (Farley Units 1 and 2), ALAB-182, 7 AEC 210, 212-15 (1974), *reversed on other grounds*, CLI-74-12, 7 AEC 203 (1974).

¹⁸ The Coalition had, of course, attempted to raise the waste management issue early on in the proceeding, but was precluded from doing so by principles which were thought to be controlling at that time. Any attempt to renew the matter prior to the Court of Appeals decision would have been unavailing (see p. 265, *infra*).

¹⁹ See *United States v. Konovsky* 202 F.2d 721, 726-27 (7th Cir., 1953).

²⁰ *United States v. National Association of Real Estate Boards*, 339 U.S. 485 (1950).

the construction permits.²¹ In sum, because the burden now on the applicants is greater than it was previously they cannot here stand on the prior determination in their favor.

Like considerations give rise to still another reason why the applicants' *res judicata* claim is unavailing. The standards we must employ in passing upon the Coalition's stay motion—*i.e.*, those set forth in the Commission's policy statement (see p. 241, *supra*)—differ significantly from those, derived from *Virginia Petroleum Jobbers*, which were utilized in connection with the earlier stay motion. The most obvious example of this difference concerns the extent to which we should take into account environmental injury which will result if a stay is not granted. In the one instance, the test is whether there would be "irreparable injury" done to the environment; in the other, we have been told to determine whether there will be any "significant adverse impact" upon the environment. The difference between the two tests is a crucial one. Even disregarding the other variances between the *Virginia Petroleum Jobbers* standard for a stay of an initial decision pending appeal and the policy statement's standard for permit suspension pending implementation of a judicial decision, that difference is enough to require the conclusion that the issue before us in ALAB-338 and the issue at hand are quite dissimilar.

IV

Having thus determined that the pendency of a petition for judicial review of ALAB-338 does not strip this Commission of jurisdiction to grant the relief

As will be discussed in greater detail later in this opinion (see pp. 249-250, *infra*), several years ago the Commission was called upon to consider whether the construction permit for the Davis-Besse facility should be suspended pending the outcome of a NEPA review mandated by a judicial decision rendered after the permit was issued. In assigning to a licensing board the function of considering the suspension question on the basis of factors essentially equivalent to those identified in the policy statement here, the Commission specifically directed that "[t]he burden of proof shall be upon the licensees" *Toledo Edison Co.* (Davis-Besse Nuclear Power Station), 4 AEC 801, 802 (1972). We see no reason why that direction is not equally applicable to the closely analogous situation at bar. And three of our colleagues recently reached precisely the same conclusion in the course of their consideration of a motion in another case which likewise seeks the suspension of an outstanding construction permit by reason of the judicial invalidation of portions of the uranium fuel cycle rule. *Union Electric Co.* (Callaway Plant, Units 1 and 2), ALAB-346, NRCI-76/9 214 (September 9, 1976). Although the applicant in that case asked for reconsideration of ALAB-346, in doing so it challenged only the holding therein that it has the burden of going forward on the equitable factors set forth in the policy statement; *i.e.*, it expressly conceded that the ultimate burden of proof on the suspension question does rest with the utility in these circumstances. In any event, on reconsideration, the *Callaway* Board adhered to the views expressed in ALAB-346. See ALAB-348, NRCI-76/9 225 (September 29, 1976).

sought by the Coalition's motion, and further that the Coalition's motion is not barred by *res judicata*, we proceed to the merits. Before embarking upon the application of the equitable factors set forth in the Commission's policy statement to the particular circumstances of this case, a few general observations are in order.

1. As we read it, the policy statement does not permit us to apply the factors to this or any other reactor on the presumption that a new uranium fuel cycle rule—interim or final—will be set in place by any particular date.

As earlier observed, the Commission did expressly note its "expectation" that the "revised and adequately documented" environmental survey which it has directed the staff to prepare will be completed "on or about" September 30, 1976. Despite the suggestion of the Coalition that in fact the survey may not become available until an appreciably later date, it is a reasonable supposition that every effort is being made by the staff to give effect to the Commission's wishes in the matter. Accordingly we are prepared to assume for present purposes that the survey will be in the Commission's hands by no later than the middle of October, and very possibly within the next few days.

But the Commission was most careful not to treat similarly the matter of the course of events thereafter. To be sure, the policy statement does hold out the possibility that an interim rule might be promulgated as early as this December. It makes it quite plain, however, that the issuance of such a rule (utilizing notice and comment rule-making procedures) would depend, *inter alia*, upon the revised environmental survey providing sufficient justification for following that path. On this score, the Commission eschewed a prejudgment of either (1) the conclusions which will be reached in the revised survey or (2) the likelihood that, upon analysis of its content, the survey will be found to supply an adequate foundation for putting forth an interim rule months—and perhaps a year or more—before a sufficient record has been developed to permit the adoption of a final rule.²²

It would be inappropriate for us to do otherwise. For one thing, we are in no better position than is the Commission to predict the likely immediate fruits of the revised survey. For another, we find nothing in the policy statement which might be taken as even an implicit direction that motions of the stripe of the one at bar are to be decided by adjudicatory boards on the basis that (1) in the relatively near term, an interim rule will be adopted; and (2) the substance of that rule will be such that, in the case of any specific reactor, the assigned

²² Because the revised survey is but the first step in the reevaluation process and will reflect the conclusions of the staff rather than of the Commission itself, the imminence of its likely release is not a reason to withhold action on the suspension motion. In this connection, the policy statement did not direct that license suspension decisions await the survey.

environmental effects of the reprocessing and waste disposal aspects of the uranium fuel cycle could not tip the NEPA balance against the facility

In short, adjudicatory boards must consider suspension motions arising under the policy statement with due regard for the presently uncertain duration and outcome of the Commission's reevaluation of the reprocessing and waste disposal issues. It need be added in this connection only that any judgment reached within that framework in a particular case will be subject to alteration once the uncertainties are removed. The Commission made it clear in the policy statement that the proscription now in effect respecting the issuance of further licenses might be removed should an interim rule be promulgated and allow such action. 41 Fed. Reg. at 34708. Any suspension of an existing license which might be decreed at this juncture would likewise have no certain permanent effect; it too could be terminated at any time if warranted by a change in circumstances.

2. A principal source of most of the equitable factors which the Commission has directed us to take into account is *Coalition for Safe Nuclear Power v. AEC*, 463 F.2d 954 (D.C. Cir. 1972), cited in the policy statement. That case came to the District of Columbia Circuit on a petition for review of the Commission's issuance of a construction permit for the Davis-Besse 1 facility. While the petition was pending, that same court rendered its decision in *Calvert Cliffs Coordinating Committee v. AEC*, 449 F.2d 1109 (1971). At the Commission's request, the *Davis-Besse* record was remanded to it by the court for further environmental review. The Commission received briefs on the question of interim suspension of the construction permit to await the outcome of a full NEPA review and decided not to suspend. 36 Fed. Reg. 23172 (1971). Thereafter, not availing themselves of the opportunity afforded by existing Commission regulations for a hearing on the suspension question, the petitioners returned to the court of appeals and asked for an interlocutory injunction barring further construction pending judicial consideration of the administrative decision against permit suspension. The court concluded that that request was premature because of the failure to exhaust administrative remedies, but remanded once again to the Commission with directions to hold an expedited hearing on suspension.

In taking this action, the District of Columbia Circuit noted that the regulations promulgated by the Commission pursuant to *Calvert Cliffs* established three factors to be considered and weighed "in the determination of the question of suspension of a construction permit pending completion of a full N.E.P.A. review":

(a) Whether it is likely that continued construction or operation during the prospective review period will give rise to a significant adverse impact on the environment; the nature and extent of such impact, if any; and whether redress of any such adverse environmental impact can reasonably be effected should modification, suspension or termination of the permit or license result from the ongoing NEPA environmental review

(b) Whether continued construction or operation during the prospective review period would foreclose subsequent adoption of alternatives in facility design or operation of the type that could result from the ongoing NEPA environmental review

(c) The effect of delay in facility construction or operation upon the public interest. Of primary importance under this criterion are the power needs to be served by the facility; the availability of alternative sources, if any to meet those needs on a timely basis; and delay costs to the licensee and to consumers. 10 C.F.R. part 50 Appendix D §E2.

463 F.2d at 956. Beyond those factors, the court determined, the Commission would be obliged on the remand to "consider in detail" whether the "additional irretrievable commitment of substantial resources" which would be occasioned by continuation of construction while the NEPA review was in progress "might affect the eventual decision reached on [that] review" *Ibid.* In the court's view "[t]he degree to which this expenditure might affect the outcome of the final N.E.P.A. process should be a paramount consideration in the decision on suspension reached after the hearings on remand" *Ibid.*²³

Although the *Coalition* decision did not specifically call upon the Commission to consider as well the extent of the NEPA violation and the timeliness of the objections, those factors were given effect in *Greene County Planning Board v. Federal Power Commission*, 455 F.2d 412 (2nd Cir.), *certiorari denied*, 409 U.S. 849 (1972), also cited in the policy statement. That case involved, *inter alia*, an endeavor to halt construction of two transmission lines associated with a pumped storage power project, pending FPC compliance with NEPA in regard to a third transmission line which was also a part of the overall project. In declining to order the stay the Second Circuit pointed to the fact that construction of the two lines was already 80% completed and had been commenced under a final agency order which had been neither opposed administratively nor challenged judicially. It added, however, that it nonetheless might have arrived at a different conclusion on the stay question had it found (which it did not in the particular circumstances presented to it) a "significant potential for subversion of the substantive policies expressed in NEPA" 455 F.2d at 424-25

Almost three years after *Greene County* the Second Circuit decided *Conservation Society of Southern Vermont, Inc. v. Secretary of Transportation*, 508 F.2d 927 (1974), *vacated on other grounds and remanded*, 423 U.S. 809 (1975). There, the court of appeals was called upon to decide whether two highway projects should be allowed to progress while deficiencies in the NEPA review

²³To the extent here relevant, we shall discuss later in this opinion the conclusions reached by the Commission following the remand.

were being cured. In the case of one of these projects (referred to as the "Route 7 corridor"), the district court had enjoined further construction; in the case of the other (the "Sleepers River Interchange"), that court (albeit per a different judge) had reached the opposite result.

The Second Circuit approached its review function from the standpoint that "[a]lthough the procedural requirements of NEPA must be followed scrupulously and cost or delay will not alone justify noncompliance with the Act, where the equities require, it remains within the sound discretion of a district court to decline an injunction, even where deviations from prescribed NEPA procedures have occurred" 508 F.2d at 933-34. Finding no abuse of that discretion in either instance, both actions of the district court were upheld.

The decision to enjoin the continuation of the Route 7 project—which apparently was not far advanced—had rested in good measure upon the concern of the district court respecting the "irretrievable commitment of federal funds to local highway projects without early attention to possible alternatives to highway development" 508 F.2d at 935. With regard to the Sleepers River Interchange, the decision *not* to enjoin had rested on different considerations: (1) both the interchange and the highway project of which it was a part "were at an advanced stage of completion" (2) "the outcome was virtually undisputed" the affected resource was not "so environmentally unique [as to require] any special consideration" and "extensive and thoughtful consideration had been given to mitigating the adverse environmental consequences" and (3) if the injunction issued, "heavy damage" would be sustained by a town in which the interchange was located (the traffic burden in the absence of the interchange was such as to compromise both the quality of life in the town and the safety of its inhabitants). *Id.* at 936-37. The district court also had found that continuation of construction would "provide jobs in an area of high unemployment" while a delay occasioned by an injunction would be costly. *Id.* at 937. The Second Circuit observed, however, that the employment factor "would appear to be of no consequence if the ultimate outcome were in substantial doubt, but such was not found to be the case." *Id.* at 937 fn. 58.

The last decision referred to in the policy statement concerned an ICC order which authorized the abandonment of a terminal railroad. *City of New York v United States*, 337 F. Supp. 150 (E.D. N.Y. 1972; three-judge court). After determining that the ICC had failed to review adequately the environmental implications of the abandonment, the court then addressed the question whether it should allow the railroad to remain shut down pending further administrative action. Although pointing out that the vacating of the ICC order "would normally attend" a remand for additional consideration, the court nevertheless answered this question affirmatively on the basis of what it perceived to be "special circumstances" warranting resort to its equity power to "adjust relief to the exigencies of the case." In elaboration, the court pointed to the facts that

(1) NEPA had been recently enacted; (2) the plaintiffs had been tardy in raising the environmental question on the administrative level; (3) the railroad was in a seriously deteriorated condition, both physically and economically and (4) the ICC supplementation of the record on the environmental issue and reassessment of its abandonment order was to be accomplished, under a time limitation imposed by the court itself, within a 90-day period. 337 F Supp. at 163-64.

If nothing else, these four decisions which were singled out for special mention in the policy statement refute the applicants' claim at oral argument that, notwithstanding the Commission's considered judgment that the question of suspending outstanding licenses cannot appropriately be resolved on a generic basis, the application of the equitable factors necessarily will produce the same answer in the case of every such license (*viz.* no suspension). As the decisions reflect, in applying the factors themselves the courts have placed heavy emphasis on the circumstances of the particular case at bar. Thus, for example, the judicial refusal to suspend continuation of construction of the transmission lines in *Greene County* and the highway interchange in *Conservation Society* was influenced by *inter alia*, the fact that the projects had almost been completed. And understandably so. The stage of construction which has been reached is, of course, not a factor *per se*. But it does have a readily discernible bearing upon such established factors as whether the cost/benefit balance might be tilted through increased investment.²⁴

Indeed, in the context of the undertaking we have been assigned by the Commission's policy statement, it would appear that only the factor of the extent of the NEPA violation is susceptible of generic evaluation. Obviously the amount and the significance of the environmental impact which will be associated with continued construction or operation will vary widely from one reactor to another. So too, not all reactors can be lumped together insofar as the probable effect of delay upon either the utility or the public interest is concerned. Nor will the procedural posture of the reprocessing and waste disposal issues be the same in each case; in some, those issues may have been injected (at least to the extent permissible under the Commission's practice) at the inception of the licensing proceeding; in others, the reactor may have gone through the entire licensing process (including actual or possible judicial review) without the issues having been raised at all.

In short, it can not justifiably be assumed that the outcome of the balancing of the equitable factors here will similarly control the resolution of the suspension question with respect to any let alone all, other facilities. Put another way what may be called for in the totality of the Seabrook situation very well may be at some distance from what due regard for the whole range of equitable considerations may dictate in some other discrete situation—just as the equities

²⁴ See *Allied-General Nuclear Services* (Barnwell Nuclear Fuel Plant Separations Facility), ALAB-296, 2 NRC 671, 678, 679 (1975).

associated with the two highway projects involved in *Conservation Society* produced disparate results.

V

We now turn to an examination of each of the equitable factors identified in the policy statement as that factor applies to the case before us.

A. The Commission has told us to consider whether it is likely that significant adverse impact will occur before an interim rule is announced. As indicated in the preceding discussion, we cannot say precisely how long a time period that will involve; nor can we proceed on the assumption that the substance of the rule will be favorable to the nuclear industry in general or to the *Seabrook* applicants in particular. Thus, we must look at the activities to be conducted in at least the next several months, and consider them against the possibility that this facility may not obtain final approval.²⁵

In the context of the prior stay motion, we held that SAPL-Audubon had not demonstrated that early construction activity would lead to any irreparable environmental harm. The test now is a different one—is that activity likely to occasion significant environmental impact? Consequently we must now examine the impacts of construction in a different light from that which we previously turned on them.

We begin by looking again at what we earlier described as the “ordinary consequence[s] of any major construction project.” ALAB-338, *supra*, NRCI-76/7 at 15. Although we there made specific reference only to “dusty or muddy access and work areas,” other conditions such as noise and increased truck traffic will also be natural consequences. On a project of this size, these “ordinary” impacts are likely to be of considerable magnitude. This being so, our holding that these impacts did not constitute irreparable injury in the context of the matter then before us does not preclude us from now weighing them in the balance as significant adverse impacts resulting from plant construction.

In order to portray more accurately the extent of the impact resulting from construction activity we first describe the physical setting in which it would take place. The facility itself will be located some two miles inland from the Atlantic Ocean, on high ground which is surrounded on three sides by salt marsh. The eastern end of the point of land, known as “the Rocks,” has in the past provided access to the marsh for boaters, clam diggers and other sportsmen.²⁶ Running through the site is Rocks Road, which connects with Route 1,

²⁵While in the context of the present motion this possibility is raised by the fuel cycle matter, we note that ultimate denial of the permits could also result from our consideration of the pending appeals from the initial decision.

²⁶Applicants' Environmental Report (E.R.), Vol. I, Sec. 2.9, p. 2.9-1.

located to the west. A dump used by local residents is presently located at the western end of the site near the tracks of the Boston & Maine Railroad.

To the north and south of the triangular site are two tidal creeks which, flowing generally eastward, run through the marsh and, together with other shallow streams, empty into Hampton Harbor. The Harbor is a rectangular lagoon located behind the barrier beach which forms the actual coastline. A narrow inlet bisecting the beach (Hampton Beach lies to the north and Seabrook Beach to the south) connects the Harbor to the Ocean.

Generally estuaries—which are semi-enclosed coastal bodies of water where sea water and fresh water mix freely—are recognized to be complex, richly productive ecological environments. The Hampton Harbor estuarine system is no exception. According to the applicants' own description, the estuary "provide[s] valuable habitat for large populations of game and forage fish * * *"²⁷ The harbor is also "a rather large source of softshell clams" taken by individuals for their own consumption, while lobster and crabs are present in commercial quantities.²⁸ The staff, in expressing the need for "considerable concern * * * toward preservation of the marsh habitat and its drainage ways," pointed out that the marsh is also valuable for its production of nutrients which are transported by tidal flow to offshore waters.²⁹

Against this background, we turn to the construction scheduled to take place. Some major activity will occur away from the plant site itself. Specifically the applicants have just begun construction of a barge landing to be located where a beach now exists in Hampton Harbor, on the landward side of the barrier beach, just down from the inlet which is bordered by a state park. The barge landing is designed to be approximately 200,000 square feet (or nearly five acres) in size;³⁰ put another way it will be as big as four football fields.

As far as we can tell, neither the applicants' Environmental Report nor the body of the staff's Final Environmental Statement even mentioned the barge landing, much less discussed the impacts of its construction. (But see p. 255 fn. 34, *infra*). We have found no explanation for this omission. The applicants' prepared testimony did touch on the subject, indicating that constructing a causeway driving the retaining sheet piling and dredging 810,000 cubic feet of material from the harbor for fill would create some turbidity but that it was not expected to be anything but a minor problem.³¹ The Harbor beach area in

²⁷Preliminary Safety Analysis Report, Vol. I, par. 2.1.4, p. 2.1-9.

²⁸*Ibid.*

²⁹Final Environmental Statement, par. 2.7.1.1, p. 2-13.

³⁰See Tr. 6104-05; App. Ex. 13; and App. Direct Testimony Number Twenty p.11 (foll. Tr. 10767). Other testimony that the landing will be 150,000 square feet, or 3.5 acres, in size was obviously in error. See App. Direct Testimony Number Ten, p. 10 (foll. Tr. 10794) (compare lines 17-18 with lines 11-16).

which the landing is to be built is presently a source of clams that will be lost, but the clams are at sufficiently low density (three per square foot) that the area is not considered to be a clam flat.³² On the other hand, the area in which dredging would be carried out (see fn. 31 *supra*) does contain some clam flats which may be destroyed.³³

Owing to the failure of the basic source documents—*i.e.*, the applicants' Environmental Report and the staff's Final Environmental Statement—to discuss the barge landing, we are uncertain that the record was fully enough developed to paint a clear picture of the impact its construction might have.³⁴ In any event, its sheer size, and the amount of dredged and other fill needed to construct it, suggests the possibility that there may be significant impact on the fragile estuarine ecosystem.³⁵ Moreover, we would expect a significant impact on the surroundings to flow from the noise and disruption attendant to driving the retaining piles, dredging and perhaps hauling in other fill. In addition, the applicants presumably intend to use the barge landing early in the construction phase for the delivery of materials and equipment;³⁶ in that event, there will certainly be significant impact on the use of the harbor from the vessels—including large, heavily-laden barges—which the landing is designed to accommodate.³⁷

The other major work away from the facility itself which the applicants propose to undertake shortly is the construction of the two and one-half to

Direct Testimony Number Twenty pp. 11-12 (foll. Tr. 10767). The applicants explained that dredging was not a necessary source of fill but that State representatives suggested it as a way of increasing the size of an existing mooring basin. Tr. 10789-90; Direct Testimony Number Ten, p. 11 (foll. Tr. 10794). As may be seen, the dredged material would provide fill about four feet deep over the entire area of the barge landing. Our review to date of the record has not disclosed the source of such fill as may not be obtained by dredging.

³² Direct Testimony Number Ten, pp. 11-12 (foll. Tr. 10794); Tr. 10797-98.

Ibid.

³⁴ The opinion of our dissenting colleague brings to our attention that the "Answers to Comments" section of the FES does make brief mention of the barge landing. FES, par. 11.4.1, pp. 11-9 to 11-10. No discussion of its size or the impact of its construction appears there, however, and the body of the FES was not amended to include any discussion of the barge landing.

³⁵ On the other hand, the applicants claim that dredging will not cause any permanent injury. Direct Testimony Number Twenty pp. 16-17 (foll. Tr. 10767).

³⁶ On the basis of a reference in the back of the FES to the use to be made of the barge landing (see fn. 34, *supra*), our dissenting colleague says "it is primarily intended to be used for 'four to ten barge shipments *'" which he believes will not take place until late 1977. See fn. 8, *infra*, p. 283. The cited reference makes clear, however, that the landing will likely be put to use earlier than that, for once completed it is to "act as the landsupport point for offshore construction" which, as we note in the text (p. 256, *infra*), is to begin in short order.

³⁷ See SAPL Ex. 3 (Testimony of James F. Fallon), p. 3.

three-mile long cooling water tunnels running between the ocean and the plant. The intake and the discharge tunnels, both of which will have an eighteen foot inside diameter, will terminate some distance apart from each other half a mile to a mile out in the ocean. The tunnels themselves will be at a depth of 250 feet, under bedrock, but at their extremities there will be vertical shafts connecting the tunnels, at the ocean end, to the cooling water intake and discharge structures and, at the landward end, to the pump house which controls the flow to the condenser.

The shafts will be constructed in the following manner.³⁸ At the landward end, on the plant site, a caisson reaching from the surface to the top of the bedrock will be installed. Extensive dewatering will, of course, be required in the course of removing the overlying earth. The bedrock will then be drilled, blasted and removed, and the concrete liner poured. The tunneling operation will begin at that point and continue to its ocean terminus.

The offshore shafts present a more complex problem. There, too, caissons will be used; they will be sunk to the ocean bottom and then lowered to bedrock through the overburden, which is to be removed in the wet. Dewatering then will take place and the shaft will be drilled through the rock under dry conditions. The drilling of the shaft, as opposed to the earlier work above bedrock, cannot take place until the tunnels themselves are constructed, for the shot material in the shaft is to be removed by letting it fall through a small pilot shaft into the tunnel; the spoil is to be removed by being transported back through the tunnel onto land in the same manner as the spoil from the tunnel itself. In this connection, the applicants have indicated that all the spoil will be used for fill, otherwise disposed of on site, or sold to contractors.

The timetable furnished us by the applicants, as modified,³⁹ called for the start recently of the open cuts for the landward tunnel shafts and the start of their excavation in early October; it also contemplates an October start of the installation of the offshore shafts.

As might be expected, in many respects the environmental impacts of the construction of the shafts are significantly different on land than in the ocean. Construction of the offshore shaft, of course, will definitely lead to turbidity problems and a concomitant "decrease in the suitability of the adjoining beach

³⁸This description is taken from the applicants' Environmental Report, Vol. I, pp. 4.1-9 to 4.1-12.

³⁹The modifications are reflected in a staff affidavit which recited the status of work and plans as of August 30, 1976. At argument, the applicants moved to strike that affidavit. We deny the motion; however, we have utilized the affidavit only insofar as it (1) informs us as to changes in the construction timetable originally furnished us by the applicants early in July; and (2) indicates that the applicants will need to take certain steps to protect their property and the environment if construction is halted (see p. 272, *infra*).

areas for swimming”⁴⁰ According to both the staff and the applicants, excavation of the onshore shafts will create noise highly objectionable to area residents, as well as surface disturbance.⁴¹ It will also call for extensive dewatering; the volume of dewatering effluents from this and other excavating is expected to be 720,000 gallons per day.⁴² Thus, together with the deposit of spoil, is what the staff believes will be the principal “threat to the integrity of the estuarine ecosystem.”

These adverse environmental impacts, as well as similar ones stemming from construction of the plant buildings themselves, will be widely felt. Heavy truck traffic will result from tunneling and other work at the plant area, adding to the noise problem,⁴³ creating dust in the Rocks Road area, and leading to the deterioration of local roads. The noise problem will be compounded by additional deliveries by train and by occasional night-time operation of the concrete batch plant.⁴⁴ A sizeable number of people—some 500 live within one mile of the plant and thus stand to feel one or more of these impacts.⁴⁵ While many will, therefore, wish they could be farther from the construction site, others will be affected in a different manner—it appears that access to the recreation areas near the Rocks stands to be limited as a result of the construction activity.⁴⁶

In order to alleviate some of the traffic burden on the existing Rocks Road, the applicants plan to construct a new access road to the north of it, as well as a railroad spur. The impact of this construction will, of course, not be an unixed blessing, for neither passageway will utilize an existing right-of-way. A total of 55 additional acres will be needed for these traffic arteries; owing to the nature of the surroundings, however, the adverse consequences of taking this land might not be as significant as has been found to be the case in other situations.⁴⁷

⁴⁰FES, par. 4.2, p. 4-9. We assume, however, that the suitability of a New Hampshire beach for swimming during the fall and winter months involves a moot point.

¹Environmental Report, Vol. I, par. 4.1.2, p. 4.1-10; FES, par. 4.1.1, p. 4-3.

²FES, par. 4.1.1, p. 4-1.

³At argument, applicants conceded that the truck noise was already proving to be a serious problem (App. Bd. Tr. 154).

⁴FES, par. 4.1.1, p. 4-3. Construction of the batch plant was one of the earliest activities undertaken; it is scheduled for testing in December and will be put to use shortly thereafter.

FES, par. 4.1.1, p. 4-3; E.R. Sec. 2.2, Table 2.2-1. The FES also tells us that the increased noise stands to affect the wildfowl which frequent the area during the winter months. FES, par. 4.3.2.1, pp. 4-10 to 4-11. Initially the staff was able to say that the portion of this work which proved the greatest threat would be conducted in the spring. *Ibid.* That is no longer so. We do not place reliance on this fact, however, for we presume that any disturbed birds will be able to find suitable resting areas nearby. Humans affected by the noise, on the other hand, are less readily able to move to another location.

⁵See, generally initial decision, par. 109-113, NRCI-76/6 at 885.

⁷See *Kansas City Power & Light Co.* (Wolf Creek Station, ALAB-331, NRCI-76/6 771, 776-78 (June 8, 1976)).

Adverse effects less noticeable to the surrounding population will also occur. The extensive clearing, grading, excavating and dewatering necessary to the work scheduled in the near future poses the threat of runoff of dirt and other material into the estuary as well as other effects associated with the changes in runoff patterns and ground water flow. The extent of any adverse impact on this score is difficult to predict. At the staff's insistence, the applicants are going to install a larger settling basin to catch the runoff than had previously been contemplated.⁴⁸ The extent to which this will enable them to avoid increasing turbidity to undesirable levels is problematical.

B. Relying upon the formulization of the factor in *Coalition for Safe Nuclear Power v AEC, supra*, 463 F.2d at 956, the applicants argue that, in considering whether "reasonable alternatives will be foreclosed by continued construction or operation" the entire focus must be upon "alternatives in facility design or operation." On this basis, it urges that that factor cuts against suspension of construction for the reason that, in the policy statement, the Commission expressed the belief that "it is extremely unlikely that the revised environmental survey will result in any modification of [nuclear power generating] facilities"; rather, "[o]nly the possibility of discontinuing their construction or use is likely to be at issue" 41 Fed. Reg. at 34708. The staff's position is not much different. In its view what must be looked at is "the possibility that interim construction activities could have the effect of rendering one or more environmentally preferable alternatives regarding reprocessing and waste management technically infeasible, or making abandonment of the Seabrook project impracticable." The staff maintains that that possibility is virtually non-existent.

The Coalition, on the other hand, gives a considerably more expansive scope to the factor. It sees it as having reference not merely to alternatives in the design or operation of this facility but as well to the search for and development of alternative energy sources or measures to achieve energy conservation. And the Coalition would have it that, so long as the construction of the Seabrook facility moves forward, the incentive to pursue such alternatives will be absent. Should the facility later be abandoned, effective resort to them would be more difficult (albeit not totally foreclosed).⁴⁹

We need not here resolve those divergent views regarding the reach of the factor. This is because the Coalition would not be materially aided even were we to accept its interpretation. To be sure, the increased investment in the facility

⁴⁸See FES, par. 4.1.1, pp. 4-1 to 4-3; initial decision, par. 139, NRCI-76/6 at 891.

At oral argument, the staff noted its agreement with the Coalition that, for the purposes of this factor, "foreclose" should be taken to mean "more difficult" rather than absolutely precluded (App. Bd. Tr. 180). We likewise concur in that interpretation. There are relatively few, if any alternatives the pursuit of which might be made *impossible* by the continued construction or operation of a nuclear power plant; thus, to read "foreclose" literally would strip the factor of meaning.

which would attend continued construction might well influence the ease of subsequent substitution of some other energy source. But the implications of the continuing commitment of resources to this project in terms of its later abandonment in favor of another alternative are more appropriately examined and weighed in connection with a different factor to be discussed later in this opinion. See pp. 260-262, *infra*. Hence, if the Coalition is right as to the bounds of the factor, the question is whether, those implications put to one side, a failure to halt Seabrook construction would place significant obstacles in the path of the investigation or adoption—either now or at some future time—of other means of coping with energy demands. We think not.

The Coalition has given us no reason to assume, and it appears to us highly improbable, that suspension of the construction permits pending the evolution of a new rule pertaining to spent fuel reprocessing and waste disposal would occasion an immediate alteration in the applicants' present planning with regard to the development of other energy sources (e.g., the building of additional fossil-fuel plants). It is possible, of course, that permit suspension would provide some incentive for accelerating the exploration of such potential energy conservation measures as resort to the time-pricing of electricity. But even that falls in the realm of speculation; and there is still greater uncertainty that, absent a present impetus, it would prove more difficult to invoke such measures later on.

It follows that the "foreclosure of alternatives" factor helps the Coalition only if there is a fair possibility that the outcome of the reevaluation of the environmental effects of spent fuel reprocessing and waste disposal would be a desirable design change made more difficult because of construction activities carried on in the interim. In the policy statement, however, the Commission opined that there was not such a possibility; rather, it was "extremely unlikely" that design modifications will be called for by any new fuel cycle rule. See 41 Fed. Reg. at 34708. That assessment is certainly correct as applied to the suggestion of the Coalition at oral argument that a still open and viable option is the storage of spent fuel on the Seabrook site proper for a substantial period of time, following which permanent disposal would be made of it without reprocessing. It is unclear on the record at hand whether any construction activities occurring over the next year or so might cause difficulties were that option to be eventually selected as the optimum means of dealing with spent fuel.⁵⁰ But were we to give the Coalition the benefit of all doubt on that score, the fact would still remain that a new rule directed to the extent of the environmental impacts

⁵⁰The staff has supplied a construction timetable which reflects that excavation for the Unit 1 fuel storage building (to include a spent fuel storage area) may be undertaken by the end of this year. There is no indication, however, that the taking of this step (or any other early construction activity) would impede later enlargement of the spent fuel storage area; nor do we know when the erection of the building itself is likely to be started.

of the various phases of the fuel cycle would probably not be the source of any need to expand the on-site spent fuel storage area. When and in what manner disposition is to be made of spent fuel will be considered and decided in other proceedings, the pendency or prospect of which does not provide a basis for our suspension of the Seabrook permits under the aegis of the policy statement.

C. We have seen that the obligation to consider "the possibility that the cost/benefit balance will be tilted through increased investment" is rooted in the District of Columbia Circuit's decision in *Coalition for Safe Nuclear Power v AEC, supra*. As the court there held, the degree to which an "additional irretrievable commitment of substantial resources might affect the eventual decision reached on the N.E.P.A. review" should be "a paramount consideration" in determining whether to halt construction to await the outcome of the completion of that review. See *supra*, p. 250. In so holding, the court observed that "[s]ince the decision reached on whether to go forward with the project depends, to some extent at least, on a balance of the environmental harm and the economic cost of abandonment, each additional increment to the amount of money invested in the project tilts the balance away from the side of environmental concerns" 463 F.2d at 956. This observation was made with full recognition "that a construction permittee, particularly after [*Calvert Cliffs Coordinating Committee v AEC, supra*] proceeds at its own financial risk with respect to any investment made prior to the completion of judicial review of an operating license supported by an appropriate N.E.P.A. environmental impact statement" that consideration the court thought to provide "simply another reason" why the Commission should expedite its evaluation of "the potential environmental harm resulting from the completion and operation of the project" *Id.* at fn. 1.

In this case, according to a staff estimate which has gone unchallenged, should construction proceed without interruption the increased monetary investment in Seabrook will amount to \$61.3 million by the end of this year and \$83.7 million by the end of next February.⁵¹ The staff regards this to be an "extremely small fraction" of the estimated total project cost of approximately \$1.6 billion. Moreover, the staff urges, in no circumstances could that investment serve to "tilt" the cost/benefit balance in light of the notation of the District of Columbia Circuit that "sunk costs are not appropriately considered costs of [complete] abandonment [of the project] * * *" *Union of Concerned Scientists v. AEC*, 499 F.2d 1069 1084 fn. 37 (1974); repeated in *Aeschliman v NRC, supra*, ___ F.2d at ___, fn. 20 (slip opinion, pp. 21-22).

The principal difficulty with the staff's analysis is that it necessarily assumes that the only possible alternative to the construction of Seabrook which might be suggested by a new uranium fuel cycle rule is not building any additional

Response of the NRC staff to the Coalition's suspension motion, dated September 2, 1975, p.15. The estimate was based on information informally supplied to the staff by the applicants.

generating facilities at all. Manifestly that assumption is not warranted; another viable alternative might be the substitution for Seabrook of a non-nuclear plant or a smaller nuclear facility⁵² And the very discussion in the *Union of Concerned Scientists* decision upon which the staff relies conveys the message to us that the quantum of the investment in the Seabrook facility could be influential in determining whether such substitution is warranted on a cost/benefit basis.

In the words of the court, "replacement costs may be [appropriately considered part of the costs of abandonment] if construction of a substitute facility could reasonably be expected as a consequence of abandonment" *Ibid*. We take this to mean that, in undertaking a comparative cost/benefit analysis of Seabrook and possible replacement generating facilities once a new uranium fuel cycle rule has been put in place, the Commission will be free to consider the relative *economic* and *environmental* costs associated with (1) completing the construction of Seabrook and (2) substituting for it an alternative facility the construction of which has not as yet been commenced.⁵³ And the further advanced Seabrook construction is at that time, the more probable it will be that the comparison will inure to the benefit of that facility from the standpoint of both economic considerations and environmental protection—no matter what the magnitude of the environmental effects which might be attributed to the uranium fuel cycle in the new rule. Indeed, just as the applicants have relied upon the monetary and environmental expenditures involved in construction activities to date in arguing that the balance of convenience requires that construction now be allowed to proceed,⁵⁴ so too they well could be expected to stress any additional incremental expenditures along that line when the time comes to rebalance (in light of the new rule) the benefits and costs of continuing with Seabrook instead of pursuing some other alternative.⁵⁵

⁵² Irrespective of its content, a new uranium fuel cycle rule almost certainly could not tip, of itself, the cost/benefit balance to the side of constructing a nuclear facility of equivalent size on a different site.

⁵³ This interpretation of *Union of Concerned Scientists* is buttressed by *Coalition for Safe Nuclear Power v. AEC, supra*, in which the same court explicitly directed the Commission to consider, in determining if it should suspend construction, whether the "additional irretrievable commitment of substantial resources" might affect the eventual decision on the NEPA review. See p. 250, *supra*. Patently no such commitment could affect the review in any circumstances if, as a matter of law, it has to be totally ignored in striking the ultimate cost/benefit balance.

⁵⁴ The staff has joined the applicants in that reliance insofar as the already incurred environmental damage is concerned.

⁵⁵ In *Northern Indiana Public Service Co. (Bailly Generating Station, Nuclear-1)*, ALAB-224, 8 AEC 244 (1974), one of the issues on appeal was whether the Licensing Board should have rejected the proposed site for the facility in favor of another site claimed to be preferable on a cost/benefit comparison. In resolving that issue, we held that the delay and economic costs which would be entailed in shifting the facility from the chosen site to a different one were not to be ignored by the Licensing Board but rather given "their ap-

Continued on next page.

This is not to say that continuation of construction pending the development of a new uranium fuel cycle rule perforce *will* decisively affect the Seabrook cost/benefit balance. Nor can a precise assessment be now made of the degree of likelihood that the increased investment would tip the scales. To begin with, we do not know how long it will be before a new rule is adopted and a rebalancing of costs and benefits occurs; as previously pointed out, it could be a matter of a few months or instead a year or more. Another variable is what the content of the new rule will be. It may turn out to reflect little change in the values assigned by Table S-3 to the reprocessing and waste disposal phases of the uranium fuel cycle; on the other hand, there is at least the possibility that a significant upward alteration will be made. Still further, we have not as yet decided whether, the environmental effects of the uranium fuel cycle to one side, the cost/benefit balance for Seabrook favors the facility substantially marginally or not at all. That question, which remains before us on the appeals from the initial decision, takes on special significance because the dissenting member of the Board below concluded on his examination of the record that "at this time the costs [of Seabrook] outweigh the benefits" NRCI-76/6 at 948. Even if he is not right in that conclusion, it nevertheless might not take much to tilt the balance against Seabrook.

The situation at hand, then is one in which there is more than a mere theoretical possibility that the outcome of a restriking on a comparative basis of the cost/benefit balance for Seabrook (following the issuance of a new interim or final fuel cycle rule) will hinge upon whether construction does or does not go forward in the interim. It need be added only that, as earlier suggested (p. 252, *supra*), that possibility is enhanced because Seabrook construction has not as yet progressed very far. In the case of a facility which is in an advanced stage of completion—*i.e.*, as to which the major portion of the economic, and perhaps all of the environmental, costs of construction already have been incurred—the additional expense attendant to going ahead with what remains to be done could be expected to have much less impact upon a cost/benefit balance struck for the purpose of deciding whether to substitute another kind of facility for it.⁵⁶

D. Insofar as the extent of the NEPA violation is concerned, the parties are

Continued from previous page.

appropriate weight" in the balancing process. *Id.* at 269. On its review of ALAB-224, the Court of Appeals for the Seventh Circuit expressly upheld that determination. *Porter County Chapter of the Izaak Walton League v. AEC*, 533 F.2d 1011, 1017 fn. 10 (1976). At the time the Licensing Board struck its comparative cost/benefit balance in *Bally*, construction had not as yet commenced. Obviously the economic expenses involved in shifting the facility to another site would have become substantially greater as construction moved ahead.

⁵⁶ See *Barnwell*, ALAB-296, *supra*, 2 NRC at 678, 679.

unsurprisingly at polar extremes. The Coalition insists that “the absence of an adequate analysis of the handling and disposing of spent fuel, which represents the most serious environmental and safety problem associated with nuclear reactors, is a major and crucial omission in the licensing process.” For “this reason alone” according to the Coalition, the construction permit should be suspended. On the other hand, the applicants maintain that *Natural Resources Defense Council v NRC, supra*, should be read as “finding no violation of NEPA at all” but rather as identifying simply a violation of the Administrative Procedure Act which made it impossible to determine whether there had been a failure to fulfill the NEPA command. Although the staff does not appear to join in that view it urges that the NEPA violation was “essentially harmless” in this case. In support of this position, it tells us that all environmental impacts associated with Seabrook other than those in the area of reprocessing and waste disposal have already been adequately considered. Moreover, the staff points out, no wastes or spent fuels will be generated by Seabrook during the period required for the Commission’s generic reevaluation of the environmental impacts of those phases of the uranium fuel cycle. If the results of that reevaluation should tip the cost/benefit balance against Seabrook, the argument proceeds, construction can be then suspended.

Our own analysis brings us to a point in between these two extremes. To begin with, we can certainly agree with the applicants that here, as in *Greene County supra*,⁵⁷ “there is no indication * * * of obstinate refusal to comply with NEPA” And it may turn out that the staff is right that, with respect to all other environmental issues pertaining to Seabrook, the requirements of NEPA have been met; although this is one of the questions presented by several of the appeals from the initial decision which remain to be fully briefed, argued and determined. Further, it seems a compelled inference that neither the District of Columbia Circuit nor the Commission perceived the necessary result of the invalidation of the 1974 uranium fuel cycle rule to be, as the Coalition apparently would have it, a suspension of all outstanding licenses without regard to any other considerations. The court did not direct the suspension even of the licenses (those of the Midland and Vermont Yankee facilities) which were directly before it. For its part, as we have noted, the Commission concluded in its policy statement that the suspension question should be resolved on a case-by-case basis—taking account of a number of factors, many of which (unlike the one here under scrutiny) have no generic application.

At the same time, however, the endeavors of the applicants and the staff to dismiss the violation as of little (if any) present importance fall far short. In the first place, we cannot accept the applicants’ claim that all that is involved is a non-observance of APA requirements. The essence of the District of Columbia

⁵⁷See 455 F 2d at 425.

Circuit's decision in *Natural Resources Defense Council v. NRC*, *supra*, was that an inadequate record had been developed on the matter of the environmental effects of spent fuel reprocessing and waste disposal and that, as a consequence, the rule which had been founded upon that record was invalid.⁵⁸ Inasmuch as that rule, and more particularly Table S-3, had served as the sole basis for the evaluation of those environmental effects in the case of the Seabrook reactors (as well as the other reactors undergoing environmental review since 1974), it is abundantly clear that what we are confronted with is a defective NEPA cost/benefit analysis and, therefore, a violation of the command of *that* statute.

It is also apparent from its opinion that the District of Columbia Circuit did not regard as trivial the deficiencies which it had found. Among other things, the court quoted (with added emphasis) its earlier statement in *Scientists' Institute for Public Information v. AEC*, 481 F.2d 1079 1098 (1973), to the effect that "[t]he environmental problems attendant upon processing, transporting and storing these wastes * * * warrant the most searching scrutiny under NEPA"⁵⁹ and went on to conclude:

Decisions to license nuclear reactors which generate large amounts of toxic wastes requiring special isolation from the environment for several centuries are a paradigm of "irreversible and irretrievable commitments of resources" which must receive "detailed" analysis under §102(2) (C) (v) of NEPA, 42 U.S.C. §4332(2) (C) (v).⁶⁰

Finally we are not persuaded that the extent of the statutory violation is materially lessened because Seabrook is not in operation and therefore is not now generating wastes or spent fuel. On the staff's theory even a total failure to consider *any* environmental effects of reactor operation at the construction permit stage could appropriately be treated as *de minimis* so long as those effects were susceptible of evaluation before the operating stage was reached. Such a result would of course be untenable. For good and obvious reasons, NEPA contemplates a full and proper review of the environmental impact of both construction and operation *before* the first shovelful of dirt is turned over; *i.e.*, before the environment is disturbed and resources are irretrievably committed to

⁵⁸ The Commission acknowledged as much in the policy statement. 41 Fed. Reg. at 34708. See also the Commission's recent memorandum and order in *Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station)* and *Consumers Power Co. (Midland Plant, Units 1 and 2)*, CLI-76-14, NRCI-76/9 163, 165 (September 14, 1976) in the court's ruling was taken to be that

* the issues of nuclear waste disposal and fuel reprocessing had not been sufficiently considered by the AEC either in the individual licensing proceedings involving the Vermont Yankee and Consumers Power plants, or in a Commission rulemaking proceeding which examined the environmental effects of the uranium fuel cycle and set them forth in Table S-3, 10 CFR 51.20(e) of the Commission's rules.

⁵⁹ ___ F.2d at ___ fn. 11 (slip opinion, p. 8).

⁶⁰ *Id.* at ___ (slip opinion, p. 12); footnote omitted.

the project with the at least possible consequence that the later pursuit of alternatives would prove more difficult. When, in derogation of that contemplation, an important and conceivably crucial environmental impact—be it of construction activities or of reactor operation—is not acceptably analyzed at that threshold point, there is a NEPA violation of some magnitude.

E. There is understandable agreement among the parties that the Coalition raised the spent fuel reprocessing and waste disposal issues in a timely fashion. Early in the proceeding, on May 6, 1974, the Coalition attempted to inject into the case a contention (No. 20) that “[t]he safe and environmentally acceptable disposal of nuclear wastes from the plant” was premised on unsupported assumptions. *New England Coalition on Nuclear Pollution Further Statement of Contentions*, p. 6.⁶¹ We therefore need not extend this opinion further by additional discussion of that factor.

F We have discussed above the adverse environmental effects which would be needlessly suffered if construction were not halted at this juncture and it were later determined that the plant should not be built. We have also considered other adverse consequences of continuation of construction. We turn now to the opposite side of the coin, *i.e.*, to a consideration of the adverse effects which would result if construction were delayed now and it were later determined that the plant should be built.

As we see it, there are three factors which must be taken into account in evaluating the possible effects of delay. The first, specifically mentioned in the policy statement, concerns the need for the project. The second involves the additional financial cost that would be incurred by the applicants. The third concerns the impact of a suspension of construction on the workmen now employed.⁶²

1. Like many of the other factors we have considered, the “need for the project” does not involve absolutes. In most instances, the question will not be whether or not the project is needed, but how critical the need is; put another way the question is to what extent delay in its completion date can be tolerated on the assumption that it will be ultimately determined that the plant should be constructed.

Generally the further away from completion a plant is, the more difficult it will be to evaluate the imminency of the need for it. Nuclear plants are long

¹The attempt was unsuccessful because the validity of the 1974 uranium fuel cycle rule (including Table S-3) was not open to challenge in an individual licensing proceeding. *Douglas Point*, ALAB-218, *supra*. See also *Union Electric Company* (Callaway Plant, Units 1 and 2), ALAB 347 NRCI-76/9 216, 218 (September 16, 1976).

²In its policy statement, the Commission indicated that among the pertinent considerations for us to consider were “[g]eneral public policy concerns” A number of such concerns — *e.g.*, loss of employment — have been touched on in this opinion. The parties have not suggested that any other public policy considerations have a bearing on the issue before us.

lead-time projects, and we have previously commented about how long-term demand projections upon which the project is based are necessarily imprecise and involve at least a degree of speculation. *Niagara Mohawk Power Corp.* (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347 365 (1975). As the plant gets close to completion, shorter-term—and thus more precise—predictions come into play

In this respect, the situation before us is unlike that envisioned, for example, by the legislation which, for a time after the *Calvert Cliffs'* and *Quad Cities* decisions,⁶³ authorized the issuance of temporary operating licenses before full NEPA review was completed.⁶⁴ That statute made need for power a paramount consideration, and allowed the grant of a temporary license on a finding that:

operation of the facility * * * is essential toward insuring that the power generating capacity of a utility system or power pool is at, or is restored to, the levels required to assure the adequacy and reliability of the power supply taking into consideration factors which include, but need not be limited to, alternative available sources of supply, historical reserve requirements for the systems involved to function reliably the possible endangerment to the public health and safety in the event of power shortages, and data from appropriate Federal and State governmental bodies which have official responsibility to assure an adequate and reliable power supply

In deciding whether such a finding was justified in a particular case, the Commission would have been dealing with the power supply and demand situation existing at the time of its decision and in the immediate future. In contrast, we must attempt to foresee what lies in store more—perhaps much more—than five years from now

The difficulties attendant upon our doing so are illustrated by the *Davis-Besse* case, which has been discussed elsewhere in this opinion (see p. 247 fn. 21 and pp. 249-250, *supra*). There, the question of suspension of the construction permit, which had been issued in March 1971 came before the Commission and its boards in mid-1972. The Licensing Board, focusing on the need to meet the June 1975 peak demand, found there to be a substantial probability of either blackouts or brownouts if the facility were not in operation at that time.⁶⁵ The

³ *Calvert Cliffs' Coordinating Committee v. AEC*, *supra*; *Izaak Walton League of America v. Schlesinger*, 337 F Supp. 287 (D.C. D.C. 1971).

⁶⁴ See Section 192 of the Atomic Energy Act, 42 U.S.C. 2242, as added by Pub. L. 92-307 (June 2, 1972). By its own terms, the authority granted by that statute expired on October 30, 1973, having been utilized only once, *viz.*, by the Vermont Yankee applicant.

⁶⁵ Initial decision, 4 AEC 871, 882-884 (May 19, 1972), *affirmed*, ALAB-55, 4 AEC 907 (June 2, 1972), *reversed and remanded on other grounds* by Commission memorandum and order of June 5, 1972, 4 AEC 912.

Board utilized that finding to support its decision that the construction permit should not be suspended. As of this writing, however, the *Davis-Besse* plant is still several months short of being ready for commercial operation and we are unaware that any service interruptions have occurred.

It is similarly difficult to make an accurate prediction here. Two members of the Licensing Board were able to find only that the plant would be needed "in the early to middle 1980's * * *"⁶ For his part, the dissenting member of the Board below summarized his position by saying that "there is no urgent need for Seabrook."⁷

The divergency of opinion is carried forward in the arguments the parties have presented to us. The Coalition claims that, according to the applicants' own figures, the two Seabrook units will not be needed until 1983 and 1984, respectively. On that premise, the Coalition concludes that even a two-year delay in construction will not have any adverse impact on the applicants' ability to meet the forecasted demand for electric power. The applicants counter by asserting that (1) this argument assumes that all other units scheduled to go on line earlier than Seabrook actually do so and (2) even if they are ready before critically needed, the Seabrook units will be useful as substitutes for fossil-fuel units.

In advance of our full review of the extensive record evidence on the need for the facility we can do little more at this juncture than note that there is no hint that a suspension of the Seabrook construction permits threatens to precipitate any sort of power supply crisis. Without intimating that we will subscribe to those views when it comes time to consider the merits of the appeals pending before us, we believe it appropriate to quote at this point from the dissenting opinion below for the purpose of demonstrating that there is at least substantial doubt that the need for Seabrook is such that suspension would be at all significant in that regard (NRCI-76/6 at 947-48):

The admitted uncertainty of forecasting electrical demand for periods of 5 or more years in the future, coupled with the predictive margin of error being on the high side in recent years, throws considerable doubt on the need for Seabrook in the near future (i.e., before 1985 or 1986). The reduction in rate of growth of 1%, which was acknowledged, is equivalent to the output of Seabrook.

The minimum New England demand for 1970-1985 is based on a growth rate in energy use from 4.7% to 5.6%. Thus, the base capacity need only meet the 4.7% and short lead time units can be used for the additional 0.9%—if needed.

⁶ Initial decision, par. 201, NRCI-76/6 at 902.

⁷ NRCI-76/6 at 948.

Although a plant or unit need not be justified for any given year, when it has been clearly demonstrated that the need has been overestimated and the time schedule can slip by "a few years" and the given plant (Seabrook) has other issues of serious concern, it is a fact that the plant should not be built until other alternatives are considered. The so-called substitution theory is not applicable under these circumstances because the "substitute" (Seabrook) has these serious issues of concern. Furthermore, without the construction of Seabrook, the reserve in the years 1981-1984 will average 19.8% with the reserve through 1983 being over 20%.

Because of the conflicting testimony in the record, it is difficult to define the real need at any specific future date.

Also, if the regional need in early 1980's is real, the delay of Millstone 3 from 1979 to 1982 is illogical on the basis of entanglements with fuel contractors.

In sum, the applicants cannot rely on any critical need for the plant in order to avoid suspension of the permits. As we see it, the staff is correct that this factor does not weigh heavily one way or the other.

2. The applicants place much emphasis on the claim that halting construction now would impose severe economic penalties upon them.⁶⁸ In support of this assertion, they refer to an affidavit they submitted in connection with the SAPL-Audubon stay motion.⁶⁹ There they represented that they had already invested \$73 million in the project and that the cost of this money at 9.5% interest, was almost \$7 million per year. In addition, they say assuming that completion of the project will be set back one day for every day of suspension, the cost of the project will escalate—presumably due largely to inflation—at the rate of approximately \$10 million per month. Finally they point out, suspension will also entail substantial storage and other direct standby charges.

The staff—whose view is endorsed by the Coalition—looks at the matter somewhat differently. It largely discounts any inflationary impact on total project cost, pointing out that inflated costs will be paid for with inflated dollars. And, as far as carrying charges go, the Coalition reminds us that the applicants testified that they expected interest rates to decrease. If this occurs, whatever additional costs are incurred by postponing construction will be at least partially offset by the fact that the applicants will not need to obtain

⁶⁸In speaking here of the applicants, we do not find it necessary to discuss which financial costs would be borne by the shareholders and which would be passed on to ratepayers.

⁶⁹For that reason, in describing the positions of the parties on this point, we need to draw upon the papers filed in connection with both stay motions.

money until it is available more cheaply. As far as the money which has already been expended is concerned, the staff stresses that it was spent by the applicants at their own risk prior to—and for the purpose of—obtaining construction permits and thus should be accorded little weight.

We agree generally with the staff's and the Coalition's assessment of the matter. It must of course be recognized, as the staff does, that shutdown and startup costs, as well as storage and other standby costs which will accrue during a suspension period, will be substantial. At the same time, however, the applicants would stand to lose even more substantial amounts if they went ahead with construction and, at a future date, it were decided that the Seabrook facility did not pass muster.

3. A suspension of construction would mean that the bulk of the working force now employed—perhaps 200 individuals—would lose their jobs. We have previously stressed that the fact that a proposed plant will provide employment opportunities can have no place in the decision whether or not to authorize plant construction⁷⁰—if the facility is not needed for the power it will produce, it cannot be justified on the ground it will cure unemployment. Nonetheless, when the decision to be made is the different one of whether a suspension of construction is called for, the impact of that action on the workers is certainly a consideration that has to be borne in mind. As we have indicated earlier (see p. 251, *supra*), at least one court has done so in determining whether to suspend highway construction.

Unfortunately the record is devoid of information on whether displaced workers could be expected readily to find other employment in the vicinity and on the amount of any unemployment compensation or severance pay those who cannot do so might be entitled to receive. We cannot, however, allow the fact that the burden of proof is on the applicants to blind us to the potential problems a decision to suspend could create for a sizeable number of workers. The impact of suspension upon their lives, although not quantifiable on this record, will be real and has been given thoughtful consideration by us.

VI

This brings us to the ultimate question presented by the Coalition's motion: whether on balance the equities dictate the suspension of Seabrook's construction permits, and thus the halt of construction activities, to await further developments in the evolution of a new uranium fuel cycle rule. With due deference to the contrary conclusion of our dissenting colleague, we believe that that

⁷⁰ *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-179, 7 AEC 159 177 (1974); *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, & 3), ALAB-336, NRCI-76/7 3, 4 (July 1, 1976).

question must be answered affirmatively in light of the analysis of the ingredient factors which we have just completed. Although, as applied to this case, no single factor standing alone would seem to be decisive, we are satisfied that *in combination* they preclude any other result.

We have earlier observed in connection with the applicants' *res judicata* argument (see pp. 246-247 *supra*) that, in contrast to the situation where a stay of an initial decision is being sought pending appeal, in the present circumstances the proper inquiry is whether it affirmatively appears that the permit or license should be left in effect. This reversal of the ordinary rule is both understandable and reasonable. A movant for a stay pending appeal is seeking to prevent action being taken under a presumptively valid authorization. Here, however, there is no such authorization. Rather, as matters currently stand, any further construction will be accomplished under the authority of an initial decision resting in part upon a substantive regulation which has already been declared invalid.

This consideration is of course not dispositive; if it were, the matter of permit suspension would not be before us. But it does establish a framework within which the various factors are to be assessed. So too, we must make our assessment with an eye on the possibility that the additional look at the environmental effects of the spent fuel reprocessing and waste disposal phases of the uranium fuel cycle might—at least if all other weights on the Seabrook cost/benefit balance scales are not tampered with in the interim—call for the abandonment of the facility in favor of some alternative. Once again, an assumption for present purposes that the warrant for Seabrook construction will necessarily survive any new fuel cycle rule would involve prejudgment on our part.

Employing this frame of reference, we begin with the adverse environmental impact that would be associated with further construction activities over the forthcoming months. Although not departing from our earlier conclusion in ALAB-338 that the impact will not be such as to cause irreparable injury nonetheless we cannot subscribe to our dissenting colleague's view that the environmental consequences of these activities can be dismissed as so insubstantial as to merit scarcely any consideration. "Significant"—the standard employed both in NEPA (42 U.S.C. 4332(2) (C)) and the Commission's policy statement—may not be susceptible of precise measure. *Cf. Kansas Gas and Electric Co.* (Wolf Creek Nuclear Generating Station, Unit No. 1), ALAB-331, NRCI-76/6 771 (June 8, 1976). But it seems idle to suggest that undertakings such as the building of an enormous barge landing, the drilling of tunnel shafts and the excavation for plant building foundations can be accomplished without, at bare minimum, significant disruption of the environment of persons in the vicinity of the site as well as, possibly an unfavorable impact upon the estuary.

Nonetheless, if the prospect of this environmental disruption were all that militated in favor of halting construction, we would be disposed to agree with our dissenting colleague that the Coalition's motion should be denied. But it is by no means all. Another consideration—in the view of the District of Columbia

Circuit in *Coalition for Safe Nuclear Power* a “paramount” one⁷¹ — is the effect that the continuation of construction might have on a later decision with regard to both the desirability and feasibility of replacing Seabrook with another alternative. We need not rehearse the totality of our previous discussion on this point. Suffice it to say that, particularly since Seabrook is now still at an incipient stage of construction, an additional investment of perhaps as much as \$100,000,000 or more could well have an important bearing upon any new comparative cost/benefit balance struck in the wake of a revised uranium fuel cycle rule. Without attempting to estimate the degree of likelihood of the balance actually being tipped by the incremental investment—an impossible task in the absence of sufficient prescience to predict when the rule will issue and what it will provide—this is necessarily a weighty factor in our ultimate judgment.

Nor can we discard lightly the consideration that the Coalition raised the fuel cycle issue on a timely basis, that its objections have now been judicially upheld in part and that the determined deficiency in the prior NEPA review cannot, in light of what was said by the District of Columbia Circuit, be treated as trivial. Even though these factors are not *per se* controlling, they appear to us to provide some equitable foundation for the Coalition’s insistence that construction should not be allowed to continue unless and until the deficiency is cured and it then appears that the project is justified from a NEPA standpoint.

Given these circumstances, for the applicants to prevail here it would have to appear clearly that a delay of construction would have the most dire consequences in terms of either the applicants themselves or the public interest. We have just seen, however, that the applicants have not sustained their burden on that factor. To repeat, there is no basis for assuming that a cessation of construction for as much as a year conceivably might precipitate power shortages even approaching crisis proportions; indeed, in the view of one member of the Board below the record leaves room for considerable doubt respecting whether a “slippage” of several years in the now-estimated completion date would be significant at all. And the economic penalty which might be expected to result from suspension is also of very uncertain quantity. Moreover, no such penalty of any dimensions will be incurred should, for reasons either related to the uranium fuel cycle issue or wholly extraneous to that issue, Seabrook be eventually rejected. In this connection, we are no more prepared now than we were in ALAB-338 to dismiss out of hand any real chance that, without regard to the environmental effects of the fuel cycle, Seabrook might be disapproved. See NRCI-76/7 at 14.

What that leaves is the loss of employment opportunities. We have said that that is something which must be taken into account; and we have done so. It

See p.250, *supra*.

would, however, elevate that consideration far beyond permissible limits were we to hold it sufficient to control the result here. The factors pointing in the other direction are just too strong.

VII

The precise relief sought by the Coalition is a suspension of the construction permits "until a licensing board, on remand, can factor into the NEPA and safety analyses proper consideration of the incremental effects of reprocessing and/or disposal of wastes to be produced by this plant" We need not go that far. Among other things, there may be no occasion for a remand to the Licensing Board; quite possibly we will be able to take account of any new interim or final fuel cycle rule in the exercise of our jurisdiction over the appeals from the initial decision. It is enough to provide now that the suspension is to remain in effect pending further order of the Commission or this Board. In this connection, it will be open to any party to seek a modification or lifting of the suspension at any time should new developments or a material change in circumstances so warrant.

Two other matters remain for consideration in connection with the matter of relief. The first is whether, as suggested by the affidavit submitted to us by the staff,⁷² we should allow the applicants at least (1) to complete the settling basin to control run-off from denuded areas; (2) to do contouring where grading is incomplete; and (3) to construct a closed storage facility or warehouse to protect equipment and materials. We conclude that the suggestion is well taken; thus, this order does not preclude those specific activities. Moreover, the completion of the settling basin and the contouring work may be required by the staff in the interest of "protect[ing] the environmental integrity of the site" (Geckler Affidavit, p. 3).

Second, we must decide when this suspension order should take effect. It seems apparent that, there being no emergency situation presented, the applicants should be given a reasonable period of time in which to make the necessary arrangements to bring construction activities to a halt in an orderly fashion. At the same time, a protracted continuation of construction might defeat some of the purposes underlying suspension of the permits. All things considered, we conclude that our order should go into effect at 6:00 p.m. (EDT) on October 8, 1976 unless in the interim it is further stayed by the Commission.⁷³

⁷² See p.256, fn. 39, *supra*.

⁷³ This relatively brief postponement of the effective date of our order will give the Commission an opportunity to decide whether it desires to preserve the *status quo* pending its own possible review of the matter.

Motion of New England Coalition on Nuclear Pollution *granted* in accordance with this opinion. The construction permits for the Seabrook facility are *suspended* effective 6:00 p.m. (EDT) on October 8, 1976.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Margaret E. Du Flo
Secretary to the Appeal Board

Opinion of Dr. Buck, dissenting:

The Commission, in its General Statement of Policy 41 Fed. Reg. 34707 (Aug. 16, 1976), has directed us, in determining whether already issued construction permits should be continued, modified, or suspended until an interim fuel cycle rule has been made effective, to consider "equitable factors well established in prior practice and case law" (*id.* at 34709). I have carefully reviewed the equitable considerations brought to our attention by the parties, as well as certain other relevant facts appearing in the record of this proceeding. In my view, a proper balancing of the material before us leads to but one inescapable conclusion: that, at least for the next six months (unless the Commission issues further guidance prior to that time), there is no ground which would even suggest, much less mandate, that the permits should be suspended. Since my colleagues obviously do not concur in my assessment of the record, I must respectfully dissent.¹

I

1. The genesis of the Commission's General Policy Statement is that under the ruling in *Natural Resources Defense Council, Inc. v. NRC*____ F.2d ____ (D.C.Cir., July 21, 1976), an error has been made by the Commission in every environmental review of a proposed nuclear reactor which relied in any way on the statement of the environmental costs of reprocessing and waste disposal set forth in Table S-3 to 10 CFR §51.20(e). The error is not, however, necessarily one of substance. For the court did not find that the contents of Table S-3 were incorrect; all it found was that, insofar as the Table set forth values for the environmental costs of reprocessing and waste disposal, an adequate foundation

I concur in my colleagues' discussion of jurisdictional questions appearing in Part II of their opinion.

for such values was lacking.² For that reason, every cost-benefit analysis which relied on the values set forth in Table S-3 (including that performed for the Seabrook reactors) could be regarded as technically flawed but not as necessarily incorrect. The General Policy Statement so treats them.

Just as clearly neither the court decision nor the General Policy Statement regarded this technical flaw as fatal; for if they had, the Vermont Yankee license at issue in the *NRDC* decision, as well as the Midland construction permits at issue in the companion case of *Aeschliman v. NRC*, ___ F.2d ___ (D.C. Cir., July 21, 1976), would likely have been summarily suspended. They were not: the court remanded the *Vermont Yankee* and *Midland* proceedings to the Commission to await the results of further rulemaking (and in the case of *Midland*, for resolution of certain other issues), but declined to suspend the licenses. Implementing those decisions, the General Policy Statement established general criteria under which the suspensions of various licenses (including those of Vermont Yankee and Midland) were to be considered.

2. In the face of a technical flaw in the Commission's generic evaluation of the environmental costs of reprocessing and waste disposal, the approach of the court and of the Commission through its General Policy Statement in not automatically suspending affected licenses is both rational and in accord with a significant body of judicial precedent, some of which is specifically cited in the Statement. As that precedent demonstrates, it is well-settled that an error or a deficiency in a NEPA environmental review performed by an agency—even an error of much more serious proportions than the technical flaw involved here—will not necessarily invalidate the underlying federal action during the period when the error is being ameliorated. A few examples will suffice:

(1) In *Coalition for Safe Nuclear Power v AEC*, 463 F.2d 954 (D.C. Cir. 1972), the lead case cited in the Policy Statement, the environmental review of the Davis-Besse Unit 1 facility had been effectively invalidated by the then-recent *Calvert Cliffs'* decision and the Commission's revised environmental regulations which implemented that decision. A complete new environmental review was called for with the potential that significant structural changes to—or, indeed, complete abandonment of—the project might be deemed necessary. Nevertheless, the Court did not suspend construction (as it had been asked to do) but only specified criteria for the Commission to take into account in considering whether to do so. And after balancing a multitude of relevant facts,

²The Court emphasized that it did “not dispute [the] conclusions” embodied in Table S-3, only the circumstance that there was lacking a “thorough explanation and a meaningful opportunity to challenge the judgments underlying [those conclusions]” (slip op., p. 34). It went on to remark that the “Commission may well reach the same conclusion on remand” (*id.*, at 42). Judge Tamm, concurring in the result, went further and opined that it was almost inevitable that the Commission “will reach the same conclusion” on remand (concurring opinion of Judge Tamm, p. 5).

the Appeal Board affirmed the Licensing Board's conclusion that construction could continue. *Toledo Edison Co.* (Davis-Besse Nuclear Power Station, Unit No. 1), ALAB-59 5 AEC 257 (1972).

(2) In *Conservation Society of Southern Vermont, Inc. v. Secretary of Transportation*, 508 F.2d 927 (2d Cir. 1974), *vacated on other grounds and remanded*, 423 U.S. 809 (1975), the environmental review of a highway interchange project was found deficient because the impact statement was prepared by a state agency rather than by the Federal government (as NEPA then required). Nevertheless, work on the interchange was allowed to continue during the preparation of a new impact statement.

(3) In *Greene County Planning Board v. FPC*, 455 F.2d 412 (2d Cir.), *cert. denied*, 409 U.S. 849 (1972), the environmental review of a transmission line attendant to a pumped storage facility was found deficient because the impact statement was prepared by the applicant rather than by the Federal agency. But there again, because of the particular circumstances involved, the Court permitted construction of the basic project and of transmission lines to continue while a new statement was being prepared.

(4) In *City of New York v. United States*, 337 F. Supp. 150 (E.D.N.Y. 1972) (three-judge court), no formal environmental impact statement at all had been prepared by the I.C.C. for a railroad abandonment. But the Court took particular relevant circumstances into account in determining that the abandonment order could remain in effect pending preparation of an impact statement.

These cases referenced by the General Policy Statement are by no means unique. Many others have permitted an action to remain effective pending the correction of errors in a project's environmental review. See, e.g., *Essex County Preservation Ass'n v. Campbell*, 536 F.2d 956 (1st Cir. 1976) (highway project permitted to continue during preparation of supplemental impact statement covering "significant new information" failure to include such information termed a "technical noncompliance" with relevant statutory requirements); *Conservation Council of North Carolina v. Costanzo*, 528 F.2d 250, 252 (4th Cir. 1975) (development of marina permitted to continue pending preparation of an impact statement; "[t]he mere fact that an EIS may be called for does not automatically require temporary relief"); *Environmental Defense Fund, Inc. v. Froehlike*, 477 F.2d 1033 (8th Cir. 1973) (dam and reservoir project permitted to continue while impact statement being prepared); *Cape Henry Bird Club v. Laird*, 484 F.2d 453 (4th Cir. 1973) (federal dam project not enjoined pending preparation of a supplemental impact statement); *accord, Simmans v. Grant*, 370 F. Supp. 5 (S.D. Tex. 1974) (channel improvement project permitted to continue while agency prepared negative declaration; the court had been concerned with "the absence of documentary support" (*id.* at 21, emphasis supplied) for the agency's determination that an impact statement was not required).

In all of the cited cases, projects were permitted to continue while further environmental reviews were being undertaken. In each situation, a balancing of

equitable considerations led to that result—with the existence of a NEPA error or deficiency being only one such consideration, and not entitled to any particular deference. I regard the General Policy Statement as mandating just such a balancing of equitable considerations; the technical flaw in the NEPA review resulting from the court's decision on Table S-3 is only one of the many considerations at which we must look.

3. As I earlier stated, the General Policy Statement has directed us to consider the suspension question in the light of “equitable factors well established in prior practice and case law” (41 Fed. Reg. at 34709). The Statement specifically mentions several such factors (*ibid.*):

(1) the likelihood that significant adverse impact will occur until a new interim fuel cycle rule is in place;

(2) the foreclosure of reasonable alternatives by continued construction;

(3) the effect of delay;

(4) the possibility that the cost/benefit balance will be tilted through increased investment.

(5) general public policy concerns, including the need for the project, the extent of the NEPA violation, and the timeliness of objections.

The door is left open, however, for adjudicatory boards to look at other equitable considerations. One on which the court in *Environmental Defense Fund, Inc. v. Froehlke, supra*, took occasion to comment perhaps overlaps certain of the other factors but, in any event, is worthy of consideration. That court outlined the several factual circumstances which there favored the continuation of construction, and it concluded:

In short, we are persuaded that this is not a case where, unless the plaintiffs receive now whatever relief they are entitled to, “there is [a] danger that it will be of little or no value to them or to anyone else when finally obtained.”

477 F.2d at 1037 (citation omitted). As will become apparent in my consideration of the various factors in light of the facts of this case, I regard this latter consideration as having considerable bearing upon the course of action which I believe is appropriate in this case.

II

Application of equitable factors such as those outlined by the Commission in its General Policy Statement requires that we adjust any relief we might grant to the “exigencies of the case” before us. *Ford Motor Co. v. N.L.R.B.*, 305 U.S. 364 373 (1939). Doing so entails our taking a close look at the facts actually existing in a particular situation. In the words of the Supreme Court, such a look must be “something more than an ingenious academic exercise in the conceivable.” *United States v. SCRAP* 412 U.S. 669 688 (1973). What we must look at

is the real effect of license suspension in terms of whether any potential benefits of such a suspension at this time outweigh any potential costs. For only if they do should the construction permits be suspended at this time.

A. To begin with, a fair assessment of the relevant equitable factors requires that we select a particular time period for their assessment. While not explicitly stated, that requirement is inherent in the very nature of most of the factors set forth by the Commission. The General Policy Statement indicates that the relevant period should be that preceding the adoption by the Commission of an interim rule dealing with the environmental costs of reprocessing and waste disposal. In that regard, the Statement reflects that the staff has been *directed* "to produce on an expedited basis a revised and adequately documented environmental survey on the probable contribution to the environmental costs of licensing a nuclear power reactor that is attributable to the reprocessing and waste management stages of the uranium fuel cycle" (41 Fed. Reg. at 34708), and it holds out the possibility that the revised survey might serve as the basis for an interim rule, together with "an evaluation of the environmental impact of using that interim rule as a basis for licensing until the final rule is in place, and an assessment of the impact of a suspension of further licensing during that time period" (*ibid.*). The revised survey and the other information described is to be available on or about September 30, 1976 and an interim rule, should that course of action be selected by the Commission, could be put into effect "as early as December 1976" (*ibid.*).

To be sure, the Policy Statement makes no commitment either that an interim rule will be forthcoming or that, if such a rule were to be issued, that it would be put into effect by any particular date. The December 1976 date is a goal which might or might not be realized. But it clearly reflects the obvious urgency which the Commission has given to the resolution of the fuel cycle question and, in the near term, a determination whether an interim rule may be used as a basis for licensing until a final rule is adopted. That being so, I think it not unreasonable to assume that, if an interim rule were to issue, that action would likely occur within the next six months. Certainly a proposed interim rule could be issued—if appropriate—shortly after the release of the revised environmental survey and under notice-and-comment procedures an interim rule could be adopted prior to the end of the year. The six-month period which I view as appropriate for evaluating the effects of suspension allows for three-months leeway in issuing the interim rule. Moreover, even if no such rule were to be adopted during that six-month period, additional information will clearly be available to assist in determining whether suspension at that time would be warranted. Even if it were then still not appropriate to look at the substance of the revised survey the action taken by the Commission as a result of the survey—*i.e.*, the survey's incorporation or lack of incorporation (as the case may be) into a proposed interim rule, and any instructions which the Commission might provide as to use of a proposed rule as a guideline—would nevertheless be

instructive. Further, if there should be any significant impacts from continued construction, that circumstance would become much more apparent six months from now than, in my view it now is. That being so, I view it appropriate to evaluate the relevant factors in the context of likely effects occurring over the next six months.

My colleagues view the absence of any certainty that an interim rule will issue during this (or any other) time period as precluding them from imposing any cut-off for the consideration of the factors. Even they do not doubt that new information will be available—they assume that the revised survey will be completed by no later than the middle of October, and they do not dispute that, if appropriate, at least a proposed rule will be issued. But they nevertheless decline to select any particular period for the assessment of the impact of suspension *vel non*. That course of action, in my view, effectively obfuscates the equitable balancing process in which we are called upon to engage. For it precludes them from recognizing the essentially *de minimis* nature of the environmental impacts resulting from construction activities scheduled to occur in the near future. That circumstance in itself gives a false tilt to the equitable considerations which must be balanced. That being so, a time limit for our present inquiry becomes essential and, in my view, six months is appropriate.

In selecting a six-month period for the balancing of equitable factors, I recognize that I may be accused of engaging in the type of incremental decision-making which the Court of Appeals excoriated in its *NRDC* decision (slip op., pp. 8-10). But such an accusation would be no more than a shibboleth. For if an interim rule were not in effect at the expiration of the six-month period, a new determination based on the entire complement of construction activities performed up to that time and projected during a future period would appropriately be considered. Given the additional information concerning reprocessing and waste disposal and the status and schedule of construction activities which will become available (and which will likely have generated at least some preliminary action by the Commission) during the next six months, the selection of such a period for evaluating the equitable factors appears to be reasonable.

B. I turn now to the application of the factors to the present request for suspension of the construction permits.

1 The first—and in my view the most important—of the factors encompassed within the General Policy Statement which we must consider is the likelihood that significant adverse impact will occur during the period before a new interim fuel cycle rule is in place. As I have indicated, an appropriate time frame for evaluating such adverse impact is the next six months. To determine what that impact might be, I have looked at the most recent information in our possession, the affidavit of Robert P Geckler submitted by the staff, dated September 2, 1976 and reflecting an August 30, 1976 site visit by Mr. Geckler.

Of primary significance is the fact that the impact attendant to reprocessing

and waste disposal will *not* occur during that period. The evaluation of that impact is what gave rise to the NRDC decision and the General Policy Statement; under the standards laid down by those authorities, *that impact is the only one which at this stage of the appellate review process can per force be deemed to have been inadequately considered and evaluated.*³ The impact of that type to which the Seabrook facility may give rise cannot and will not occur until the facility commences operation.

Any adverse impact that might occur in the relevant period will be that attendant to construction. We have already determined in this proceeding that early construction activities, while “not * * * totally free of all environmental impact,” are not such that their preclusion *pendente lite* “is required to avoid the imposition of substantial and irreparable harm” to the intervenors who there were seeking a stay (SAPL-Audubon). ALAB-338, NRCI-76/7 10, 17 (July 14, 1976). The impacts which were brought to our attention in connection with that determination were the clearing of land; the relocation of an access road and the building of a railroad spur to the site; excavation work; the extension of a municipal water line into the area; the destruction of three archaeological sites; the construction of a barge unloading and offshore service facility and potential damage to salt marsh land.

Here, the impacts complained of by NECNP are of the same genre.⁴ But, now significance rather than irreparability is the standard by which they are to be judged. Nevertheless, the impacts can scarcely in my view, be deemed to be of such significance as to overbalance the very real costs of delay which suspension will entail.

What are these impacts? In its suspension motion, NECNP first mentions the “building activities” in general terms, claiming that they will involve “environmental damage to what is an extremely fragile environment—a salt marsh and its immediate environs.” NECNP concedes that the FES indicates that such damage

³I express no opinion, of course, as to the significance of any of the other potential impacts of construction or operation of the Seabrook facility: all of those impacts are before us in our review of the initial decision of the Licensing Board.

My colleagues (see pp. 262, 267-268, 271) have apparently given some weight to the circumstance that exceptions have been filed to a number of the Licensing Board’s environmental findings and conclusions, reflecting in part the views expressed by the dissenting member of that Board. In particular is this so with respect to the Licensing Board’s need-for-power findings. I view their giving any weight to the findings and conclusions of the dissenting License Board member to be manifestly improper in the absence of our ruling on the particular issues involved. Prior to that, the Licensing Board majority’s findings and conclusions should be accepted by us as presumptively valid, except insofar as they invoke the invalid Table S-3.

⁴NECNP makes no mention of the archaeological sites, as to which we found that SAPL-Audubon was relying on testimony never entered into the record and in any event, that the testimony did not stand for the showing of injury for which it was being used.

will be minimized during construction, but it concludes that "the damage is nonetheless real and will occur." This conclusion ignores our finding in ALAB-338, however, to the effect that "none of [the salt marsh] land would be affected at all by any construction activities contemplated [during the period of appellate review] by the applicants." NRCI-76/7 at 17 Since no contrary information has been presented to us, that finding in my view is dispositive of the present claim insofar as it is based on impact to the salt marsh.

At oral argument, NECNP and SAPL-Audubon (which appeared in support of the NECNP motion) went into somewhat more detail about adverse environmental impacts which could occur during the next six months. They mentioned the dirt, noise and other effects of construction and their impact on the surrounding population. SAPL-Audubon added that the extended two-shift construction schedules being followed by the applicants resulted in noise which kept people from sleeping at night. Dirt, noise and other construction effects are, of course, "an ordinary consequence of any major construction project" and, by themselves, "certainly cannot be regarded as giving rise to irreparable harm in a legal sense." ALAB-338, *supra*, NRCI-76/7 at 15. Similarly I do not believe that such impacts can give rise to significant harm within the NEPA meaning of that term.⁵

In that connection, those persons most affected by these construction impacts (*i.e.*, the persons living on Rocks Road, the existing access road) will gain considerable relief upon the completion of the new access road from Route 1 north of Rocks Road to the plant. This new road was more than half finished as of last August 30 (Geckler affidavit). It might be noted that, in response to questions by the staff, the applicants stated that:

The residents of the 21 homes on Rocks Road while hearing some noise

⁵ The hours during which construction may be permitted to take place is a matter of local jurisdiction; the intervenors might well have a remedy on this matter at the local level. Already we were told at oral argument, the extended two 10-hour shift construction schedule followed last summer was reduced in early September by 4 hours, to two normal 8-hour daytime and evening shifts (AB Tr. 150-51).

On page 257 *supra*, my colleagues imply that 500 people will be affected by the construction activities. To place their statement in proper context, the source of that statement (FES, § 4.1.1, p. 4-3) states:

Except for detonating explosives during site preparation and excavating vertical tunnel termini, construction noise should not prove objectionable to area residents. Blasting mats will be used to minimize noise and flying rock. Rail deliveries and nighttime operations of the concrete batch plant (*not planned on a regular basis*) may be serious disturbances to residents living within a 1-mile radius of the site (approximately 500 persons; ER, Sect. 2.2, Table 2.2-1).

[Emphasis supplied. See also PSAR, Vol. I, Figs. 2.1-8a and 2.1-9 for population distribution.]

from the new road should see a reduction in traffic from the present situation which finds Rocks Road as the sole access to the municipal dump.

Environmental Report, Volume II, Section 13 page S8-4 (July 1973) (underlining in original).

Both NECNP and SAPL-Audubon claim that the excavation of the cooling water tunnels and the installation of the shore inlets and discharge shafts for the cooling water systems, which are scheduled to begin shortly will create a significant impact in that much waste from the tunnels and shafts will have to be disposed of. While the waste may be created, it does not appear that the disposal of this dirt and crushed rock will present a major problem. Mr. Geckler indicates in his affidavit that the spoils area south of the site had been cleared as of August 30, and that spoil material was being deposited there. That area could be used to store the waste from the tunnels and shafts (which as a practical matter cannot be extensive in the next six months of the project). In the alternative, the waste dirt and crushed rock could be stored on other areas of the site or hauled on a barge out to sea and dumped. In any event, no significant impact will occur.

SAPL-Audubon additionally cites impacts which might result from construction of the barge landing, which was scheduled to begin shortly after this past Labor Day. It describes the landing as "an enormous facility * * * some three and a half or four acres in extent" located in "an entirely new area of construction effort" (AB Tr. 74-75). And it specifically focuses our attention on the alleged impacts of the barge landing which it placed before us in its previous request for a stay *pendente lite*—namely the destruction of "some" of the five clam flats in the Hampton-Seabrook estuary.

There appears to be some confusion in the various testimonies as to the actual number of acres involved in the barge landing project (see majority opinion, p.254, *supra*). However, one can gain some perspective of the size of this project by noting that the maximum area involved is roughly 500 feet by 500 feet (applicants' Direct Testimony Number 20, p. 11 fol. Tr. 10767). This is slightly more than 5 acres out of the 4200 acres of marsh and open water in the estuary (NRC Staff Testimony on Construction Impacts, p. 2, fol. Tr. 10910).

Apart from the "normal construction" impacts of dust and noise, which I do not consider as sufficiently serious to warrant being given significant weight in favor of suspending the permits, I regard the remainder of the claim concerning the construction of the barge landing to be governed by our rejection of the same claim in ALAB-338:

Confronted with the applicants' reliance in their papers upon the Licensing Board's finding to the contrary in paragraph 175 of the initial decision (NRCI-76/6 at 897), SAPL-Audubon now tells us by way of reply that "[a]lthough applicants' witness Bosworth did indicate that the [3.5 acre] intertidal area to be destroyed was not a clam flat, he did point out that

there were clams there.” As the portion of the Bosworth testimony quoted by SAPL-Audubon indicates, however, the clams in that area are “at a very low density” and “people don’t go out there and clam” (Tr. 10797-98).¹²

¹²In this connection, the Board found in paragraph 175 that the intertidal area in question has a density of 3 clams per square foot compared with an average density of 16.5 clams in the five areas considered by the Board to be clam flats (which areas hold approximately 85% of the soft-shelled clams resident in the Hampton-Seabrook estuary).

NRCI-76/7 at 17

Even if we were to conclude that additional marsh will be disturbed by the dredging operation required for construction and operation of the dock, this does not mean that the impact will be significant. To place the impact of this project in perspective, we note that a number of dredging and harbor floor operations have been performed by the Corps of Engineers or the State of New Hampshire in the harbor area since 1955 (applicants’ Direct Testimony Number 20, pp. 20-22, fol. Tr. 10767). Maintenance dredging of 15,000 to 17,500 cubic yards was performed on at least four occasions. One instance of maintenance dredging, occurring in 1974, involved 59,253 cubic yards. In 1965, 250,000 cubic yards was dredged from the harbor and placed on the north end of Hampton Beach (*id.* at 21). The “improvement dredging” of an 8 foot channel at the entrance to the harbor in 1965, involving 29 400 cubic yards of material (*ibid.*), is comparable to the dredging operation anticipated for the barge slip and dock landing project. For that operation, the applicants estimate that about 30,000 cubic yards of material will be dredged from the harbor (*id.* at 12).⁶ None of the parties has presented to us any suggestion that the prior dredging operations have disrupted the ecosystem or interfered with public utilization of the harbor area.

Not only is the impact of the barge landing of little significance, but, as we pointed out in ALAB-338, it will only be temporary. For in about five years, after the applicants have finished their use of the landing, they will either leave it for public use or remove it, depending on the wishes of local or State officials (NRCI-76/7 at 17 n. 13). We should note that the Town of Seabrook, in granting a zoning variance for the barge landing, conditioned its permit to prohibit the removal of “any construction to be done on the [barge landing] site” (applicants’ Direct Testimony No. 10, pp. 10-11, fol. Tr. 10794).⁷

⁶The quantity of material removed is expressed in the testimony in units of cubic yards, the customary unit of measure in engineering. The majority opinion, however, expresses this quantity in units of cubic feet. For comparison purposes, 30,000 cubic yards equals 810,000 cubic feet; similarly, the 250,000 cubic yards dredged in 1965 equals 6,750,000 cubic feet.

⁷It is difficult to understand my colleagues’ emphasis on the environmental effect of use of the barge landing dock in view of the Town’s grant of a zoning variance for dock construction and its insistence that the dock remain in place for the use of its citizens.

Finally both NECNP and SAPL-Audubon point to excavation and foundation construction as creating a significant impact. The only impacts explicitly referenced are the digging of holes and the concomitant creation of spoils which must be disposed of, and the possibility of "ground water disruption" (AB Tr. 73). As I have already indicated, disposition of the spoils presents no great problem. And with respect to the ground water, we have been provided no information which would place into question the conclusion in the Final Environmental Statement (FES, §4.2, at p. 4-9) that "[n]o long-term detrimental effects to local groundwater supplies are expected as a result of dewatering or other construction activities."

Apart from the impacts brought to our attention by the several intervenors, I believe it appropriate to note that some of the ongoing construction work will serve to mitigate certain environmental impacts which otherwise would occur. As indicated earlier, the new access road to the site, when completed, will provide a substitute for the existing partially gravel, partially paved access road (Rocks Road) and will reduce the dirt, c and noise impacts which use of Rocks Road has produced. Completion of the settling basin for storm water runoff will reduce the erosion resulting from existing construction on the site; it will provide a hold-up basin so that settlement occurs before that water is released to the estuary. This basin is, of course, an essential part of the environmental protection program which is to be utilized during construction (FES, §4.5.1). (Recognizing this circumstance, my colleagues are willing to permit this activity to continue.)

In sum, the environmental impacts which will attend the next six months of construction do not appear to be significant.⁸ Insofar as impact to the site is concerned, most of it has already occurred. For the site has at this time been cleared and grubbed (*i.e.*, the roots and stumps removed). By way of com-

⁸ The majority opinion appears to overstate the magnitude of many of the environmental impacts which it discusses. For example:

1. The construction and operation of the barge landing are said to result in an impact on use of the harbor (p. 255, *supra*); by inference, that impact will effect the harbor's asserted use as a source of "lobsters and crabs in commercial quantities" (p. 254, *supra*). But no commercial fishing in the harbor is carried out (PSAR, § 2.1.4). And, as for the "heavily-laden barges" which are said to produce the impact on the harbor (majority decision, p. 255, *supra*), the FES, in its discussion of the barge landing, indicates that it is primarily intended to be used for "four to ten barge shipments required for plant components too large to reach the site by railroad" (FES, § 11.4.1, p. 11-9). Components of this sort (such as the reactor vessel) are not scheduled to be delivered to the site until late 1977 (Construction Status Report, August, 1976, NUREG-0030-8, at p. 2-73), well beyond that time period which is relevant to our consideration here.

2. With respect to the construction of the off-shore shafts for the cooling-water tunnels, the majority opinion (citing §4.2 of the FES) indicates that such construction "will definitely lead to turbidity problems and a concomitant 'decrease in the suitability of the

Continued on next page.

parison, the impacts which might occur at Seabrook during the next six months appear to be vastly less—of a different order of magnitude—than impacts which might be possible at some other sites. For example, if a reactor required construction of a dam which would involve the flooding of several thousand acres of farm land during the period prior to issuance of an interim fuel cycle rule, the impact would likely be sufficient to justify (absent strong public policy considerations) suspension of at least that aspect of construction.

Moreover, much of the impact which will occur in the next six months is clearly redressable. If appropriate, the holes can be filled, the foundation structures can be torn down, and the roads, railroad spur, and barge landing can be removed. Redressability is, of course, part and parcel of the General Policy Statement's "significant adverse impact" factor. The Commission's post-*Calvert-Cliffs*' regulations, from whence this factor originally emanated, explicitly directed that consideration be given to "whether redress of any * * * environmental impact can reasonably be effected should modification, suspension or termination of the permit or license result from the ongoing NEPA environmental review" 10 CFR Part 50, Appendix D, par. E.2(a) (1972).⁹ In concert with my determination that construction should not now be suspended, I would impose a condition requiring that, if the construction permits were later to be revoked, the applicants would be required to restore the site to its current condition (at least absent a showing that the site was to be used for some other form of power plant construction, such as a coal or oil facility).¹⁰

Continued from previous page.

adjoining beach areas for swimming' " (pp. 256-257 *supra*). It concedes, however, that suitability of a New Hampshire beach for swimming during the fall and winter months involves a moot point. Moreover, it fails to note that the FES also points out that, "since dredging operations are more or less routinely carried out in this area, it is the staff's opinion that ordinary use of the adjacent waters will not be affected" (FES, § 4.2, at p. 4-9).

3. The majority opinion questions the effectiveness of the settling basin, without giving any reasons or citing any evidence to support that view. Use of such basins is a normal construction technique to minimize turbidity and the requirement for such a basin was reviewed extensively by the staff (FES §4.1.1) and the Licensing Board (initial decision, par. 139, NRCI-76/6 at 891). Moreover, as the Licensing Board notes, the applicant is required to meet applicable State regulations limiting the turbidity in any discharge (*id.* at par. 142).

⁹As is reflected in greater detail in the majority opinion (*supra*, p. 249), this factor (including its reference to redressability) was approved by the court in *Coalition for Safe Nuclear Power v. AEC*, *supra*, and thus has been incorporated by the Commission in its General Policy Statement.

¹⁰Such restoration would not necessitate the return of the construction area to precisely the same condition it is now in. It would demand, however, that, irrespective of cost, the applicants return the area either to a condition which bears a reasonable resemblance to its condition now or to a condition which is as desirable, from an environmental standpoint, as its present condition. See *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, 4), ALAB-184, 7 AEC 229, 235 (1974).

2. The second factor which we must consider is the degree to which continued construction will foreclose reasonable alternatives.¹¹ There are two types of alternatives which the various parties have asked us to look at in evaluating this factor. And, in my view, neither type would be foreclosed.

The first is alternative methods of waste disposal; such methods are now under study generically by the Commission. The General Policy Statement indicated, however, that “[s]ince existing concepts for reprocessing and waste technology do not vary significantly with the design of nuclear power generating facilities, it is extremely unlikely that the revised environmental survey will result in any modification of these facilities. Only the possibility of discontinuing their construction or use is likely to be at issue” (41 Fed. Reg. at 34708). The parties here have brought to our attention only one facility change which might eventuate from the waste study. NECNP claims that on-site storage is a viable option and that, if it were to be selected as the most desirable method of waste disposal, the spent fuel storage area on the site might have to be expanded (AB Tr. 43-44). The applicants state (without contradiction) that there is adequate room on-site to expand the spent-fuel storage pool (AB Tr. 126), but they admit that it would be easier to do so where the storage pool had not yet been built (AB Tr. 138). The short answer to NECNP’s claim, however, is that, during the next six months, only the excavation for the storage area will be started. Its construction will not have proceeded to the extent that its expansion would be precluded or indeed even be made more difficult. In any event, additional storage areas to which spent fuel could be trucked could be constructed in other areas of the site. That being so, continued construction will have no effect whatsoever on the availability of waste disposal alternatives.

The second type of alternative at which we must look is that of other forms of energy production. The site might, of course, be used for a coal or oil-fired plant as well as for a nuclear plant; and on reconsideration of the costs of reprocessing and waste disposal, those fossil alternatives might prove to be preferable to the nuclear alternative. But none of the construction during the next six months would place any barrier on a shift to either of those options; indeed, some of the construction (such as the cooling water tunnels and the access roads) could serve those options.

The intervenors strongly argue that the expenditure of additional funds could help tip the eventual balance against other options. Since this claim is more relevant to the factor of whether the cost-benefit balance will be tilted through increased investment, I will discuss it in that context. Suffice it to say here that, as I later conclude, the increased investment during the next six months will not be large enough to foreclose any alternative energy options.

I have no problem with my colleagues’ view that “foreclose” is not to be read literally but rather is to comprehend impracticability as well as impossibility

In sum, I conclude that the continuation of construction for the next six months will not foreclose any alternatives, either as to waste disposal facilities or energy-production options. This factor, therefore, clearly weighs in favor of continuation of construction.

3. The next factor which we must consider is the effect of delay. To some extent, of course, that effect must be somewhat imponderable, involving as it does a prediction of future events. But suspension clearly will bring into play to some extent some predictable costs. And, in my view those costs collectively are substantial.

To begin with, a number of construction workers will undoubtedly have to be dismissed from the project. During the first year, a peak work force of about 550 is expected (FES, §3.9.2, Table 3.8), and a major portion of these workers will undoubtedly be laid off the project if it is suspended. I need not determine whether these workers (some of whom are drawn from outside the local area) will be out of all work as a result of the license suspension to be certain that such a layoff would significantly affect their lives. Social impacts of this type have been held to be within the scope of NEPA, giving rise to the necessity for an impact statement. *Prince George s County v Holloway* 404 F Supp. 1181 (D.C.D.C. 1975). And while there may be some question about the weight which the impact on workers can be accorded if the balance for the whole project were under review (see *Conservation Society of Southern Vermont, Inc. v. Secretary of Transportation, supra*, 508 F.2d at 937 (n. 58 and accompanying text)), that impact is manifestly relevant and significant to the short-term balance which we are here called upon to draw. In that connection, the very real impact of suspension on the families of several hundred workers surely outweighs the inconvenience to the persons living in the 21 houses on Rocks Road which may result from normal construction activities, to which my colleagues appear to have accorded significance.

Suspension will clearly add to the financial costs which the applicants and/or their utility customers must bear. As of June 1, 1976, some \$73,000,000 had already been spent on the project, and the applicants claim that the carrying charges on such expended funds run to about \$19,000 per day. Delay also has an inflationary impact. While suspension may not, as the staff points out, result in a day-for-day delay in completing the project, it seems likely either that *some* delay will occur or that additional costs will be incurred to achieve a compression of the construction schedule. Moreover, as the staff points out, there are bound to be substantial costs for equipment and materials storage, and for shutdown and startup of construction activities.

Even if construction were terminated and many of the workers were laid off, some construction costs would nonetheless continue. Costs for the rental of construction equipment might well not abate, at least at the instant that construction is suspended. Some skilled workers who are laid off might be

difficult to replace at the instant that construction might be permitted to resume. And the applicants would likely continue their engineering staff during any period of suspension (as distinguished from revocation) since the process of re-hiring such a staff would entail significant delays at a future time.

Some of these costs might be characterized as taken at the risk of the applicants and hence entitled to little weight. That might be so insofar as evaluation of the cost-benefit balance for the entire project is concerned. But in determining the costs and benefits of proceeding with construction during the next six months, those costs are very real and of the type which should be taken into account. See *Environmental Defense Fund, Inc. v. Froehlke, supra*; *Ohio v. Callaway* 497 F.2d 1235, 1241 (6th Cir. 1974).

In my view these substantial delay costs far outweigh the relatively trivial environmental costs of continuing construction during the next six months. They strongly push the equitable balance against suspension at this time.

4. My colleagues' determination to suspend the construction permits appears to be founded in substantial measure upon their evaluation of the possibility that the cost/benefit balance will be tilted through increased investment. They maintain that the further advanced Seabrook construction is at the time a new uranium fuel cycle rule has been put in place, the more probable it will be that a comparison of the costs of completing Seabrook with the costs of substituting an alternative facility "will inure to the benefit of [Seabrook] from the standpoint of both economic considerations and environmental protection" (*supra*, p. 261). The circumstance that Seabrook construction has not as yet progressed very far thus weighs, they argue, in favor of suspension of construction.

That theoretical argument has appeal only when it is divorced from the true facts at issue. Viewed against those facts, it appears to be no more than "an ingenious academic exercise in the conceivable."

Thus, the record before us indicates that the applicants as of June 1, 1976, had already spent more than \$73,000,000. The staff has estimated the increased investment to be about \$83,700,000 for the six months ending February 28, 1977 but does not purport to indicate how much of this cost would be saved if construction were to be halted. Given the labor-intensive character of early construction work, it is reasonable to predict that costs which could be saved during suspension would largely be of construction labor. But, *for the entire first year*, those costs are estimated at only \$6,000,000 (FES, §3.9.2, Table 3.8). All of these costs are relatively insignificant when compared to the total cost of the project, estimated by the staff to be \$1,600,000,000.

Analytically my colleagues appear to be treating the Seabrook project like a broken pinball machine which immediately displays a red "tilt" sign whenever a quarter is inserted in the slot. Assuming the machine were in proper working order, that result would clearly not follow: something more would be required

for the "tilt" to appear. Similarly assuming (as we must) the validity of our administrative processes,¹² something more than the mere expenditure of a relatively small sum of money would be necessary to "tilt" the balance in favor of Seabrook and away from an option which turned out to be environmentally superior. *Cf. Illinois Power Co. (Clinton Power Station, Units Nos. 1 & 2), ALAB-340, NRCI-76/7 27 48 (July 29 1976).*

One other point bears comment in this regard. My discussion of whether the balance might be tilted by an additional expenditure of funds assumes that the balance in question is between alternative means of producing power. If it should turn out that, as NECNP claims, the need for Seabrook has been overstated and no new alternative energy source is required, we would not then be permitted to take sunk costs into consideration in determining whether the Seabrook project should be completely abandoned. *Aeschliman v. NRC, supra, ___ F.2d at ___ (slip op., pp. 21-22, n. 20)*, citing *Union of Concerned Scientists v. AEC*, 499 F.2d 1069 1084 n. 37 (D.C. Cir. 1974). Further, at least one court would likely prohibit us from taking sunk costs into account even when considering a shift to an alternative power source. *Minnesota Environmental Control Citizens' Association v AEC*, 4 ERC 1876, 1879-80 (D. Minn. 1972).

5. Finally the General Policy Statement directs us to look at various public policy considerations in determining whether construction should be permitted to continue pending development of a new fuel cycle rule. Those considerations to some extent inhere in the other factors and are discussed by me in conjunction with those factors—see, in particular, my comments on the costs of delay. But the Policy Statement explicitly points to several specific considerations as relevant to the type of question before us.

The question of need for the project is of obvious significance. Here, the facility is not scheduled to come on line for some time, and the evidence on need for that facility is not sufficiently delineated to permit us to judge precisely the effect of a short delay on the satisfaction of that need. NECNP points to testimony of the applicants to the effect that Unit 1 of Seabrook may not be needed until the winter of 1983 and Unit 2 until 1984 (Tr. 12507-08). Since a normal construction period for a plant of this nature normally runs five years, construction of Unit 1 could conceivably be completed late in 1981. Beyond that, there must be a minimum of six months for a testing and break-in period before the plant can be considered available for putting on line at any level, and perhaps another six months before the plant can predictably be available for production of power full-time at full power. Theoretically then, the plant could

¹²*Cf. Arkansas Power and Light Co. (Arkansas Nuclear One, Unit 2), ALAB-94, 6 AEC 25, 28 (1973); Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB 212, 7 AEC 986, 997 (1974).*

be available by the winter of 1982, a year before the particular estimate of need would require it to be on line.

But how accurate can projections of need actually be? We have previously pointed to the uncertainties in that type of projection: “[t]he margin of error implicit in such predictions is at least of sufficient magnitude to encompass [a] two-year difference between * * * forecasts” *Niagara Mohawk Power Corp.* (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347 365 (1975). The circumstance that the need showing in the record is based in part on the past two low-growth recessionary years might well portend a need for the facility prior to 1983. And the applicants, citing other evidence, point out that the projection which NECNP references is itself premised on the on-time completion of certain other generating plants, including two other nuclear units. Moreover, are we now able to assume confidently that, by 1982, oil (which powers much of New England’s generating capacity) will either be available or, if available, affordable?

Thus, the need for the plant might well eventuate prior to 1983. Given our previous determinations that the failure to meet real demand would be “un-thinkable” (see *Illinois Power Co.* (Clinton Power Station, Unit Nos. 1 & 2), *supra*, NRCI-76/7 at 37), can it be prudent to assume that a delay will *necessarily* have no bearing on fulfilling an actual need for power? In good conscience, I cannot do so. If the plant is needed and is not available, the environmental and social effects on the section of the country which Seabrook is intended to serve will be almost infinitely greater than the conceivable environmental and other effects of permitting construction of the facility to continue. At the very least the “need” factor cannot be regarded as pushing the equitable balance toward suspension.

The next public policy concern outlined in the Policy Statement is the extent of the NEPA violation. While reprocessing and waste disposal are certainly important parts of the NEPA review of a nuclear facility¹³ it is important to remember that they are but a small segment of that review. This is not a case where no NEPA evaluation has been performed, and at this stage of appellate review we cannot assume that the entire analysis is incomplete or invalid. Indeed, I reiterate my earlier observation that at this stage we cannot assume that any part of the NEPA analysis except that relating to reprocessing and waste disposal is in any sense defective. As the cases I cited earlier

³In this connection, I note, however, that the existing volume of waste from the ERDA military program is already *an order of magnitude greater* than the volume of waste which will be accumulated by the entire commercial nuclear power industry through the year 2000. See testimony of F.B. Baranowski before Subcommittee on Legislation of the Joint Committee on Atomic Energy on ERDA Authorizing Legislation for Fiscal Year 1977 February 4, 1976, Part 2, at pp. 1463-64.

demonstrate, even the complete absence of a NEPA review will not necessarily cause a Federal action to be stayed. Certainly the technical flaw involved here should not of itself do so. The court in both the *NRDC* and *Aeschliman* cases obviously has agreed with this assessment, since it elected not to suspend summarily the Vermont Yankee license or Midland permits.¹⁴ At worst, therefore, the seriousness of the NEPA violation can be viewed as neutral in our evaluation of whether to suspend the permits.

Finally I agree with my colleagues that the last public interest factor, the timeliness of objections to the permits, is not of significance here; no claim is made that NECNP did not raise its objections in a timely fashion.

6. Having considered the various equitable factors spelled out in the General Policy Statement, we must now step back and take an overview to see where they lead us. In doing so, it is important to bear in mind the relief sought by NECNP and SAPL-Audubon and to pose the question raised by the court in *Environmental Defense Fund, Inc. v Froehlke, supra*: i.e., would any relief to which they may become entitled following further fuel-cycle rulemaking be of value to them if it were not granted until then (or at least until the expiration of the six-month period against which I have been measuring the various factors)?

Before the Licensing Board, both NECNP and SAPL-Audubon were seeking denial of the Seabrook construction permits. On appeal they are seeking revocation of those permits. They also are seeking to preclude any significant environmental impacts from occurring pending the disposition of their appeals.

The first of these goals would be achieved if they obtained revocation of the construction permits at any time. And we have seen that the increased investment during the next six months will not be sufficient to affect the likelihood that such an eventuality will occur. Moreover, no reasonable alternatives (either for waste disposal or for energy production) will be foreclosed during this period of time. As for the second goal, there is little likelihood that significant adverse environmental effects will result from construction activities which will be carried on during the next six months. In any event, the great majority of the impacts which do occur will be redressable.

Thus, the relief which the intervenors are seeking will be essentially as available and as valuable six months from now as it is today. Balanced against that must be the very real and substantial adverse effects of delay—the disruptive effect on workers, the additional costs which must be borne by the applicants and/or the consuming public, and the additional uncertainties which delay in construction could entail in terms of the public interest in having adequate power supplies available when needed.

Taking these considerations into account, as well as the technical nature of

¹⁴I understand that the Midland plants are currently at a relatively early stage of construction. See Construction Status Report, August 1976, NUREG-0030-8, at pp. 2-53 and 2-54.

the NEPA violation and the fact that the Court of Appeals did not see fit to suspend the licenses and permits before it in either of the fuel cycle cases, I find the balance to point inexorably in one direction. that the *Seabrook* permits should be permitted to remain in effect for the next six months, pending further Commission action on an interim fuel cycle rule.

III

For the reasons stated, I would deny at this time the request of NECNP and SAPL-Audubon for a stay of the outstanding construction permits. But I would modify the authorization for those permits to include the following additional conditions:

1. Any construction work hereafter performed by the applicants, prior to the adoption of a new fuel cycle rule by the Commission, shall be at the applicants' risk.

2. If the construction permits are revoked as a result of considerations related to the environmental costs of reprocessing and waste disposal, the applicants shall be required to redress to the extent feasible the environmental impact of the construction and, to that end, shall restore the site substantially to the condition it now is in. (This requirement shall not be applicable if the applicants can show that they have authority and plan to use the site for an alternative type of electric power supply.)

3. If the Commission has not issued a new interim fuel cycle rule during the next six months, the intervenors are invited to file a new suspension motion, based on the *NRDC* court's invalidation of the reprocessing and waste disposal aspects of the fuel-cycle rule. The factors included in the General Policy Statement shall then be re-evaluated, using current information but taking into account the complement of construction activities taking place both during the next six months and during an additional future review period.

4. Before commencing any construction activities not included within the Geckler affidavit, the applicants shall be required to provide at least 10 working days' notice to the staff (with copies to all parties and to us). To the extent that any party believes that such construction activities will involve significant and irredeemable adverse environmental impacts, it may request us to halt such activities.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-32

ATOMIC SAFETY AND LICENSING BOARD

Thomas W. Reilly Chairman
Frederick J. Shon
Dr. Frank Hooper

In the Matter of

**Docket Nos. 50-458
50-459**

GULF STATES UTILITIES COMPANY

**(River Bend Station,
Units 1 and 2)**

September 2, 1976

Upon partial remand by the Appeal Board (ALAB-317) of the Licensing Board's first Partial Initial Decision (LBP-75-50), the Licensing Board conducted further hearings on the rate of uranium utilization of River Bend and other light water reactors and reaffirms its conclusion that uranium resources are sufficient to supply the requirements of the 236 reactors in operation, under construction or planned during the lifetime of the River Bend units. The Board also (1) makes determinations of fact and law on issues pertaining to radiological health and safety financial qualifications, and the common defense and security and (2) reopens and defers ultimate findings on the environmental cost-benefit analysis pending further action by the Commission on reprocessing and waste management questions, as outlined in the General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle (41 F.R. 34707 August 16, 1976).

RULES OF PRACTICE: RESPONSIBILITIES OF PARTIES

When an interested State participating under 10 CFR §2.715(c) elects to "take a position" with respect to the issues, it is then bound by the same requirements for timeliness, advance notice and specificity as are other parties.

TECHNICAL ISSUES DISCUSSED: Efficiency of utilization of uranium fuel, use of Regulatory Guides.

(2d) PARTIAL INITIAL DECISION

(Construction Permit & Remanded Issue From Appeal Board)

APPEARANCES

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Lawrence Brenner, Esq., and Richard K. Hoefling, Esq., Office of The Executive Legal Director, U S. Nuclear Regulatory Commission Washington, D.C., For the NRC Regulatory Staff

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APPENDIX A – List of Exhibits

APPENDIX B – Transcript Corrections

I. INTRODUCTION

1. This Partial Initial Decision, which addresses primarily the issues pertaining to radiological health and safety financial qualifications and the common defense and security¹ concerns an application filed with the Commission² on September 24, 1973, by Gulf States Utilities Company (“Applicant”). In addition, this Partial Initial Decision addresses the Board’s findings on the question of fuel utilization efficiency which issue the Atomic Safety and Licensing Appeal Board (“Appeal Board”) remanded for further consideration.³ (See Section III, *infra*.) The application, filed in accordance with the Atomic Energy Act of 1954, as amended (the Act), requests issuance of construction permits and operating licenses for two boiling water nuclear reactors, each having a design capacity of 2894 MWt and approximately 934 MWe net (App. Exh. 1, p.

This Board issued its Partial Initial Decision (Partial Construction Permit Proceeding Environmental Matters and Site Suitability Only) on September 2, 1975, dealing with, *inter alia*, environmental issues, site suitability and the need for power (NRCI-75/9, 419), hereinafter also referred to as “PID.”

²The application was originally filed with the Atomic Energy Commission. Since the date of filing, the Atomic Energy Commission has been abolished and its regulatory responsibilities have been transferred to the Nuclear Regulatory Commission in accordance with the Energy Reorganization Act of 1974, 88 Stat. 1233, codified at 42 U.S.C.A. §5841 (Supp. 1976).

³*Gulf States Utilities Company* (River Bend Station, Units 1 and 2) ALAB-317 NRCI-76/3, 175 (March 4, 1976).

1.1-1 Staff Exh. 2A, pp. 1-1 1-2) ⁴ with safety systems analyzed and designed for a thermal power of 3039 MWe, which is the power corresponding to 105% of rated power (Staff Exh. 2A, p. 1-2).

2. The application was docketed on September 24, 1973. The proposed facility to be named the River Bend Station, Units 1 and 2, would be located on the east bank of the Mississippi River, approximately 24 miles north-northwest of the center of Baton Rouge, Louisiana. (Staff Exh. 1A, p. 1-1 PID, NRCI-75/9 456-7). The earliest completion dates for Units 1 and 2 are estimated to be March 1981 and March 1983, respectively. The latest completion dates, estimated for purposes of construction permit duration, are March 1983 and March 1985, respectively (Appl. Exh. 1 [License Application] p. 6).

3. On October 23, 1973 in accordance with the requirements of the Act and 10 CFR Parts 2 and 50, the Atomic Energy Commission published in the *Federal Register* (38 Fed. Reg. 29243) a "Notice of Hearing on Application for Construction Permits" (Notice of Hearing). Pursuant to the Notice of Hearing and 10 CFR §2.714, Mr. Will Pozzi was admitted as a party-intervenor. On March 11 1975 the Attorney General of the State of Louisiana ("State") petitioned to participate in this proceeding as a representative of an interested state pursuant to 10 CFR §2.715(c). On March 19 1975, the Board approved the State's participation.

4. The evidentiary hearing on environmental issues and site suitability was held on March 24-27 and May 20-21, 1975. On September 2, 1975, the Atomic Safety and Licensing Board (Board) issued a Partial Initial Decision addressing the issues specified in 10 CFR §50.10(e) and 10 CFR, Part 50, Appendix D (now Part 51).⁵ Further background regarding this proceeding, particularly the evidentiary hearings, is set forth in detail in that Partial Initial Decision. However, subsequent to the completion of the receipt of evidence and of all pleadings in this proceeding, the Court of Appeals of the District of Columbia Circuit issued a decision in *Natural Resources Defense Council et al. v. NRC*, Nos.

References to the record of this proceeding shall be as follows:

- (1) References to the transcript of the prehearing conference and evidentiary hearings are cited as "Tr. ____ .
- (2) References to Applicant's exhibits introduced into evidence are cited as "Appl. Exh. ____ "
- (3) References to Regulatory Staff's exhibits introduced into evidence are cited as "Staff Exh. ____ "
- (4) References to the State of Louisiana's exhibits are cited as "State's Exh. 1976- ____ "
- (5) References to prepared testimony incorporated in the transcript, but not numbered sequentially with the pages of the transcript are cited to the transcript page immediately preceding the testimony as follows: "Testimony of _____ p. ____ [Fol. Tr. ____] "

⁵ n.l, *supra*.

74-1385 and 74-1586 (July 21, 1976) which held that the Commission's consideration under the National Environmental Policy Act in the rulemaking proceeding on the Environmental Effects of the Uranium Fuel Cycle (Docket RM-50-3) was not adequate as to the environmental impact of fuel reprocessing and waste management. In its General Statement of Policy dated August 13, 1976, (41 FR 34707) the Commission stated that these two matters would be further considered in the rulemaking docket and that (as applicable to this proceeding) no construction permits would issue until interim rulemaking steps described therein had been taken. The Commission also stated that licensing boards should continue to process applications up to the point of, but not including licensing. In compliance with that Policy Statement, we are issuing this Partial Initial Decision, making findings on all other matters, but specifically reopening and deferring ultimate findings on the cost-benefit analysis question pending further action by the Commission as contemplated by the above-mentioned General Statement of Policy

5. On March 4, 1976, the Atomic Safety and Licensing Appeal Board issued its "Memorandum and Order" remanding the matter of fuel utilization efficiency to this Board for further evidentiary hearings on the empirical bases for certain of the Board's findings in the Partial Initial Decision.⁶ As discussed in Section III, *infra*, the Board fully considered this matter at the evidentiary hearings held on April 6-7 and May 25-27 1976.

6. On March 12, 1976, pursuant to 10 CFR §2.752, and the Board's Notice and Order for Prehearing Conference was held in New Orleans, Louisiana, *inter alia*, to identify the key issues and witnesses, set a hearing schedule, and arrange for the exchange of written testimony. Lead counsel for the State, who had participated in the previous hearing, was not present. The Board was therefore unable to obtain a specification of the issues which the State wished to pursue at the radiological safety hearing. On March 17 1976, the Board issued its Third Prehearing Conference Order. At the prehearing conference and in the Third Prehearing Conference Order⁷ the Board advised the State that it would not countenance the rather loose procedure followed at the environmental session of the hearing, *i.e.*, State bringing up, *de novo*, new major issues or subject areas as it goes along in its cross examination during the hearing. In its prehearing conference order, the Board required the State, if it desired to raise additional (substantive) issues or particular concerns at the hearing, to define issues that were relevant, material and narrow enough to permit evidentiary determination in an adjudicatory setting⁸ within seven days from the prehearing conference. (The practical need for this requirement was to afford other parties—Staff and

ALAB-317 NRCI-76/3, 175, at 185.

⁷ See e.g. Tr. 1367-8, 1370-1, 1391 and Third Prehearing Conference Order at pp. 3-4.

⁸ See Third Prehearing Conference Order at p. 4.

Applicant—the opportunity to prepare direct testimony in such areas, and to come to the hearing with knowledgeable witnesses prepared to be questioned in those areas.)⁹ The State requested and was granted a one-week extension of that date. On March 26, 1976, the State submitted “State of Louisiana Statement of Safety Issues” which referred to “all unresolved safety problems identified in the GESSAR-238, the Staff Safety Evaluation of the GESSAR-238 and the NRC’s Technical Safety Activities Report, December 1975 that are relevant to this facility ” In addition, the State wished to address certain “safety problems substantively relevant to these reactors for which resolution is contained in Regulatory Guides. ”

7 On March 30, 1976, the State late-filed a document entitled “State of Louisiana Identification of Unresolved Safety Problems Requiring Additional Testimony from Applicant and Staff on Which It Proposes to Conduct Cross-Examination.” Attached to this document was a list of fourteen Regulatory Guides entitled “Regulatory Guides Substantively Relevant to River Bend Reactor Which Will Not be Applied Because of Date of Publication of the Regulatory Guide” and a list of 24 items with a heading that stated that they were “ .identified in the SER [but] will not be resolved prior to a decision on issuance of the construction permit.” The Applicant indicated in a conference call, prior to the hearing, that it would object to the consideration of the State’s issues in that the statement, *inter alia*, failed to meet the requirements of the Board as far as relevancy materiality and specificity

8. After hearing extensive argument by the Applicant, the Staff and the State (Tr. 1516-36, 1636-56), the Board excluded the State’s “issues” as not being sufficiently narrow and specific enough to be amenable to adjudication in a licensing proceeding, and not stated so as to give a fair opportunity to the other parties to know precisely what the limits of the issues are, exactly what proof, evidence or testimony is required to meet the issues, and exactly what support the State intended to adduce for its allegations (Tr. 1656-9). The Board also concluded that consideration of the State’s “issues” would not help the Board in evaluating the issues before it, including the contention of the Intervenor. The Board permitted the State to participate in the hearing in a manner consistent with its ruling.

9 During the May session of the hearing, the Board was moved by the Staff to reconsider the portion of its ruling on the State’s issues relating to the list of

⁹The “surprise” method of proceeding that had been tolerated in last year’s environmental hearings resulted in adjournments and lengthy delays while the NRC Staff and Applicant searched for knowledgeable witnesses to respond to new areas developed by the State’s Attorney *during* his cross-examination, beyond the scope otherwise in issue in the proceeding. Indeed, the Appeal Board’s remanded issue of uranium fuel efficiency was first injected into this proceeding during cross-examination of Applicant’s witnesses at the earlier (1975) environmental hearing, without prior notice to the Board or other parties. (Tr. 473, *et seq.*)

the 24 items from the SER. The Board took the opportunity to reiterate its position with regard to participation of the State of Louisiana in the proceeding. The Board stated, that with regard to the State's proffered issues, it viewed the State actions as attempting to take a position, a course permitted by 10 CFR §2.715(c); however, it was the Board's view that when a participant under 10 CFR §2.715(c) elects to proceed in this fashion,¹⁰ it is then bound by the same requirements for timeliness, advance notice and specificity as are other parties, so as to enable the Board and other parties to fairly prepare for and address such issues in the framework of an adjudicatory proceeding (Tr. 2230-1). While the Board still had misgivings about the specificity of the State's statement of "issues," in an effort to accommodate the State, and at the urging of the NRC Staff, the Board permitted the State to cross-examine Staff's witness Kane on the 24 SER items (Tr. 2231-2). The Board affirmed all other aspects of its previous ruling on the State's issues. In conjunction with this ruling, and at the request of the State, the Board struck a portion of the Staff's "Response to State of Louisiana Questions" by William F Kane. (Fol. Tr. 1667· Tr. 2231-2.) This document had been admitted into evidence after the Board's ruling on April 7 1976. The State did not object to its admission at that time, nor did the State cross-examine Mr. Kane, although given an opportunity to do so (Tr. 1666-7 1675 2217). The State later cross-examined with regard to the first seven of the 24 items, but then decided not to pursue the line of examination any further (Tr. 2296).

10. The Board notes that neither Mr. Pozzi nor counsel in his behalf attended either day of the April hearing session. The Board was informed at the hearing that Mr. Pozzi was out of the country at the time, but had not so informed the Board (Tr. 1686). Neither Mr. Pozzi nor counsel in his behalf was present at the May 25-27 hearing (Tr. 1707 2307).

11. The evidentiary hearing on radiological health and safety issues was held on April 6 and 7 1976, in St. Francisville, Louisiana, pursuant to the notice issued on March 18, 1976, and published in the *Federal Register* on March 25 1976 (41 Fed. Reg. 12363). The Notice for the May hearing was issued by the Board on April 30, 1976 and published in the *Federal Register* on May 5 1976 (41 Fed. Reg. 18735). On March 18, 1976, the Board issued nine questions relating to the health and safety hearing and nine related to the remand question, advising that the parties would be expected to present witnesses responsive to those questions. The Applicant and Staff responded to these questions, as appropriate. The Board has considered these responses as well as the responses of the Staff and Applicant to additional clarifying questions by the Board during the course of the hearing. At the request of the Board, the Staff and Applicant also responded during the course of the hearing to certain questions posed in

¹⁰ i.e., when the State decides to "take a position" even though it is not required to do so under 10 CFR §2.715(c).

limited appearance statements. The Board is satisfied that these questions were fully addressed.

12. In addition to the 1,349-page transcript of the prehearing conferences and environmental and site suitability evidentiary hearing containing, *inter alia*, the testimony of witnesses for the Staff, Applicant and the State, and the exhibits which were received in evidence listed in Appendix A to the Partial Initial Decision,¹¹ the record of this proceeding further consists of the transcripts of the prehearing conference held on March 12, 1976 (Tr. 1344-99) and the evidentiary sessions held on April 6-7 1976 (Tr. 1400-1701), May 25-27 1976 (Tr. 1702-2307) and the exhibits which were received in evidence listed in Appendix A, hereto. Proposed findings of fact and conclusions of law were submitted by both the Staff and the Applicant. Proposed findings of fact and conclusions of law were submitted by the State of Louisiana with respect to its issue of unresolved safety problems and with respect to the remanded issue of fuel utilization efficiency. Any proposed findings of fact or conclusions of law submitted by the parties, which are not incorporated directly or inferentially in this Partial Initial Decision, are herewith rejected as being unsupportable in law or fact, or as being unnecessary to the rendering of this Partial Initial Decision.

II. FINDINGS ON RADIOLOGICAL HEALTH AND SAFETY MATTERS

A. Description and Safety Evaluation of the Facility

13. This Partial Initial Decision involves Commission review of the radiological health and safety considerations specified in the October 23, 1973 Notice of Hearing on Application for Construction Permits ("Notice of Hearing"), particularly issues one through four specified therein.

14. The License Application (Appl. Exh. 1), and the Preliminary Safety Analysis Report (PSAR) (Appl. Exh. 1) contain in-depth technical information relative to radiological health and safety matters. This information includes a description of the plant design, including the general design criteria by which compliance with Appendix A of 10 CFR Part 50 would be achieved; an analysis of the safety related structures, systems and components; an analysis of postulated accidents and the engineered safety features provided to limit their potential effect; a summary of the Applicant's quality assurance program; the technical qualifications of the Applicant; the financial qualifications of the Applicant; and considerations relating to the common defense and security of the United States. The Board finds that the application, consisting of the formal License Application and the Preliminary Safety Analysis Report (Appl. Exh. 1),

Appendix A was omitted from the Nuclear Regulatory Commission Issuances reprint of the Partial Initial Decision.

properly describes the facility in accordance with the Commission's regulations and the Notice of Hearing.

15. The Staff extensively reviewed this material, and in September 1974, issued its Safety Evaluation Report, as corrected by an errata dated October 1974 (SER), relating to construction of the River Bend Station, Units 1 and 2 (Staff Exh. 2A and D). The SER was supplemented by the Staff's Supplement No. 1 to the Safety Evaluation Report, (Suppl. 1 SER), issued in December 1974 (Staff Exh. 2B). A second supplement (Suppl. 2, SER) was issued in December 1975 (Staff Exh. 2C). The SER, as twice supplemented, summarized the results and delineated the scope of the technical evaluation relative to the radiological health and safety aspects of the proposed facility

16. The Staff analyzed and evaluated the characteristics of the site and its environs, including nearby population centers, geology demography meteorology hydrology and seismology the design, fabrication, construction, testing criteria and anticipated performance characteristics of the facilities, structures, systems and components important to safety the response of the facility to various anticipated operating transients and to a broad spectrum of postulated accidents, including design basis accidents; the Applicant's engineering and construction organization and the plans for the conduct of operations, including the technical qualifications of the Applicant; the measures taken for industrial security the planning for actions to be taken in the event of an accident that might affect the general public; the design of the several systems provided for control of radioactive effluents and management of radioactive wastes from the plant; the Applicant's quality assurance program; the financial qualifications of the Applicant to design and construct the facility and matters concerning the common defense and security of the United States.

17 Based upon its evaluation, the Staff concluded that the River Bend Station, Units 1 and 2, can be constructed and operated at the proposed location without undue risk to the health and safety of the public (Staff Exh. 2A, p. 21-1). As a result of its review, the ACRS concluded that if due consideration were given to certain matters which could be resolved during construction, "the River Bend Station, Units 1 and 2, can be constructed with reasonable assurance that they can be operated without undue risk to the health and safety of the public." (Staff Exh. 2C, p. B-3.) The Staff has considered the comments and recommendations of the ACRS and addressed the Committee statements in SER Supplement 2 (Staff Exh. 2C, Suppl. 2, SER, p. 18-1).

18. The Board finds that the Applicant has provided sufficient information relative to the radiological health and safety of the proposed facility and that the Staff's consideration, review and evaluation of that information has been satisfactorily performed.

19 The facility is to be located on a site of approximately 3292 acres on the east bank of the Mississippi River approximately 24 miles north-northwest of the city center of Baton Rouge, Louisiana and approximately three miles from

St. Francisville, Louisiana, the nearest town (Staff Exh. 2A, SER, pp. 1-1 2-5 Staff Exh. 2C, Suppl. 2, SER, p. 2-1 Appl. Exh. 1, p. 2.1-1 to 2.1-3a). In its earlier Partial Initial Decision, the Board noted that the Applicant had then recently notified the Staff that the proposed exclusion area distance, as defined in 10 CFR §100.3(a), would be increased from 610 meters to 914 meters and that the low population zone would be changed up to a maximum distance of 4.5 miles (LBP 75-50, NRCI-75/9 419 457). The PSAR has been amended to reflect the 914 meter exclusion area distance and the fact that the Applicant is the sole owner of all land and mineral rights in the area within the 914 meter exclusion distance (Appl. Exh. 1, p. 3.1-2). The Staff has concluded that a 914 meter exclusion distance is acceptable since the Applicant has the authority to control all activities within the exclusion area, and thus satisfies the requirements of 10 CFR Part 100 (Staff Exh. 2C, Suppl. 2, SER, p. 2-1). In addition, the Applicant has selected a Low Population Zone distance of 2-1/2 miles (Appl. Exh. 1, p. 2.1-5) which the Staff has reviewed and concluded that the requirements of 10 CFR Part 100 were met and that it was acceptable (Staff Exh. 2C, Suppl. 2, p. 2-1). The Board, which has previously made detailed findings of fact describing the River Bend site in its Partial Initial Decision dated September 2, 1975 (LBP 75-50, NRCI-75/9 419 456), has now considered the additional material and Staff analysis presented in the SER and the two supplements, including the final specification of the exclusion area distance and low population zone distances, discussed above, and the Staff's analysis of offsite radiation doses resulting from routine releases, and additional evidence presented by the Staff and Applicant at the safety hearings. As discussed below, the Board has found no reason to alter the findings on site suitability made in its previous Partial Initial Decision. In addition, the Board finds that the River Bend Station conforms to the requirements of 10 CFR Part 100.

20. At the hearing, the Board considered the onsite tracer tests conducted under stable atmospheric conditions accompanied by light wind speeds, which permitted the Staff to modify its standard model for short-term centerline diffusion estimates of the River Bend Site (SER, Suppl. 2, Staff Exh. 2C, pp. 2-2 to 2-6). The Staff concluded that the River Bend study corroborated by results from three other studies, supported a factor of four reduction in the relative concentration for short-term centerline diffusion estimates prior to any adjustment for building wake, under stable conditions (Pasquill Types E, F and G) with light wind speeds, *i.e.*, less than 2.5 mph. The Staff stated that it established a "reasonable upperbound" rather than a "best fit" approach to allow some margin for the uncertainty inherent in experimental studies. Only five of the 88 experimentally-determined values at all sites show less than a factor of four reduction. The majority of all experimentally-determined values are between a factor of ten and a factor of one hundred lower than the calculated values. (Response to ASLB Question B-1 by James E. Fairbent [Tr. fol. 1485] Tr. 1486-8.) The Board agrees with the Staff that the factor of four allows

appropriate credit for additional dispersion during these low wind speed conditions, and yet allows adequate margin for the uncertainty associated with experimental tests and the seasonal variation of meteorological and topographical conditions. The Board has reviewed and approved the use of the reduction in the X/Q value for the calculation of the potential offsite doses to the design basis accidents. The computed doses are within the NRC Staff's construction permit guideline values contained in 10 CFR Part 100, and therefore acceptable (SER Suppl. 2, Staff Exh. 2C, pp. 15-1 to 15-10). In response to a Board question, the Staff explained the difference in its evaluation of the hydrogen purge dose between SER, Suppl. 1 and Suppl. 2. (Response to ASLB Question B-9 by William F Kane [Tr. Fol. 1497].) The Board is satisfied that the two changes that the Staff has made to its calculated model are reasonable.

21. The Board finds no reason to alter its previous findings that the proposed site is a suitable location for two nuclear power reactors of the general size and type proposed from the standpoint of radiological health and safety considerations under the Act and the rules and regulations of the Commission. The Board has further considered the characteristics of the site in light of the particular design proposed and finds that the River Bend site and the facility design conform to the requirements of 10 CFR Part 100 for operation of the reactors at their design power level.

22. Each of the River Bend units will use a single cycle, forced circulation, boiling water reactor (BWR-6) and a vapor suppression type of containment (Mark III), both of which are based on designs introduced by the General Electric Company in 1972 and are adequately described in the PSAR and the Staff's SER and SER supplements.

23 Each of the River Bend Station units will use the recently developed 8 x 8 fuel assembly design. The smaller diameter rods, with lower linear heat generation rate and thicker cladding of the 8 x 8 fuel assembly design, result in increased engineering safety margins, when compared with the 7 x 7 fuel assemblies of previous reactor designs (SER, Staff Exh. 2A, pp. 4-10 to 4-17). The Board concurs with the Staff conclusion that the design of the fuel is acceptable (SER, Staff Exh. 2A, p. 4-17).

24. The Staff reviewed the evaluation of ECCS performance submitted by the Applicant and concluded that the evaluation was performed wholly in conformance with the requirements of 10 CFR 50.46(a), and Appendix K. The River Bend Station ECCS performance assures conformance with. (1) the peak cladding temperature limit of 2200°F (2) the maximum cladding oxidation limit of 17% of total cladding thickness before oxidation, (3) the maximum hydrogen generation core-wide limit of 1% of the total metal in the cladding surrounding the fuel, (4) the requirement that core geometry remain amenable to cooling, and (5) the long-term cooling requirement of maintaining acceptable core temperatures and decay heat removal (Staff Exh. 2C, SER Suppl. 2, pp. 6-10 to 6-12). The Board has reviewed the Staff analysis and concurs with the

Staff's conclusions that the ECCS for the River Bend Station meets all the criteria of 10 CFR §50.46 and the requirements of Appendix K to 10 CFR Part 50, and is acceptable.

25. The Board inquired into a change in the Staff's classification of the offgas system, which change is described in SER, Suppl. 2 at p. 3-1. The change involved a lowering of the allowable seismic design to less than Category I criteria, and use of 10 CFR Part 100 dose guidelines for evaluating the radiological consequences of a postulated failure. As originally proposed by GSUC, the offgas systems for River Bend Station, Units 1 and 2 did not meet Regulatory Guide 1.29. Of specific concern to the Staff was that failure of those portions of the offgas system which are designed to store or delay gaseous radioactive wastes and portions of structures housing these portions of the offgas system could result in offsite doses in excess of the 0.5 rem guideline value of Regulatory Guide 1.29 which is equivalent to 10 CFR Part 20 limits. (Response to ASLB Question B-2 by William F. Kane, Tr. following 1506.) The Staff testified that as a result of concerns raised in the ACRS letter on the justification for multiplicative conservatism in the application of Regulatory Guide 1.29 it reevaluated application of those design standards to the offgas system. The Staff agreed that justification for the seismic Category I classification is questionable because: (1) there is a limited amount of radioactivity available for release from the charcoal delay tanks even assuming a ruptured condition; and (2) the probability of failure of the charcoal delay tanks and supporting structures that are designed to a seismic design response spectra normalized to an OBE minimum ground level acceleration, and utilize the materials, and the quality assurance criteria described in Appendix D of the RBS SER Supplement 2 is sufficiently low that the radiological analysis should utilize the very conservative accident assumptions and can be judged against 10 CFR Part 100 rather than 10 CFR Part 20.

26. Because of these considerations, the Staff concluded that the deviation from Regulatory Guide 1.29 is acceptable. The analysis of the failure of this system is performed using accident meteorology and very conservative assumptions regarding the source term and operational malfunctions. Based on these assumptions, the whole body dose calculated and reported in SER Supplement 2 is less than 5 rem, which is well below the 10 CFR, Part 100 limit of 25 rem. The Staff subsequently revised Regulatory Guide 1.29 in February 1976 to remove the seismic capability guidelines for radioactive waste management systems from the guide. (Response to ASLB Question B-2, *supra*.) The Board finds that the proposed design for the RBS offgas system meets the current Staff design criteria and is acceptable.

B. Technical Qualifications, Quality Assurance and Management

27 The record in this proceeding demonstrates that Gulf States Utilities

Company is technically qualified to design and construct the proposed River Bend facility. The PSAR described the organization of the Applicant, identified its architect-engineer, principal contractors and its technical consultants, and described their background and qualifications. The nuclear steam supply system and turbine will be designed and built by the General Electric Company. Stone and Webster is the architect-engineer and the constructor. Gulf States Utilities Company's technical staff has broad experience in the nuclear and conventional utility engineering fields; moreover, its staff has participated in, and will continue to attend, various training programs designed to add further experience in nuclear technology (Appl. Exh. 1 pp. 13.1 to 13.15 Testimony of Adams, p. 2 [Fol. Tr. 1464]). The Applicant testified that it will soon designate a superintendent for the River Bend facility to integrate the construction and operational phases and to supervise the staffing and training of station personnel. In addition, while operation of the first unit of the facility is over five years away the Applicant has made provisions in its organizational structure to assure continuity between the construction and operation of its nuclear units. The responsibility for operation of the River Bend Station will remain with the Vice-President Power Plant Engineering, Design and Construction, separating this function from the operation of the Applicant's fossil units and allowing the requisite management attention. (Testimony of Adams at pp. 3-4 [Fol. Tr. 1464] Tr. 1463-4).

28. The plant staff for River Bend Station Unit 1 will consist of approximately 70 employees reporting to the Plant Superintendent. For two unit operation approximately 20 additional personnel will be assigned to the Operations Supervisor with additions also being made to the other plant groups (Appl. Exh. 1, pp. 13.1-12, 13 SER, Staff Exh. 2A, p. 13-1). The qualification requirements of all plant supervisory operating, technical and maintenance support personnel will meet or exceed the minimum requirements set forth in ANSI N18.1 (SER, Staff Exh. 2A, p. 13-2). Further, the Staff has reviewed the overall training program for the plant personnel and found that it conforms to Regulatory Guide 1.8 (March 10, 1975) and is acceptable (SER §13.2).

29. The Applicant has established a technical support staff for the design and construction of the plant. Reporting to the Manager, Power Plant Engineering and Design are four groups, headed by a Senior Project Engineer, a Licensing Manager, a Director of Nuclear Services, and a Director of Plant Design. Gulf States Utilities has also added an additional position, Manager, Power Plant Construction, who along with the Manager Power Plant Engineering and Design, reports to the Senior Vice President, Power Plant Engineering, Design, and Construction, Mr. S. L. Adams. (Appl. Exh. 1 p. 13.1-1 SER, Staff Exh. 2A, p. 13-2; SER Suppl. 2; Staff Exh. 2C, p. 13-1).

30. The Staff reviewed and assessed the organization of the Applicant and the technical qualifications of the Applicant, its architect-engineer, nuclear

steam supply system contractor, and principal contractors and technical consultants and concluded that they are technically qualified to design and construct the River Bend Station (SER §§13 and 21, and SER Suppl. 2, Staff Exh. 2C, p. 13-1). The Board concludes that the Applicant, together with its principal contractors and technical advisors, is technically qualified to design and construct the proposed facility. Further, the Board concludes that the Applicant has provided in PSAR Chapter 13 an adequate preliminary description of its plans for plant organization training of personnel and conduct of operations.

31. A description of the quality assurance ("QA") program of the Applicant is contained in Chapter 17 of the PSAR (Appl. Exh. 1, pp. 17-1 to 17-19). The NRC Staff reviewed the quality assurance program of the Applicant and its principal contractors and concluded that it complies with the requirements of 10 CFR Part 50, Appendix B and is acceptable for design, procurement and construction (SER, Staff Exh. 1 p. 17-13).

32. The Staff has reviewed the Applicant's quality assurance program, including the programs of its principal contractors, and concluded that the program provides sufficiently detailed procedures, requirements, and elements of control to assure that all safety-related structures, systems and components will be designed, constructed, installed, inspected and tested in accordance with the requirements of 10 CFR Part 50, and is therefore acceptable. Moreover, the Staff has determined that the QA personnel of the Applicant and of each of its principal contractors have sufficient authority, organizational freedom and independence to perform their QA functions effectively (SER, Staff Exh. 2A, pp. 17-1 to 17-19; SER Suppl. 1 Staff Exh. 2B, p. 17-1, SER Suppl. 2, Staff Exh. 2C, p. 17-1). The NRC's Office of Inspection and Enforcement has conducted inspections of the River Bend Quality Assurance Program and concluded that the implementation of the PSAR commitments is consistent with the status of the project. (SER, Staff Exh. 2A, p. 17-13; SER Suppl. 1, Staff Exh. 1B, p. 17-1; SER Suppl. 2, Staff Exh. 2C, p. 17-1). The Staff concluded the implementation of the River Bend quality assurance program is acceptable.

33. The Board finds that the Staff's review of the Applicant's QA Program has been adequate and that it has demonstrated that the QA Program will meet the requirements of the Commission's regulations, including the requirements of 10 CFR Part 50, Appendix B. In addition, the record shows the Applicant is cognizant of the importance of a sound quality assurance program and its management has the commitment to assure its implementation through the design, construction, and operation phases of the Station.

34. Based upon the description contained in the PSAR, the NRC Staff analysis set forth in the SER and SER supplements, and the Testimony of Adams [Fol. Tr. 1464] the Board concludes that the Applicant's quality assurance program complies with the applicable NRC regulations. In addition, the record shows that the Applicant is cognizant of the importance of a sound quality assurance program, both to itself, the NRC, and the public at large.

C. Common Defense and Security

35 The activities to be conducted under the construction permits will be within the jurisdiction of the United States. All of the Applicant's directors and principal officers are citizens of the United States, and the Applicant is not owned, dominated or controlled by an alien, foreign corporation, or a foreign government. The activities to be conducted do not involve any restricted data, but the Applicant has agreed to safeguard any such data which might become involved in accordance with the requirements of 10 CFR Part 50. The Applicant will rely upon obtaining fuel as it is needed from sources of supply available for civilian purposes, so that no diversion of special nuclear material for military purposes is involved (SER §19.0; License App. Appl. Exh. 1 pp. 5, 12-13). The Board finds that the issuance of construction permits for the River Bend Units No. 1 and 2 will not be inimical to the common defense and security

D. Emergency Plans

36. The Applicant has described the preliminary plans for coping with emergencies in accordance with applicable Commission regulations, including Appendix E of 10 CFR Part 50. The preliminary plans describe the Applicant's protective measures for accidents affecting both on-site and off-site areas, and identify local, state and federal agencies and organizations which may be required to assist in coping with emergencies occurring at the site of the River Bend Units. (PSAR, §13.3.)

37 The Staff concluded that the preliminary emergency plans presented by the Applicant meet the requirements of Appendix E, 10 CFR Part 50, and are acceptable at the construction permit stage of a licensing review. (SER, §13.3.) Likewise, the Board finds that the Applicant's preliminary emergency plans meet the requirements of Appendix E of 10 CFR Part 50 and are acceptable.

E. Industrial Security

38. The Applicant has provided a general description of its program for protecting the plant against industrial sabotage. The program will include employee investigations, provisions for controlling access to the plant site, provisions for communication with local law enforcement authorities, monitoring of vital areas and equipment of the plant, and the control of personnel, materials and vehicles within the plant site. (PSAR, §13.7.)

39 The Staff has reviewed the Applicant's arrangements for the protection of the River Bend Units against acts of industrial sabotage, and concluded that these arrangements are acceptable at the construction permit stage of the

licensing process. As required by Commission regulations, a detailed physical security plan will be submitted for review at the operating license stage of the licensing review (See 10 CFR §50.34(c)). The Applicant has committed to conform that plan to the provisions of Regulatory Guide 1.17 that apply to the design and construction of the plant. (SER, §13.5.) The Board finds that the preliminary industrial security plans for the River Bend Units are acceptable.

F Independent review of the Advisory Committee on Reactor Safeguards (ACRS)

40. At its meeting on January 9 1975 the ACRS completed its independent review of the application for authorization to construct the River Bend Units. The plants had been previously considered at a full ACRS meeting on October 10, 1974 and at subcommittee meetings on September 21 1974 and January 6, 1975. Members of the ACRS visited the site on September 20, 1974. On January 14, 1975, the Committee forwarded to the Chairman of the Commission its "Report on River Bend Station, Units 1 and 2" (SER Supp. 2, Appendix B).

41. The ACRS concluded that matters which merited additional consideration could be resolved during construction and that, with due consideration given to these items, the River Bend Units can be constructed with reasonable assurance that they can be operated without undue risk to the health and safety of the public. The Staff and the Applicant have duly considered these items and are taking appropriate action to implement the recommendations of the ACRS (SER Suppl. 2, §18).

G. Applicant's Financial Qualifications for River Bend Units 1 and 2

42. On the basis of its review of the financial information presented in the application and the amendments thereto, and financial information generally available to it, the Staff concluded that the Applicant is financially qualified to design and construct the proposed River Bend Units. (SER, §20.) As reported in the SER, estimated costs of the construction of the plants, including certain transmission facilities and other associated costs, and of procurement of the initial reactor cores, will total 1,104.4 million dollars. This total reflects a cost of 595.4 million dollars and 509.0 million dollars for River Bend Units 1 and 2, respectively. The Staff concluded that the Applicant's estimated costs of constructing the facilities were reasonable (SER, §20).

43. The Applicant plans to finance construction of the plant as an integral part of the overall construction program. GSUC's projections of sources of funds

for construction expenditures during the years 1974-1978, the latest years for which projections are available, indicate that approximately 24.6% of such expenditures will be financed by the use of internally generated funds compared with 45.2% of construction expenditures financed by internally generated funds during the years 1969-73. This indicates an increasing reliance on funds from external sources such as bonds and common and preferred stock (SER, §20).

44. In the SER, the Staff also reviewed the Applicant's annual report for 1973 which indicated operating revenues of 288.6 million dollars. Operating expenses depreciation and taxes other than income taxes were stated to be 188.2 million dollars of which 35.8 million dollars represented depreciation. Net income totaled 50.2 million dollars, of which 34.8 million was distributed as dividends to stockholders with the remaining 15.4 million retained for use in the business. As of December 31 1973, GSUC's assets totaled 1,163.7 million dollars, most of which was invested in utility's plants. (1,087.7 million dollars.) Retained earnings amounted to 154.6 million dollars. Moody's investor services rates the Applicant's first mortgage bond as Aa (high grade bonds) and the debentures as A (upper medium grade bonds). (Ser, §20.)

45 Subsequent to the issuance of the SER, the Staff has updated its review of the financial condition of the Applicant and has determined that there have been no developments that would alter the favorable conclusion reported in the SER (SER Supplement No. 2, §20). The Applicant's operating revenues were 359.2 million dollars for the 12 months ended September 30, 1974 and were 358.9 million dollars for the 12 months ended September 30, 1975. Net income increased from 47.6 million dollars to 50.8 million dollars over the same period. Earnings per average common share increased from \$1.60 to \$1.65 Cash earnings available for common stock increased from \$3.14 to \$3.46 over the same period. This comparison between cash earnings available for common stock and the common stock dividend indicates that a substantial portion of internally generated cash is available for construction expenditures. In addition, GSUC's common stock has recently been sold at or above book value (SER Supplement No. 2, §20). Based on its review the Staff concluded that the Applicant was financially qualified to design and construct the proposed River Bend facility

46. The record shows that the Applicant has supplied information regarding financial qualifications in accordance with the Commission's regulations, 10 CFR §50.33(f) and Appendix C of 10 CFR Part 50. The Board finds, in view of the above facts, that Applicant is financially qualified to design and construct the proposed facility

H. Further Technical and Design Information

47 Pursuant to the Notice of Hearing, the Board, as part of its considera-

tion as to whether construction permits shall be issued for the River Bend Station, is required to decide, *inter alia*,^{1 2}

1 Whether in accordance with the provisions of 10 CFR §50.35(a);

- (1) The applicant has described the proposed design of the facilities including, but not limited to, the principal architectural and engineering criteria for the design, and has identified the major features or components incorporated therein for the protection of the health and safety of the public;
- (2) Such further technical or design information as may be required to complete the safety analysis and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;
- (3) Safety features or components, if any which require research and development have been described by the applicant and the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components; and
- (4) On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facilities, and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facilities can be constructed and operated at the proposed location without undue risk to the health and safety of the public.^{1 3}

48. The Commission has consistently interpreted this section as not requiring that all design details of a facility must be supplied at the construction

²In the "State of Louisiana Proposed Findings of Fact and Conclusions of Law Concerning Unresolved Safety Problems" ("State's Safety Findings") at pp. 1-2, the State paraphrases one of the findings that the Board must make in determining whether construction permits should be issued. The Board does not believe that the State's restatement correctly characterizes the cited regulation. As an example, the State restates 10 CFR §50.35(a)(2) to the effect that "any technical or design information which *is not major* and which has not been supplied may reasonably be left for later consideration [emphasis supplied] " The regulation does not have any requirement that the design information left for later consideration not be "major." Similarly the State, in restating 50.35(a)(1), has omitted that portion of the regulation which requires that the Board make findings only with regard to "the major features or components *incorporated therein for the protection of the health and safety of the public* [emphasis added] " The Board rejects the State's statement of the findings it must make with regard to 10 CFR §50.35(a).

³Notice of Hearing at pp. 2-3.

permit stage.¹⁴ The regulations cited above permit two distinct categories of matters which may be deferred: (1) further technical or design information as may be required to complete the safety analysis, and which can be reasonably left for later consideration, and will be supplied in the final safety analysis report; and (2) safety features or components, if any which require research and development.¹⁵

49 The Staff's position is that there is no research and development required to resolve any safety questions with respect to safety features or components of the River Bend facility (Tr. 2216), and therefore no matters which fall within subsection (a)(3) of §50.35(a). The Applicant's position, stated in its proposed findings, is similar. It should be noted from the express language of 10 CFR §50.35(a) that there is, of course, no proscription against reliance on research and development programs to supply such further technical or design information as may be required to resolve safety questions. However, if any such research and development program is being relied on, then a Licensing Board would have to further find that there is reasonable assurance that the program will satisfactorily resolve the safety question at or before the latest date stated in the application for completion of construction of the proposed facilities, as required by §50.35(a)(4). It should also be noted that while there may always be research and development programs underway with respect to nuclear power plants, *such programs do not come within the province of the required findings* of §50.35(a) if they are not being relied on as the basis for the reasonable assurance that any further information which may be required will be supplied at the operating license (final safety analysis report) stage. The Staff has also concluded that, in the case of the River Bend Station, the provisions of 10 CFR Part 50 §50.35(a) have been met since such further technical or design informa-

Matter of Jersey Central Power and Light Company (Oyster Creek Nuclear Power Plant Unit No. 1), 3 AEC 28, 29 (1965); *Matter of Florida Power and Light Company* (Turkey Point Nuclear Generating Station, Units Nos. 3 and 4) 4 AEC 9, 17 (1967); *Matter of Florida Power Corporation* (Crystal River Unit 3 Nuclear Generating Plant) 4AEC 318, 321 (1970); and *Long Island Lighting Company* (Shoreham Nuclear Power Station) 6 AEC 831, 844-5. On April 30, 1970 (35 Fed. Reg. 5317 (March 31, 1970)), 50.35(a) was amended to conform to the then prevailing practice by elimination of the term "provisional" construction permit, but the Commission stated "[t]he findings required for issuance of a construction permit would be the same. "

10 CFR §50.2(n) defines research and development as meaning "(1) theoretical analysis, exploration, or experimentation; or (2) the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes." If a research and development program is required, a board must find that there is reasonable assurance that the program will resolve the safety question "at or before the latest date stated in the application for completion of the proposed facilities."

tion as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report ("Response to State of Louisiana Questions" by William F Kane [Fol. Tr. 1667] (hereinafter Kane Testimony) at p. 3; Tr. 2216).

50. The State of Louisiana, on the other hand, has taken the position that there may be matters which have been left unresolved or which may even require a research and development program; in short, that the Board cannot make a finding that 10 CFR §50.35(a) has been complied with (State's Proposed Findings pp. 3 12-13). The State urges that the Board cannot find such compliance because:

1. The State terminated its cross-examination of Mr. Kane after only seven of State's 24 SER items had been addressed (State's Proposed Findings at p. 3).
2. The Staff has no general criteria for deciding what matters can be left for post-CP resolution (*ibid.*, at p. 4).
3. Even for those matters which were addressed, Mr. Kane was not qualified to give proper answers (*ibid.*, at pp. 4-5).
4. The hearing did not ventilate all the "issues" which the State had marked in the Staff's "Technical Safety Activities Report"¹⁶ for December 1975 (*ibid.*, at pp. 5ff) attached to State's March 30, 1976 submission.
5. The hearing did not examine the matter of compliance with each Safety Guide listed by the State in its March 30, 1976 submission.

51. With regard to those matters listed as 4 and 5 above, the TSAR and the regulatory guides referenced by the State, the Board adheres to its previous ruling denying consideration of the TSAR and these regulatory guides in the River Bend proceeding in the manner requested by the State (Tr. 1656-9·2230-33; see also Paragraphs 6-9 *supra*). While this ruling is dispositive of the State's proposed findings on the TSAR and the regulatory guides, the Board has, for the sake of completeness of the record, nevertheless further elaborated on its ruling, considering the presentation contained in the State's proposed findings. The Board would note that the TSAR is, on its face, an internal status report on various developmental or study programs being conducted or contemplated by the NRC. It does not purport to give a definitive NRC Staff position on any safety problem related to the facilities of the type proposed for the River Bend Station. The Board disagrees with the State which asserts that "[e]ach problem

¹⁶The State, in its brief, erroneously refers to this document as the Technical Safety Analysis Report. While inadvertent, this calls attention to what this document is, a status report on various internal staff projects, and not a detailed analysis of any safety concern. Furthermore, the State asserts that TSAR was offered into evidence. It was marked for identification only and was not received into evidence (Tr. 1660).

presented in the TSAR. .raises questions for the present and future concerning the Staff review of the design, equipment and operation of the facility ” The Board does not see, and the State has not demonstrated, any nexus between the general discussion in the TSAR and any deficiency in the River Bend application and the findings it must make now with regard to 10 CFR §50.35

52. As indicated by the *TSAR*, the Staff has a program to explore new areas and develop new review capabilities. The *TSAR* is a Staff document which, although it may set forth certain safety problems, does not address specific safety questions for individual plants considered for licensing. The Staff’s analysis of the River Bend Station has revealed no safety matters which require research (*vide* ¶49 *supra.*). If each license application had to await the completion of all the programs described in the *TSAR*, no facility would ever be licensed. The Atomic Energy Act and NRC regulations call for no such result. On the contrary the Commission has established a procedure and standards for addressing the impact of new safety considerations on individual facilities subsequent to the issuance of construction permits. See 10 CFR §50.109 Thus, if and when any item in the *TSAR* should be found by the Staff to represent a safety question and if such a problem should be found to relate to the River Bend Station, it would be addressed at that time.

53. With regard to the 14 Regulatory Guides, the same considerations apply Examination of any one of the more than 100 Regulatory Guides reveals that there was no intention to require compliance with each Regulatory Guide:

Regulatory Guides are issued to describe and make available to the public methods acceptable to the NRC Staff of implementing specific parts of the Commission’s regulations, to delineate techniques used by the staff in evaluating specific problems or postulated accidents, or to provide guidance to applicants. Regulatory Guides are not substitutes for regulations, and compliance with them is not required. Methods and solutions different from those set out in a basis for the findings requisite to the issuance or continuance of a permit or license by the Commission. (Cover page of ea. NRC Reg. Guide)

54. Regulatory Guides do not purport to be the single and only solution to any matter. There is no basis for such State position. Neither is there basis for the State’s assertion that “the facility will make use of out-of-date or less effective safety solutions.” (State’s Proposed Findings at p. 10.) At the outset, the mere fact that a Regulatory Guide has been issued or revised does not automatically or necessarily mean, as the State asserts, that any other solution is “less effective” or that the newer document results in “a procedure or system acknowledged as an improvement in safety ” (*Ibid.*)

55 As to the State’s Item 1 the Board notes that the State voluntarily terminated its cross-examination of Mr. Kane (Tr. 2296). Further, even the State

agrees that "Mr. Kane was able to provide answers concerning a number of problem areas" (State's Proposed Findings at p. 3). Certainly the State adduced no material during cross-examination which would suggest either that further research and development would be required on any item or that it was anything other than likely that proper designs and proper information would be available post-CP. The Board is satisfied from its independent examination of all 24 SER items, that the bases for the Staff's conclusions are sufficiently set forth to enable the Board to find that the requirements of §50.35(a) have been met, and further that there are no research and development programs being relied on to assure that the requirements of §50.35(a) are met. It is, of course, not impossible that some safety question may lurk somewhere among the seventeen matters mentioned by the State but not examined. Indeed, it is not impossible that there may be such a matter elsewhere in the vast amount of technical material associated with the plant. But the Board is not required to find that nothing could possibly be wrong. Our quantum of proof is that of "reasonable assurance" and that we have in ample measure. Furthermore, under any reasonable interpretation of the Commission's Rules of Practice, a hearing board is not required to search through a "laundry list" of numerical references to Regulatory Guides, Technical Safety Activity Report subject lists, or the Staff's Safety Evaluation or GESSAR-238, in order to discover if, in fact, there is a true safety issue directly relating to this particular plant and to then phrase it in terms of a litigable issue amenable to examination and cross-examination in a contested proceeding.

56. As to the State's proposed finding that the Staff has no criteria for deciding what non-research matters may be left for post-CP resolution, numbered 2 above, the Board finds in the transcript (Tr. at 2245-6, 2254-6) ample indication that each such item is considered by the Staff's professional people on an ad hoc basis, and the decision is made on the basis of engineering judgment and a knowledge of the current state of the art. No specific challenge to the Staff's judgments have been made of record in this proceeding. Thus, this seems an adequate procedure to the Board.

57. Lastly with regard to Item 3 Mr. Kane's qualifications the Board finds that Mr. Kane, on the basis of this Board's experience and the opportunity to observe and question Mr. Kane over the lengthy course of the evidentiary proceedings (including last year's sessions), has proven to be an individual possessing the very highest qualifications to testify on the Staff's safety review of the River Bend Station. As project manager from the beginning of the Staff's review he has the technical responsibility for the management and technical coordination of the safety review of the River Bend Station. (See Mr. Kane's Professional Qualifications, following Tr. 1497.) He has an educational background in mechanical and nuclear engineering, and over 13 years professional experience as an engineer in the nuclear field (Professional Qualifications,

supra.) Mr. Kane reviews the work of the various individual Staff experts, and evaluates the depth of their review to assure that it was adequate (Tr. 2270-1). He must be satisfied with the review and has the authority to cause the review to be challenged within the Staff (Tr. 2271-2). While Mr. Kane may not be an expert in every detail of every discipline involved, it is clear from his articulate answers and his background and qualifications that his position as a manager of specialists has given him all the familiarity he needs with these matters as they bear on River Bend Station in order to fully explicate them before this Board.

58. In conclusion, the Board has reviewed the entire record of this proceeding, and has found no instance where a research and development program for any safety features or components is necessary. Furthermore, the Board finds that the bases for the Staff conclusions in its safety evaluation are sufficiently set forth in the record to permit the Board to make its appraisal concerning compliance with 10 CFR §50.35(a). The Board would note that while its Conclusions of Law with respect to research and development contained in Part B (3) of Section IV of this Initial Decision follow the form of the Notice of Hearing, the Board wishes to make it clear that it specifically finds that there are no safety features or components of the River Bend Station which require research and development and, therefore, no research and development is necessary. As a result, it is not necessary to rely on future resolution of any safety questions in making the Board's finding that the proposed facilities can be constructed and operated without undue risk to the health and safety of the public.

I. Compliance With Appendix I, 10 CFR Part 50

59. For the reasons detailed in our Partial Initial Decision issued on September 2, 1975, the question of whether the specific design proposed for the River Bend Station complies with the requirements of Appendix I, 10 CFR Part 50 was reserved for this radiological health and safety phase of the proceeding. The Board must evaluate whether the proposed radwaste systems are capable of meeting the numerical design objectives specified in §§IIA, B, C, and D of Appendix I.

60. On September 4, 1975 the Commission amended Appendix I of 10 CFR Part 50 to provide applicants who have filed applications for construction permits for light-water-cooled nuclear power reactors which were docketed on or after January 2, 1971 and prior to June 4, 1976, the option of dispensing with the cost-benefit analysis required by Paragraph II.D of Appendix I. This option permits an applicant to design his radwaste management systems to satisfy the Guides on Design Objectives for Light-Water-Cooled Nuclear Power Reactors proposed in the Concluding Statement of Position of the Nuclear Regulatory Staff in Docket RM-50-2, dated February 20, 1974. As indicated in the State-

ment of Considerations included with the amendment, the Commission noted it is unlikely that further reductions to radioactive material releases would be warranted on a cost-benefit basis for light-water-cooled nuclear power reactors having radwaste systems and equipment determined to be acceptable under the proposed Staff design objectives set forth in RM-50-2. In a letter to the Commission dated November 17 1975, Gulf States Utilities Company chose to exercise the option provided by the Commission's September 4, 1975 amendment to Appendix I, eliminating the necessity for the Staff to perform a cost-benefit analysis as required by Paragraph II.D of Appendix I. (Supplemental Testimony of William M. Hewitt on Evaluation of Liquid and Gaseous Effluents With Respect to Appendix I of 10 CFR Part 50 [Hewitt Testimony] following Tr. 1469 at p. 1-2.)

61. The Staff has evaluated the radioactive waste management systems proposed for River Bend Station, Units 1 and 2, to reduce the quantities of radioactive materials released to the environment in liquid and gaseous effluents. These systems are essentially as described in §§11.2 and 11.3 of the Safety Evaluation Report, dated September 1974, and in §3.5 of the Final Environmental Statement (FES), also dated September 1974. (Hewitt Testimony at p. 2.) In addition, by Amendment 15 to the PSAR, the Applicant is committed to modify the design of the radwaste treatment systems to include a charcoal filtration system which treats the mechanical vacuum pump exhaust for radioiodine removal (PSAR Amendment 15 p. 2U-1 Affidavit of William M. Hewitt on Appendix I to 10 CFR Part 50 [Hewitt Affidavit] following Tr. 1805). Mr. Hewitt presented the calculation of the Staff's revised liquid and gaseous source terms in his testimony as modified by his Affidavit. The Staff's revised source terms consider the current River Bend Station design along with more recent operating data applicable to the River Bend Station and changes in the Staff's calculational model which have occurred since the FES was issued. (Hewitt Testimony at p. 2.)

62. Dr. Michael A. Parsont, a scientist in the Staff's Radiological Assessment Branch, presented extensive testimony on the radiological doses calculated by the Staff, applying Mr. Hewitt's source terms to site specific data. (Parsont Testimony following Tr. 1471 Parsont Supplemental Testimony following Tr. 1814; see also Tr. 1807-14.) As required by Appendix I, to determine compliance with §IIA, B, and C of Appendix I, doses were calculated on a per reactor basis. To determine compliance with the Annex to Appendix I (the Staff's RM-50-2 design objectives), as the optional means of complying with §IID, doses were calculated on a per site basis (both Units 1 and 2 combined releases).

63 As summarized in Table 1 and 2 of Dr. Parsont's testimony (Parsont testimony p. 9 and 10), the liquid effluent and noble gas effluent releases satisfy all requirements of Appendix I, including those of the Annex in lieu of the requirements of §IID. In addition, as testified to by Mr. Hewitt, the annual total

quantity of iodine-131 released in gaseous effluents will be less than 1 curie per year per reactor and will therefore meet this requirement of the Annex to Appendix I. (Hewitt Testimony p. 3, as further reduced by Hewitt Affidavit.) The Board has reviewed the approach leading to the above conclusions as detailed in the Staff's testimony and finds that the Staff's evaluation provides a substantial basis for agreeing with the Staff's conclusions.

64. This Board must also find that the combined annual total quantity of radioiodine and radioactive particulates released in gaseous effluents from both Units 1 and 2 will not result in an annual dose or dose commitment to any organ of an individual in an unrestricted area from all pathways of exposure in excess of 15 millirem, as required by the Annex to Appendix I. The evaluation of this dose depends heavily on the pasture-dairy animal-milk pathway as demonstrated by Dr. Parsont's evaluation. At the hearings in April 1976, new information was provided to the Staff which cast doubt on the adequacy of Applicant's cow location survey which had been performed prior to that time. In response, the Applicant presented a new survey (performed in April 1976) at the May 1976 hearing (Amendment 15 to the PSAR). As a result of the detailed methodology of this new survey (Tr. 1720), the Board is satisfied that all milk animal locations within three miles of the site have been identified. As a result of this new survey the Board finds that the contention by Mr. Pozzi that a sufficient dairy cow inventory was not conducted is now without merit. However, the Board wishes to note its approval of Mr. Pozzi's actions in raising this issue and thus prompting Staff and Applicant to look more closely into this important matter. As testified to by the Staff, there is no need to extend the survey beyond the 3-mile radius survey area, as more critical milk animal locations could not exist beyond three miles (Parsont Supplemental Testimony following Tr. 1814 at p. 3; Tr. 1813-14).

65 In order to assess the most critical location of the dairy cow locations, the various site specific parameters must be combined and applied. One parameter, which applied to all the cows, was the fact that none of the cows would have a total daily consumption of all foods of greater than 26 kilograms wet weight, as reported in Amendment 15 to the PSAR and as testified to by Mr. Magee, the West Feliciana Parish County Agent (Tr. 1759-63). In addition, supplemental feeding practices specific for each of the cow locations was provided by the Applicant's survey (Tr. 1776-7· 1794-5). Using these data, and the site specific data on the individual consuming the milk, the Staff was able to determine the critical dose (Tr. 1808).

66. It developed that the critical dose was to a child living 24 miles away in Baton Rouge, consuming milk from the Leet location, 0.93 miles NW of the plant. This child is a consumer of the Leet milk, but not on a regular daily basis. (PSAR, Amendment 15 Table 2U-2A.) Dr. Parsont's calculated dose to the critical receptor from both reactor units was 15.1 millirems per year. (Tr. 1809.) However, Dr. Parsont further testified that on the basis of his calculation, he

could conclude that the dose to this critical receptor would not be in excess of the required 15 millirems. (Tr. 1812.) This is because the .1 millirems is not a real increment in light of the fact that the calculation did not consider the fact that the child did not consume all his milk from the Leet cows, nor did the calculation consider the decay time in transportation. The Board agrees with Dr. Parsont's analysis, and finds that there is reasonable assurance that the proposed facility complies with this requirement of the Annex to Appendix I.

67 The Board notes that at one cow location, the owner indicated that she planned to have milk-producing goats in the immediate future when Applicant's survey was made in mid-April, and Applicant did not follow-up on this possibility in closer proximity to the hearing. (Tr. 1732-3.) However, as the only regular consumer of the goat milk would be an adult (Tr. 1733-5), the calculated dose through this pathway if it exists, would still be less than the allowable 15 millirems per year for both reactors (Tr. 1813). The fact that there might be some random use of the milk by other non-resident receptors (Tr. 1734-5) does not serve as a basis for calculating a regular annual dose using a receptor other than an adult. Similarly the Leets indicated, when visited by the Staff project manager, Mr. Kane, that there would be occasions when people, possibly including infants, might be visiting and therefore be given some milk. However, there was no use of the milk by an infant on anything other than this possible random basis (Tr. 1907). The Board finds that these possibilities, which always might exist in the real world, are not of sufficient import to detract from the reasonable assurance that the proposed facility meets the requirements of Appendix I. The Board notes, however, that changes in the nature of the population consuming milk from the cows currently present, and changes in feeding practices (both matters relied upon to permit reductions in conservatism) could result in projected doses as high as 42 mrem/yr to the thyroid (Tr. 1825). The Board believes that it is the Commission's intent to detect such changes should they impend (Tr. 1833, 1834). We will therefore impose, as a *condition on any construction permit* which may issue^{16A} the requirement that the Applicant

^{6A}To be specific with regard to environmental and safety *conditions*, the Board directs that, with respect to any construction permit which may issue for this facility the following conditions shall be imposed:

For the protection of the environment:

- (1) The Applicant shall take whatever mitigating actions are necessary, including those expressed in §4.5 of the Final Environmental Statement (FES), dated September 1974, to avoid unnecessary adverse environmental impacts from construction of the facility and associated transmission lines.
- (2) The Applicant will conduct its proposed preoperational monitoring programs as described in §6.1 of its Environmental Report and as summarized in Chapter 6 of the FES including the Staff's recommendations in §6.1.4 of the FES.

Continued on next page.

devise, and the Staff review and approve, a system for checking not only the positions of dairy animals, but also the population drinking milk from those animals and the feeding practices in use in the area in order to assure that, when the time is ripe for consideration of an operating license, and thereafter projected iodine doses can be recalculated to reflect conditions then extant. If site specific parameters previously relied upon change to the extent that the facility no longer complies with applicable regulations, the facility will have to be modified (by equipment or operation) so that it does conform.

68. Because new dose models and source terms had been developed by the Staff in response to the Commission's mandate to present more realistic dose values since the environmental and site suitability phase, the Staff also re-evaluated the radiological dose due to the sweet potato pathway (Parsont Testimony at p. 5). The Staff's analysis reaffirms, and the Board agrees, that any doses from ingestion of sweet potatoes would be insignificant, even using the Staff's very conservative analytical approach.

Continued from previous page.

(3) The Applicant shall establish a control program which will include written procedures and instructions for purposes of controlling all construction activities and additionally the Applicant's program will provide for periodic management audits for the determination of the adequacy of implementation of environmental conditions. Moreover, the Applicant will maintain sufficient records of evidence of compliance with all the environmental conditions.

(4) The Applicant will prepare and record an environmental evaluation of any construction activities not previously evaluated by the Commission, before engaging in such activities. If there is an indication that such activities could result in a significant adverse environmental impact or that the impact is significantly greater than measured in the FES, the Applicant shall provide a written evaluation of such activities and shall obtain the prior written approval of the Director of Nuclear Reactor Regulation for such activities.

(5) If unexpected harmful effects or evidences of serious damage are detected during construction of the facility the Applicant will provide to the Staff an acceptable analysis of the problem and a plan of action to eliminate or significantly reduce such harmful effects or damage.

(6) Construction of the facility may result at times in temporary closing of the roads in the vicinity of the site. The Applicant shall assure that safe and continuous access between St. Francisville, Louisiana and all affected properties is maintained throughout the duration of such closures.

To assure compliance with Appendix I:

(1) During the construction period, the Applicant shall devise, and shall submit to the Staff for review and approval, a system for determining not only the location of local dairy animals (both cows and goats) but for determining local feeding practices and determining the composition of the population drinking milk from those animals, in order to assure that, when the time is ripe for consideration of an operating license, and thereafter, a calculation can be made of iodine dose which will properly account for the dose parameters as they exist at that time.

69 On the basis of the extensive evidence in the record, as summarized above, the Board finds that there is reasonable assurance that the proposed radwaste system preliminary design can meet the numerical design objectives of Appendix I.

III. FINDINGS OF FACT RELATIVE TO THE REMANDED ISSUE OF FUEL UTILIZATION EFFICIENCY

A. Background

70. In a Memorandum and Order dated March 4, 1976 (ALAB-317), the Atomic Safety and Licensing Appeal Board, reviewing the Decision of the Licensing Board on environmental and site suitability related matters in this proceeding, concluded that the record did not adequately support the Licensing Board's ultimate finding that there will be sufficient uranium to fuel the River Bend Facility over its projected lifetime. In conducting its review of the Licensing Board's decision, the Appeal Board specifically affirmed that portion of the decision which quantified the extent of uranium resources. The Licensing Board had found at page 453 of its Decision:¹⁷

As of January 1, 1975, the resources estimated total 3.7 million tons through the \$30/lb price category of which 1,980,000 tons are either in the ore reserve category or the probable potential category

The data for this finding were provided to the Licensing Board by John A. Patterson of the Energy Research and Development Administration. The Appeal Board, at page 12 of its Memorandum and Order held that such data provided to the Licensing Board by an expert could justifiably be taken as a foundation for findings on a projected uranium supply of 1,980,000 tons of U_3O_8

71. However, while the Appeal Board felt that the extent of uranium resources had been adequately defined, that Board was of the opinion that the rate of uranium utilization which could reasonably be expected in the case of the River Bend, and other light water reactors which foreseeably will be operating during the lifetime of River Bend, was not adequately documented in the record and so the record could not support a finding as to that question. The Appeal Board thus remanded to the Licensing Board the question of the rate of uranium utilization with specific direction as to the Licensing Board's inquiry

72. The following specific guidance was provided by the Appeal Board in their Memorandum and Order:

A. The record should establish the processing losses encountered through-

Gulf States Utilities Company (River Bend Station, Units 1 and 2), LBP-75-50, NRCI-75/9, 419 (1975).

out the fuel cycle and the basis for those losses (Memorandum and Order, p. 18).

- B. The record evidence should support extrapolation of existing fuel burnup experience to the projected values which are to be expected during equilibrium cycles (Memorandum and Order, p. 19).
- C. The record should indicate that the analytical methods and assumptions used to calculate fuel burnup and spent fuel enrichment rest on firm empirical grounds and should address the reactor operating experience supporting the results of the calculations made (Memorandum and Order, p. 17).
- D. The record evidence should establish that, based on the empirically verified rate of uranium utilization, projected uranium supplies will be sufficient to cover demand (Memorandum and Order, p. 13).

73. In summary the Appeal Board directed the Licensing Board to review the entire fuel cycle with the view towards establishing and quantifying process loss factors, and to review fuel burnup experience and the support for extrapolation of this experience to equilibrium design values. The Appeal Board further directed the Licensing Board to examine fuel utilization by nuclear power reactors as to the methods used to determine such fuel utilization and the empirical foundation for such methods. Any empirical support establishing the validity of the analytical methods used to determine fuel utilization should include experience from actual operating reactors. Finally based on the above, the adequacy of uranium resources to meet requirements should be determined.

B. Fuel Cycle Process Losses

74. The first step in the fuel cycle is the mining of uranium ore. This ore is then transported to a mill where the uranium contained in the ore is removed. The refined product is called "yellow cake" or U_3O_8 . The first process loss associated with the fuel cycle, therefore, occurs at the mill. The process losses at the mill have ranged from 4.8% to 6.8% during the 11 year period from 1965 through 1975. For the future, process losses from milling uranium ores in the \$30/lb forward cost category should not exceed 10% as a reasonable upper-bound (Wilde, Tr. following 1997).¹⁸

75. In projecting future process losses, the Staff indicated that accurate projections are difficult since recovery rates are based primarily on economic factors. Process losses can be reduced to 1-2% with present technology (Wilde, Tr. 2021). Additionally there is incentive for producers to minimize process loss

¹⁸ The testimony of Mr. R. M. Wilde was corrected on the record at Tr. 2001, and supplemented at Tr. 1996.

factors, as approximately two-thirds of all milling costs are incurred before the milling stage: in exploration, mining and shipment of ore (Wilde, Tr. 2018-19).

76. The Staff's expert witness further testified that the uranium recovery rate was generally independent of the concentration of uranium in the ore. Even if uranium ore grades of .02 percent uranium were processed, recoveries in excess of 90 percent could be expected (Wilde, Tr. 2005-8).

77 The Staff's expert witness examined the trend in recovery rates over the period 1965-1975 as shown in Attachment 1 to his testimony (Wilde, Tr. following 1997) and attached no significance to the downward trend (Tr. 2010). In several cases, recoveries have increased during that interval (Tr. 2013).

78. Process loss factors will vary depending on the mineral characteristics of the uranium ore body. However, technology is available at the present time to permit milling of any material taken from the \$30/lb forward cost category with process losses no greater than 10% (Wilde, Tr. 2020). The Staff's witness indicated that the technology-dependent characteristics of uranium ore bodies are (1) the presence of reduced mineral and (2) the existence of a matrix containing the uranium ore (Tr. 2025). For either type of ore body technology exists which could readily extract the uranium (Tr. 2026-27). And process losses would not be expected to exceed ten percent (Tr. 2019-21).¹⁹

79 The next step in the fuel cycle at which process losses occur is at the conversion stage where uranium in the form of U_3O_8 is converted into uranium hexafluoride (UF_6). A Staff review of industry experience with process losses at this step of the fuel cycle indicates that such losses are running less than 0.5%. (Wood, Tr. following 2041, especially Attachment 1.) This is identical to the process loss factor presented by the Applicant (GSUC Testimony Tr. following 1542, especially Attachment C).

80. The next step of the fuel cycle consists of enriching the natural uranium, thereby raising the content of the uranium isotope U-235 from its natural level of 0.71 weight percent to the enriched level required for reactor fuel. The enriching process takes natural uranium material and results in an enriched quantity of uranium and a quantity of uranium "tails." (Thomas, Tr. following 1974-A, at p. 2.) This step of the fuel cycle is governed by the "Table of Enriching Service Charges, Specifications and Packaging," 38 *Fed. Reg.* 21518 (August 9 1973) referred to in GSUC Testimony Tr. following 1542, especially Attachment A. That table identifies no losses associated with the enriching process.

81. The next step of the fuel cycle at which process losses occur is the conversion of the enriched uranium hexafluoride to ceramic grade UO_2 powder that is subsequently pelletized for insertion into fuel tubes and the final fabrica-

¹⁹The testimony of Mr. R. M. Wilde was corrected on the record at Tr. 2001, and supplemented at Tr. 1996.

tion of fuel elements. Based on operating experience, a reasonable process loss for UF_6 to UO_2 conversion and fuel element fabrication is 1% of the total input to the process (Wood, Tr. following 2041 especially Attachment 1). The more limited information provided by the Applicant indicated a 1.5% process loss for this step (GSUC Testimony Tr. following 1542, especially Attachment D). The Board recognizes the larger data base supporting the 1% loss presented by the Staff and adopts that value. However, even if the loss approached 1.5% as suggested by the Applicant, adequate uranium supplies would still be available.

82. After fuel element fabrication, the fuel elements are shipped to the reactor facility for placement in the reactor vessel and used in the generation of energy. When these fuel assemblies have achieved their design burnup, they are withdrawn from the reactor vessel and stored in the facility's spent fuel pool. These spent fuel assemblies may be reprocessed to recover the remaining uranium contained in them. It is in this step of the fuel cycle that the next process loss is experienced. Industry experience has shown that a 1% loss of uranium in the chemical reprocessing phase of the fuel cycle is reasonable and conservative. This 1% loss is associated with the reprocessing activities resulting in the production of uranyl nitrate. Detailed reprocessing and accountability measurements for fuel from the Dresden 1 and Yankee Rowe reactors are available. These were the first commercial reactor fuels to be reprocessed. For 50 metric tons of uranium reprocessed in the case of Dresden, total measured losses were 0.51%. Of the 49.8 metric tons of uranium processed for Yankee Rowe, totaled measured losses were recovered at the Nuclear Fuel Services Facility during the interval from April 1966 through March 1972; reprocessing losses were well within 1%. (Wood, Tr. following p. 2041, especially Attachment 2.) The more limited information provided by the Applicant also indicated a 1.5% process loss for this step (GSUC Testimony Tr. following 1542, especially Attachment A). The Board recognizes the larger data base supporting the 1% loss presented by the Staff and adopts that value. However, even if the loss approached 1.5% as suggested by the Applicant, adequate uranium supplies would still be available.

83. An additional factor to be considered in discussing the rate of uranium utilization is the effect of Uranium-236. While not properly termed a process loss factor, the U-236 effect does act as an effective process loss by increasing the requirements of uranium. U-236 is produced primarily from a radiative capture of neutrons by U-235. It, in turn, captures neutrons to produce U-237 which decays by beta emissions to Np-237. This is also a strong neutron absorber and produces Np-238. Np-238 then decays to Pu-238, another neutron absorber. The loss of neutrons to these absorbers decreases the amount of burnup that would be obtained on a fuel assembly unless the fuel enrichment were adjusted upward. This increased fuel enrichment increases the requirement for uranium (Wood, Tr. following 2041 at pp. 12-14). U-236 buildup in uranium increases

with the exposure of that uranium fuel. However, the enriching process removes about 50% of the U-236 in recycled uranium and so provides a sink for U-236 to be taken out of the fuel cycle. In the event that uranium is recycled then the net result is that the U-236 concentration in uranium fuel will not increase indefinitely with time and continued recycling of uranium but will approach a limiting value. The concentration of U-236 in reactor fuel will begin at a relatively low value and then increase and stabilize. The maximum value at which the stabilization would occur is about 0.35 weight percent U-236. (De La Garza, Tr. following 1994, especially Figure 1.) Such a concentration of U-236 in reactor fuel may be converted into an effect on increased enrichment and hence uranium requirements. For the equilibrium concentration of U-236 at 0.35 weight percent, U_3O_8 requirements would be increased by 2.4%. The Staff utilized independent calculations to develop this quantification of U-236 effects (Wood, Tr. following 2041 at pp. 12-14). The Applicant concurred that the Staff's value was reasonable (Champagne, Tr. 1960). However, the Applicant quantified the effect of U-236 on uranium fuel requirements at 5%. (GSUC Testimony Tr. following 1542, especially Attachment B.) However, the Applicant did not attempt to verify that value through independent calculations (Champagne, Tr. 1958). For the case without the uranium recycle, U-236 has no effect as it is discarded with the spent fuel (Wood, Tr. following 2041, at pp. 12-14). The Board recognizes the value of the Staff's independent calculation of U-236 effects and adopts it. However, even if the U-236 approached the 5% value presented by the Applicant, adequate uranium supplies would still be available (Wood, Tr. following 2041).

84. The Staff further concluded that there are no effects associated with U-236 which would make the use of recycled fuel containing it operationally unfeasible. Specifically viewed from an operational feasibility viewpoint, the presence of U-236 has inconsequential effects at the enriching plant (De La Garza, Tr. following 1994).

85 The Board finds that the Staff has adequately identified the process losses associated with the nuclear fuel cycle, including the effects of U-236 for the case of uranium recycle, has quantified the effects of those process losses on uranium requirements, and has provided a reasonable basis for that quantification. As actual operating experience served as a basis for the Staff's quantification of process losses, the Staff has been responsive in this regard to the specific directions of the Appeal Board. The information provided by the Applicant provides added confirmation that the Staff's values are reasonable. The Board finds that process loss factors have been adequately identified and quantified with due regard given to actual operating experience.

C. Basis for Projecting Existing Fuel Burnup Experience to Values Anticipated for BWR and PWR Equilibrium Cycles

86. The uranium requirements figures developed by the Staff assume certain

burnups for those fuel batches reaching equilibrium. In the case of a BWR, that equilibrium batch burnup is 27,500 MWD/MTU. In the case of a PWR, that equilibrium batch burnup is 32,600 MWD/MTU (Wood, Tr. following 2041 at p. 21).

87 The Applicant submitted data indicating that such discharge burnups are presently being achieved in several operating reactors (GSUC Testimony Tr. following p. 1542, especially Table I). The Staff also presented data which indicated that discharge burnups, of the magnitudes indicated in the preceding paragraph above, were being achieved in operating reactors (Wood, Tr. following 2041, especially Tables 7, 12, 13, and 20). The Staff also indicated that additional burnup data were available indicating that design burnups of the magnitudes identified in para. 86 above, would be readily achievable in practice (Houston, Tr. 2052-53).

88. The Staff indicated in its testimony that fuel experience to date from operating reactors had identified three fuel failure mechanisms. (Houston, Tr. following 2037 especially Table I.) One major problem which has been identified is that of hydride failures. The problem is due to hydrogenous impurities sealed in the fuel rod, for example, moisture or oil. The remedy to prevent this type of failure has been based on the use of higher purity fuel and/or on the addition of a hydrogen-getter inside the fuel rod to tie up the impurity. Operating experience indicates that these remedies have been successful (Houston, Tr. following 2037 especially Table II). Another major fuel failure mechanism which has been identified is that of fuel densification with cladding collapse. The cause of fuel densification with cladding collapse is the use of an unstable low density fuel in unpressurized PWR fuel rods. The solution to this problem is straightforward. Current fuel is manufactured as a stable type and the fuel rods are internally pressurized to appropriate levels that restrict cladding collapse (Houston, Tr. following 2037). The final problem that has been identified is that of pellet/cladding interaction. As the fuel temperature increases, the pellets expand filling the radial pellet-to-cladding gap, physically locking with the cladding as the gap closes and stretching the cladding as the pellet continues to expand. This interaction can result in failure of the cladding. Reactor operational procedures have been established to minimize or eliminate the occurrence of pellet/clad interaction failures. In addition to the operational procedures, the fuel vendors have introduced new fuel designs which minimize pellet/clad interaction (Houston, Tr. following 2037).

89 Operating fuel performance experience to date has been extensive. Fuel failure mechanisms have been uncovered that have resulted in the premature discharge of power reactor fuel assemblies. The Staff has indicated that practically all of these premature discharges have been due to the three failure mechanisms discussed in para. 88 above. The Staff has indicated that suitable solutions have been developed to eliminate or minimize these failure mechanisms. And the Staff has concluded that fuel performance should be unaffected by these fuel failure mechanisms and that design fuel burnups for

equilibrium cycles, typically 27,500 MWD/MTU for a boiling water reactor and 33,000 MWD/MTU for a pressurized water reactor should be readily achievable and practiced. (Houston, Tr. following 2037.)

90. In response to a question raised by the Board, the Staff's expert on fuel performance provided evidence which supports the conclusion that fuel failure problems have been solved. Early fuel performance indicated that only 75 percent of design energy production was being realized. In 1974, this value reached 91 percent. Of the non-realized energy in 1974, 77 percent was due to three reactors all operating with fuel not designed to present standards. Future performance should continue this improvement (Houston, Tr. 2152).

91 Both the Applicant and the Staff have indicated that the equilibrium burnups, identified in para. 86 above, should be readily achievable in practice. The Board finds that there is adequate record evidence to support extrapolation of existing fuel burnup experience to the projected values indicated in para. 86 above. Burnups of this magnitude have been achieved in practice. The Board further finds that the fuel failure mechanisms which have been identified in the extensive operating experience to date have solutions in practice and that there is reasonable assurance that these problems have been solved and that design equilibrium burnups are achievable.

D. The Analytical Methods Used to Calculate Fuel Burnup and Spent Fuel Enrichment and Their Empirical Bases

92. The calculation of the neutronic behavior of nuclear power reactors is a mature technology. Development of methods by reactor vendors to predict core performance and burnup began in 1955. As a result of this long and diverse activity there are numerous analytical computer codes available for calculating the burnup performance of the core and the fuel isotopic composition. The analytical techniques may be briefly described as follows:

- a. A MUFT type code with some modification is generally used by all nuclear designers to calculate the behavior of neutrons as they slow down in the core lattice. Phenomena such as fast fission, resonance absorption, etc. are taken into account. Generally a neutron spectrum is generated and then effective flux weighted cross-sections are generated for use in subsequent calculations (Wood, Tr. following 2041, at pp. 2-3).
- b. The thermal neutron spectrum (0 to about 1 ev) in the lattice must be calculated and take into account the spacial flux distribution in the fuel cell and determine effective cross sections. Computer codes such as THERMOS or SOFOCATE are commonly used (Wood, Tr. following 2041 at p. 3).

- c. The procedures outlined in a. and b. above are repeated for various points in the life of the fuel. LEOPARD is a typical example of a computer code which performs this function. The results are few group cross-sections as a function of burnup for each important isotope and the isotopic composition of important nuclides fission products. (Wood, Tr. following 2041, at pp. 3-4.)
- d. Once the burnup dependent cross sections for all of the fuel compositions and other materials, such as water holes, instrument thimbles, burnable poisons, etc., have been developed as a result of the procedures, described in a., b., and c. above, a core spacial burnup design of the present generation of reactors is PDQ-7 HARMONY. The result of such a calculation is a burnup of each fuel assembly over its lifetime as well as the determination of batch and core burnups and calculation of spent fuel compositions (Wood, Tr. following 2041 pp. 4-5).

93 Critical experiments which are zero or low power (less than 10 kw) measurements performed under laboratory conditions provide verification of analytical methods used to calculate fuel burnup and fuel isotopic compositions. Numerous critical experiments are reported in the literature.²⁰ Analysis of such critical experiments using those analytical techniques which are presently in use by reactor vendors to design fuel for commercial nuclear power plants has indicated the ability of these analytical techniques to predict critical parameters and thereby has provided verification of those techniques (Wood, Tr. following 2041, at pp. 6-7).

94. Further, data from operating reactors relating to fuel burnup and fuel isotopic composition have also been analyzed and compared with the results achieved employing the analytical techniques discussed above. In the area of fuel isotopic composition, the exhaustive Yankee Core Evaluation Program,²¹ carried out on the Yankee Rowe reactor provided verification that analytical techniques are adequate in this area. Similar measurements have been made of the isotopic compositions in numerous boiling water reactor fuel rods and agreement between calculation and the measurement of isotopic composition was

²⁰ See typically, L. E. Strawbridge, F. F. Barry, "Criticality Calculations for Uniform Water-Moderated Lattices, NUC. SCI. and ENG. 23, pages 58-73 (1965); R. D. Leamer, *et al.*, "Pu02 Critical Experiments," WCAP-3726-1, (July 1967); W. J. Eich, *et al.*, "Evaluation of a Computational System Applicable to the Nuclear Analysis of Critical Experiments and Power Reactors," WCAP-3269-53, (June 1965). (Referenced in Wood Testimony following Tr. 2041, at pp. 6-10.)

See A. P. Suda, L. Chajeon, J. J. O'Boyle, "Yankee Core Evaluation Program Summary Report," WCAP-6088 (August 1969). (Referenced in Wood Testimony following Tr. 2041, at pp. 6-10.)

within the experimental error of plus or minus 1%.²² In the area of fuel burnup, comparisons have also been made between data from actual operating reactors and results obtained by computation from the analytical techniques discussed above.²³ Data clearly demonstrating the validity of burnup calculations are the soluble boron burnup data presented in the semiannual operating reports for the Surry reactors. Data for Surry Unit No. 1, cycle 2 and Surry Unit No. 2, cycle 1 (Attached as Figures 2 and 3 to the Testimony of Mr. P M. Wood, Tr. following 2041) indicate that the observed and predicted cycle lengths are almost exact (Wood, Tr. following 2041, at pp. 6-9). The Staff identified certain uncertainties, associated with the calculation of fuel burnup and fuel composition. Burnup calculations can be expected to be within $\pm 5\%$, resulting in a $\pm 3\%$ effect on uranium requirements for the uranium recycle case and a $\pm 5\%$ effect in the case of no recycle. Calculations of compositions can be made to within 3% for U-236, Pu-239 Pu-240 and Pu-241 and within 1% for U-238. These latter uncertainties would effect uranium requirements only for the case of uranium recycle and would have an effect of less than 1% on those requirements (Wood, Tr. following 2041 at pp. 9-10.)

95 While not describing the analytical methods employed, the Applicant did present information relative to the ability of analytical methods to predict actual reactor burnups and fuel compositions. The Applicant compared actual versus predicted burnups for several operating reactors (GSUC Testimony Tr. following 1542, especially Table I.A.). The actual burnups listed in Table I.A. were measured by means of a plant heat balance to yield total core energy output with allocation to batches done by means of in-core energy flux maps (Parkos, Tr. 1570-71). Predicted batch burnups were calculated with the most current General Electric analytical techniques (Tr. 1609-10). Finally the Applicant's expert witness indicated that isotopic analyses were performed on pellet samples for the Dresden-1 reactor (Parkos, Tr. 1569-70). The experimental burnups so determined were compared with calculated burnups and agreement was to within 5% (Parkos, Tr. 1559).

96. The Staff has described the analytical methods and assumptions used to calculate fuel burnup and spent fuel enrichment. The Staff has indicated that these analytical techniques rest on empirical data and are verified by actual

²²J. R. Toronto, "A Comparison of Measured and Calculated Isotopic Compositions as a Function of Burnup in a 1.5 wt% PuO₂-UO₂, Light-Water Moderated Fuel Assembly" TRANS-AM. NUCL. SOC. 9, p. 293 (1966). (Referenced in Wood Testimony following Tr. 2041, at pp. 6-10.)

²³See R. L. Hellens, "The Physics of PWR Reactors," p. 3. CONF 720901, Kiamesha Lake, New York, September 12-15, 1972; R. L. Crowther, "Physics Measurements of BWR Reactors and Comparison With Theory," p. 114, CONF 720901, Kiamesha Lake, New York, September 12-15, 1972. (Referenced in Wood Testimony following Tr. 2041, at pp. 6-10.)

operating reactor data. The Applicant has provided additional information confirming the Staff's findings. The Board finds that the Staff has adequately described the analytical methods used by reactor vendors and has demonstrated that these methods are verified by empirical data and actual reactor operating experience.

E. Uranium Resources are Adequate to Meet Uranium Requirements

97 The Applicant presented extensive data on the issue of uranium fuel utilization efficiency. The Applicant's data were presented in the form of duty factors determined from actual operating data. From the average cycle-by-cycle performance of the 8 boiling water reactors and the 5 pressurized water reactors contained in Table I of GSU Uranium Testimony as supplemented in GSU Supplemental Uranium Testimony the Applicant made a projection, using the Kavanagh equation (Tr. 1912-13), of "lifetime average duty factors" for boiling water and pressurized water reactors. For this lifetime average calculation, the average batch duty factors shown for the fifth cycle (See Figure 3 in GSU Supplemental Uranium Testimony) were conservatively assumed to be the equilibrium duty factor. The fifth cycle is the largest number of cycles completed for these reactors, but it represents a situation still short of reaching equilibrium. This assumed equilibrium duty factor, along with the actual average duty factors for the first four cycles of operation, were used to obtain an estimate of the 30-year "lifetime average duty factor." Since only burnup values which have been actually achieved were used, this eliminates reliance on projections of burnup and, at the same time, is conservative (Figure 3 of GSU Supplemental Uranium Testimony).²⁴ For the case of uranium recycle, duty factors for both PWR's and BWR's were around 35×10^6 Kwhre/STU₃O₈. For the no-recycle case, duty factors for both PWR's and BWR's were around 25×10^6 Kwhre/STU₃O₈.

98. The Staff also presented duty factor based on actual operating reactor experience (Wood, Tr. following 2041 especially Tables 3-21 Figures 5-7 and Staff's Exhibit 3). The Staff indicated that these data did not include process

²⁴ If the predicted equilibrium burnups for light water reactors were utilized, it can be seen from Figure 3 of GSU Supplemental Uranium Testimony that lifetime average duty factors of 35×10^6 kwhe/ST U₃O₈ for PWRs and 35.3×10^6 kwhe/ST for U₃O₈ for BWRs would be achieved. The actual values of duty factors used in the Applicant's analysis were 32×10^6 kwhe/ST U₃O₈ for PWRs and 35×10^6 kwhe/ST U₃O₈ for BWRs (Tr. 1924). Comparing the duty factors utilizing predicted equilibrium data to the duty factors utilized in the analysis, and considering the ratio of BWRs to PWRs (GSU Supplemental Testimony at p. 4), the use of such equilibrium data would result in a decrease of 6% in uranium requirements for the 236 reactors in the analysis.

loss effects or the effect of U-236 and was being presented for information purposes only (Wood, Tr. 2164). These data indicated that high duty factors were being readily achieved in practice and that duty factors in excess of 38×10^6 Kwhre/STU₃O₈ are achievable for recycle equilibrium BWR batches and that duty factors in the range of 34×10^6 kwhre/STU₃O₈ are achievable for recycle equilibrium PWR fuel batches (Wood, Tr. following 2041, pp. 17-19).

99 Both the Staff and Applicant indicated that the duty factor approach to the question of uranium fuel utilization had drawbacks. Both the Applicant (Champagne, Tr. 1942) and the Staff (Wood, Tr. 2044) indicated that the duty factor approach did not properly consider the effects of residual uranium for the duration of the forecast period. While the Staff indicated that it was presenting duty factor data for information purposes and to be responsive to questions raised by the Board, the Staff further indicated that it was not relying on the duty factor approach to resolve the remanded question of uranium fuel utilization (Wood, Tr. 2164). The Staff did not take the duty factor approach for three reasons. First, the duty factor concept has an inherent drawback in the treatment of residual uranium as mentioned above. Second, while the Staff had acquired a large amount of operating data, it became apparent upon review that this data was in "raw" form and could not be used with confidence. A herculean effort would have been required to reduce the data to usable form, on the order of many many months (Wood, Tr. 2164). In addition, the Staff's expert was of the opinion that an adequate data base already existed (Wood, Tr. 2164). Finally the Staff had at its disposal the NUFUEL computer program which permitted projecting U₃O₈ requirements in terms of actual tonnage. The most logical approach for the Staff was to empirically verify the nuclear fuel cycle assumptions of that computer code. The Board agrees that the duty factor approach is not an especially fruitful one for making long-term predictions. The fact that uranium requirements vary stongly with the age of a reactor means that the requirements of a mixed and growing population cannot be well described by a single "efficiency" number. Indeed, only by defining some suitable average (as the Applicant did) can such an approach be used at all, and that can be done only after a treatment of individual cases extensive enough to predict requirements without generating the average. The Board does, however, take note that when the Staff's and the Applicant's diverse approaches are converted to a common duty factor basis they agree well. That lends confidence to the validity of either approach.

100. Trusting that verification of the theoretical and empirical bases for the NUFUEL forecast had been verified by its approach, the Staff used that forecast to predict requirements for a total of 236 reactors consisting of approximately 67 percent PWRs and 33 percent BWRs (Wood, Tr. 2104).

101 The ERDA forecast was produced by running the computer program NUFUEL (Wood, Tr. following 2041, at p. 14). The Staff indicated that it scrutinized the fuel management design data that the NUFUEL code used in

producing the ERDA forecast. That nuclear fuel design data was found to be reasonable and typical of the fuel design values which are generated by the analytical methods and techniques discussed by the Staff's witness Wood (Tr. following 2041 at p. 14). Equilibrium batch burnup values used in the NUFUEL code were 27,500 MWD/MTU for a boiling water reactor and 32,600 MWD/MTU for a pressurized water reactor (Wood, Tr. following 2041 at p. 21).

102. The Staff verified that the process loss factors used in the NUFUEL code were in agreement with process loss factors that the Staff established in their direct testimony (See IIIB above). In this review the Staff identified that one process loss factor had not been included in the NUFUEL program. This was the process loss at the U_3O_8 to UF_6 conversion stage (Wood, Tr. following 2141 at pp. 11-12).

103 The Staff indicated that the ERDA forecast, which utilized validated process loss factors with the exception of the conversion process loss factor indicated in the preceding paragraph and validated fuel design data, projected a U_3O_8 requirement of 1,240,000 short tons to fuel the population of reactors which were projected to exist over the lifetime of the River Bend reactors assuming the recycle of uranium (Wood, Tr. following 2041 at p. 21). For the case of uranium recycle, the Staff conservatively adjusted this uranium requirement upward to account for various adjustments and uncertainties. The Staff added an adjustment for the omitted process loss conversion factor increasing requirements by 0.5 percent. A further increase of 2.4 percent was made to account for U-236 effects. A further increase in requirements of 4 percent was made to account for burnup and fuel composition uncertainty effects resulting in total requirements of 1,328,000 short tons of U_3O_8 (Wood, Tr. following 2041, especially Table 23a).

104. For the case where uranium is not recycled, the Staff indicated that the ERDA forecast requirements were conservatively adjusted upward by 20.5 percent to account for the added uranium requirements in the no-recycle case. The adjustment factor was developed from a composite model with PWR and BWR fuel characteristics weighting the model 67% for PWR's and 33% for BWR's (Wood, Tr. 2104). The model gave the total U_3O_8 requirements for a 30-year life with and without uranium recycle and not taking credit for the residual uranium at the end of the forecast period (Wood, Tr 2046). An additional increase of 5 percent was made to account for burnup uncertainties resulting in a total uranium requirement for the no-recycle case of 1,577,000 short tons U_3O_8 (Wood, Tr. following 2041, especially Table 23a).

105. The Staff indicated that the quantity of total uranium available for use in nuclear reactor fuel, namely 1,980,000 tons of U_3O_8 ²⁵ had not been adjusted to consider losses in material at the mill site where the ore is refined to

²⁵This is the quantity of uranium available which the Appeal Board affirmed in its March 4, 1976 Memorandum and Order.

yellow cake (Wood, Tr. following 2041, at p. 23). The Staff's witness Wilde had testified that such mill losses may conservatively be taken at 10 percent (see 74 and 75 above). Hence, uranium resources available for use as nuclear reactor fuel must be adjusted downward by a factor of 10 percent resulting in a uranium availability of 1,782,000 short tons of U_3O_8 (Wood, Tr. following 2041, especially Table 23a).

106. In the case of uranium recycle, the Staff indicated that uranium resources available exceeded the uranium requirements projected by the ERDA forecast. The Staff indicated that excess uranium available amounted to 454,000 short tons of U_3O_8 . In the case of no uranium recycle, the Staff again indicated that uranium resources available exceeded the uranium requirements projected by the ERDA forecast as adjusted for the case of no-recycle. In that instance, excess uranium available amounted to 205,000 short tons of U_3O_8 (Wood, Tr. following 2041 especially Table 23a).

107 The ERDA forecast which was used by the Staff in developing uranium requirements assumed an enrichment plant tails assay of 0.30% U-235. The Staff presented testimony indicating that 0.30% U-235 is a reasonable and prudent tails assay and would not understate the U_3O_8 requirements for the population of 236 reactors used in the ERDA forecast. In his extensive testimony (Tr. following 1974-A), Mr. David C. Thomas, Division of Nuclear Fuel Cycle and Production, U. S. Energy Research and Development Administration, discussed four distinct cases which considered the relevant variables such as construction of additional enrichment capacity through either private or governmental means and the generic use of plutonium in light water reactors. While it is not possible to isolate a definite value on such a complex of parameters which could affect enriching plant capacity Mr. Thomas concluded that 0.3% tails was reasonable and prudent and would not understate natural uranium requirements (Tr. following 1974-A, at p. 22). Furthermore, Mr. Thomas concluded that the assumption of no uranium recycle would not affect his conclusion (Tr. 1983).

108. At the hearing, the Staff's witness Wood indicated (Tr. 2140) that his figures did not take into account the effect on uranium requirements of premature discharge of fuel on those occasions when fuel is prematurely withdrawn for reasons other than fuel failure.

109 Witness Wood testified that a utility might consider withdrawing fuel prematurely when faced with a situation involving a general plant shutdown for maintenance or associated reasons prior to the fuel having achieved its design burnup (Wood, Tr. 2061). The utility might also consider prematurely withdrawing fuel when that fuel contained insufficient energy to assure the utility that the reactor could function continuously during intervals of peak load (Wood, Tr. 2060).

110. Mr. Wood testified that experiences of this type to date had been minimal. Of the 67 batches of PWR fuel catalogued in Tables 3-21 of Mr. Wood's testimony only 4 of them had been discharged early for non-fuel failure related

reasons (Wood, Tr. 2147). In these cases, the fuel experienced approximately 10 percent less burnup so that the total effect of this consideration on fuel burnup and hence on uranium requirements would be in the range of 0.7 percent (Wood, Tr. 2147). The Staff witness indicated that the effects of such premature batch withdrawals would have very little effect in the case of uranium recycle because the spent fuel would still have value and could be used to reduce uranium requirements (Wood, Tr. 2161). In the case of no uranium recycle, Staff witness indicated that a 1 percent effect on uranium requirements from this practice would be conservative (Wood, Tr. 2159). To reach this 1 percent figure, one would have to assume that 10 percent of all utilities consistently engaged in a practice of withdrawing their fuel early with burnups reduced by a factor of 10 percent (Wood, Tr. 2159). The Staff witness concluded that such an industry pattern clearly represented an upper bound. The Board concurs that this effect is small and could be adequately covered by the excess uranium available.

111. The Applicant indicated that an important parameter in the calculation of duty factor for a particular batch of fuel was the plant efficiency defined as the net electrical output divided by the core thermal output (Champagne, Tr. 1865). The Staff also indicated that it calculated duty factors using appropriate plant efficiencies, taken for the appropriate plant from NUREG-0032, "Fuel Performance of Licensed Nuclear Power Plants Through 1974" January 1976 (Wood, Tr. 2111 State Exhibit 1976-5). While the Staff did not calculate duty factors (except provide a comparison with the Applicant's results) and hence did not use thermal efficiency directly in its predictions, the Staff's calculations, based as they are upon a projection of installed *thermal* capacity (when society's needs are obviously for electrical capacity) would be influenced if it became obvious that the thermal-to-electrical conversion efficiency of reactors in general was far poorer than their designers expected.

112. During the May hearings, the State inquired as to experience from operating nuclear plants as to the conversion efficiency. In this regard, the State introduced into evidence a document prepared by the Staff, with additional material added by the State (State Exh. 1976-5). The first two columns added to this document by the State related to the startup date for each facility listed thereon and the page in NUREG 75/020-8, the August 1975 version of the Staff's so-called "Gray Book," from which the information in the third column was derived. The third column represented a figure for "Cumulative Thermal Efficiency (net MWe/MWt %)" for each reactor in the exhibit. The State took the gross thermal energy generated in megawatt hours thermal for each facility as listed in this edition of the Gray Book and divided it into the net electrical energy generated (megawatt hours electric) from startup through July 1975 to provide "thermal efficiency" values, which are generally less than the design efficiency ratings listed on the last column of this exhibit.²⁶

²⁶These values are determined by dividing the licensed maximum thermal power level into the corresponding net electrical power level.

113. The numbers which the State called "cumulative thermal efficiency" do not seem to the Board to be a reliable basis for determining the conversion efficiency for the 236 reactors under discussion as utilized in the Kavanagh equation, nor do they seem useful for predicting thermal capacity requirements from projected electrical demand. They do not recognize that the limited data presented are not representative of the operation of the 236 reactors over their lifetime. Certain of the reactors in the table have been operated, for various reasons, under reduced power operating restrictions. The new generation of power reactors of the River Bend design, have not yet, in any case, reached maturity. Hence, the data presently available reflect the effects of startup, testing and early problems, including operating limitations imposed on certain of the plants due to fuel problems, all of which give a distorted impression of efficiency over the lifetimes of the plants. The State, of course, questions whether plants of the future will be more efficient, or, indeed, will operate with fewer restrictions and problems.

114. Although design efficiency may not be fully achieved by some of the population of 236 reactors under discussion for various reasons, it can nevertheless be seen from the example of Oyster Creek in State Exh. 1976-3 that a nuclear generating unit can reach or exceed its calculated design efficiency.

115. Considering all factors, the Board finds it reasonable to project that the conversion efficiencies will improve over the values advanced by the State which rely on atypical conditions. The Board also finds it is reasonable to predict that the conversion efficiency of the population of the 236 reactors will substantially attain the value utilized by the Kavanagh equation.

116. However, if an average of the State's column of numbers headed "Cumulative Thermal Efficiency" in State's Exh. 1976-5 is taken, the result is 31.1%.²⁷ The Board believes that while it is appropriate to use 33% as conversion efficiency value, for the sake of completeness and conservatism, the Board can consider the effect of using the State's value of 31.1%. Even if the value 31.1% were used, this would only increase the projected requirements of U_3O_8 by 6.1%, an increase which would not affect the Board's conclusions.

117. The Applicant's approach to the question of uranium fuel utilization through the concept of duty factor provides a check on the conclusions reached by the Staff. The Applicant's approach was limited to the case of uranium recycle. Using the average duty factor discussed above, the Applicant calculated uranium requirements considering the appropriate mix of 236 reactors used in the ERDA forecast and applying appropriate adjustments for losses and U-236

²⁷ Taking the energy efficiency of each, adding them up and dividing by the number of reactors is not, technically the correct way of determining the true average conversion efficiency. For a true average, the total electrical output of all reactors should be divided by the total thermal production.

effects (Champagne, Tr. 1962). The Applicant developed uranium requirements of 1,520,000 short tons U_3O_8 . The Staff developed requirements of 1,328,000 short tons U_3O_8 (Wood, Tr. following 2041 especially Table 23a.) However, the Applicant employed a capacity factor of 75% (Champagne, Tr. 1962). The Staff employed a capacity factor of 66% (Wood, Tr. 2167). Reducing the Applicant's uranium requirements by the appropriate ratio, i.e., 66/75 results in a requirement of 1,337,600 short tons, which agrees well with the Staff's value. The Board finds that this independent check again lends considerable confidence to both approaches.

118. The State takes the position that the "Applicant and Staff have failed to satisfy the burden imposed upon them by the Appeals Board (ALAB-317 p. 16, 17 19) to provide sufficient data with respect to actual reactor operating experience to confirm the validity of assumptions employed to determine the lifetime uranium requirements of the River Bend reactors and those other U. S. reactors (now operating, in construction and planned) which must share with them the same supply"²⁸ The State, on the other hand, also asserts "Neither is there record evidence to support a conclusion that there will *not* be sufficient uranium to fuel the River Bend facility over its projected lifetime."²⁹

119 The Board cannot accept the State's position for several reasons. The first is that, while the State makes general assertions concerning what it views as deficiencies in the record, the memorandum attached to its findings only discusses alleged deficiencies in the Staff presentation. As discussed below the Board has determined that these assertions are not well taken. Further, there is no mention in the memorandum³⁰ of any deficiency whatsoever, in the evidence presented by the Applicant regarding the remanded matter. As the Board has previously discussed, the Staff and Applicant used different approaches in presenting and validating the empirical bases for uranium utilization efficiency. Even if the State were correct on every point it attempts to make regarding the Staff analysis (which the Board is convinced it is not), it still does not impugn the correctness of the data, analysis, and results presented by the Applicant. Therefore, even if we were to accept the memorandum at face value, the Applicant's independent analysis would form substantial basis, which is not dependent on the ERDA program, to support the projection that there will be an adequate supply of uranium for reactors in operation, under construction, or planned, as required by the Appeal Board's remand.

120. Turning now to the State's observations concerning the Staff presentations, we do not share the State's concern that sufficient empirical information

²⁸ The State of Louisiana's Proposed Findings of Fact and Conclusions of Law Relative to Sufficiency of Uranium Resources (State Uranium Findings at p. 1).

²⁹ Id. at p. 2.

³⁰ Memorandum of the State of Louisiana in Support of Its Proposed Findings of Fact and Conclusions of Law Relative to the Issue Heard on Remand.

has not been placed on the record to support the Staff's analysis. The Board finds that the Staff has shown that the values of burnup as input to the ERDA program are reasonable and based on verified empirical data. In its memorandum, the State chides the Staff for not using the data from operating reactors directly. While the Staff admittedly did not use these data directly to verify the ERDA program, (the material was gathered only to respond to a Board question) the data, when corrected for potential and actual fuel failures, appear to be within about 5% of the burnups predicted in the program (Tr. 2094-5, 2164). The Staff relied on the verification of reactor design calculations to verify burnups, inasmuch as that process had been ongoing for a number of years and much information in such regard was at the Staff's disposal, whereas, the operating data collected was in raw form and not readily usable by it to confirm the ERDA program (Tr. 2164). The Board finds the method used by the Staff to be acceptable.

121. In summary the Board believes that its discussion above has disposed of the matters raised in the State's findings and memorandum. The State has brought forth no record evidence which raises a single question as to the methodology or data used by the Applicant, nor which raises any substantial question as to the Staff analysis. As discussed, immediately below the Board has decided the remanded issue in favor of the Applicant.

122. In conclusion, the Board has examined the matter remanded by the Appeal Board concerning fuel utilization efficiency and the empirical bases to support the projections of uranium requirements for reactors in operation, under construction or planned, including the River Bend units, and reaffirms its conclusion that the resources of uranium are sufficient to supply the 236 reactors under consideration. The Board is satisfied that the determination of fuel efficiency utilization used in this analysis is reasonable and based on sound empirical evidence.

IV CONCLUSIONS OF LAW

123 In the Partial Initial Decision issued on September 2, 1975 the Board made findings of fact and determinations and reached conclusions of law regarding environmental and site suitability matters. The Board has considered these earlier findings, determinations, and conclusions, as well as all of the documentary and oral evidence of record in this proceeding. This consideration and a review of the entire record, including that portion of the record created since the issuance of the Partial Initial Decision, have led that Board to the foregoing discussion and findings of fact, and to the conclusions of law stated hereinafter.

124. The Board concludes that the application and the record of the proceeding contain sufficient information and that the review of the application by the Staff has been adequate to support the following.

125 We find that:

A. In accordance with the provisions of 10 CFR §50.35(a):

(1) The Applicant has described the proposed design of the facilities, including, but not limited to, the principal architectural and engineering criteria for the design, and has identified the major features or components incorporated therein for the protection of the health and safety of the public;

(2) Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;

(3) Safety features or components, if any which require research and development have been described by the Applicant and the Applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components; and

(4) On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facilities, and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facilities can be constructed and operated at the proposed location without undue risk to the health and safety of the public.

B. The Applicant is technically qualified to design and construct the proposed facilities.

C. The Applicant is financially qualified to design and construct the proposed facilities.

D. The issuance of permits for construction of the facilities will not be inimical to the common defense and security or to the health and safety of the public.

E. Subject to the conditions as set forth in the Partial Initial Decision, dated September 2, 1975 as supplemented herein and subject also to the circumstances noted in ¶4 above:

(1) The Environmental review performed by the Staff (pursuant to the National Environmental Policy Act of 1969) and set forth in the Final Environmental Statement has been adequate *except* for the evaluation of the environmental impact of fuel reprocessing and waste management.

(2) Sections 102(2) (A), (C) and (E) of NEPA and 10 CFR Part 51 of the Commission's Regulations have been complied with except as noted in (1) immediately above.

(3) Because of the pendency of Commission action noted in ¶4 *supra*, the Board is unable to strike a final environmental balance in this case as would be required by 10 CFR 51.

V ORDER

126. IT IS ORDERED, in accordance with 10 CFR §2.760, §2.762, §2.764, §2.785 and §2.786 that this Partial Initial Decision shall become effective immediately and shall constitute with respect to the matters covered therein the final action of the Commission forty-five (45) days after the date of issuance hereof, subject to any review pursuant to the Commission's Rules of Practice. Exceptions to this Partial Initial Decision may be filed by any party within seven (7) days after service of this Partial Initial Decision. Within fifteen (15) days thereafter [twenty (20) days in the case of the Staff] any party filing such exceptions shall file a brief in support thereof. Within fifteen (15) days of the filing of the brief of the appellant [twenty (20) days in the case of the Staff] any other party may file a brief in support of, or in opposition to, the exceptions.

IT IS SO ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Frederick J. Shon, Member

Thomas W Reilly Charman

[Dr. Hooper concurs but was
unavailable for signature.]

Issued at Bethesda, Maryland
this 2nd day of September, 1976.

[Appendices A & B are omitted from this publication but are available at NRC's
Public Document Room, Washington, D.C.]

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-33

ATOMIC SAFETY AND LICENSING BOARD

John M. Frysiak, Chairman
Frank F. Hooper
Gustave A. Linenberger

In the Matter of

Docket Nos. 50-440
50-441

DUQUESNE LIGHT COMPANY
OHIO EDISON COMPANY
PENNSYLVANIA POWER COMPANY
THE CLEVELAND ELECTRIC
ILLUMINATING COMPANY and
THE TOLEDO EDISON COMPANY

(Perry Nuclear Power Plant,
Units 1 and 2)

September 10, 1976

The Licensing Board authorizes amendments to applicants' existing limited work authorizations.

TECHNICAL ISSUE DISCUSSED: Pool dynamic loads on the design of the Mark III containment system.

**SUPPLEMENTAL PARTIAL INITIAL DECISION
AMENDING PREVIOUSLY-ISSUED LIMITED
WORK AUTHORIZATION**

APPEARANCES

Gerald Charnoff, Esq., and Ernest Blake, Esq., on behalf of Applicants.

Evelyn Stebbins, on behalf of Intervenor, Coalition for Safe Electric Power.

Gregory Lewis, Esq., on behalf of the U.S. Nuclear Regulatory Commission.

I. INTRODUCTION AND BACKGROUND

1. This Supplemental Partial Initial Decision Authorizing Issuance of Further Limited Work Authorization concerns requests by Duquesne Light Company Ohio Edison Company Pennsylvania Power Company The Cleveland Electric Illuminating Company and The Toledo Edison Company (hereinafter collectively referred to as "Applicants") for further limited work authorization¹ related to the Perry Nuclear Power Plant, Units 1 and 2. Applicants presently are doing work at the Perry site under LWA-1 and LWA-2 limited work authorizations previously issued subsequent to this Board's prior Partial Initial Decisions.²

2. The Applicants now seek further authorization from this Board, pursuant to 10 CFR §50.10(e) (3) to enable commencement of construction work, within the limitations of this provision, involving installation of all steel and concrete structural foundations below plant grade level - 620'-6" - including necessary subsurface preparation, for structures, systems and components of safety class structures. Included structures are: (1) reactor building (including the containment wall), (2) control building, (3) auxiliary building, (4) fuel handling/intermediate building, (5) radwaste building, (6) steam tunnel building, (7) off-gas building, (8) emergency service water pumphouse and (9) intake and discharge tunnels.³

3. As a result of outstanding questions regarding criteria pertaining to the off-gas building, (7) above, existing between the NRC Staff (Staff) and the Applicants, the Applicants have determined to postpone any related construction activities contemplated by their requested LWA amendment until these matters can be resolved.⁴ Consequently construction activities related to the off-gas building as were requested by the Applicants in their letters of May 24, 1976 and July 13, 1976, are expressly excluded from this decision.

4. Pursuant to a Board Memorandum and Order of July 1, 1976, and Notice of Hearing issued on July 2, 1976, a public hearing was held on July 26, 1976, in

The authorization involved would be an amendment to an existing LWA-2 and would not be a new LWA (proscribed by the NRC Policy Statement of August 13, 1976). The activities proposed here consist principally of pouring concrete in foundations that have already been excavated, lined with surfacing concrete, and had rebar installed in place. The intake tunnels are essentially an underground activity. All of the proposed activities could have been performed under the existing LWA-2 had the Applicant so requested. The record is clear that these limited activities considered by themselves have no significant environmental impacts.

LBP-76-17 NRCI-76/5 (May 10, 1976); LBP-75-73, NRCI-75/12 946 (December 31, 1975); LBP-75-53, NRCI-75/9 478 (September 9 1975), *vacated in part*, see ALAB-298, NRCI-75/11 730 (November 6, 1975); LBP-74-76, 8 AEC 701 (October 20, 1974); LBP-74-69 8 AEC 538 (September 16, 1974).

Applicants' letters dated May 24, 1976 and July 13, 1976 (Tr. following 2998 and 3002, respectively).

⁴Tr. 2989.

Cleveland, Ohio, to consider Applicants' request for additional limited work authorization. Prepared testimony was presented by Applicants and by the NRC Staff as follows:

Applicants' Supplemental Testimony of Ian McInnes and William Gustafson Related to Limited Work Authorization Activities, *incorporated into the record following Tr. 2996* (hereinafter referred to as "McInnes and Gustafson Testimony").

Cleveland Electric Illuminating Company letter to Director of Nuclear Reactor Regulation, dated May 24, 1976, *incorporated into the record following Tr. 2998* (hereinafter referred to as "May 24, 1976, LWA Request").

Cleveland Electric Illuminating Company letter to Director of Nuclear Reactor Regulation, dated July 13 1976, *incorporated into the record following Tr. 3002* (hereinafter referred to as "July 13, 1976, LWA Request").

Revised "Figure 1" to Cleveland Electric Illuminating Company letter to Director of Nuclear Reactor Regulation of July 13, 1976, *incorporated into the record following Tr. 3015*.

Supplemental Testimony of the NRC Staff on the Amended LWA-2 Request for Work Activities Related to the Construction of Safety Related Buildings and Structures by M.D. Lynch, *incorporated into record following Tr. 3031* (hereinafter referred to as "Lynch Supplemental Testimony").

No testimony was offered by the Intervenor Coalition for Safe Electric Power; the Ohio Power Siting Commission did not participate. Limited appearance statements were made by Mr. Phillip T Braff, President, Sahara Mobile Home Park and Sales, Madison, Ohio; Mr. J Paul Cotton of Geneva, Ohio; and Mr. Michael D. Coffey Lake County Commission, Lake County Ohio.⁵ Proposed findings of facts were filed by Applicants, Staff, and Intervenor, Coalition for Safe Electric Power. The Applicants also filed a response to Intervenor's proposed findings of fact.

5. The Staff advised the Board of the status of its safety review indicating that, except for its review of the proposed Class A fill, there was no change. The Staff has completed its review of the characteristics of Class A fill and its placement for the Perry facility concluding that the proposed fill is acceptable on the basis of its physical characteristics and design specifications, including the applicable provisions for quality assurance. The Staff further stated its finding

⁵ Tr. 2979-86, 3058-59.

that the Applicants had satisfied the requirements of Condition No. 7 of the LWA, issued on December 3, 1975 ⁶

II. FINDINGS OF FACT

6. There are two significant safety-related issues that affect the work activities requested in the Applicants' letters of May 24 and July 13, 1976. The first is the matter of pool dynamic loads on the design of the Mark III containment system; the second is the seismic design criteria for the off-gas system.⁷

Since the Applicants have determined to postpone their proposed activities related to the off-gas building, only the first of these issues needs to be addressed here.

7 In Section 6.2.1.7 of the Perry Safety Evaluation Report (SER), the Staff identified a generic issue related to the dynamic loadings on the various components and structures in and above the surface of the suppression pool of the Mark III containment system. This includes those structures that confine the suppression pool. The two principal phenomena that could result in a significant dynamic loading of structures located in and above the suppression pool were discussed in Section 3.1 of the Staff's April 13 1976 testimony ⁸ The first of these phenomena is the pool response to a postulated loss-of-coolant accident (refer to Section 3.1.1 of April 13 1976 testimony).

The Staff's concern in this matter is that acceptable design criteria for the Mark III containment system be adopted by the Applicants as early as practicable. It is the Staff's position that the pool dynamic loads may represent limiting structural design criteria for the Mark III containment; and, therefore, the design of the affected structures should accommodate the suppression pool dynamic loads. The principal structures in the reactor building affected by these loads are:

- (1) Structures immediately above, or partially submerged within, the suppression pool (e.g., the steam tunnel, the TIP station, and the support columns);
- (2) Piping systems, gratings, support platforms, and other small structures;
- (3) The free standing containment vessel in the vicinity of the suppression pool; and
- (4) The structural connections that join the shield building, the free standing containment vessel, the support columns, the drywell wall and the weir wall with the base mat.

Of these four categories of structures, all but the second type will be con-

Lynch Supplemental Testimony at 6-7

⁷ Lynch Supplemental Testimony at 6-7

⁸ Following Tr. 2943.

sidered here⁹ except to the extent these items form an integral part of another structure subject to this LWA.

The Staff stated in its April 13, 1976 testimony that the Applicants had committed themselves to designing the base mat and its embedments to safely withstand suppression pool dynamic loads that are acceptable to the Staff. The basis for this conclusion for the pool swell loads associated with a postulated LOCA is the Staff's review and evaluation of the large scale Mark III tests performed by the General Electric Company (GE). The Staff concluded that the design loads specified in the criteria are acceptable since they are: (1) conservation; (2) adequately supported by test data; and (3) include an appropriate design margin. The Staff reaffirmed its prior position that the proposed suppression pool loads resulting from a postulated LOCA are still acceptable, and hence represent acceptable design criteria for the design of the structures in the reactor building, which were included in the description of the work activities contained in the Applicants' letters of May 24 and July 13, 1976.

8. The requirements for the safety/relief valve (SRV) loads were stated in the Staff's April 13, 1976 testimony to be based on its review and evaluation of quencher test results contained in the GE topical report, NEDE 21078-P "Test Results Employed by GE and BWR Containment and Vertical Vent Loads," dated October 1975. These safety/relief valve loads, based on the proposed installation of a "quencher" discharge device on each of the safety/relief valve discharge lines in the suppression pool, are described in the Staff's testimony of April 13 1976. The Applicants had previously committed themselves to adopt these loads only for the design of the reactor building foundation mat and its associated embedments. In their letters of May 24 and July 13 1976, the Applicants then committed themselves to:

- (1) Designing: (a) the base liner plate in the suppression pool; (b) the base liner plate anchorages; and (c) the containment vessel for safety/relief valve "quencher" loads characterized by a maximum positive peak pressure of +30 psid and a maximum negative peak pressure of -19 and
- (2) Adoption of a spatial distribution for these loads that is constant along all bounding surfaces of the suppression pool, below the normal water level.¹⁰

These proposed design loads for the base liner plate, including its anchorages, and the containment vessel are acceptable to the Staff as cited above. However, the Staff has recently completed its generic review of the proposed "quencher" loads, described in Amendment 43 to the GESSAR-238

⁹ Lynch Supplemental Testimony at 8-10.

¹⁰ Lynch Supplemental Testimony at 10-11.

Nuclear Island Application (Docket No. STN 50-447), and reached the following conclusions:

- (1) The statistical approach and methodology proposed by the General Electric Company (GE) for establishing the quencher loads for the Mark III containment system are acceptable.¹¹
- (2) The acceptance by the Staff, for use in the design of the proposed Perry facility of the quencher loads proposed by GE on a generic basis is predicated upon the adoption by the Applicants of seven Staff requirements contained in Section IV of Appendix A to the Lynch Supplemental Testimony
- (3) In addition to the foregoing requirements, the Staff further required the Applicants to redefine Item (j) "Safety/Relief Valve Operation" of their description of the design basis loads contained in Enclosure 2 to their letter of November 14, 1975 to conform to the Staff positions contained in Section IV of Appendix A to the Lynch Supplemental Testimony

9 The Coalition's proposed findings 19 and 20 allege that the safety/relief valve quencher design presents an unresolved safety issue. These findings reflect a misunderstanding of the evidence presented concerning the applicability of the results of GE's SRV loads test program to the Perry Plant, and a misconception of the proper legal test to be applied by the Board in this proceeding. The uncontradicted evidence presented during the earlier April 13, 1976, hearing phase and again during the July 26, 1976, hearing established that GE's test program included testing of a sparger device that was technically identical in performance characteristics to the GE quencher proposed to be used at Perry.¹² In its Supplemental Initial Decision of May 10, 1976, this Board recognized that the proposed SRV design loads are supported appropriately by GE test results. No evidence was introduced at the July 26, 1976, hearing to disturb the Board's earlier determination that GE's test program results are applicable to support SRV design criteria for the Perry Units. The uncontradicted testimony at the July 26, 1976, hearing reflected the high confidence levels required by the Staff before the GE test results were deemed acceptable.¹³ Testimony also reflected that certain specific commitments were made by Applicants to assure additional conservatism in the GE design criteria now accepted by the Staff for the Perry Plant.¹⁴ Further, while the Staff's witness did not testify that there was "absolute" assurance that actual measured loads might not exceed the design

The proposed quencher loads were extensively discussed in Appendix A, to Lynch Supplemental Testimony

² Tr. 2932, 3047, 3053.

³ Lynch Supplemental Testimony Appendix A, pp. 6-7

Lynch Supplemental Testimony, pp. 12-13, Tr. 3032-33.

parameters now being required by the Staff,¹⁵ he did testify that the actual loads should not exceed the design basis loads. Moreover, Applicants will be required to perform in-plant testing to confirm the adequacy and conservatism of the SRV loads now being required of Applicants for the Perry Plant.¹⁶ The Board finds that on the basis of the GE test results and the Applicants' commitments to adopt the Staff's specified criteria for acceptance of the GE generic SRV load parameters for the Perry Plant, the SRV loads reflected in Table 1 of Mr. Lynch's testimony are appropriate criteria for the Perry design. Thus, the Board concludes that there remain no unresolved safety questions related to these SRV loads in the Perry design.

10. The Applicants, in their letter to the Staff of June 16, 1976, submitted the results of their design reanalysis of the reactor building base mat, including its embedments, and the rebar in the reactor building base mat. This reanalysis was submitted in conformance with the commitments made by the Applicants in their letter of April 7, 1976. The reanalysis was required to determine whether the structures cited above could withstand the NRC's conservative bounding criteria for the SRV loads specified in its testimony of April 8, 1976.

The reanalysis indicates that the proposed rebar in the reactor building base mat is sufficient to withstand the loads from all applicable load combinations, including the SRV loads previously specified by the Staff (+30 psid, -19 psid over a frequency range to 5 to 11 Hz). On the basis that lower values of SRV loads are now found to be acceptable, the Staff concluded that the rebar proposed for the reactor building foundation mat is sufficient and, therefore, acceptable.¹⁷ The Board finds that the Staff's conclusion is appropriate and satisfactory.

In their letter of June 16, 1976, the Applicants indicated that additional containment shell embedments and containment shell vertical stiffeners would be required for the +30/-19 psid quencher loads. An additional 1600 base liner plate anchorage bolts would also be required to withstand the design basis negative pressure load of -19 psid. The Staff recognized that much, if not all, of this additional strengthening is no longer required since, as stated in their testimony, the Staff requirements for quencher loads have been reduced. Thus Staff position also applies to the proposed structural modifications contained in the Applicants' letter of July 13, 1976. The Staff considers that the implementation of the structural design which will accommodate the reduced quencher loads is a detailed design function which does not require review. However, the Staff does conclude that there are no unresolved safety issues relating to the requested work activities in the additional amendment to the LWA request. The bases for this conclusion were stated to be that: (1) the Staff has found the proposed

⁵Tr. 3051-52.

Lynch Supplemental Testimony Appendix A, pp. 6-9, Tr. 3052.

⁷Lynch Supplemental Testimony at 13-14.

design loads to be acceptable on a generic basis; (2) the Staff has previously reviewed and found acceptable the preliminary design of these structures; and (3) it has previously found the methods of analysis to be acceptable.¹⁸ The Board finds that the Staff's conclusions are justifiable and acceptable.

11. The Staff previously reviewed and found acceptable the following structures: (1) the control room building; (2) the auxiliary building; (3) the fuel handling/intermediate building; (4) the radwaste building; (5) the steam tunnel; (6) the emergency service water pumphouse; and (7) the intake and discharge tunnels. It concluded that there are no unresolved safety issues relating to the requested work activities in the additional amendment to the LWA-2 request, except for the off-gas building, consideration of which has been deferred. The basis for this conclusion is that it has previously reviewed and found acceptable: (1) the proposed design basis loads and loading combinations for these structures; (2) the preliminary design of these structures; and (3) the methods of structural analysis.¹⁹

12. Based upon having reviewed the analyses performed by the Staff including the Staff's determination of the acceptability of the design criteria proposed by GE on a generic basis for the loads associated with the actuation of the safety/relief valves and the acceptability of the structural design, the Board concludes that there are no unresolved safety issues affecting the work activities in the additional amendment to the LWA-2 request, exclusive of the off-gas building.²⁰

13. During cross-examination of Staff witness Lynch by the Intervenor, a letter from Applicants to the NRC's Office of Inspection and Enforcement, dated July 19 1976, was alluded to. In brief, this letter reports the infiltration of mud into the porous concrete poured at the site caused by a rainstorm in June.²¹

Although there is no evidence of record pertaining to this matter, the Board takes notice of the existence of this situation. The Board notes, however, that it has already considered the acceptance criteria that the porous concrete must satisfy taking into consideration its intended significance in the construction of the Perry facility.²² It is the Board's opinion that enforcement of the requirements and criteria for the porous concrete may be left to the Office of Inspection and Enforcement (OI&E). While the Board has no basis to suggest the need for further formal consideration of the issue at this time, we expect to be

¹⁸ Lynch Supplemental Testimony at 14.

Id. at 14-15.

¹⁹ Lynch Supplemental Testimony at 16.

Tr. 3033 *et seq.*

²² *Perry* Supplemental Partial Initial Decision Site Suitability and Environmental Matters, December 31, 1975 at 25. The LWA-2 issued by the Staff December 31, 1975, sets forth as condition No. 3 the Board's requirement for a minimum value of permeability of three feet per minute.

advised of any development inconsistent with the findings herein, should the Applicants be unable to satisfy OI&E that the referenced condition will be met.

III. CONCLUSION OF LAW

On the basis of the record and the Board's prior Initial Decisions in this proceeding including particularly the evidentiary hearings of June 23 and June 24, 1975, and July 26, 1976, the Licensing Board concludes that there are no unresolved safety issues relating to the limited work authorization activities requested in Applicants' May 24, 1976, and July 13 1976, LWA Requests except as related to the off-gas building and that the requirements of 10 CFR Section 50.10(e) (3) have been satisfied.

IV ORDER

WHEREFORE, in accordance with the Atomic Energy Act of 1954, as amended, and the Rules of Practice of the Commission, and based on the findings and conclusions set forth herein, IT IS ORDERED that the Director of Nuclear Reactor Regulation is authorized to amend Applicants' Limited Work Authorizations to permit the conduct of the activities described in Applicants' May 24, 1976, and July 13, 1976, LWA Requests except as related to the off-gas building, in addition to those activities previously authorized by the Director.

IT IS FURTHER ORDERED, in accordance with 10 CFR § § 2.760, 2.762, 2.764, 2.785, and 2.786 that this Decision shall become effective immediately and shall constitute, with respect to the matters covered herein, the final Decision of the Commission thirty (30) days after the issuance of this Decision, subject to any review pursuant to the above-cited Rules of Practice. Exceptions to this Decision may be filed within seven (7) days after service of this Amendment Decision and a brief in support of such exceptions may be filed by any party within fifteen (15) days (twenty [20] days in the case of the Staff) thereafter. Within fifteen (15) days of the filing and service of the brief of appellant (20 days in the case of the Staff), any other party may file a brief in support of, or in opposition to, such exceptions.

IT IS SO ORDERED.

ATOMIC SAFETY AND LICENSING BOARD

Frank F Hooper, Member

Gustave A. Linenberger Member

John M. Frysiak, Chairman

Dated this 10th day of September 1976
At Bethesda, Maryland.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-34

Ivan W. Smith, Chairman
Dr. George C. Anderson
Lester Kornblith, Jr.

In the Matter of
NORTHERN STATES POWER COMPANY
(Tyrone Energy Park, Unit 1)

Docket No. STN 50-484

September 23, 1976

Upon applicants' motion for a protective order for the withholding from public disclosure of plant security information, the Licensing Board rules that information on the adequacy of plant security methods should not be released to the public, that proceedings on this subject should be conducted *in camera*, and that intervenors who have not raised the plant-security issue and do not have a discernible interest in the issue should not be permitted to participate on that issue.

Protective order issued.

RULES OF PRACTICE: CROSS-EXAMINATION BY INTERVENORS

As a general rule, an intervenor may cross-examine on those portions of testimony relating to issues placed in controversy by any party so long as that intervenor has a discernible interest in the issue. That interest may be ascertained on the basis of assertions in the intervention petition which the Licensing Board explicitly or implicitly accepted in granting the intervention. *Northern States Power Company* (Prairie Island Nos. 1 and 2), ALAB-244, 8 AEC 857 870 (1974).

MEMORANDUM AND ORDER

On August 30, 1976, the Applicants filed a Motion for a Protective Order for the Withholding from Public Disclosure of Plant Security Information pursuant to 10 CFR §2.740 (c) (6). This is a request that the proprietary testimony in relation to Contention 3.B (plant security) be served upon only the Board, NRC Staff and counsel for and certain members of Citizens for Tomorrow (CFT).

Applicants move further that the proprietary testimony on Contention 3.B shall be received into evidence *in camera*; that any examination or cross-examination of witnesses on the subject shall be during *in camera* sessions only.

and that participation in the *in camera* sessions of the hearing to consider proprietary testimony on Contention 3.B shall be restricted to Applicants, NRC Staff, counsel for CFT and certain members of CFT who have executed a non-disclosure agreement with Applicants.

NRC Staff, in responding to the Applicants' motion, stated they have no objection to the request that the testimony be received *in camera* but object to an order which limits the opportunity for some parties to be represented at *in camera* proceedings. Staff also objects to an order which would deny the opportunity for those parties to cross-examine without first establishing the extent of the excluded Intervenor's interest in the subject matter. The Staff recommended that the Board receive temporarily *in camera* the proposed proprietary testimony; that the Board determine whether the proprietary testimony should be treated *in camera*, and that the Board then receive memoranda from each party as to its interest in Contention 3.B thereby enabling the Board to compare the interest in Contention 3.B with the proprietary testimony.

In view of the schedule in this case, the Board issued an interim order requiring the Applicants to serve upon only the Board and NRC Staff the proposed proprietary testimony.

Upon filing the proprietary testimony in issue, the Applicants stated that they expressly reserve the right to withdraw and have returned from the Board and the Staff the proprietary testimony consistent with the provisions of 10 CFR §2.790 (c).

None of the Intervenor's responded to the motion for a protective order. The Board has now examined the proposed proprietary testimony.

It appears to the Board that, because of the nature of the security plan, the information should not be released to the public. Therefore receiving the proprietary testimony *in camera* is appropriate and it is within the discretion of the Board to proceed *in camera*. *Pacific Gas and Electric Company* (Diablo Canyon Nuclear Power Plant, Units No. 1 and 2) ALAB-334, NRCI-76/7 809 at 816 (June 22, 1976).

The Board does not so easily arrive at the conclusion that Intervenor's other than CFT should be excluded from the *in camera* proceeding. The Appeal Board in *Northern States Power Company* (Prairie Island Nos. 1 and 2) ALAB-244 8 AEC 857 (1974) discussed the rights of intervenor's to participate in evidentiary hearings. In this case, Applicants observe that no Intervenor except CFT pursues affirmatively a contention concerning plant security. But *Prairie Island*, provides that each intervenor should be afforded the opportunity to cross-examine on those portions of witness' testimony which relate to matters which have been placed in the controversy by at least one of the parties to the proceeding—*so long as that intervenor has a discernible interest in the resolution of the particular matter* (Prairie Island at 870.) The Appeal Board went on to explain that discernible interests should be ascertained on the basis of those relevant asser-

tions in the intervention petitions which were explicitly or implicitly accepted by the Licensing Board in connection with a grant of intervention.

In this connection, and for the purpose of determining the interests of Intervenor, the Board has reexamined the petitions to intervene. Ms. Kees states that she and her family live within ten miles of the facility The Village of Tyrone, the home of Mr. Cider, is closer. Members of Northern Thunder live in "geographic proximity" to the plant. Citizens Against Unsafe Sources of Energy (CAUSE) assert that its members live within a 21-mile radius of the proposed site. Comparing these interests with the proprietary information, the Board observes that it is only the distance to the plant which might establish any arguable interest in the subject of plant protection.

While the Board is able to imagine why each of these intervenors, particularly Mr. Cider, might have an interest in plant security the Board is unable to discern any explicit or implicit interests in the subject matter from the language of the petitions, considering each petition and its amendments as a whole. None of these Intervenor assert any plant security contentions, nor mention plant security as a matter of interest in the proceeding. None have objected to the exclusion sought by the Applicants.

We are unable to see any purpose to be served by inviting memoranda from the Intervenor concerning their possible interests in Contention 3.B. The time for demonstrating Intervenor's interests in the proceeding, as controlled by 10 CFR 2.714, has long passed. Without access to the proprietary material, Intervenor would be unable to add to their present petitions on any basis contributing good cause for a late amendment. Moreover, none of the Intervenor have requested the opportunity to file memoranda.

In issuing the protective order below the Board does not rely solely upon the fact that the excluded Intervenor do not oppose the motion for the protective order, nor upon the fact that no interests in plant security are clearly discernible from the respective petitions. The Board has also considered several other factors.

Members of CFT will be present, participating, and represented by competent counsel, Matthew Quinn, Esq. CFT's interests in plant security is at least as great as any that might be ascribed to other intervenors. The interests of the excluded parties will be adequately protected by the participation of CFT the NRC Staff and by the exercise of the Board's responsibilities.

Moreover, the Applicants do not seek to exclude the Intervenor from all participation concerning plant security Non-proprietary testimony of Mr. Gelle has been served on all parties and will be offered into evidence with full exposure to appropriate cross-examination. The Board observes, without so ruling, that absent CFT's affirmative contention concerning plant security it is possible that no further plant security testimony would have been required.

Finally the Board recognizes that the Appeal Board's order in *Prairie Island*,

supra, does not cover a fact situation where confidential security information is involved. It is with reluctance that the Board excludes CAUSE, Ms. Kees, Mr. Cider and Northern Thunder but, realistically we must recognize that unnecessary dissemination of this information is inconsistent with public safety particularly realizing that CAUSE and Northern Thunder each have an undetermined number of unknown members.

The order below does not exclude counsel for the Minnesota Pollution Control Agency (MPCA). MPCA's petition initially contained a plant security contention (II-17) but, after conferences among the parties, MPCA dropped this contention. Counsel for MPCA indicated at the prehearing conference that the Agency did not waive any rights to participate in the hearing solely because, in the interest of cooperation, it dropped some of its contentions. (Tr. 102, *et. seq.*) Accordingly it would be appropriate for MPCA to be represented by its counsel, under protective order, at the *in camera* session.

Applicants' proposed protective order provides that the proprietary testimony shall be served upon " a limited number of representative and members of CFT [in addition to counsel, the Bauers and the Falkners] to be selected by CFT " The proposed order would provide also that the selected members may attend the *in camera* session.

The Board is unwilling to delegate to CFT the authority to determine which additional unnamed persons may attend its *in camera* sessions. Therefore the Board denies this portion of Applicants' motion.

In the letter of September 14 1976 covering the filing of the proprietary testimony Applicants reserve an asserted right to have the written testimony returned from the Board and Staff if any part of the motion for a protective order is denied. Although 10 CFR 2.790 (c), cited by Applicants, does not cover this situation exactly they are entitled to have the material returned because the Board has materially departed from the proposed order. Therefore, the Board will entertain an appropriate motion from Applicants for the return of the materials if Applicants elect not to proceed under the following order

PROTECTIVE ORDER

Radiological health and safety Contention 3.B, which was established as a matter in controversy in this proceeding by the Board's Special Prehearing Conference Order of July 15, 1976, addresses the adequacy of methods to make the Tyrone Energy Park secure against acts of domestic sabotage.

Applicants intend to file direct testimony with respect to Contention 3.B, a separate part of which will include proprietary information describing measures for the physical security of the Tyrone Energy Park, including plans for protecting the plant against potential acts of industrial sabotage.

The Board finds that the release of such information would be contrary to

the public interest and to the protection of public health and safety The Board finds, therefore, that Applicants' proprietary testimony on Contention 3.B is entitled to protection, pursuant to the provisions of 10 CFR §§2.740 (c) and 2.790, to prevent its disclosure to the public.

WHEREFORE, IT IS ORDERED that:

1 Applicants' proprietary testimony on Contention 3.B shall be served upon counsel for Intervenor Citizens for Tomorrow Inc., Harold C. and Lucille Bauer, Henry and Clara Falkner (collectively "CFT"), who shall not disclose to any other person or entity the information contained therein.

2. Applicants' proprietary testimony on Contention 3.B shall be offered and, if received into evidence, shall be received *in camera*, and shall be the subject of examination and cross-examination of witnesses only during *in camera* sessions of the hearing.

3. Attendance at and participation in *in camera* sessions of the hearing to consider Applicants' proprietary testimony on Contention 3.B shall be restricted to the Board, representatives of Applicants and the NRC Staff, counsel for CFT Harold C. and Lucille Bauer, Henry and Clara Falkner, counsel for the Minnesota Pollution Control Agency necessary witnesses, and others whom the Board and Applicants together may approve.

IT IS SO ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

Ivan W Smith, Chairman

Dated at Bethesda, Maryland
this 23rd day of September 1976.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-35

ATOMIC SAFETY AND LICENSING BOARD

John F Wolf, Chairman
Dr. J. Venn Leeds, Jr.
Dr. Forrest J. Remick

In the Matter of

Docket Nos. STN 50-518
STN 50-519
STN 50-520
STN 50-521

TENNESSEE VALLEY AUTHORITY

(Hartsville Nuclear Plant
Units 1A, 2A, 1B and 2B)

September 30, 1976

Upon applicant's request for an amendment to its outstanding limited work authorization (LWA), as authorized by LBP 76-16, the Licensing Board concludes that (1) there are no unresolved quality assurance or safety questions to constitute good cause for withholding authorization for certain specific additional on-site activities, and (2) an LWA amendment permitting construction of transmission lines, as previously granted by the staff, must be rescinded.

Request granted in part; LWA modified.

LWA. SCOPE

Pre-construction permit activities authorized by a limited work authorization (LWA) are intended to be primarily on-site activities. Extensive off-site activities, such as the clearing, grubbing and construction of transmission lines, are not intended to be authorized by an LWA.

**FIRST SUPPLEMENTAL PARTIAL INITIAL DECISION
LIMITED WORK AUTHORIZATION II – PART I**

APPEARANCES

Alvin Gutterman, Esq., William Dunker, Esq., and Nicholas Della Volpe, Esq., for Applicant, TVA.

Leroy J. Ellis, Esq., for Intervenors William N. Young, et al.

William B. Hubbard, Esq., and William Barrick, Esq., for State of Tennessee.

William Paton, Esq. and William Massar, Esq. for NRC Staff.

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I. BACKGROUND

1 In a partial initial decision issued on April 20, 1976, this Board made all the findings required by 10 CFR Parts 50 and 51 for the issuance of construction permits with respect to NEPA matters and determined that there is reasonable assurance that the proposed site of the Hartsville Nuclear Plant is suitable for the operation of nuclear power reactors of the type and size proposed by the Tennessee Valley Authority Accordingly on April 22, 1976, the Director of Nuclear Reactor Regulation issued an LWA identifying activities authorized by 10 CFR Part 50.10 (e) (1) which the Applicant, TVA, is permitted to undertake at its risk, at the Hartsville site.

2. In a letter to the Director of Nuclear Reactor Regulation, dated June 1

1976, the Applicant requested an amendment of the LWA under item 2 of Permanent Features to authorize TVA to conduct specified activities. The Director of the Division of Project Management of Nuclear Reactor Regulation responded and held that the requested amendment was subject to Appendix B and Atomic Safety and Licensing Board approval and therefore denied it.¹

3. In the same letter, in regard to the Applicant's request for approval of the facility transmission lines the Director stated:

"In addition, you requested that an item 9 be added to the LWA under Permanent Features to allow construction of the facility transmission lines. Since all NEPA questions have been resolved regarding transmission lines for the Hartsville Nuclear Project, the request to add item 9 under Permanent Features of the LWA is granted. Item 9 of the LWA will read as follows:

9 Clear, grub, and construct the facility transmission lines."

4. On July 27 1976, a Special Prehearing Conference was held in Nashville, Tennessee to consider proposed LWA activities. The Board outlined the prerequisites to the granting of a LWA-2. It also approved the parties recommendation that evidence relating to Applicant's request for a LWA-2 be taken in two separate sessions. The first session would deal only with drilling, foundation grouting and the placing of dental and fill concrete. That session was heard in the U.S. Courthouse, Nashville, Tennessee on August 17 1976.

II. FINDINGS OF FACT

A. Drilling, Grouting and Placement of Dental and Fill Concrete

5. The Applicant presented evidence at the August 17 1976 hearing, regarding drilling, foundation grouting and placement of dental and fill concrete.² Its witnesses indicated that weathering was encountered in some areas of the site along the Carters Limestone and Hermitage Formation interface and in isolated vertical joint cavities in the upper Carters Limestone. Because the resulting solution features are generally unpredictable, the Staff has required the Applicant to further investigate and treat the Carters Limestone beneath Category I structures. The foundation grouting program consists of drilling holes to establish solution features with subsequent pressure grouting with concrete.

6. The placement of dental concrete to fill surface cavities uncovered during the excavation program and the placement of fill concrete both to level and to

Director, Division of Project Management, Office of Nuclear Reactor Regulation's letter to TVA dated July 23, 1976.

²Testimony of Ronald G. Domer and Raymond W Dibeler Regarding Foundation Grouting and Placement of Dental Fill Concrete following Tr. 5098 (hereinafter Domer and Dibeler).

protect exposed rock surfaces was also described by an Applicant witness.³ He indicated that the placement of dental and fill concrete are prerequisites to beginning construction of the structural foundations.

7 The Staff introduced evidence describing their investigations and evaluation of the foundation engineering program at the Hartsville site including the drilling, grouting and placement of dental and fill concrete.⁴ The Staff witness indicated that the various techniques proposed by the Applicant are common and accepted techniques (Tr. 5165)⁵

8. The Board finds that the proposed activity of drilling, grouting and placement of dental and fill concrete are standard and accepted practices utilized to treat solution features and protect exposed foundation and vertical surfaces. These activities will result in a more competent foundation for the plant structures.

B. Quality Assurance

9 The record includes Applicant's evidence of the quality assurance program that will be in effect for the proposed drilling, grouting and placement of dental and fill concrete. It indicates that quality assurance and quality control instructions and procedures are available. The quality assurance procedures encompass the design, procurement, documentation, calibration and quality assurance record control. The quality control instructions delineate the inspections, examinations, and tests for material qualification as well as the drilling, pressure grouting and dental and fill concrete activities, including the identification of irregularities. It shows that quality assurance audits will be performed and reported and that quality control personnel will be trained and qualified.

10. The Staff introduced evidence of its evaluation of the quality assurance program of the Applicant for the construction of the proposed Hartsville Plant.⁶ A Staff witness indicated that the Applicant has committed to provide adequate and well defined quality assurance procedures, independent verification inspections and adequate personnel training and qualification programs as well as a documented system of quality records, an audit system and management involvement and assessment of the quality assurance program (Tr. 5178).

11. Staff witnesses further indicated that the Office of Inspection and Enforcement has determined that there are not any substantive unresolved issues relating to the implementation of the Applicant's quality assurance manual⁷ and

³Domer and Dibeler at 3 and 4.

⁴Safety Evaluation Report §2.5.3.1. – 2.5.3.4. Testimony of Lawrence A. White following Tr. at 5166 as amended (hereinafter White).

⁵White at 1.

⁶Staff Ex. 2-2 (SER §17).

⁷Testimony of John K. Rausch following Tr. 5182.

that the Applicant has adequate quality assurance capabilities in place to perform the drilling, grouting and concrete leveling work.⁸

12. The Board finds that the limited activities proposed by the Applicant at this stage of the proceeding do not require the implementation of the entire quality assurance program developed by the applicant and reviewed by the Staff for the construction of the entire plant.⁹

13. Applicant's proposed program of quality assurance instructions and procedures, documentation, inspections, audits, records and personnel are adequate to assure that the proposed drilling, grouting and placement of dental and fill concrete can be performed as required by Appendix B of 10 CFR 50.

C. Safety Issues

14. Paragraph e(3) (ii) of 10 CFR 50.10 requires that an LWA-2 shall be granted only after the Board has made the added finding that there are no unresolved safety issues relating to the additional activities that may be authorized, that would constitute good cause for withholding authorization. In response to a Board request at the July 26, 1976 Special Prehearing Conference, the Staff and the Applicant addressed the matter of possible unresolved safety questions.

15. A Staff witness testified that the limited activities proposed by the Applicant have no bearing on the remaining issues in contention in the forthcoming health and safety hearing: the four preliminary design approval (PDA) conditions and the nineteen post-PDA items have no relation to the proposed activity; none of the concerns expressed in the ACRS letter of May 13, 1976 could affect the proposed activity; none of the unresolved safety issues which will be addressed in future safety evaluation report supplements are related to the proposed activity; there is no relation to the proposed activity and the ability of the plant to comply with Appendix I requirements; and the resolution of the natural gas pipeline location will not affect the proposed activity.¹⁰

16. However, the Staff witness indicated that the foundation preparation work proposed by the Applicant was formulated on an assumption that the plant will not have to be hardened to withstand aircraft accidents. In the event that it is ultimately determined that the plant must be hardened, further evidentiary hearings may be required to provide assurance that any additional

⁸ Testimony of Wallace B. Swan following Tr. 5183.

⁹ The Board will consider the full quality assurance program of the Applicant for the construction of the whole plant as well as the Staff's evaluation of said program at the continuation of the LWA-2 proceeding beginning on September 27 1976 in Nashville, Tennessee.

¹⁰ Testimony of Harry E. P. Krug at 1 and 2 following Tr. 5143 (Hereinafter Krug).

concrete leveling work would be accomplished in accordance with quality assurance criteria.¹¹

17 The Applicant's witness testified that none of the unresolved safety issues raised by the Board, the Intervenor or the ACRS has any bearing on the proposed activity. The areas where the proposed activities are to be carried out are determined by the present building layout. However, the treatment of a particular area will not preclude the treatment of additional areas should the plant layout be altered by subsequent design changes,¹² e.g., in the event the plant is to be hardened.

18. The Board finds that other than the unresolved question of plant hardening there are no other known unresolved safety questions associated with either remaining issues or contentions; with the four PDA conditions and nineteen post-PDA items; with the ACRS letter or the ability of the plant to meet Appendix I requirements; or with the resolution of the gas pipeline location. If the resolution of the aircraft accident question requires plant hardening, additional work of the type currently proposed would presumably be needed. Such additional work could make further hearings on quality assurance criteria necessary. However, the activities, presently proposed would not foreclose the ability to readily perform any additional work needed.

D. Spray Pond Liners

19 After the Board issued its Partial Initial Decision, Applicant's counsel sent a letter to the Board stating that paragraph 282 of that decision was in error in stating that the spray ponds will be lined with a 10-foot thick clay blanket. The letter stated that evidence concerning this matter would be presented at the "health and safety" hearing. The Board asked the parties about this matter. Both the Applicant and Staff witnesses stated that the Staff testimony at the environmental and site suitability hearing contained a typographical error and that the clay blanket for the spray ponds will be five feet thick (Tr. 5170). The Board finds that each of the four spray ponds will be lined with a five-foot thick clay blanket. The Partial Initial Decision dated April 20, 1976, is accordingly amended to reflect this correction.

E. The Amendment of LWA-1 to Permit Construction of Off-site Transmission Lines

20. In response to a telephone request by the Board on August 11, 1976, the parties discussed at the hearing, on August 17 1976, the amendment of the

Krug at 2.

² Domer and Dibeler at 4.

LWA-1 by the Staff which added item 9 under Permanent Features permitting the construction of off-site facility transmission lines.

21. The Board questioned whether construction of off-site facility transmission lines affecting 7800 acres of land, including 2300 forested acres could appropriately be undertaken as part of LWA-1 activities.

22. The Staff argued that because the Board had made its finding with respect to site suitability and had made its full NEPA findings, including the evaluation of the impact of off-site facility transmission lines, the Staff could therefore amend the LWA-1 to permit the construction of off-site facility transmission lines (Tr. 5064-65).

23 The Applicant indicated that at the time of the original request for an LWA-1 the construction of off-site facility transmission lines was overlooked. Subsequently the Applicant became aware that some of these transmission lines might have to be placed in service earlier than originally planned and therefore had requested an amendment to the LWA-1 (Tr. 5080).

24. In response to a Board question, the Applicant stated that to date its activity in regard to these transmission lines had been limited to surveying. The Applicant also stated that acquisition of right-of-way is currently scheduled to begin in January 1977 and clearing of the right-of-way will not begin until toward the end of 1977 (Tr. 5197-98).

25. Item 9 was added to the LWA-1 without the Board's knowledge. Further, the clearing, grubbing and construction of off-site transmission lines, although considered by the Board in reaching its NEPA findings, was not an activity considered or authorized by the Board as part of the LWA-1 The Board finds that such extensive off-site activities are not intended to be included in limited work authorizations. The Statement of Consideration published on April 24, 1974^{1 3} clearly indicates that preconstruction permit activities were intended to be primarily on-site activities.

26. From an environmental standpoint, construction of these off-site lines will affect adversely a large geographic area. When such construction is done under an LWA, the adverse effect differs considerably from that which results from the same kind of construction after a construction permit has been issued. In the former situation, the adverse environmental effect is felt sooner and includes the risk that it will have been unnecessary if the permit is not granted.

27 Environmental costs resulting from construction of these lines after the construction permit has been issued is balanced against the primary benefit. At the LWA stage, the situation is radically different. Whether or not the primary benefit will be obtained is still unknown because the decision to issue a construction permit has not been made. The LWA allows certain environmental costs to be incurred. These costs, though extensive, are intended to be local in nature,

39 Fed. Reg. 14506.

i.e., mainly on-site. These costs are balanced against an early start of construction of the plant in order to meet the need for power, the primary benefit for building the plant.

28. Furthermore, if the construction of these transmission lines were permitted by the regulations, as part of an LWA, the Atomic Safety and Licensing Board would be required under NEPA¹⁴ to consider the environmental impact of such construction "to the fullest extent possible." The United States Court of Appeals for the D.C. Circuit held in *Calvert Cliff's Coordinating Committee v United States Atomic Energy Committee*¹⁵ that:

"Beyond Section 102(2) (C), NEPA requires that agencies consider the environmental impact of their actions "to the fullest extent possible." The Act is addressed to agencies as a whole, not only to their professional staffs. Compliance to the 'fullest' possible extent would seem to demand that environmental issues be considered at every important stage in the decision making process concerning a particular action—at every stage where an overall balancing of environmental and nonenvironmental factors is appropriate and where alterations might be made in the proposed action to minimize environmental costs. Of course, consideration which is entirely duplicative is not necessarily required. But independent review of staff proposals by hearing boards is hardly a duplicative function. A truly independent review provides a crucial check on the staff's recommendations. The Commission's hearing boards automatically consider nonenvironmental factors, even though they have been previously studied by the staff. Clearly the review process is an appropriate stage at which to balance conflicting factors against one another. And, just as clearly it provides an important opportunity to reject or significantly modify the staff's recommended action."

29 Since TVA did not include transmission lines in its original request for an LWA, the distinguishing characteristics¹⁶ of the environmental impact of an LWA transmission line activity were not evaluated by this Board in making its NEPA and site suitability findings in its Partial Initial Decision of April 20, 1976. Nor has it previously considered alternatives to insure the minimization of environmental risks and costs in connection with such activities.

30. The Board finds that the environmental cost and risks can be minimized by not beginning construction of these major off-site facilities until after a construction permit is issued. If a construction permit is not issued, the environmental impact caused by the activities under the LWA will be localized at the Hartsville and Gallatin sites.

42 U.S.C. §431.

449 F.2d 1109 1118.

⁶See paragraphs 27-29 above.

31 The choice in this case between the alternatives of construction of the transmission lines as a part of the LWA activities or as a part of the construction permit activities is clear. The work on the lines should be a part of the construction permit activities. However, if the facts change, the Applicant may petition, at that time, for an amendment to the LWA. This Board would then be required to balance the environmental impact of any such activities against the benefit to be derived.

III. CONCLUSIONS OF LAW

32. The Board holds that it has jurisdiction to make the findings of fact and conclusions of law set forth herein. (See the Nuclear Regulatory Commission's *Environmental Effects of the Uranium Fuel Cycle, General Statement of Policy* dated August 13, 1976.)

33. Applicant's proposed program of established quality assurance instructions and procedures are adequate to insure that the proposed drilling, grouting and placement of dental and fill concrete can be performed as required by Appendix B of 10 CFR 50.

34 The Board finds that there are no unresolved safety issues relating to the activities proposed by the Applicant that constitute good cause for withholding authorization to conduct such activities.

35 Preconstruction permit activities are intended, under the regulations, to be primarily "on-site" activities. The substance of item 9 under permanent features of the LWA-1 i.e., permission for clearing, grubbing and construction of transmission lines was not considered by the Board in making its LWA-1 decision as required by NEPA. Item 9 involves greater environmental risks and costs than would result if the alternative of waiting for the issuance of a construction permit were adopted.

IV ORDER

36. It is ordered that the Applicant's request to carry out preconstruction activities, i.e., drilling, grouting and placement of dental and fill concrete be granted subject to the strictures contained in the Nuclear Regulatory Commission's General Statement of Policy dated August 13 1976.

37 It is further ordered by the Board that the LWA-1 as amended by the Staff, be modified to exclude permission to clear, grub and construct facility transmission lines, i.e., to exclude the activities currently authorized under item 9 under permanent features, of the LWA-1 as amended.

38. Following upon the Board's Findings and Conclusions, **IT IS ORDERED THAT** this Partial Initial Decision shall constitute a portion of the Initial Decision to be issued upon completion of the radiological health and safety phase of this proceeding.

39 IT IS ORDERED THAT in accordance with Sections 2.760, 2.762, 2.764(a), 2.785 and 2.786 of the Commission's Rules of Practice in 10 CFR Part 2, and consistent with the Commission's Policy Statement of August 13, 1976, that exception to this Partial Initial Decision must be filed within seven (7) days after service of this Partial Initial Decision. A brief in support of the exceptions shall be filed within fifteen (15) days thereafter, twenty (20) days in the case of the Regulatory Staff. Within fifteen (15) days after service of the brief of appellant [twenty (20) days in the case of the Regulatory Staff] any other party may file a brief in support of, or in opposition to, the exceptions.

IT IS SO ORDERED.

ATOMIC SAFETY AND
LICENSING BOARD

J. Venn Leeds, Jr.

Forrest J Remick

John F Wolf, Chairman

Dated at Bethesda, Maryland,
this 30th day of September, 1976.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-15

Commissioners:
Chairman Rowden
Commissioner Mason
Commissioner Gilinsky
Commissioner Kennedy

In the Matter of

Docket Nos. 50-443
50-444

**PUBLIC SERVICE COMPANY OF
NEW HAMPSHIRE, ET AL.**

(Seabrook Station, Units 1 & 2)

October 5, 1976

Effect of ALAB-349 stayed, pending review by the Commission pursuant to 10 CFR 2.786.

ORDER

On September 30, 1976, the Atomic Safety and Licensing Appeal Board rendered ALAB-349 NRCI-76/9 235, in which, by a divided vote, it suspended the effectiveness of the outstanding construction permits for the proposed Seabrook facility pending further order of the Commission or Appeal Board. The Board postponed the effective date of its decision until October 8, 1976, noting that the postponement would "give the Commission an opportunity to decide whether it desires to preserve the *status quo* pending its own possible review of the matter." NRCI-76/9 at 272, n. 73.

The Commission has decided to review ALAB-349 pursuant to 10 CFR 2.786. The Commission anticipates that the survey of the environmental effects of the uranium fuel cycle called for by its recent General Statement of Policy concerning the assessment of incremental effects of the fuel cycle with reference to individual light water reactors (41 Fed. Reg. 34707) will be available very shortly. As noted by the Appeal Board majority (NRCI-76/9 at 248-249), the survey was not available to it when ALAB-349 was rendered. The results of that survey may not have a bearing on whether ALAB-349 should be modified by the Commission and therefore the parties should have a reasonable opportunity to address its relevance.

To allow the parties a reasonable opportunity to develop and present their positions, the following schedule for briefing and argument is established:

October 18, 1976 Briefs of the parties to be received by the Secretary and other parties
October 22, 1976 Reply briefs to be received by the Secretary and other parties

October 26, 1976 Oral argument before the Commission
10:30 a.m.

The Commission intends to resolve this matter as promptly as possible thereafter.

As provided by 10 CFR 2.786 (a), the effect of the Appeal Board's decision is hereby stayed.

It is so ORDERED.

Samuel J Chilk
Secretary of the Commission

Dated at Washington, D.C.
this 5th day of October, 1976

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-350

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. John H. Buck
Michael C. Farrar

In the Matter of

Docket Nos. 50-443
50-444

**PUBLIC SERVICE COMPANY OF
NEW HAMPSHIRE, et al.**

(Seabrook Station, Units 1 & 2)

Intervenors' motion for reconsideration by the Appeal Board of ALAB-338 is held in abeyance, as a matter of comity pending action by the Court of Appeals for the First Circuit on a petition for review of that decision.

Messrs. John A. Ritscher and Thomas G. Dignan, Jr. and Ms. Eleanor D. Acheson, Boston, Massachusetts, for the applicants, Public Service Company of New Hampshire, *et al.*

Mr. Robert A. Backus, Manchester, New Hampshire, for the Seacoast Anti-Pollution League and the Audubon Society of New Hampshire.

Mr. Michael W. Grainey for the Nuclear Regulatory Commission staff.

**MEMORANDUM AND ORDER
October 6, 1976**

In ALAB-338, NRCI-76/7 10 (July 14, 1976), we denied the motion of the Seacoast Anti-Pollution League and the Audubon Society of New Hampshire for a stay pending appeal of the Licensing Board's initial decision authorizing the issuance of construction permits for the Seabrook facility¹ Thereafter, SAPL

LBP-76-26, NRCI-76/6 857 (June 29, 1976).

Audubon filed (1) a petition in the Court of Appeals for the First Circuit for review of ALAB-338 specifically and (2) a motion with us asking that we reconsider the denial of a *pendente lite* stay

In recently passing upon a motion filed by another party to this proceeding (the New England Coalition on Nuclear Pollution) which sought a suspension of the construction permits on grounds unrelated to those advanced by SAPL-Audubon, we had occasion to examine whether the pendency of the petition for judicial review of ALAB-338 stripped us of jurisdiction to consider and decide that motion. ALAB-349 NRCI-76/9 235 (September 30, 1976).² We concluded that the petition for review had no such effect. *Id.* at 242-245. In arriving at that conclusion, we expressly reserved judgment on whether, because "what is squarely before the court of appeals is the correctness of" ALAB-338, we cannot rule upon the SAPL-Audubon motion for reconsideration of that decision "without obtaining leave of court to do so" *Id.* at 245, fn. 16.

Although now confronted with that question, we still need not resolve it. For it seems to us that, irrespective of whether we are empowered to reexamine ALAB-338 at this time, it would be inappropriate to take that step in the absence of some clear indication that the First Circuit wishes us to do so. At the very least, abstention would appear to be called for by considerations of comity between court and agency. In this connection, we can officially notice not only that the petition for review of ALAB-338 was filed in advance of the submission of the motion for reconsideration to us but, as well, that a hearing was held before a judge of the First Circuit a few weeks ago in connection with that petition. Leaving aside our substantial doubt regarding the propriety of a party seeking relief in one forum while his request for precisely the same relief remains before a different forum, in these circumstances we should (even if not absolutely required to do so) allow the court to act on the matter first. There is, of course, nothing to preclude SAPL-Audubon from explicitly requesting the First Circuit to remand ALAB-338 to us for reconsideration. Our notation of this obvious point should not, however, be construed as meaning either (1) that we are affirmatively soliciting such a remand; or (2) that we have already decided that ALAB-338 is possibly incorrect and therefore merits full reconsideration.

ALAB-349 directed the suspension of the construction permits. By order of October 5, 1976, the Commission announced its intention to review that action and stayed the effectiveness of the suspension pending the outcome of the review.

The motion for reconsideration of ALAB-338 is accordingly *held in abeyance*.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Margaret E. Du Flo
Secretary to the Appeal Board

Mr. Farrar, concurring in the result:

I join the Board's ruling here because the matter we are asked to reconsider is the very one pending in the Court of Appeals. I must add, however, that I have reservations about the continued validity of the result we reached in ALAB-338, which was in no small measure predicated upon hastily drawn papers which the movants filed before they had even seen the initial decision. In the light of further analysis, I would be inclined at least to take another look at the matter were it appropriate to do so.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-351

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. John H. Buck
Dr. Lawrence R. Quarles

In the Matter of

Docket Nos. 50-259 O.L.
50-260 O.L.

TENNESSEE VALLEY AUTHORITY

(Browns Ferry Nuclear Plant,
Units 1 and 2)

Upon *sua sponte* review of the Licensing Board's initial decision (LBP 76-30) authorizing issuance of operating license amendments proposed as a result of the March 22, 1975 fire, the Appeal Board finds no error warranting corrective action.

Licensing Board decision affirmed.

DECISION
October 6, 1976

On March 22, 1975 a serious fire occurred at the two-unit Browns Ferry facility when a candle flame being employed by workmen for testing purposes ignited some flammable material. Six months later, the Commission gave notice of its proposed issuance of amendments to the outstanding Browns Ferry operating licenses. 40 Fed. Reg. 46365 (October 7 1975). Insofar as is here relevant, those amendments would have modified "in a number of details" and have reinstated the Browns Ferry Technical Specifications "upon satisfactory completion of the work required to restore the plant following the * * * fire."

Thereafter, the Licensing Board granted a petition for leave to intervene and request for a hearing filed by William E. Garner. The issues placed into controversy by this intervenor concerned (1) whether the contemplated design modifications were adequate to accomplish their intended purpose;¹ (2) whether the personnel of the licensee Tennessee Valley Authority were technically qualified to complete (a) the work necessary to restore the plant after the fire damage

¹This issue was, however, withdrawn by the intervenor before the evidentiary hearing commenced.

and (b) the design modifications; and (3) whether the Commission's inspection and surveillance programs were sufficient to insure that TVA satisfactorily completed the restoration work and design modifications. Following an evidentiary hearing, the Licensing Board issued an initial decision in which it rejected the intervenor's position in total and authorized the issuance of the proposed amendments to the Browns Ferry operating licenses. LBP-76-30, NRCI-78/8 133 (August 20, 1976). This authorization enabled the immediate resumption of reactor operation since, by that date, restoration and modification had been fully performed.

No exceptions to the initial decision have been filed. In accordance with our usual practice, we have nonetheless reviewed the decision and the underlying record *sua sponte*. That review has disclosed no error warranting corrective action. Because, however, the Browns Ferry candle may well rank in history on a par with Mrs. O'Leary's lantern, a few observations appear appropriate.

The record reveals that the fire originated in the sealant material—specifically polyurethane—in a cable penetration between the cable spreading room (common to both Units 1 and 2) and the containment building for Unit 1. The candle flame which came into contact with and ignited the polyurethane was being used to detect the presence of air currents passing through the penetration. Because the cable spreading room was then at a higher pressure than that in the Unit 1 containment building, such currents would have been indicative of leaks in the penetration.

Although the fire did not extend appreciably back into the spreading room, it did penetrate the sealant and reached a large area of high cable concentration in the containment building. As a consequence, numerous electrical cables shorted to each other, as well as to trays and conduits. This in turn occasioned a loss of electrical control for equipment such as valves, pumps and blowers.

The two reactors were shut down by operating personnel. In spite of the loss of important control elements, adequate reactor cooling was provided. There was no radioactivity release beyond that associated with a routine shut-down.

Both the licensee and this Commission conducted an extensive inquiry into the cause of the accident, the factors which had contributed to its magnitude and the measures necessary to restore the facility to proper operating condition and to avoid a recurrence of such an incident. This investigation led the Commission to conclude that, broadly speaking, the fire and its consequences were attributable to the "(1) failure of TVA to recognize the nuclear safety significance of the penetration sealing work being performed, and (2) failure of NRC, TVA and the entire industry to fully recognize the extent of the potential for damage from an electrical fire."² In order to rectify the particular deficiencies

² NRC staff testimony foll. Tr. 416, at p. 82.

disclosed upon its analysis, the staff proposed significant revisions to the technical specification and of applicable administrative control procedures. Among other things, the polyurethane sealant was to be, and has been, replaced with an ablative and fire-retardant material.

The inspection programs of the licensee and the staff were substantially expanded for the restoration and modification activities necessitated by the fire. The licensee required each step in the rework of the penetrations to be examined by inspectors who were independent of the personnel responsible for performing that task. So too, the staff's Office of Inspection and Enforcement conducted frequent inspections in great depth to insure that the work was satisfactorily completed. In addition, that office has issued bulletins of generic application with regard to the matter of fire prevention and protection.

We have canvassed the record with care and have found no cause to take issue with the Licensing Board's detailed findings which prompted that Board to conclude both that the Browns Ferry facility has been properly modified and restored and that there is the requisite assurance that it now can be operated without endangering the public health and safety. We accordingly *affirm* the decision below.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Margaret E. Du Flo
Secretary to the Appeal Board

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-352

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Richard S. Salzman, Chairman

Dr. W. Reed Johnson

Jerome E. Sharfman

In the Matter of

**Docket Nos. STN 50-483
STN 50-486**

UNION ELECTRIC COMPANY

(Callaway Plant, Units 1 and 2)

Intervenors moved to suspend the outstanding construction permits, basing their motion on the Commission's *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* (41 Fed. Reg. 34707 (August 16, 1976)). The Appeal board rules that (1) upon consideration of the equitable factors specified in the Policy Statement, the requested suspension is not warranted and (2) the requests to return the proceeding to the Licensing Board and to compel the staff to issue a new environmental impact statement call for actions inconsistent with the Policy Statement.

Motion denied.

RULES OF PRACTICE: CHALLENGE TO COMMISSION REGULATIONS

The appropriate forum for deciding a challenge to a proposed interim Commission rule is the rulemaking proceeding itself.

GENERAL STATEMENT OF POLICY ON FUEL CYCLE: INTERIM LICENSING SUSPENSION

In view of the three-month period for promulgation of an interim fuel-cycle rule suggested by recent Commission issuances, the relevant period for measuring both the environmental impact of construction and the possibility of tilting the cost-benefit balance through increased investment is approximately three months.

GENERAL STATEMENT OF POLICY ON FUEL CYCLE: INTERIM LICENSING SUSPENSION (FORECLOSURE OF ALTERNATIVES)

The "foreclosure of alternatives" factor militates in favor of suspension only if there is a fair possibility that the result of the new rule would be a design

change made more difficult because of construction activities carried on in the interim period. *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 & 2), ALAB-349

GENERAL STATEMENT OF POLICY ON FUEL CYCLE: INTERIM LICENSING SUSPENSION (NEED FOR PROJECT)

In considering the need for a project, demand forecasts should be based on historical long-term growth rates to the extent possible, rather than short-term trends.

GENERAL STATEMENT OF POLICY ON FUEL CYCLE: INTERIM LICENSING SUSPENSION (MAGNITUDE OF NEPA VIOLATION)

The Commission's failure to analyze adequately the environmental effects of the uranium fuel cycle is a NEPA violation "of some magnitude" *Public Service Co. Of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-349

GENERAL STATEMENT OF POLICY ON FUEL CYCLE: INTERIM LICENSING SUSPENSION (GENERAL PUBLIC POLICY CONCERNS)

In considering whether construction should be suspended under the *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle*, the impact of such suspension on the workers currently employed is a factor to be considered but is not controlling.

Mr. Gerald Charnoff, Washington, D.C., for Union Electric Company Applicant.

Mr Dennis J. Tuchler, St. Louis, Missouri, for Coalition for the Environment and Utility Consumers Council of Missouri, Joint Intervenors.

Mr. Joseph F Scinto (Mr. O. Gregory Lewis on the brief) for the Nuclear Regulatory Commission Staff.

**MEMORANDUM AND ORDER
October 21 1976**

This matter comes before us on Joint Intervenors' motion to suspend the

construction permits previously issued to the applicant authorizing it to build a nuclear powered generating plant in Callaway County Missouri.¹

On July 21 1976, the Court of Appeals invalidated those portions of the Commission's regulation (10 C.F.R. §51.20(e)) concerning the environmental effects of the uranium fuel cycle which relate to reprocessing and waste management upon which the Licensing Board's decision to award the permits rests in part. *Natural Resources Defense Council v NRC*, 547 F.2d 633 9 ERC 1149 No. 74-1586 (D.C. Cir.).² On August 13 1976, the Commission issued a *General Statement of Policy* in Docket No. RM-50-3, *Environmental Effects of the Uranium Fuel Cycle*, 41 Fed. Reg. 34707 (August 16, 1976), which explained how the Commission proposed to proceed with the conduct of its licensing proceedings while new rulemaking looking toward an amended regulation was moving forward.³ The Policy Statement said that, where a license has been issued but the action has not become final within the Commission because of a pending appeal, issues other than fuel cycle issues, "including as appropriate the issue of suspending activity under the license in question, may be resolved in the interim." 41 Fed. Reg. at 34709 It added that the suspension issue should be resolved on a case-by-case basis by weighing the following equitable factors: whether it is likely that significant adverse impact will occur until a new interim fuel cycle rule is in place; whether reasonable alternatives will be foreclosed by continued construction or operation; the effect of delay the possibility that the cost/benefit balance will be tilted through increased investment; general public policy concerns; the need for the project; the extent of the NEPA violation; and the timeliness of objections. *Ibid.*⁴ We therefore proceed to consider intervenors motion in light of those factors as applied to this case.

See our prior decisions in this proceeding: ALAB-346, NRCI-76/9 214 (Sept. 9, 1976); ALAB-347 NRCI-76/9 216 (Sept. 16, 1976); ALAB-348, NRCI-76/9 225 (Sept. 29, 1976).

²For a discussion of what the practical effect of that regulation was and how it was employed to exclude certain contentions made by intervenors in this case, see Part I of our Partial Decision, ALAB-347 NRCI-76/9 216 (Sept. 16, 1976).

³For a summary of the contents of that statement, see *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 & 2), ALAB-349 NRCI-76/9 235 at 240-241, (Sept. 30, 1976).

⁴On October 13th, the day this motion was argued, the Commission issued a Notice of Proposed Rulemaking in which it proposed the adoption of a revised fuel cycle regulation based on an environmental survey recently completed by the staff (Environmental Survey of the Reprocessing and Waste Management Portions of the LWR Fuel Cycle, NUREG-0116) and an analysis of the consequences of adopting or not adopting an interim rule. 41 Fed. Reg. 45849 (Oct. 18, 1976). As the proposed interim rule has no legal effect unless and until it is adopted by the Commission, it can have no relevance to the motion at bar. The notice is relevant only insofar as it evidences the Commission's present inclination to adopt an interim rule and the time frame within which this is likely to be done.

(Continued on next page)

1. The Environmental Impact of Continued Construction

The first factor is the adverse impact on the environment that will occur if construction is not halted between now and the time that an interim fuel cycle rule is adopted. Intervenor's take the position that it would be illegal for the Commission to put any interim rule into effect pending the completion of a full National Environmental Policy Act ("NEPA") review in the rulemaking proceeding of the reprocessing and waste management problems. Intervenor's suggest that this would take at least a year, a not unreasonably long prediction given the Staff's October 13th analysis of the consequences of adopting or not adopting an interim rule which assumes (at p. 2) that a final rule will issue a year after the issuance of an interim rule. Therefore, intervenor's argue that we should consider a year as the relevant period for measuring both the environmental impact of construction and the possibility of tilting the cost/benefit balance through increased investment, rather than the three-month period for the promulgation of an interim rule portended by the Policy Statement (41 Fed. Reg. at 34708) and recently confirmed by the October 13th letter from the Secretary of the Commission to parties in various proceedings (including this one) asking for comments on the *Vermont Yankee* motion to terminate proceedings seeking the suspension of licenses. See note 4 *supra*. The Commission has noticed its proposed interim regulation in the Federal Register and has invited "all interested persons" to submit to it any written comments or suggestions relative to the regulation which they might care to. 41 Fed. Reg. at 45853 The appropriate forum for dealing with intervenor's' views that the proposed regulation would be illegal is therefore the rulemaking proceeding itself. In the instant proceeding, we believe that the Commission's proposed interim regulation is entitled to a presumption of validity. It would be inappropriate for us to arrogate the Commission's rulemaking function (which, in this case, it is presently in the process of carrying out) to ourselves. For these reasons, we hold that the relevant period

(Continued)

In a letter from its Secretary dated October 13, 1976, the Commission asked parties in various proceedings, including this one, to comment on whether Vermont Yankee Corporation's motion "to recall so much of the GSP [General Statement of Policy] as directs Licensing Boards and/or Appeal Boards and/or the Staff (on a show cause petition) to reconsider orders authorizing individual construction permits or operating licenses on the grounds of the so-called fuel cycle issue arising out of the decision of the United States Court of Appeals in *NRDC v. NRC*. The instant proceeding is not a show cause proceeding. Part I, Section 2A of ALAB-348, *supra* note 1. However, one may infer from the fact that parties to this case were invited to comment on the motion that the Commission's decision in *Vermont Yankee* is likely to be applicable to motions to suspend in pending appeals as well. We are not deferring our decision in this case pending the Commission's decision on the *Vermont Yankee* motion because (1) the Commission has not directed us to do so and (2) the decision we reach here would not produce a result inconsistent with either a grant or a denial of the *Vermont Yankee* motion.

for examination of environmental impacts of construction is approximately three months.

The record on the motion before us contains affidavits from both the applicant and the staff. Insofar as they describe what construction work has already been accomplished and what will be done within the next few months, they are not questioned by the intervenors. These affidavits indicate that the following work has already been done: Most of the clearing, grubbing, grading and excavation on the site have been accomplished. Several roads and transmission lines have been relocated. Several buildings and parking lots needed for construction have been built. A railroad spur and hauling roads have been almost completed. Also in place are an on-site rock mine, a rock-crushing facility and a concrete batch plant. A meteorological tower an instrument station, construction utilities and fencing have been installed. The affidavits show that, within the next few months, the following will occur: the continued construction of four buildings and the beginning of construction of two buildings required for Unit 1 the building of a 3.7 mile access road, the modification and continued operation of the on-site rock mine, and the clearing of 48 acres to permit construction of a transmission line and the intake and discharge pipelines.⁵

Intervenors concede that the environmental impact of continued construction during the next three months will be "very limited" (App. Tr. 195). They admit that it would be significantly less than it would have been in *Seabrook*, *supra* note 3, a case in which our colleagues found that the environmental disruption of continued construction, taken alone, would not have been enough to warrant the suspension of construction. NRCI-76/9 at 270. We agree that the environmental impact of another few months of construction in this case would be very small in view of the substantial changes which have already been imposed on the site by construction to date.

2. The Foreclosure of Reasonable Alternatives

The Board held in *Seabrook*, *supra* note 3 that the "foreclosure of alternatives" factor militates in favor of suspension "only if there is a fair possibility that the outcome of the reevaluation of the environmental effects of spent fuel reprocessing and waste disposal would be a desirable design change made more difficult because of construction activities carried on in the interim." NRCI-76/9 at 259 The interim rule proposed by the Commission on October 13th requires no such design change.

Intervenors argue that the building of a non-nuclear plant as an alternative

⁵The 48 acre figure is applicant's. The staff alleges that only 41 acres are involved. However, applicant's affidavit states that, as to 12 of the 48 acres, only such trees and vegetation as would interfere with power lines will be cleared.

to the Callaway facility is precluded as construction of and concomitant investment in the nuclear plant continue because the degree to which applicant can afford to erect an alternative plant is reduced (App. Tr. 202). The total construction expenditures estimated for October through December of this year are \$25,431,000. We doubt that they would be significantly different for the three months commencing October 13th. We do not believe that this amount of incremental expenditure would in and of itself preclude consideration of a non-nuclear alternative should the construction permit be denied on the basis of the interim regulation.

3. Tilting of the Cost/Benefit Balance

Another factor is the possibility that the cost/benefit balance will be tilted through the investment in the plant of the resources involved in what, as we have said, we must assume will be an additional three months of construction. Intervenor's concede that, if we assume a three-month period, the commitment of resources made during that time would probably be insufficient to change the balance (App. Tr. 191-92).

4. The Effect of Delay

Applicant's affidavit reveals its estimate that a three-month suspension of construction would result in direct costs of \$19,166,000, assuming a 7% per annum cost escalation rate, and \$29 million representing the value of the lost capacity due to a three-month delay in completion. This latter figure is based on the assumption that the Callaway Plant would operate at 50% capacity during its first three months of operation. Intervenor's offer no evidence of their own on this question but challenge the assumption of both the 7% escalation rate and the 50% capacity figure.

Intervenor's may well be correct in asserting that the record does not support the assumption of a 7% escalation factor. However, even using the 4% escalation factor which they prefer, a three-month suspension would add \$12,364,000 to the cost of the plant. Joint Intervenor's Response at p. 4. This is a substantial amount of money. While intervenor's say that the escalation factor may even be lower than 4%, we think this is unrealistic in view of the inflationary period we are living through. Indeed, recent experience suggests that 7% would be closer to the mark than 4% and may even be too conservative.

We agree with intervenor's that the \$29 million cost assumed for replacement power is speculative, for a short delay in construction may not result in a later completion date and replacement power may not have to be bought even if it does. Nevertheless, we note the Licensing Board's finding in the Partial Initial Decision that, under applicant's load forecast which it found reasonable, a one

year delay in the completion date of the plant would reduce applicant's reserve margin to the "unacceptably low" level of 4%, as against a recommended reserve margin of "at least 15 percent." LBP-75-47 2 NRC 319 at 338-40 (1975). In view of that finding, to which intervenors took no exception, the need to buy replacement power is certainly a realistic possibility

In sum, while we cannot be certain that a three-month suspension would cost the applicant \$48,166,000 as it asserts, we are convinced that the cost would be substantial, amounting to millions of dollars.

5. The Need for the Project

As we have just stated, the Licensing Board found that if the plant's commencement of operation were delayed one year beyond its projected date of 1982, applicant's reserve margin in that year would fall to the "unacceptably low" level of 4%. Contrast this with the situation in *Seabrook*, *supra* note 3 where even the applicant seemed to concede that a two-year delay in construction would not have any adverse impact on its ability to meet the demand for electric power. NRCI-76/9 at 267

On this issue, intervenors point to the fact that, in 1975, applicant's total sales of kilowatt hours rose by only 3.45%,⁶ as opposed to applicant's projection which showed an increase in 1975 of 5.37%.⁷ They suggest that this shortfall undermines the reliability of applicant's forecast. We disagree. The report of applicant's demand forecaster Mr. Guth states (Exhibit 16 at 15 and 6):

Finally our study emphasizes the *long-run* average annual growth rates for Union Electric which we believe are consistent with the best results on price and income elasticities available. We have emphasized long-run average growth rather than short-run growth for several reasons. First, we believe that economic analyses currently available of long-run average annual growth are much more reliable than any short-run analyses which have been performed. In particular, short-run growth is often subject to a number of factors, both economic and noneconomic, which dominate year-to-year movements in electricity sales but which are of much less importance in the long run. These factors would include both cyclical swings in the national economy as well as the political climate in the Middle East and the actual climate closer to home. Second, for purposes of planning future generation and transmission capacity additions, the long-term growth trends would appear to be more relevant.

⁶ See applicant's 1975 Annual Report at p. 26.

⁷ See Table 1.1-3 at p. A-31 of the Final Environmental Statement.

This statement accords with our own holding in *Niagara Mohawk Power Corp.* (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347 (1975), where we rejected a demand projection based on a five-year historical period in favor of one based on an eleven-year historical period, stating (*id.* at 365):

In short, given the fluctuating nature of the growth of electric power demand, forecasts based on short time periods may be overly influenced by transitory effects and thus not accurately reflect basic long-term trends.

These remarks apply *a fortiori* to intervenors' attempt to project demand based on figures from a single year. We are unconvinced that the 1975 figures demonstrate any unreliability in applicant's forecasts which were found reasonable by the Licensing Board and were not challenged on appeal by the intervenors.

6. Extent of the NEPA violation

Although the revised environmental survey (NUREG-0116) suggests that the Commission's original regulation may not have been too far off the mark, we agree with the staff that it would not be appropriate to take that staff document into account at this time, it not having yet been adopted by the Commission (App. Tr. 148-49). We adhere to the conclusion reached in *Seabrook*, *supra* note 3, for the reasons there stated, that the NEPA violation was "of some magnitude." NRCI-76/9 at 263-265.

7 The Timeliness of the Objections

In this proceeding, intervenors' objections to the fuel cycle regulation were made in its contentions at the outset of this litigation and the instant motion to suspend construction was made promptly after issuance of the Commission's Policy Statement. There can be no question of untimeliness.

8. General Public Policy Concerns

Certain matters having a bearing on public policy such as the need for the plant's power and the economic cost of suspension of construction, have already been discussed. The applicant would also have us consider the impact that suspension would have on the plant's construction force. As the *Seabrook* decision discussed, (*supra* note 3, NRCI-76/9 at 269) an initial decision to construct a nuclear power plant may not be justified on the basis of the job opportunities it will provide. But whether construction of a previously approved plant should be suspended pending the Commission's compliance with NEPA presents a different question, one which calls into play equitable considerations. See *City of New*

York v United States, 337 F Supp. 150, 163-64 (E.D.N.Y. 1972) (three-judge court). Among those considerations is the effect suspension of construction would have on the workmen building the plant, both in terms of their economic loss and the disruption in their lives. Without going into detail, the evidence before us suggests that were we to order suspension of construction, hundreds would be put out of work through no fault of their own, many of whom would not be able to find other employment given in the current state of the local economy. We think these are factors to be considered and, while not controlling, are certainly ones which militate against suspension.⁸

⁸ Mr. Sharfman disagrees with Part 8 of this opinion. His views on the question discussed therein are as follows:

Conservation Society of Southern Vermont v. Secretary of Transportation, 508 F.2d 927 (2d Cir. 1974), *vacated on other grounds and remanded*, 423 U.S. 809 (1975), *rev'd per curiam on other grounds*, 531 F.2d 637 (2d Cir. 1976), is discussed at length in *Seabrook*, *supra* note 3, NRCI-76/9 at 250-251, and was relied upon in the Commission's August 13th Policy Statement. 41 Fed. Reg. at 34709. In that case, the District Court, in declining to suspend construction of a highway project known as the Sleepers River Interchange, stated as one of its grounds that "construction would provide jobs in an area of high unemployment." 508 F.2d at 937. The Court of Appeals, however, stated that this factor "would appear to be of no consequence if the ultimate outcome were in substantial doubt." *Id.* at 937 n. 58. The *Seabrook* Board, after quoting this statement (NRCI-76/9 at 251) inexplicably cites *Conservation Society* as its sole authority for the proposition that loss of construction workers' jobs may be considered on a motion to suspend construction pending the remedy of an inadequate NEPA review. NRCI-76/9 at 269. However, as the above quoted footnote makes clear, *Conservation Society* held that this factor may be considered only where the ultimate outcome of the NEPA review is not in substantial doubt; where that is not the case, it is "of no consequence" 508 F.2d at 937 n. 59. In *Conservation Society* the District Court had found that the outcome of the NEPA review "was virtually undisputed" *id.* at 937 and the Court of Appeals held that this finding was "supported by the record" *Id.* at 936. The NEPA issues raised by *Natural Resources Defense Council v. NRC*, *supra* at p. 373, are not undisputed and the *Seabrook* Board did not find that there was no substantial doubt about their ultimate outcome. Even now, after issuance of the revised environmental survey (NUREG-0116) and the Commission's Notice of Proposed Rulemaking, we cannot make such a finding. Neither the survey nor the interim regulation has yet been adopted by the Commission; they have merely been noticed for public comment. Moreover, the October 13th Notice of Proposed Rulemaking reiterated the Commission's intention to hold a public hearing after promulgation of an interim rule "in order to facilitate effective public participation on the question whether the interim rule should be amended for future use and, if so, in what respect" 41 Fed. Reg. at 45851. We cannot assume that public comment on the interim rule and the public hearing on the final rule, as well as the opportunity for further reflection, will have no influence on the Commission's final decision. Thus, the ultimate outcome of this NEPA review is still far from settled. The loss of construction workers' jobs which would be caused by a suspension of construction may therefore not be considered on this motion.

CONCLUSION

Although the NEPA violation is significant and the issues were timely raised, the other factors weigh against suspension. The environmental impact of construction until an interim regulation is adopted is minor; the cost/benefit balance will not be tilted by the increased investment during that period; delay will cost the applicant millions of dollars; and the record shows a serious need for the power to be produced by this plant in the year when it is scheduled to come on line. The request for suspension of the construction permit must therefore be denied.

Intervenors motion also sought to return this proceeding to the Licensing Board for an evidentiary hearing on fuel cycle issues and to compel the staff to issue a new environmental impact statement containing a more detailed evaluation of the environmental impact of the fuel cycle and to produce evidence and testimony in support of its conclusions. Such relief would be inconsistent with the Commission's Policy Statement of August 13, 1976 and we therefore decline to grant it.

The motion is *denied*.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Margaret E. Du Flo
Secretary to the Appeal Board

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-353

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. John H. Buck
Richard S. Salzman

In the Matter of

Docket Nos. 50-516
50-517

LONG ISLAND LIGHTING COMPANY

(Jamesport Nuclear Power Station,
Units 1 and 2)

The Appeal Board denies a petition to direct certification, pursuant to 10 CFR 2.718(i), of a specific interlocutory evidentiary ruling by the Licensing Board.

Messrs. W. Taylor Reveley III, Richmond, Virginia, and
Edward J. Walsh, Jr., Mineola, New York, for the applicant,
Long Island Lighting Company

Mr. Irving Like, Babylon, New York, for the intervenor,
Suffolk County New York.

Mr. Bernard M. Bordenick for the Nuclear Regulatory Commission staff.

MEMORANDUM AND ORDER
October 28, 1976

We have endeavored to make clear our disinclination to exercise our authority to direct certification¹ to review interlocutory rulings of licensing boards dealing with garden-variety evidentiary matters. See *Toledo Edison Co.* (Davis-Besse Nuclear Power Station, Unit 1), ALAB-314, NRCI-76/2 98 (February 26, 1976); *Long Island Lighting Co.* (Jamesport Nuclear Power Station, Units 1 and 2), ALAB-318, NRCI-76/3 186 (March 16, 1976). Apparently

See 10 CFR 2.718 (i) and *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-271, 1 NRC 478 (1975).

unconvinced that we meant what we said in those decisions, Suffolk County New York – the very intervenor whose petition for directed certification was rejected in ALAB-318 – has now filed another petition by which it seeks once again to bring before us such a ruling. The petition is *demed.*²

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Margaret E. Du Flo
Secretary to the Appeal Board

The ruling in question related to the County's desire to present the testimony of a witness of its own on certain questions raised by the Licensing Board. What transpired below is fairly summarized by the staff in its opposition to the petition for directed certification (at pp. 3-4, footnotes omitted):

The County had indicated that it would present a case in chief on these Board questions. However, at the appropriate time (September 1, 1976) the County's witness, John Frizzola, was not present in the hearing room to sponsor his prefiled testimony and to be available for cross-examination. Because of separate objections on the part of the Applicant, the NRC Staff and the State of New York, the Licensing Board directed that Mr. Frizzola be present to testify on September 2, 1976. Counsel for the County noted his objection to the Board's direction and stated that Mr. Frizzola would *not* be present on that date (Tr. 1815-1827).

On September 2, 1976, Counsel for the County verbally apprised the Board that Mr. Frizzola was present in the hearing room. However, representatives of the State of New York, including counsel, who had previously expressed interest in the above quoted Board questions, had departed Riverhead [where the hearing was being held] and returned to Albany in reliance on County Counsel's statement on September 1, 1976 (Tr. 1830-37 2541). The Board, however, determined to reconsider its previous ruling precluding the testimony of Mr. Frizzola and stated that it would allow Mr. Frizzola's testimony to be offered in evidence the following week, September 7 provided "that all parties are notified and [agreeable and] will be present to be available for cross-examination of Mr. Frizzola" (Tr. 1841-2). Since the County was unable to meet the condition set down by the Board, the Board reinstated its prior ruling precluding the testimony of Mr. Frizzola (Tr. 2515-19).

As can be readily seen from this summary we are not here confronted, any more than we were in ALAB-314 or ALAB-318, with such extraordinary circumstances that our involvement at this juncture is mandated.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-354

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr John H. Buck
Richard S. Salzman

In the Matter of

Docket No. 50-537

**PROJECT MANAGEMENT CORPORATION
TENNESSEE VALLEY AUTHORITY
ENERGY RESEARCH AND DEVELOPMENT
ADMINISTRATION**

(Clinch River Breeder Reactor Plant)

Upon appeal by fourteen Tennessee counties and municipalities from the Licensing Board's order denying their untimely petitions for leave to intervene (LBP 76-31), the Appeal Board rules that (1) the petitioners have not offered a substantial excuse for the lateness of their petitions; (2) consideration of the four factors of 10 CFR 2.714(a) does not overcome that deficiency and (3) the State of Tennessee, which has supported the petitioners' intervention, may participate pursuant to 10 CFR 2.715(c) in the issues sought to be raised by the counties and municipalities, notwithstanding its stipulation limiting its own contentions to other issues.

Licensing Board order affirmed.

RULES OF PRACTICE: NONTIMELY INTERVENTION PETITIONS

Late petitioners for intervention have a substantial burden in justifying their tardiness, and the burden of justifying intervention based on the other factors in 10 CFR 2.714(a) is considerably greater where the latecomer has no good excuse.

RULES OF PRACTICE. APPELLATE REVIEW

When petitioners fail to demonstrate a good excuse for the lateness of their intervention petitions, an appeal board should reverse a licensing board's order denying intervention only if it clearly appears that in combination the four factors of 10 CFR 2.714(a) weigh so heavily in petitioners' favor that an abuse of discretion is involved.

RULES OF PRACTICE: INTERVENTION BY A STATE

Even though a State has submitted contentions and intervened under 10 CFR 2.714, it may participate as an "interested State" under 10 CFR 2.715(c) on issues in the proceeding not raised by its contentions.

RULES OF PRACTICE: NONTIMELY INTERVENTION PETITIONS

In considering the four factors of 10 CFR 2.714(a) relative to a nontimely intervention request, a board cannot take the fourth factor (the extent to which the petitioners' participation will broaden the issues or delay the proceedings) as being dispositive.

Mr. George L. Edgar, Washington, D.C. for the applicants,
Project Management Corporation, *et al.*

Messrs. William B. Hubbard, Assistant Attorney General of
Tennessee, and **William M. Barrick**, Nashville, Tennessee,
for the appellants, Lenoir City Tennessee, *et al.*

Mr Geoffrey P Gitner (with whom **Mr. Barry H. Smith** was
on the brief) for the Nuclear Regulatory Commission staff.

DECISION October 29, 1976

Opinion of the Board by Mr. Rosenthal, in which Mr. Salzman joins:

This construction proceeding involving the proposed Clinch River Breeder Reactor Plant is once again before us on an interlocutory matter.¹ This time, fourteen counties and municipalities in Tennessee challenge a Licensing Board order denying their untimely petitions for leave to intervene. LBP-76-31, NRCI-76/8 153 (August 26, 1976).² The matter comes to us by way of an appeal under 10 CFR 2.714a. We affirm.

Several months ago, we were asked (but declined) to direct certification of a Licensing Board order admitting to the proceeding certain contentions of an intervenor. ALAB-326, NRCI-76/4 406 (April 19, 1976), *reconsideration denied*, ALAB-330, NRCI-76/5 613 (May 12, 1976). The Commission subsequently did review that order. CLI-76-13, NRCI-76/8 67 (August 27 1976).

² Each of these governmental entities is located in the general vicinity of the Clinch River site, which is within the city limits of Oak Ridge in Roane County (approximately 25 miles west of Knoxville).

I

A. The announced deadline for leave to intervene was July 18, 1975 40 Fed. Reg. 25708 (June 18, 1975). Prior to that date, intervention petitions were filed by the State of Tennessee, Roane County the City of Oak Ridge and a group of three private organizations. On October 9 1975 all but the Oak Ridge petition were granted. On the strength of an amended petition, Oak Ridge was permitted intervention in March of this year.

The Roane County and Oak Ridge petitions were signed by a County Judge and the City Attorney respectively. As amended, they asserted generally that the applicants' Environmental Report did not adequately assess the socio-economic impact of the Clinch River facility on communities in its vicinity³. The petitioners manifested concern, *inter alia*, that the influx of construction workers and permanent employees would have a deleterious effect upon the quality of life in these communities and, more particularly, would overtax the services provided by their governments (*e.g.*, school systems and sewers).

The State of Tennessee's petition did not raise like issues. In March 1976, however, the State moved to amend its petition to add a contention to the effect that neither the Environmental Report nor the NRC staff's Draft Environmental Statement had discussed adequately "the significant environmental impact which the school children of the construction workers of the plant will have on the State educational system * * *" The motion, signed by an Assistant Attorney General of Tennessee, stated that:

* * * By way of stipulation filed today the State of Tennessee has dropped all other contentions subject to the Board's approval. The City of Oak Ridge has raised the issue of the social economic impact which will be felt by the local communities, however, it is the opinion of the State of Tennessee that the significant impacts upon the State government should be considered as well.

In its April 6, 1976 special prehearing conference memorandum and order, the Licensing Board granted the motion and also approved the stipulation pursuant to which Tennessee agreed to withdraw all of its other contentions. LBP-76-14, NRCI-76/4 430, 443.

B. The two intervention petitions now before us were filed on July 7 and 28, respectively - *i.e.*, a year late and several months after Tennessee had entered into the stipulation with the applicants and the NRC staff in which it agreed to limit its contentions to the impact of Clinch River construction upon the state educational system. The first of the two petitions was submitted on

³The Roane County petition spoke in terms of the "socio-economic impact of the Clinch River Breeder Reactor on the area in which the [facility] is to be located * * *" The Oak Ridge petition, however, confined itself to the impact upon that City

behalf of nine municipalities (Lenoir City Clinton, Oliver Springs, Kingston, Rockwood, Harriman, Knoxville, Loudon and Lake City) and four counties (Knox, Loudon, Morgan and Campbell).⁴ The second was in the name of Anderson County ⁵ Both petitions were signed by (1) the same Tennessee Assistant Attorney General who represents the State in the proceeding and had signed the stipulation for the State in that capacity and (2) a staff attorney of the Tennessee Energy Office, a state agency through which, according to the petition, the petitioners were "coordinating this intervention * * * for the convenience of all parties concerned" And both petitions were supported exclusively by the affidavit of Dr. Jack A. Thomas, the Special Projects Director of that state agency

The Lenoir City petition represented that the petitioners' interest stemmed from their responsibility to provide "broad governmental services to their citizens" services which "will be affected by the construction of this plant * * *" That petition went on to assert that neither the applicants' Environmental Report nor the NRC staff's Draft Environmental Statement

adequately addresses or assesses the impact which the construction workers on the plant will have upon local governmental services including crowding of local schools, shortage of housing resulting in inflationary rentals and prices, shortage of water and sewer services, congestion of local streets and highways, over-taxing community services and increasing the costs to these governmental entities in providing the services.

The Anderson petition was to much the same effect.

In accompanying motions for leave to file these tardy petitions, explanations were offered for the failure to have sought intervention on a timely basis.

The Lenoir City petition represented that

Petitioners have never participated in nuclear regulatory proceedings and are not familiar with their procedures. Furthermore, the petitioners were not sent copies of the Environmental Report nor the Draft Environmental Statement and have only recently become aware of the impacts which their communities are likely to feel from the construction of this plant. Many of the petitioners do not have technical and professional staffs including full time attorneys available to keep informed on proceedings of this kind.

Anderson County's excuse was that it too was unfamiliar with NRC procedures and that

Petitioner has become recently concerned that the payment in lieu of taxes which it receives from the Energy Research and Development Administration will not fully mitigate the adverse socio-economic impacts which it will

⁴ Hereinafter the "Lenoir City petition."

⁵ Hereinafter the "Anderson petition."

suffer from the construction of the Clinch River Breeder Reactor Plant. Because petitioner's Quarterly County Court only meets every third Monday of each month, petitioner was unable to obtain authorization to proceed with this petition in time to join with the petition of Lenoir City et al.

C. As is clear from the discussion in the order under appeal, the Licensing Board perceived in the totality of circumstances a need for clarification of the relationship between each of the petitioning governmental entities and the Tennessee Energy Office. It also appears from the order that the Board was not entirely satisfied with the written answers which it received to certain questions it posed to the petitioners in quest of such clarification, responses which it thought to be "evasive and unresponsive" NRCI-76/8 at 156. Our own preliminary examination of the record below upon receipt of the appeal led us to the conclusion that, at the very least, a further delineation of the respective roles of the State and the local governments in this proceeding must be obtained.

We now have in hand affidavits executed in September 1976 by the chief executives of the petitioners to the effect that they have requested the Tennessee Energy Office to represent their counties and municipalities in this proceeding because of that agency's "familiarity with the proceeding and ability to present the positions of the interested cities and counties in a unified petition" The affiants went on to request that, if we were to determine that the counties and municipalities could not be represented by counsel for the Tennessee Energy Office, they be afforded the opportunity to retain other counsel.

At the oral argument of the appeal, we elicited additional relevant information respecting not only the involvement of the State and the Tennessee Energy Office in this intervention endeavor but, as well, the matter of what the local governments propose to litigate and the relief which they seek. We were told that in May 1976 - *i.e.*, approximately two months after the stipulation was executed and one month after it had been approved by the Licensing Board - "the State sought a meeting with the cities and counties which the State believed were going to be affected by construction of this plant, and the State recommended that these cities and counties become parties to the proceeding" (App. Bd. Tr. p. 13). At this meeting, the two State lawyers who ultimately filed the petition, in conjunction with Dr. Thomas, described to the local officials "what was going on" (*id.* at 23). The municipalities and counties "eventually * * * organized themselves and * * * decided they wanted to proceed" (*ibid.*). After each had obtained the requisite authorization from the appropriate governing body the petitions were filed (*id.* at 23-24). Although the local governments would control such decisions as what witnesses would testify on their behalf, the State intends to bear all litigation costs (*id.* at 15 20). Indeed, the single contribution which would be made by the petitioners themselves would be that of providing "background information" (*id.* at 20).

We were further informed that the objective of the petitioners' participation in the proceeding will not be a determination that, because of the socio-economic impact which the Clinch River facility would have upon their communities, a construction permit should be withheld (*id.* at 8). Moreover, petitioners acknowledge that there is no way of forecasting at this juncture precisely what that impact would be on any particular community (*id.* at 25). What petitioners are looking for is an order which, once construction is underway would require the applicants – and particularly the Energy Research and Development Administration—to monitor the effects being experienced by the local communities and to mitigate those effects in accordance with “some type of formula” which presumably would be devised by the Licensing Board (*id.* at 25). As we understand it, the “mitigation” which petitioners have in mind might take one or more of several forms; *e.g.*, making of direct payments to the local governments, transporting construction workers by bus or in carpools, attempting to influence housing patterns of the workers, providing portable school classrooms (*id.* at 7-8, 25-26, 47).

While the petitioners thus do not propose to call upon the Licensing Board to make findings on the specific socio-economic impacts that will be felt by the various communities, we were told that they intend to adduce evidence relating to the governmental services which each now furnishes. Their apparent purpose is to demonstrate to the Board that there will be burdens placed upon these services in the event of an influx of new residents resulting from the Clinch River facility (*id.* at 28). Not all of the governmental entities here involved provide, of course, precisely the same services. And the extent to which particular services could be made available to additional residents without overtaxing existing physical or financial resources will also vary from community to community

D. The Licensing Board's denial of leave to intervene was based on two grounds: (1) the petitioners had not made a substantial showing of “good cause” for the untimeliness of the petition within the meaning of 10 CFR 2.714(a) as interpreted by the Commission in its *West Valley* decision;⁶ and (2) neither petition satisfied the pleading requirements imposed by the same Section of the Rules of Practice. NRCI-76/8 at 160-61. The applicants and the NRC staff ask that we uphold that result.

II

It is now well settled that, in determining whether to accept a belated

⁶ *Nuclear Fuel Services, Inc.* (West Valley Reprocessing Plant), CLI-75-4, 1 NRC 273 (1975). See also, *Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-342, NRCI-76/8 98 (August 31, 1976); *Public Service Co. of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-339, NRCI-76/7 20 (July 27 1976); *Long Island Lighting Co.* (Jamesport Nuclear Power Station, Units 1 and 2), ALAB-292, 2 NRC 631 (1975).

petition, a Licensing Board must consider both the substantiality of the excuse offered for the tardiness and the four factors which are set forth in 10 CFR 2.714(a).⁷ *West Valley* CLI-75-4, and other decisions cited, fn. 6, *supra*. Further, not only do “[l]ate petitioners properly have a substantial burden in justifying their tardiness” but “the burden of justifying intervention on the basis of the other factors in [Section 2.714(a)] is considerably greater where the latecomer has no good excuse” *West Valley* 1 NRC at 275. And “since the Commission indicated in *West Valley* that Section 2.714(a) confers ‘broad discretion’ upon licensing boards ‘in the circumstances of individual cases’ (1 NRC at 275), it follows that our ‘review of the Board’s ruling is * * * limited to determining whether that discretion has been abused in this case. *Public Service Company of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-339 NRCI-76/7 20, 24 (July 27 1976).” *North Anna, supra* fn. 6, NRCI-76/8 at 107

A. In this instance, we are entirely satisfied that the Licensing Board correctly found insubstantial the justification proffered by the petitioners for the extreme lateness of their intervention filings. Indeed, with commendable candor, one of their attorneys conceded as much at oral argument before us (App. Bd. Tr. 37-38).

Leaving aside the constructive notice of the commencement of the proceeding which was imparted by the June 1975 publication in the *Federal Register* of the notice of hearing,⁸ the petitioners could not possibly have been unaware of the proposal to build this facility. And we are informed by the applicants without contradiction that the principal newspapers serving the area in which the petitioners are located have given extensive publicity to the significant developments in the proceeding which have occurred since early last fall. Moreover, contrary to the statement in the papers of Lenoir City *et al.* that none of those petitioners had received copies of the Draft Environmental Statement upon its issuance in February 1976, that document reflects that it was furnished to, *inter alia*, Knoxville, Knox County and Loudon Counties (as well as Anderson County) with a request for comments. It was not suggested at oral argument that those petitioners did not actually receive the DES. Yet, insofar as we are aware, none responded to the invitation to comment upon it. This is so despite the fact that the petitioners seek intervention in good measure on the assertion that the

⁷ Those factors are:

- (1) The availability of other means whereby the petitioner’s interest will be protected.
- (2) The extent to which the petitioner’s participation may reasonably be expected to assist in developing a sound record.
- (3) The extent to which petitioner’s interest will be represented by existing parties.
- (4) The extent to which the petitioner’s participation will broaden the issues or delay the proceeding.

⁸ See *Jamesport, supra* fn. 6, 2 NRC at 646-47

DES inadequately assesses the socio-economic impacts upon local communities which will or might attend Clinch River construction.

What petitioners are thus left with are their claims of unfamiliarity with NRC procedures; failure of early appreciation of the possible effects upon them of Clinch River construction; and lack of technical and professional resources. See p. 386, *supra*. We find these claims unimpressive. Petitioners' governing officials surely must be assumed to have been cognizant from the very outset that the construction of a facility of this magnitude might bring a sizeable number of persons—workmen and their families – to the area and that these individuals would impose demands for governmental services upon the communities in which they settled. In these circumstances, it was incumbent upon petitioners to take some measures to protect their interests. *Cf. Jamesport, supra* fn. 6, 2 NRC at 647. At the very least, they could have sought the aid of the State – which obviously was (or became) familiar with Commission procedures and, as we have seen, is both equipped and willing to render such assistance to local communities to the point of fully manning and funding an intervention on their behalf. Granted, in contrast to Knoxville and Knox County some of the petitioners have relatively sparse populations. It is reasonable to suppose, however, that it is the smaller communities which would experience the greatest effect from an increase in the number of residents. Accordingly one well might have expected the first indication of concern to have come from those petitioners, rather than the larger cities or counties.⁹

B. In light of the foregoing, we would be warranted in reversing the Licensing Board's order only if it clearly appeared that in combination the four Section 2.714(a) factors weighed so heavily in petitioners' favor that an abuse of that Board's discretion is involved. We hold that they do not.

1. The first and third of the four factors are directed to whether denial of intervention would leave the petitioners with an interest which could not be otherwise protected by them and which would not be adequately represented by any of the existing parties to this proceeding. In prior cases involving late intervention petitions filed by cities and counties, recognition has been given to the fact that the particular public interests which are advanced by such local governmental entities on behalf of their constituencies may be of a different stripe or scope than those of other participants in the proceeding. *West Valley supra* fn. 6, 1 NRC at 275 *Marble Hill, supra* fn. 6, NRCI-76/7 at 24-25. Because of this recognition, both the Commission and this Board have been slow to conclude that a local government can reasonably depend upon someone else to carry its flag into battle. *Ibid.* Although that hesitancy carries over to this case, there are

Anderson County's excuse (see pp. 386-387 *supra*) is likewise inadequate. Among other things, that County does not explain why its concern regarding the adequacy of the payments it receives from ERDA in lieu of taxes was of "recent" origin. The reason may be that only recently were such payments commenced. If so, there remains unanswered why the County had no earlier basis for concern respecting the burdens upon it which might ensue from Clinch River construction.

special considerations present which convince us that neither the first nor the third factor is of much, if any aid to petitioners here.

We are prepared to accept the petitioners' representation that, in reality and not just in form, the intervention effort is their own. Nonetheless, in assessing whether the addition of petitioners to the ranks of party participants is necessary for the protection of the interests which their petitions assert, we cannot disregard the limited character of their past, present and intended future involvement in the proceeding. As previously noted, the filing of the petitions was prompted by the State; lawyers in the employ of the State have represented the petitioners to date and apparently will continue to do so (appearing simultaneously for the State itself); an official of a state agency supplied the necessary affidavits in support of the petitions; and the State has undertaken to assume all other costs of litigation. This is certainly a far cry from the situation in either *West Valley* or *Marble Hill*. Insofar as the record reflected in those cases, the attempts on the part of the local governments to intervene were not only self-generated but also entirely independent of any State role in the proceeding. For example, in *West Valley* the late petitioning county was endeavoring to litigate, using its own counsel as well as the technical resources of two of its own agencies, an issue (the safety implications of the transportation of nuclear material to the facility site) in which the State had evinced no interest. See ALAB-263, 1 NRC 208, 222 (1975) (dissenting opinion).

The significance of the State's obvious willingness to use its resources – financial and otherwise – in the furtherance of petitioners' interest in this proceeding is quite apparent. For one thing, although the State's own contentions are now confined to the issue of the impact of Clinch River construction upon its educational system, another intervenor (*viz.*, Roane County) has raised the broader question of the adequacy of the assessment of “[t]he socio-economic impact of the [facility] on the area in which [it] is to be located”¹⁰ We held some time ago, and the Commission agreed, that “[i]n both operating license and construction permit proceedings, an intervenor can and should be afforded the opportunity to cross-examine on those portions of a witness' testimony which relate to matters which have been placed into controversy by at least one of the parties to the proceeding – so long as that intervenor has a discernible interest in the resolution of the particular matter” *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-244, 8 AEC 857 868 (1974), *reconsideration denied*, ALAB-252, 8 AEC 1175 (1975), *affirmed*, CLI-75-1, 1 NRC 1 (1975). In this instance, the State has a manifestly discernible interest in the well-being of its political subdivisions and in the adequacy of the services which they provide to their residents. Thus, beyond doubt, it would be open to it to interrogate witnesses testifying for the various parties on the Roane County contentions. In the circumstances, it can be assumed that that right

¹⁰See fn. 3, *supra*. Although Oak Ridge also raised that matter, its contentions are limited in scope to the socio-economic impact upon itself. *Ibid.*

would be exercised – and by the very lawyers who propose to represent the petitioners if they are permitted intervention.

It is true, of course, that the *Prairie Island* rule does not go so far as to authorize one intervenor to introduce affirmative evidence on issues raised by another intervenor's contentions. ALAB-244, *supra*, 8 AEC at 869 fn. 17. Further, because that rule applies only to *contested* (or Board-raised) issues, the State could derive no benefit from it at all were Roane County to withdraw from the proceeding (a contingency which we were told at argument might materialize).¹¹ There is, however, another – and more effective – means by which a *State* can participate in the development of the record on *any* issue (contested or not) which is before a licensing board for resolution in a construction permit proceeding. Section 2.715(c) of the Rules of Practice, 10 CFR 2.715(c), provides that “a representative of an interested State which is not a party” is to be afforded “a reasonable opportunity to participate and to introduce evidence, interrogate witnesses, and advise the Commission without requiring the representative to take a position with respect to the issues”¹² This participational opportunity includes the taking of an appeal to us from an initial decision in the proceeding. *Gulf States Utilities Co.* (River Bend Station, Units 1 and 2), ALAB-317 NRCI-76/3 175 (March 4 1976).

We think that the rights conferred by Section 2.715(c) are available to the State here in connection with those issues not embraced by its single contention – *i.e.*, those issues as to which it does not enjoy full party status.¹³ Any other

App. Bd. Tr. 49 64, 67 It appears that the applicants are engaged in active settlement negotiations with Roane County and that the “Roane County representative in the negotiations has recommended to the County Court, the governing body for that county that the intervention be withdrawn”

¹Had the Commission intended to confine the reach of Section 2.715(c) to participation on issues *placed in contest* by one of the parties, it undoubtedly would have said so. In any event, we should not imply such a limitation in the absence of a good reason for doing so. None here appears.

³It is clear that, even if Roane County should withdraw from the proceeding, the socio-economic impact of Clinch River construction and operation on neighboring communities will remain an issue – albeit not a contested issue except as to Oak Ridge proper – in the proceeding. The Draft Environmental Statement addresses that impact (Section 4.5) and we understand that the yet-to-be-issued Final Environmental Statement will also do so and in greater detail. And the Licensing Board has an independent obligation, of course, to consider the subject in the discharge of its NEPA responsibilities. Among other things, the Board must determine whether there is likely to be such impact and whether there are means at its disposal to require the applicants to take measures to lessen the burdens which will be imposed upon the local governments and the communities served by them. In the latter connection, we need not and do not now pass upon the correctness of the Licensing Board's view that it lacks the authority to order the applicants to make payments to the petitioners in lieu of taxes. NRCI-76/8 at 157-60. Even if, however, the Board is right in that conclusion, it does not necessarily follow that this Commission is devoid of power to require any form of ameliorative action. This question likewise need not be examined by us at this juncture.

interpretation not only would place an undue premium upon literalism but, in addition, would derogate the purposes of Section 2.715(c) and its statutory source, Section 274 of the Atomic Energy Act, 42 U.S.C. 2021(1). See ALAB-317 *supra*, NRCI-76/3 at 178-79 The design of both provisions is to accord to States the privilege of fully participating in licensing proceedings and advising the Commission on the resolution of issues considered therein without being obliged in advance to set forth any affirmative contentions of its own (as is required of private intervenors). This design would scarcely be served by a holding that, should a State elect to file one or more contentions and thus become a "party" to the proceeding under Section 2.714(a), it thereby forfeits all right to exercise its participational rights under Section 2.715(c) insofar as all other issues are concerned. Nor do we perceive any other basis upon which such a holding could be justified. As a practical matter, it undoubtedly would inhibit the filing by States of affirmative contentions; at least in circumstances where the State's Section 2.715(c) involvement would be enough to insure that its concerns were fully explored by the Licensing Board.¹⁴ Yet there will often be a decided advantage to be gained in terms of sharpening the issues if the State elects to take a positive stand at an early stage.¹⁵

In short, we think that, in light of the unusual circumstances of this case, it can be reasonably concluded that the interests of the late petitioners both can and will be represented by an existing party.¹⁶ We need add only that, should

⁴ The Section does not appear to authorize the injection of *new* issues into a case. Thus, a State wishing to "advise" the Commission on an issue not otherwise before the Licensing Board would be required to raise that issue itself by way of a contention meeting the pleading requirements of Section 2.714(a). In light of the expansive scope of the Commission's independent NEPA responsibilities, it is unlikely that many environmental questions would fall in that category.

⁵ We do not take the stipulation entered into by the State as having any significance beyond effecting a withdrawal of the safety contentions which the State had earlier advanced — none of which concern socio-economic impacts of plant construction or operation. As such, the stipulation does not preclude the State's exercise of Section 2.715(c) rights with respect to the matters under present consideration. Similarly in our judgment, the State's motion to amend its intervention petition (see p. 385, *supra*) does not represent, either explicitly or implicitly that the State would forego participation in the adjudication of any issue relating to local socio-economic impacts which might be before the Licensing Board on the Oak Ridge contentions or otherwise. Waivers of rights by implication are, of course, not favored. "As minimum requirements to constitute an 'implied waiver' of substantial rights, the conduct relied upon must be clear, decisive and unequivocal of a purpose to waive the legal rights involved. Otherwise, there is no waiver." *Groves v. Prickett*, 420 F 2d 1119, 1125-26 (9th Cir. 1970).

⁶ More specifically the State will be able (1) to cross-examine witnesses for the applicants, the staff (or any other party) with regard to socio-economic impacts on local communities; (2) to present its own evidence (if thought necessary); (3) to file proposed findings of fact and conclusions of law concerning potential impacts and the matter of

Continued on next page.

one or more of the counties or municipalities desire to do so, they will be free to bring to the Licensing Board's attention through limited appearance statements any information regarding their particular situations which they believe the Board should have at its disposal. It well may be that, in most instances, a limited appearance will not prove even a partially adequate substitute for intervenor status. Given, however, the nature of the end result which these petitioners seek to achieve (see p. 388, *supra*), and the State's active participation in the proceeding, it should turn out to be sufficient direct involvement on their part here — assuming that any supplementation of the State's endeavors might be found warranted.

2. Little additional need be said on the second factor — the extent to which the petitioners' participation may reasonably be expected to assist in developing a sound record. At best, the petitioners would contribute to the record only factual information which might shed light upon how the influx of new residents could affect their communities and the governmental services provided therein. As we have just seen, there are available means short of intervention whereby such information can be brought to the Licensing Board's attention by either the State or petitioners themselves.

3. The fourth factor — the extent to which the petitioners' participation will broaden the issues or delay the proceeding — does favor petitioners. The issues which they seek to litigate are already before the Licensing Board. And, since issuance of the FES is a month or more away there would be no serious potential for delay were petitioners to be granted entry into the proceeding even at this late date. This is so at least if, as would necessarily have to be the case, the petitioners were required to take the proceeding as they found it. *West Valley supra* fn. 6, 1 NRC at 276.

We have previously observed, however, that Section 2.714(a) cannot be "read as making the fourth factor dispositive; *i.e.*, as manifesting a Commission judgment that, irrespective of the conclusions reached on the other factors, an untimely petition should always be accepted so long as no broadening of issues or delay in the progress of the proceeding is involved" Our reasoning was that:

Continued from previous page.

appropriate relief; and (4) to appeal from the initial decision if it is adverse to the State's ultimate position as reflected by the proposed findings and conclusions.

True enough, it will be the State and not the petitioners which will control what is actually done. That is however, always the situation when, by virtue of its failure to have filed its petition on time, a would-be intervenor must leave it to an existing party to represent its interests. Indeed, if the question of "control" were dispositive in the evaluation of the third factor, that factor would invariably tip in favor of the late petitioner and thus would become meaningless. Moreover, in this case it seems unlikely that the petitioners would direct in any real sense the conduct of the litigation on their behalf even were they allowed to intervene.

Undeniably the delay factor is a particularly significant one; indeed – barring the most compelling countervailing considerations – an inexcusably tardy petition would (as it should) stand little chance of success if its grant would likely occasion an alteration in hearing schedules. But, equally plainly we would be recasting Section 2.714(a) were we to hold that a petitioner for intervention may ignore established time deadlines with impunity if, in doing so, it presents no threat to the progress of the adjudication. More than that, we would be disregarding the teachings of the Commission’s decision in *West Valley supra*. There, as here, the scheduled commencement of the evidentiary hearing was still well in the distance when the petition was filed. Nonetheless, the Commission explicitly took into account all four Section 2.714(a) factors – three of which it found to weigh in the petitioner’s favor – in reaching its “reluctant” conclusion that the petition should be granted. [1 NRC] at 275-76.

Jamesport, supra fn. 6, 2 NRC at 650-51 (opinion of this writer speaking for the entire Board on the point).

For the foregoing reasons, we conclude that there is no basis upon which we would be justified in upsetting the Licensing Board’s determination that petitioners have not made a substantial showing of “good cause” for the failure to file their petitions on time, within the meaning of 10 CFR 2.714(a). The petitions were inexcusably late and the four factors, taken collectively do not overcome that consideration. The order under appeal is therefore *affirmed*.¹⁷

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Margaret E. Du Flo
Secretary to the Appeal Board

¹⁷ In view of our decision on the untimeliness issue, we do not reach the more difficult question whether the petitioners complied with the pleading requirements of Section 2.714(a). It should be noted in passing, however, that we do not agree with the position taken by the staff at oral argument that whether an intervention petition fulfills those requirements may depend upon the timeliness of its filing. There is nothing in Section 2.714(a) or elsewhere in the Rules of Practice which lends any support to that thesis. To the contrary as we read it, that Section admits of no interpretation other than that the question of the sufficiency of the content of the petition is wholly separate and distinct from the question of when it was filed. Stated otherwise, on the basis of what is to be found, within its four corners – and that alone – the petition is to be judged satisfactory or unsatisfactory as a pleading. The timeliness or lateness of its filing goes only to whether the Licensing Board must find something in addition to pleading sufficiency in order to allow intervention.

Opinion of Dr. Buck, concurring in the result:

Although I concur in the result reached by the majority insofar as it affirms the Licensing Board ruling on the intervention of Lenoir City *et al.*, I am in disagreement with my colleagues' view that the State is nevertheless free to exercise Section 2.715(c) rights with respect to the issue of socio-economic impacts upon local communities.¹

As I read its motion to amend its own intervention petition filed last March (quoted at page 385 of the majority's opinion), the State expressly represented therein that it would limit its participation to the newly raised contention pertaining to the potential impact of the facility upon the State educational system. In return for this limitation of its contentions, the State received substantial concessions from the applicants in such areas as radiological monitoring, water quality and traffic control. In these circumstances, there is substantial doubt that the State could thereafter be justified in actively soliciting the intervention — at State expense — of several local governments and thereby achieving indirectly what it had just publicly renounced.

Be that as it may now that that endeavor has failed, we certainly should not countenance the State assuming a full participational role on the issue of local socio-economic impacts in derogation of its prior stipulation. I find nothing in the actions of the State to warrant the prodigal-son treatment which the majority here grants it. Had the State intended to reserve Section 2.715(c) rights on the issue, it should have said so in its motion to amend its petition, rather than convey the clear impression that it would concern itself solely with the one matter to which its amendment was addressed.

Furthermore, precluding the State from affirmative participation with respect to local socio-economic impacts does not mean that this matter will not be considered by the Licensing Board. For, as the majority opinion notes, that issue has been raised by other parties to the proceeding (Roane County and Oak Ridge) and, in any event, the Licensing Board has an independent NEPA responsibility to consider it.

¹ The majority does not explicitly indicate whether it would have reached the same result were the State precluded from resort to Section 2.715(c) on that issue. In my view, however, the four Section 2.714(a) factors (taken in conjunction with the inexcusable lateness of the filing) require the denial of the petitions no matter how limited the State's participational rights.

UNITED STATES
NUCLEAR REGULATORY COMMISSION

ALAB-355

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Richard S. Salzman, Chairman
Dr. Lawrence R. Quarles
Michael C. Farrar

In the Matter of

Docket Nos. 50-413
50-414

DUKE POWER COMPANY

(Catawba Nuclear Station,
Units 1 and 2)

Intervenor appealed the Licensing Board decisions authorizing construction permits (LBP-74-22, LBP-74-34, LBP-74-90, and LBP 75-34). The Appeal Board rules that (1) the Licensing Board was correct in finding a need for the power to be produced; (2) the consideration of reprocessing and waste management issues should be deferred pending further guidance from the Commission in accordance with its *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle*, 41 Fed. Reg. 34707 (August 16, 1976); and (3) other exceptions raised by the intervenor are without merit.

Licensing Board decisions affirmed except as to the exclusion of intervenor's fuel cycle contention; evaluation of that exclusion deferred.

RULES OF PRACTICE: APPELLATE REVIEW

The "substantial evidence" rule does not apply to the Commission's internal review process and hence does not control an appeal board's evaluation of licensing board decisions.

RULES OF PRACTICE. APPELLATE REVIEW

Where an administrative record as a whole will fairly sustain a result deemed preferable by the agency to the one selected by its initial decision maker, the agency may substitute its judgment for its subordinate's.

EVIDENCE: QUANTUM OF PROOF

Each of the Commission's hearing boards and the Commission itself must decide cases in accordance with its judgment of the weight of the evidence in the record.

RULES OF PRACTICE. RESPONSIBILITIES OF PARTIES

It is of utmost importance for parties to keep a board abreast of changing circumstances bearing on their cases.

NEPA. NEED FOR POWER

NEPA requires the balancing of environmental costs against the benefits of a nuclear power plant. Absent some "need for power," justification for building a facility is problematical.

EVIDENCE. HEARSAY

Hearsay evidence is generally admissible in administrative proceedings.

RULES OF PRACTICE. BRIEFS

A party's failure to submit a brief containing sufficient information and argument to allow the appellate tribunal to make an intelligent disposition of the issue raised by an exception is tantamount to an abandonment of that issue. *Consumers Power Co.* (Midland, Units 1 and 2), ALAB-270, 1 NRC 473 (1975).

NUCLEAR REGULATORY COMMISSION: RULE-MAKING AUTHORITY

The Commission's use of rule-making to set ECCS standards is not a violation of due process. *Union of Concerned Scientists v. AEC*, 499 F.2d 1069, 1081-82 (D.C. Cir. 1974).

NUCLEAR REGULATORY COMMISSION: ENVIRONMENTAL RESPONSIBILITIES

NEPA does not require agency consideration of environmental effects (such as those which might arise from a Class-9 accident) not shown to have some reasonable likelihood of occurring. *Carolina Environmental Study Group v. United States*, 510 F.2d 796, 798-800 (D.C. Cir. 1975).

RULES OF PRACTICE. WORKING PAPERS, CONSIDERATION OF

An NRC staff working paper or draft report neither adopted nor sanctioned by the Commission itself has no legal significance for any NRC regulatory purpose. *Consolidated Edison Co. of New York, Inc.* (Indian Point, Unit 2), ALAB-209 7 AEC 971, 973 (1974); *Northern Indiana Public Service Co.* (Bailey

Generating Station, Nuclear-1), ALAB-224, 8 AEC 244, 254-55 (1974), *reversed sub nom. Porter County Chapter v AEC*, 515 F.2d 513 (7th Cir.), *reversed and remanded, sub nom. Public Service Co. v. Porter County Chapter* 423 U.S. 12 (1975), affirmed 533 F.2d 1011, 1016 (7th Cir.), *certiorari denied* _____ U.S. _____ (1976).

Mr. Troy B. Conner Jr., Washington D.C., argued the cause for the applicant, Duke Power Company *appellee*; with him on the briefs were **Messrs. J. Michael McGarry III**, Washington, D.C., and **William L. Porter**, Charlotte, NC.

Mr. George S. Daly Jr., Charlotte, N.C., argued the cause and filed a brief for the intervenor, Carolina Environmental Study Group, *appellant*; **Mr. Jesse L. Riley** Charlotte, N.C., also filed briefs for intervenor.

Mr. Joseph Scinto argued the cause for the Nuclear Regulatory Commission staff; on the briefs were **Messrs. L. Dow Davis**, **Robert H. Culp**, **Bernard M. Bordenick** and **Miss Louise C. Powell**.

PARTIAL DECISION October 29, 1976

Duke Power Company's application to the Commission¹ for permission to build the Catawba nuclear-powered electric generating station on the shores of Lake Wylie in York County South Carolina, was duly noticed in the Federal Register and Referred to a Licensing Board for a public hearing.² The Carolina Environmental Study Group was allowed to intervene in the proceeding³ and it participated actively as a party opposed to the Catawba facility.⁴ The Licensing

¹ Congress abolished the Atomic Energy Commission on January 19, 1975, transferring its authority over nuclear power plants to the Nuclear Regulatory Commission. Energy Reorganization Act of 1974, § § 104 and 201, 88 Stat. 1237 and 1242; 42 U.S.C. § § 5814 and 5841. The term "Commission" in this opinion refers either to the AEC or to the NRC as the context requires.

² 37 Fed. Reg. 25560 (December 1, 1972).

³ LBP-73-28, 6 AEC 666, *affirmed*, ALAB-150, 6 AEC 811 (1973).

⁴ South Carolina was also permitted to intervene and participate as an "interested State" under 10 C.F.R. § 2.715(c); it did not, however, take an active role. See 7 AEC 659 at 661 (1974).

Board ultimately ruled for the applicant and authorized construction permits to be issued.⁵ Intervenor appeals.

I

1. **Background.** The applicant is an investor-owned public utility which generates, transmits and sells electric energy in the Piedmont region of North and South Carolina. Believing that future demands for electric power in its service area would rise to exceed its generating capacity the utility embarked on a course of power plant construction. The proposed Catawba facility is part of that program, its two nuclear-powered units are designed to generate some 2,360 megawatts of electricity and were initially intended to be brought on line in 1979-80.

The intervenor is an association of individuals residing or owning property near the proposed plant site on Lake Wylie or in the City of Charlotte (thirteen miles to the northeast) who oppose the nuclear facility

2. **The proceedings below.** The Licensing Board conducted the construction permit hearings in stages, rendering a separate decision after each on the matters considered.

a. The first session covered environmental issues and the Board there took up intervenor's contention that neither the Catawba facility nor the additional power were needed. The Board declined, however, to entertain a Study Group contention that "the [staff's] safety and environmental analyses are deficient because they do not discuss the uranium fuel cycle and [do not] consider the uranium fuel cycle in the cost-benefit analysis."⁶ Instead, the Board ruled "that these generic matters are properly to be considered in the [pending Commission] Uranium Fuel Cycle rule-making proceeding * * * and are not appropriate for consideration in an individual licensing case," citing our *Vermont Yankee* decision and Commission instructions as authority⁷ LBP-74-5, 7 AEC 82 at 95-96 (January 15, 1974). The Board then heard the contentions which had been admitted, found that the Catawba facility's power would be needed, and

As discussed below, the Licensing Board issued partial initial decisions on environmental issues (7 AEC 659, April 9, 1974), on site suitability (7 AEC 861, May 14, 1974) and on compliance with interim emergency core cooling system ("ECCS") criteria (8 AEC 1117, December 19, 1974). The Final Initial Decision authorizing construction of the Catawba plant was rendered on June 30, 1975. LBP-75-34, 1 NRC 626. Intervenor sought no stay of that decision and, on August 7 1975, the Commission's Director of Reactor Licensing issued the applicant permits to construct the facility

⁶ This was Intervenor's "Contention A." See 7 AEC at 95.

⁷ Both the Commission's instructions, 37 Fed. Reg. 24191-93 (November 15, 1972), and our decision, *Vermont Yankee Nuclear Power Corporation* (Vermont Yankee Nuclear Power Station), ALAB-56, 4 AEC 930 (1972), were later overturned on this point by the court of appeals. *NRDC v. NRC*, 547 F.2d 633, 9 ERC 1149 (D.C. Cir. 1976). See Part V *infra*.

concluded that the benefits of having the plant on line outweighed the environmental costs. LBP 74-22, 7 AEC 659 (April 9 1974).

b. Shortly thereafter, the Commission promulgated regulations which permit one proposing to build a nuclear facility to undertake preliminary site preparation work at his own risk in advance of receiving a construction permit. Two basic prerequisites for such a "limited work authorization" or "LWA" were established: first, favorable environmental findings by the licensing board hearing the construction permit applications; second, another finding by that board that, from the standpoint of radiological health and safety the plant site was "suitable" for a nuclear facility of the size and type proposed.⁸ Applicant Duke Power promptly applied for an LWA. The Board below having previously rendered an environmental determination in applicant's favor, held a further evidentiary hearing on the fitness of the Catawba site, found it suitable within the intentment of the Commission regulation and issued a supplemental partial initial decision authorizing the LWA. LBP 74-34 7 AEC 861 (May 14 1974).

c. Intervenor then called the Licensing Board's attention to public announcements by applicant's senior officers outside the Commission hearing process that they were postponing construction of the Catawba plant for about two years. A slowdown in the growth of power demands on applicant's system and financial considerations were the reasons announced for the delay. The Licensing Board, taking note of the postponement, deemed it sufficient cause to order the record reopened for further evidence on applicant's need for Catawba and its financial qualifications. LBP-74-84, 8 AEC 890 (November 14 1974). Following completion of the reopened hearing the Board reconsidered its earlier rulings on these issues. After doing so, however, it again concluded that even in light of the new evidence the Catawba facility would be required despite the deferred completion date. The Board also found that the applicant's financial qualifications to build and operate the plant remained satisfactory. Based on those determinations, and on findings relating to radiation health and safety⁹ the Licensing Board rendered a "final" Initial Decision authorizing construction of the Catawba nuclear facility LBP 75-34, 1 NRC 626 (June 30, 1975).¹⁰

⁸The regulations governing the issuance of LWA's, initially promulgated by the Commission on April 24, 1974 (39 Fed. Reg. 14506), are now codified at 10 C.F.R. §50.10(e).

⁹Those findings were based on evidence received by the Board below at an earlier hearing session. See 1 NRC at 629 para. 5.

¹⁰The Board below also rendered a separate Partial Initial Decision which dealt with the applicant's compliance with the Commission's Interim Regulations governing the facility's emergency core cooling system (ECCS). LBP-74-90, 8 AEC 1117 (December 19, 1974). Although intervenor filed exceptions to that decision it did not brief them, in effect abandoning its appeal. *Northern Indiana Public Service Co.* (Bailly Generating Station, Nuclear-1), ALAB-224, 8 AEC 244, 248 (1974). At all events we note that the Licensing Board's action appears to have been given tacit approval by the Commission. See *CLI-75-9*, 2 NRC 180 (August 6, 1975).

II. SCOPE OF REVIEW

Before reaching the merits of intervenor's appeal we must dispose of a matter concerning the scope of our appellate review. The staff asserts that the "substantial evidence rule" controls our evaluation of licensing board decisions. The rule as usually formulated mandates that an agency decision supported by substantial evidence¹ in the record as a whole must be affirmed on judicial review even though the court might disagree with the agency's evaluation of the record. *Consolo v Federal Maritime Commission*, 383 U.S. 607 620 (1966).¹² The staff says that the rule governs the Commission's internal review proceedings and therefore asserts that we may not "substitute [our] judgment for that of the Licensing Board" if its decision rests on substantial record evidence.¹³ We do not agree. The staff has failed to distinguish between agency action on the one hand and judicial review on the other and has misapprehended our role in the process.

The staff would have us adopt and apply the test that section 10 of the Administrative Procedure Act prescribes for judicial review of agency adjudication. 5 U.S.C. §706; *Porter County Chapter v. AEC*, 533 F.2d 1011 1019 (7th Cir. 1976); *Universal Camera Corp. v. NLRB*, 340 U.S. 474 (1951). But this Board is not a court. Rather, "[o]ur review is part of the administrative decisional process" and, consequently "we are not bound by the plentitude of decisions which concern the extent to which courts defer to rulings of an administrative body" *Consolidated Edison Co. of New York* (Indian Point Station, Unit No. 2), ALAB-188, 7 AEC 323, 357 (1974). The reason we are not so bound stems from distinctions Congress made in the Administrative Procedure Act between the functions of courts and agencies. Where a statute vests the primary responsibility to hold hearings on a record, to find facts, to draw inferences and to make determinations in the first instance in an administrative agency Section 10 of the APA restrains a court's authority to reexamine the wisdom of the administrative determination. Section 10 does this by narrowing the scope of judicial review essentially to determining whether the adjudication was within the scope of the agency's authority and rationally based on substantial evidence in the whole record before it. 5 U.S.C. §706. Consequently we have no quarrel with the staff's assertion that an administrative decision based on a record that allows a choice of solutions must be upheld on judicial review

"Substantial evidence" has been defined as "such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *Consolidated Electric Co. v. NLRB*, 305 U.S. 197, 229 (1938).

²The rule is applicable only to agency adjudication required to be made on a record within the meaning of section 5 of the Administrative Procedure Act, 5 U.S.C. § 554. Our discussion also assumes that the agency's decision was within the scope of its jurisdiction.

³Staff Brief of September 22, 1975, pp. 4-8, 16.

even by a court that would have decided differently had the matter come before it *de novo*. *Consolo v FMC, supra*.

But as we indicated in *Indian Point, supra*, the substantial evidence rule's constraints on court review do not fetter the agency's decision-making authority "To be sure, on judicial review of agency action, administrative findings of fact must be sustained when supported by substantial evidence on the record considered as a whole. But that rule implicates only the reviewing court; the yardstick by which the agency itself is to initially ascertain the facts is something else again." *Charlton v. FTC*, ___ F.2d ___, 38 Ad.L.2d 379 383-84 (D.C. Cir. 1976).

Agency administrative procedures are governed by sections 5 through 8 of the APA (5 U.S.C. §§ 554 through 557), not section 10. Those provisions allow the members of the body which comprises the agency a choice of hearing and determining cases in the first instance themselves, or delegating that responsibility to subordinates while reserving the right to review their decisions. Where the latter course has been chosen, section 8 of the APA provides that "[o]n appeal from or review of the initial decision, the agency has all the powers which it would have in making the initial decision * * *" 5 U.S.C. § 557(b). It is too late in the day to dispute that this provision vests final responsibility and authority for weighing the evidence, making the findings and selecting the decision not in the subordinate hearing officers but in the individuals who comprise the agency itself. The cases accordingly teach that where substantial record evidence can support more than one result, the subordinate's choice must yield to the agency's precisely because the "responsibility for making the determination is committed to the Commission." *McClatchy Broadcasting Co. v FCC*, 239 F.2d 15, 18 (D.C. Cir. 1956), *certiorari denied*, 353 U.S. 918 (1957); *accord, Fidelity Television, Inc. v FCC*, 515 F.2d 684, 700 (D.C. Cir.), *certiorari denied*, 423 U.S. 926 (1975).

To reiterate, the APA does not bind any agency to accede to its examiner's — or licensing board's¹⁴—initial decision because it is supported by "substantial evidence" or is not "clearly erroneous." Where the administrative record considered as a whole will fairly sustain a result deemed preferable by the agency to the one selected by its initial decision maker, the law is clear that the agency may substitute its judgment for its subordinate's. *FCC v Allentown Broadcasting Co.*, 349 U.S. 358, 364 (1955); *Environmental Defense Fund v. EPA*, 489 F.2d 1247 1253 (D.C. Cir. 1973); *Greater Boston Television Corp. v FCC*, 444 F.2d 841, 853 (D.C. Cir. 1970), *certiorari denied*, 403 U.S. 923 (1971); *Hamlin Testing Lab., Inc. v. AEC*, 357 F.2d 632, 637-38 (6th Cir. 1966), *affirming* 2 AEC 423 (1964); *Loram Journal Co. v. FCC*, 351 F.2d 824 828 (D.C. Cir.

¹⁴Section 191 of the Atomic Energy Act authorizes the Commission to use licensing boards in lieu of administrative law judges to make initial decisions. 42 U.S.C. § 2241.

1965), *certiorari denied, sub nom. WWIZ v FCC*, 383 U.S. 967 (1966). See also 2 Davis, *Administrative Law Treatise* (1958 ed.) §§10.03 and 10.04; *Attorney General's Manual on the Administrative Procedure Act* (1947)¹⁵ at 83 ("In making its decision, whether following an initial or recommended decision, the agency is in no way bound by the decision of its subordinate officer: it retains complete freedom of decision – as though it had heard the evidence itself.").

We stand in the Commission's shoes and we exercise the Commission's authority when reviewing licensing board decisions. 10 C.F.R. §§2.785 and 2.786. Consequently the substantial evidence rule no more limits our freedom of action in deciding appeals than it would the Commission's. It follows therefore that the staff is mistaken in contending that we are compelled to affirm the decision below if we find it supported by substantial evidence.

That we are free of the substantial evidence rule does not imply that we make our appellate determinations on a clean slate without regard to the licensing board's opinion or that we necessarily weigh each piece of evidence *de novo*.¹⁶ This is not the case. For example, though we have the right to reject or modify findings of the licensing boards, we have stressed before that we would not do so lightly and where the credibility of evidence turns on the demeanor of a witness, we give the judgment of the trial board which saw and heard his testimony particularly great deference.¹⁷ Again, the decision below is "part of the record" we may indeed must, attach significance to a licensing board's evaluation of the evidence and to its disposition of the issues.¹⁸ And in practice we do so. Those boards are manned by individuals not necessarily less qualified or experienced than ourselves; we merely possess the natural advantages that accrue to those who review the decisions of others.

Without wishing to belabor the point, we stress again that the Administrative Procedure Act makes the Commission responsible for weighing the evidence and making the decision. When we are called upon to act in its stead, that obligation devolves on us. Application of the substantial evidence rule, however, would entail our acquiescence in licensing board determinations on the evidence in circumstances where our own considered judgment might call for a different

¹⁵The *Attorney General's Manual* is an accepted "authoritative source" of information respecting the congressional intent embodied in the APA. *Siegal v. AEC*, 400 F.2d 778, 785 (D.C. Cir. 1968).

Wisconsin Electric Power Co. (Point Beach, Unit 2), ALAB-78, 5 AEC 319 (1972).

See *Northern Indiana Public Service Co.* (Bailly Generating Station, Nuclear-1), ALAB-303, 2 NRC 858, 866-67 (1975); *Niagara Mohawk Power Corporation* (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347 357 (1975).

¹⁸See, *Greater Boston Television Corp. v. FCC*, *supra*; *Indian Point*, ALAB-188, *supra*.

result,¹⁹ thereby effectively shifting final decisional responsibility to those boards in cases where it was not intended.²⁰ We therefore hold the rule inapplicable to the Commission's internal review processes.²¹

III. NEED FOR POWER

1. Intervenor's lead contention, the only one it pressed on us at oral argument, is that the applicant will not need Catawba's output to satisfy its customers' future demands for electric power. The contention invokes the National Environmental Policy Act of 1969²² – NEPA – which requires the balancing of the environmental costs against the expected benefits of major federal action significantly affecting the environment, a category which includes licensing construction of nuclear power plants. A nuclear plant's principal "benefit" is of course the electric power it generates. Hence, absent some "need for power," justification for building a facility is problematical.²³ Whether the output of a given facility is essential is therefore a litigable issue in Commission licensing proceedings, the applicant having the "burden of showing that its projections of demand are reasonable and that additional or replacement generating capacity is needed to meet that demand."²⁴

As we mentioned (*supra*, p. 401), the Licensing Board evaluated the applicant's need for Catawba's output twice. Its first consideration was made upon the utility's initial representation that, in order to satisfy reasonably foreseeable "peak demand" and "reserve margin" requirements on its system,²⁵ it must

⁹ As we are, the licensing boards are bound to base their decisions on what they judge to be the preponderance of the evidence adduced in the record. *Indian Point, supra*, ALAB-188, 7 AEC at 356-57. The legislative history of the relevant APA provision confirms this. The House Committee Report on the Act explained: "In any case the agency must decide 'in accordance with the evidence. Where there is evidence pro and con, the agency must weight it and decide in accordance with the preponderance.'" H.R. Rep. No. 1980, 79th Cong., 2nd Sess. (1946), reprinted in *Administrative Procedure Act-Legislative History* S. Doc. No. 248, 79th Cong., 2nd Sess. 271 (1946); accord, *Charlton v. FTC, supra*, ___ F 2d ___, 38 Ad.L.2d at 384.

²⁰ See Jaffe, *Judicial Control of Administrative Action* (1965), pp. 595-613.

¹ Our holding is not inconsistent with anything said in *Point Beach*, ALAB-78, *supra*, fn. 16. The issue addressed there was whether we *may* defer to the trial board's judgment regarding the weight of the evidence; here it is whether we *must* do so, a horse of quite another color.

²² 42 U.S.C. § §4321 *et seq.*

²³ *Nine Mile Point, supra*, ALAB-264, 1 NRC at 352.

²⁴ *Energy Research and Development Administration* (Clinch River Breeder Reactor Plant), CLI-76-13, NRCL-76/8, 67 76-77 (1976).

²⁵ "Peak demand," sometimes called "peak load," has been defined as the highest demand for electric power experienced by the utility during the course of a year. See *Nine Mile Point, supra*, 1 NRC at 358 fn. 21. "Reserve margin" is the difference between a system's total generating capacity and the peak load. *Ibid.*

have the facility on line by 1979 (when completion of Unit 1 was anticipated). See 7 AEC at 671-82 and Tr. 3594. Intervenor then drew the Board's attention to a post-decision announcement by applicant's president that a slowdown in the growth of demand on applicant's system had led the utility to defer Catawba's completion for two years, a possibility which had existed — but which the applicant's witnesses had not mentioned — during the proceeding. The Licensing Board thereupon reopened the record for additional evidence on the applicant's "need for power" and reconsidered its initial decision on that point. After doing so however, the Board remained persuaded that the plant would be needed. 1 NRC at 656-66 and 680-95.²⁶

2. Applicant furnishes electricity to more than 1,000,000 industrial, commercial and residential customers in a 20,000 square mile area with a population in excess of 3,300,000.²⁷ The annual peak demand for electric power on its system grew from 4,400 Mw in 1966 to 8,236 Mw in 1973 an historical growth over that period at an average annual rate in excess of 10 percent. In 1974, however, that peak demand fell two percent to 8,058 Mw.²⁸ At the heart of the need for power issue is the cause of that fall-off. The applicant and the staff viewed it essentially as a consequence of a temporary economic recession, with power demands on applicant's system resuming their upward trend when the economy recovered.²⁹ Intervenor, on the other hand, attributed the lowered

²⁶ We think the Licensing Board's decision to reopen the record was fully justified in the circumstances. That Board also concluded that the applicant's witnesses did not appreciate when they appeared at the initial hearing that changing circumstances had rendered their testimony obsolete. See 1 NRC at 629-30. For the reasons outlined at p. 404, *supra*, we defer to the judgment of the trial board on this matter.

It cannot be overemphasized that it is of utmost importance for parties to keep the board abreast of changing circumstances bearing on their cases. As we stressed in *McGuire*, [i]f the presiding board and other parties are not informed in a timely manner of such changes, the inescapable result will be that reasoned decision-making would suffer. Indeed, the adjudication could become meaningless, for adjudicatory boards would be passing upon evidence which would not accurately reflect existing facts. The disclosure requirement we impose is not the product of any overly procedural formalism on our part — it goes to the very heart of the adjudicatory process. Its sacrifice for the sake of expediency cannot be justified and will not be tolerated.

Duke Power Company (McGuire Nuclear Station, Units 1 and 2), ALAB-143, 6 AEC 623, 625-26 (1973).

In Commission proceedings as in judicial ones, the tribunal "must rely on counsel to present issues fully and fairly, and counsel have a continuing duty to inform the Court of any development which may conceivably affect an outcome." *Fusari v. Steinberg*, 419 U.S. 379, 391 (1975) (concurring opinion of Ch. J. Burger). We find it disconcerting that this is not the first time this applicant and counsel have had to be reminded of this obligation. See *McGuire, supra*, 6 AEC at 625. We trust that it will be the last.

²⁷ See 1 NRC at 667.

²⁸ See 1 NRC at 656.

²⁹ *Id.* at 661.

demand to economic forces independent of that recession, particularly consumer resistance to the steadily increasing “true cost” (i.e., cost in “constant dollars”) of electric power. On the basis of its “econometric analysis”³⁰ of the situation, intervenor asserted that a “no growth” situation would prevail through 1982 in the Carolina Piedmont served by the applicant, with the consequence that the construction of Catawba would be unnecessary

3. The Licensing Board was called upon in these circumstances to determine a reasonable projection of future peak demand on applicant’s system and to decide whether the Catawba facility would be needed to satisfy that demand. *Nine Mile Point, ALAB-264 supra*, 1 NRC at 367 The Board did not accept the load forecasts submitted by any party but made an independent assessment of the record and derived its own predictions. This led it to forecast that the applicant could expect to face a peak demand of 11,395 Mw by 1981 and to conclude that “Catawba will most probably be required before the summer peak of 1981 and almost certainly within the next two years thereafter” to meet that demand. 1 NRC at 666.

The Licensing Board spelled out the reasons underlying its decision in a carefully drawn opinion, which it annotated with references to supporting evidence in the record. See 1 NRC at 656-66 and 680-95. We have reviewed that opinion and examined its evidentiary foundation both generally and in the light of the intervenor’s criticisms. Our review satisfies us that, with respect to the applicant’s “need for power,” the Board’s assay of the record is correct, its conclusion is appropriate, and little would be gained by our rephrasing its cogent analysis. Accordingly we content ourselves largely with noting our concurrence, refer the reader to the able opinion below and limit our discussion to answering intervenor’s principal points.

4. Intervenor’s challenge to the Licensing Board’s decision regarding the applicant’s “need for power” rests essentially on two grounds. The first is the assertion that the Board erred in finding that the 1974 fall-off in peak demand growth was caused in substantial measure by a temporary economic recession. See 1 NRC at 661-62. As we mentioned, it was intervenor’s thesis that the 1974 halt in power demand growth was really caused by “negative price elasticity”³¹ in the form of adverse consumer reaction to the steady rise in the cost of electricity. In intervenor’s judgment, proper appreciation of this factor — asserted to be independent of the recession — should have caused the Board to

³⁰The term derives from “mathematical economics.”

“Price elasticity” refers to “the change in usage of electric energy per unit change in price of electricity, i.e., the slope of the curve of usage vs. price. 1 NRC at 663 fn. 63. Negative price elasticity is, therefore, a way of saying that as cost goes up, use goes down. See Tr. 4479. How closely electric power demand follows price change is a matter of debate. See, e.g., Clearly Tr. 3920-25.

accept intervenor's prediction that electric power demand in the area would level off for the next ten years and to credit intervenor's forecast of a maximum peak demand of 9000 Mw in 1982, a level of demand at which additional power from Catawba would not be needed to satisfy applicant's customers. Tr. 4504-06, 4483 4487³²

Intervenor's position simply does not reflect the whole record; in the words of the Board below, its demand forecast "is in serious conflict with the evidence in these proceedings and with the realities of the situation." 1 NRC at 665.

To begin with, the Board below did not, as intervenor's brief suggests (p. 6), "ignore" the evidence on the effects of negative price elasticity: the Board merely did not accord it as much weight as intervenor thought appropriate.³³ There is no dispute about the fact that in 1974 the nation's economy entered a period of recession, applicant's service area not excepted.³⁴ Witnesses with considerable background experience and training in economics, electric utility operation, and load forecasting, testified for the applicant and the staff that the recession was the principal cause of the halt in the growth in demand for electric power.³⁵ (Intervenor's witness Mr. Riley conceded that the recession did at least contribute to the depressed demand. Tr. 4485.) Those witnesses further testified that the recession would be short-lived, and that thereafter the economy would again expand with a concomitant increase in the demand for electric power. They expressed the additional judgment that applicant's service area would grow more rapidly in population, income and industry than the nation as a whole, and presented Federal Power Commission and Federal Energy Administration studies that projected substantial annual increases in peak demand in applicant's area, post-recession. In essence, those witnesses forecast a return in the near future almost to historical growth rates which would necessitate applicant's reliance on the Catawba facility to satisfy expected peak demand.³⁶

Intervenor's only witness was Mr. Jesse Riley the president of the Study Group. His testimony forecast a "no growth" situation in contrast to the upward

³² See 1 NRC at 664, para. 130.

³³ Intervenor's charge (br. p. 18) that the Board assumed a 2% annual constant dollar increase and did not consider the effect of any possible higher increase rate in that factor in its "sensitivity analysis" is simply in error. See 1 NRC at 693, para. 23d.

³⁴ Riley Tr. 4486.

³⁵ The applicant's principal witness on need for power was Mr. Franz Beyer, its vice president for system planning. His background included degrees in physics and electrical engineering, twenty years in the operating and planning departments of two public utilities, three years as Assistant Professor of Electrical Engineering at Clemson University and, currently service as chairman of the Multiregional Transmission Study Committee of the National Electric Reliability Council. Tr. fol. 441. The staff's witness was Mr. Donald P. Cleary an economist with a professional background in economic analysis and forecasting and whose academic training included econometrics, statistics, economic theory and natural resource economics. Tr. fol. 979.

³⁶ See, e.g., 1 NRC at 657-58 and notes accompanying text; Beyer, Tr. fol. 3640; Cleary, Tr. fol. 3831.

demand projections offered by Messrs. Beyer and Cleary. Unlike those individuals, however, Mr. Riley was neither trained nor experienced in the areas about which he gave evidence. He claimed no special education or professional qualifications in public utility operations, load forecasting or finance, and made no mention of ever having held a responsible position in those fields. (Tr. 3518-22). Portions of certain exhibits offered by Mr. Riley were prepared for him by Mr. Wolpert. That gentleman's knowledge of electric power demand forecasting, too, was essentially that of an untrained amateur. (Tr. 3519-20).³⁷ While the Licensing Board was, of course, not compelled to favor the views of the more experienced and better qualified witnesses, we cannot find fault with it for having done so.

The fact that a forecast is labeled an "econometric demand analysis" does not automatically enhance it in stature over a trend analysis, as Mr. Riley candidly acknowledged. (Tr. 4496-97). Econometrics has been described as a method of mathematically estimating economic relationships among factors on the basis of numerical data. If the relationships among factors believed to influence one another can be quantified, then, by using mathematical techniques, a given change in some factors will in theory be reflected by predictable changes in the others.³⁸ Although this type of analysis has been recognized as possessing theoretical promise, it has not gained general acceptance as a basis for making administrative decisions. The reason for the decision makers' reluctance lies in the econometric technique itself. It functions by reducing complex relationships to numerical values. A knowledgeable commentator put the finger on the problem when he observed that this need to simplify reality leaves the results of econometric analysis vulnerable to the charge that some key element has been slighted or overlooked.³⁹ Obviously in econometric analysis (as in any other forecasting method) an unrealistic hypothesis is a fatal defect. *Southern Louisiana Area Rate Cases v. F.P.C.* 428 F.2d 407 436 fn. 91 (5th Cir.), *certiorari denied*, 400 U.S. 950 (1970); *Nine Mile Point*, ALAB-264, *supra*, 1 NRC at 359-63 (1976).

Turning to the matter at bar, we note that intervenor's analysis either omits or takes only partial account of such factors which bear on the use and demand for electric power as population increases, availability and cost of alternate fuels, growth in personal income, and industrial growth. (Tr. 4497-98). Mr. Riley neither quantified his analysis sufficiently to permit its accuracy in forecasting load factors to be tested against other instances of recession and recovery nor performed such an analysis himself. (Tr. 4486.) Moreover, intervenor relies in

³⁷Mr. Riley described Mr. Wolpert (his son, Tr. 683) as a college graduate with a degree in music who was also "an expert automobile mechanic among other things." Tr. 3518-20.

³⁸See *Nine Mile Point*, ALAB-264, *supra*, 1 NRC at 359.

³⁹See Finkelstein, *Regression Models in Administrative Proceedings*, 86 Harv. L. Rev. 1442, 1443-44 (1973). The author, a practicing attorney is a lecturer at Columbia University Law School.

part on another econometric forecast of electric power demands made by Professor Chapman of Cornell and others.⁴⁰ However, intervenor would have us ignore the fact that the Chapman study itself forecasts not “no growth,” but a 5.2% annual increase in demand in the southeastern United States (including applicant’s service area) in 1975-1980 (Tr. 4501). Finally as the staff points out, Mr. Riley’s own analysis did not itself predict the zero growth in 1974. (Tr. 4482). In the circumstances, we think the Board below gave intervenor’s econometric analysis the weight it merited. This is not to suggest that the analysis was ignored – far from it. The Board expressly took into consideration a number of factors suggested by intervenors as bearing on the need for power (see, e.g., 1 NRC at 662-63) and as a result the Board’s own forecast was far below the applicant’s.⁴¹

What intervenor attempted in essence is to rest a long term forecast of applicant’s peak load demands on changes which took place in the last two years. But, “given the fluctuating nature of the growth of electric power demand, forecasts based on short time periods may be overly influenced by transitory effects and thus not accurately reflect basic long-term trends.”⁴² In the circumstances presented, we think the Board below was right in not relying on a prediction so narrowly based.

One final word on load forecasting. The length of time required to construct a modern power plant (nuclear or otherwise) – not to mention the time needed to gain approval – requires the utility to predict peak demands on its system often as much as ten years in advance. Seeing that far into the future with accuracy is not to be expected – not of the applicant, not of the staff and not of the intervenor. It is simply true “that inherent in any forecast of future electric power demands is a substantial margin of uncertainty”⁴³ Nevertheless, the need to make load forecasts cannot be avoided either as a legal or as a practical matter. It is our obligation, then, to insure that those predictions are as reasonably accurate as circumstances permit. But some margin of error being thus unavoidable, we do not think utility forecasts are automatically suspect because they are inclined to be “conservative,” that is to say they tend to project future loads closer to the high than to the low end of the demand spectrum. To be sure, if demand does turn out to be less than predicted it can be argued (as intervenor does) that the cost of the unneeded generating capacity may turn up in the customers’ electric bills. This is not an ineluctable result, for oft times the surplus can be profitably marketed to other systems or the new capacity can replace older, less efficient units. But should the opposite occur and demand outstrip capacity the consequences are far more serious. As a Federal

⁴⁰ See Int. Exh. 6 D, Attachment 11, and Intervenor’s brief, p. 7 fn. 7 p. 8 fn. 12.

⁴¹ For example, intervenor predicted a 1982 peak power demand of 9,000 Mw, the applicant 15,074 Mw, and the Board 12,038 Mw.

⁴² *Nine Mile Point*, ALAB-264, *supra*, 1 NRC at 365.

⁴³ *Ibid.*

Power Commission witness recently explained in another case where this question arose, insufficient generating capacity

*** can lead to small scale interruptions or widespread blackouts, affecting a few individuals or leading to situations affecting the health, safety and economic well-being of large numbers of people. The life of individuals dependent upon iron lungs, artificial kidney machines, and other life-sustaining equipment will be endangered. Manufacturing activities involving electric heating, constant temperature conditions, and electric drive and controls will be interrupted, with possible spoilage of work in process. Other manufacturing activities will be interrupted but may suffer no more than loss of time and the losses that accompany unscheduled stoppages.⁴⁴

In light of these considerations, as well as those mentioned earlier, we hold that the Licensing Board's conclusion — that the applicant has a need for the power to be produced by the Catawba facility — is in accord with the weight of the evidence.

5. Intervenor also asserts that the Licensing Board inadequately considered the alternative of the applicant purchasing power from the Tennessee Valley Authority in lieu of constructing the 2,360 Mw Catawba facility. The Board rejected that alternative as impracticable on the basis of the testimony of Mr. Beyer, applicant's vice president for system planning, and declined to pursue the matter further. 1 NRC at 663 para. 126. Intervenor offered no contrary evidence but contends that Mr. Beyer's testimony was "vague and conclusory" hearsay and levels the charge that the Board was guilty of "blind acceptance of the incompetent testimony of a financially interested witness on a critical suggestion of a reasonable alternative." (Br. p. 17).

a. We put to one side the question whether, not having raised the matter when Mr. Beyer appeared before the Licensing Board,⁴⁵ intervenor waived any objections to his testimony it might have had on either hearsay or competency grounds.⁴⁶ We do so for two reasons. First, even were we to agree that Mr.

⁴⁴*Id.* at 364, fn. 57.

⁴⁵Tr. 3639: [Intervenor's counsel] "I have no objections to receiving his [Mr. Beyer's] testimony for its weight."

⁴⁶Principles of equity and fairness do not permit a party to "remain mute and await the outcome of an agency's decision and, if it is unfavorable, attack it on the ground of asserted procedural defects not called to the agency's attention when, in fact they were defects, they would have been correctable." * *Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB-123, 6 AEC 331, 333 (1973), quoting *First-Citizens Bank and Trust Co. v. Camp*, 409 F.2d 1086, 1088-89 (4th Cir. 1969). See also, *Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Unit No. 2), ALAB-335, NRCI-76/6, 830, 842 fn. 26 (1976). Even in federal court proceedings no charge of error may be predicated on the introduction of evidence admitted without objection. *United States v. Burns*, 441 F.2d 544, (9th Cir. 1971); *Bryant v. Sears, Roebuck & Company*, 435 F.2d 953, 956 (4th Cir. 1970); *Purer & Company v. Aktiebolaget Addo*, 410 F.2d 871, 876 (9th Cir.), *certiorari denied*, 396 U.S. 834 (1969); *Harrington v. Texaco, Inc.*, 339 F.2d 814, 819 (5th Cir. 1964), *certiorari denied*, 381 U.S. 915 (1965).

Beyer's testimony (discussed *infra*) was entirely hearsay evidence of that character is generally admissible in administrative proceedings.⁴⁷ Second, to our knowledge no rule bars as incompetent a corporate officer's testimony on matters pertaining to his responsibilities – and intervenor cites none.

b. The suggestion that applicant purchase 2500 Mw of power annually from TVA to obviate its need to build Catawba did not arise until the last week of the reopened hearing. Intervenor's counsel then posed this as an alternative while cross-examining Mr. Beyer (Tr. 3741-43). The witness' response, however, was to deny that firm power in that quantity was available from this source. He testified that TVA had marketed all its excess capacity to other utilities under long-term contracts and indeed had been seeking to purchase power from the applicant. (Tr. 3742-43). Mr. Beyer further explained that the intervenor's assumption that applicant had a direct interconnection with TVA – on which the suggested alternative was predicated – was in error (Tr. 3741-42). He went on to explain that for the applicant to rely on purchased power rather than self-generation would (among other disadvantages) substitute a more costly alternative for a less expensive one (Tr. 3740-41). The intervenor offered no evidence to contradict Mr. Beyer but merely urged the Board to delve further into the issue on its own (Tr. 3746-47). The question before us is whether the Board's refusal to do so was error.

We are particularly cognizant that, under NEPA, the Commission is charged with considering reasonable alternatives to each project and that further examination may be called for where an intervenor suggests a "colorable alternative" not previously considered. *Union Electric Co.* (Callaway Plant, Units 1 and 2), ALAB-348, NRCI-76/9 225 (1976); *Aeschliman v. NRC*, No. 73-1776 (D.C. Cir. July 21, 1976). In this case, however, the idea of buying power from utilities directly interconnected with the applicant had already been explored and rejected for reasons explained in the *Catawba Final Environmental Impact Statement* (December 1973), at para. 9.1.1.1., "Alternative Energy Sources – Purchased Power." This being so, we think that intervenor's eleventh hour suggestion that applicant buy large quantities of TVA power received all the consideration it deserved. The reasonableness of that alternative was rebutted by Mr. Beyer, an expert witness whose background, experience and responsibilities all pointed to the reliability of his testimony that the suggestion was

⁴⁷*Richardson v. Perales*, 402 U.S. 389, 407-410 (1971); *Willapoint Oysters v. Ewing*, 174 F.2d 676, 690 (9th Cir.), *certiorari denied*, 338 U.S. 860 (1949); *Carter-Wallace, Inc. v. Gardner* 417 F.2d 1086, 1095-96 (4th Cir. 1969), *certiorari denied sub nom. Carter-Wallace v. Finch*, 398 U.S. 938 (1970).

impracticable.⁴⁸ In the circumstances, we hold that the applicant and the staff had satisfied their burden of proof.⁴⁹ In the absence of contrary evidence from intervenors, there was insufficient cause for the Licensing Board to inquiry any further than it did.⁵⁰ No agency is obliged by NEPA to conduct an extended exploration of the environmental impact of an alternative which is remote from reality *Carolina Environmental Study Group v. United States*, 510 F.2d 796, 801 (D.C. Cir. 1975).

6. Intervenor also filed exceptions to the Licensing Board finding that the applicant was financially qualified to build and operate the Catawba facility. Its brief, however, did not go on to explain the basis for those exceptions but merely restated them. In so doing, intervenor took the position (br. p. 22) that "need for power" and financial qualifications * * * [are] essentially the same question" and, therefore, by briefing the latter it had also addressed the former. We disagree.

As the applicant and staff point out, under the Commission's Rules, a party's failure to submit a brief containing sufficient information and argument to allow the appellate tribunal to make an intelligent disposition of the issues raised by its exceptions is tantamount to their abandonment.⁵¹ (The federal courts follow a similar practice.)⁵² It is simply not the case, as intervenor would have it, that "need for power" and "financial qualifications" are but different facets of the same issue. For one thing, whether a facility is needed is a question which NEPA requires the agency to answer. See p. 405, *supra*. But the question of an applicant's financial qualifications to build and operate a nuclear power plant is not of that genre. Rather, it arises under section 103b of the Atomic

⁴⁸ Mr. Beyer testified that his "responsibilities [for Duke Power] include the planning of all generation, transmission, and distribution facilities necessary for supply of the future demand for electricity in the Duke Service area" that he has been or is now a member of the System Planning Committee of the American Institute of Electrical Engineers and the Edison Electric Institute and was chairman of the latter's Coordinated Area Planning Committee; and that he is the incumbent "Chairman of the Multiregional Transmission Study Committee of the National Electric Reliability Council, and Chairman of an EPRI committee supervising ongoing research in the analysis of power system reliability" Beyer, fol. Tr. 441.

⁴⁹ See *Callaway, supra*, ALAB-348, 76/9 at 231.

⁵⁰ "Our holding that intervenors are not initially required to go forward with evidence does not mean that they may not do so. Indeed, if they have relevant evidence, it obviously would be the better course for them to present it. *Moreover it may be necessary for them to do so in order to rebut material in affidavits presented by other parties with which they disagree.*" *Id.* at 7 (emphasis added).

¹ *Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB-270, 1 NRC 473 (1975).

⁵² *E.g., Mississippi River Corp. v. F.T.C.*, 454 F.2d 1083, 1093 (8th Cir. 1972); *United States v. White*, 454 F.2d 435, 439 (7th Cir. 1971), *certiorari denied*, 406 U.S. 962 (1972); *Whitehead v. Salyer* 346 F.2d 207 (10th Cir. 1965).

Energy Act, 42 U.S.C. §2133(b). No matter how great some utility's "need" for a nuclear facility may be, if it is not financially "equipped to observe" the Commission's safety standards, it may not be licensed to build or operate the facility *Ibid*. The decision below itself illustrates the different considerations relevant to those discrete problems. Compare 1 NRC 656-66 with *id.* at 667-74. Accordingly we treat the intervenor's failure to brief the question of applicant's financial qualification to build and operate the Catawba facility as an abandonment of its challenge to the Licensing Board's resolution of that issue.⁵³

IV OTHER EXCEPTIONS

Intervenor also filed and briefed (albeit without the aid of counsel) exceptions to the Licensing Board's partial decisions on environmental matters and on site suitability⁵⁴ The exceptions directed to the environmental decision essentially challenge determinations regarding the "need for power" and the financial qualifications of the applicant. The Board below, however, subsequently reopened the proceedings and reconsidered those issues. The substance of these exceptions are therefore treated in Part III of our opinion, *supra*, where we deal with that reconsidered decision.

Most of intervenor's remaining exceptions go to factual findings made below. Intervenor challenges such matters as the correctness of the Board's determinations of theoretical radiation dosages at the low population zone boundary; prevailing wind direction and other meteorological conditions at the site; present and future population distribution; and bolting material properties. We have looked into these and the other "factual exceptions" and are satisfied that the Licensing Board resolved the questions raised by them in accordance with the weight of the evidence.⁵⁵

Intervenor's exceptions also raise several legal issues, three of which merit brief mention here. One is a challenge to the Commission's decisions to establish emergency core cooling system (ECCS) criteria and to consider the environmental consequences of the nuclear fuel cycle on a "generic" basis, that is to deal with those issues by promulgating rules applicable to all nuclear facilities rather than

As part of our customary review of the entire decision below (whether or not excepted to), we have satisfied ourselves that the Licensing Board committed no error warranting correction on this question. Also as part of that review we asked the parties to furnish us additional information to enable us to determine whether there was compliance with (1) Appendix I to 10 CFR Part 50 and (2) the standards governing the exclusion area immediately surrounding the facility. In light of the material furnished and the representations made by applicant's counsel at oral argument, we need pursue these matters no further.

⁵⁴ See fn. 5, *supra*.

⁵⁵ See Part II, *supra*.

treating them on a case-by-case basis as the issues might arise in the course of individual licensing proceedings. Intervenor asserts that this was unfair to it because, being a "small local intervenor," lack of resources precluded its participation in rule-making proceedings not conducted in its immediate locale.

Intervenor's problem is not unappreciated. But important countervailing factors favored the use of rule-making to resolve those generic issues and those considerations outweighed intervenor's more parochial interests. Some of those factors were spelled out in *Ecology Action v. AEC*,⁵⁶ a court of appeals decision affirming the Commission's right to evaluate nuclear fuel cycle ramifications generically in one rule-making proceeding. Writing for a unanimous Second Circuit in that case, Chief Judge Friendly observed that

it would be absurd that the issue of the environmental effect of uranium mining in Wyoming should have to be separately considered on every application to construct nuclear plants from Maine to California. Rather the idea that a licensing agency should endeavor to identify environmental issues common to many applications and handle them in "generic" proceedings would seem to benefit all parties, particularly the poorly-financed environmental groups. [492 F.2d at 1002.]

We need only add that the Commission's right to set ECCS standards through rule-making has similarly received judicial sanction in a decision which also rejected the argument, raised by intervenors here, that to do so was "unfair" and a violation of due process. *Union of Concerned Scientists v. AEC*, 499 F.2d 1069 1081-82 (D.C. Cir. 1974). See also *Weinberger v. Hyinson, Wescott & Dunning, Inc.*, 412 U.S. 609 624-25 (1973).

Intervenor additionally asserts that the Licensing Board erred in omitting from the environmental balance the consequences of a "breach of containment," a "Class 9" accident.⁵⁷ The Board below ruled that the chances of this happening were so remote as to be incredible: it therefore declined to consider it absent a showing — not made — that special circumstance rendering such an occurrence more likely at Catawba than in power reactors generally. 7 AEC at 686. Intervenor argues to us that the Board was obliged to weigh this type of accident, "incredible" or not.

Intervenor put forward this same argument in a prior Commission

⁵⁶ 492 F.2d 998 (2nd Cir. 1974).

⁵⁷ "The AEC has classified hypothetical reactor accidents from Class 1 (trivial incidents with high occurrence probability) to Class 9 (ultimate severity with occurrence highly unlikely). The Class 9 accident, known as a breach-of-reactor containment accident, involves concurrent rupture of the three-foot thick concrete containment vessel and the several inches of steel surrounding the reactor core, resulting in the exposure of the radioactive core to the atmosphere." *Carolina Environmental Study Group v. United States*, *supra*, 510 F.2d at 798-99.

proceeding involving another nuclear facility. It was rejected there on the ground that NEPA does not require consideration of environmental effects not shown to have some reasonable likelihood of occurring, a rejection which the court of appeals upheld on the ground stated. *Carolina Environmental Study Group v. United States*, *supra*, 510 F.2d at 798-800 (D.C. Cir. 1975), *affirming Duke Power Co.* (McGuire Nuclear Station, Units 1 & 2), ALAB-128, 6 AEC 399 (1973). For the reasons explained in those decisions, the Licensing Board justifiably refused to consider the "Class 9 accident" contention in this proceeding.⁵⁸

Finally intervenor complains that the Board below would not let it make use of an AEC document entitled "Population Distribution Around Nuclear Power Plants" to support its contention that Catawba does not meet the Commission's nuclear power plant siting standards. (See Tr. 2906). The document in question is a staff "working paper," drafted to be sure by Commission employees. But the paper has been neither adopted nor sanctioned by the Commission itself and does not represent (or purport to represent) current Commission policy respecting where nuclear plants may be located. As the Licensing Board appreciated, Commission policy regarding these matters is published (as the Administrative Procedure Act requires)⁵⁹ in Part 100 of the Commission's regulations (10 C.F.R. Part 100). Questions about the use which may be made of this same document have arisen in other proceedings and we have ruled that, "[u]nless and until modified or changed by the Commission — whether by adoption of the suggestions in the working paper or otherwise — Part 100 governs licensing board decisions on siting matters"⁶⁰ and, accordingly that the working paper "has no legal significance for any [NRC] regulatory purpose."⁶¹ The Licensing Board therefore did not abuse its discretion in excluding consideration of the document as irrelevant to the issues being tried before it. 10 C.F.R. § §2.718 and 2.757

⁵⁸ Accord, *Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 836 (1973), petition for review filed December 23, 1973, *sub nom. Lloyd Harbor Study Group v. AEC*, D.C. Cir. No. 73-2266.

⁵⁹ See 5 U.S.C. § 552(a) (1) (D).

Northern Indiana Public Service Co. (Bailly Generating Station, Nuclear-1), ALAB-224, 8 AEC 244, 254-55 (1974), *reversed, sub nom. Porter County Chapter v. AEC*, 515 F.2d 513 (7th Cir.), *reversed and remanded, sub nom. Public Service Co. v. Porter County Chapter*, 423 U.S. 12 (1975), *affirmed*, 533 F.2d 1011, 1016 (7th Cir. 1976).

¹ *Consolidated Edison Co. of New York, Inc.* (Indian Point Station, Unit No. 2), ALAB-209, 7 AEC 971, 973 (1974).

V NUCLEAR FUEL CYCLE ISSUES.

Here, as in the *Callaway* proceeding,⁶² an intervening party sought to contend that the NEPA cost-benefit balance must include intervenor's evidence of adverse environmental consequences of the nuclear fuel cycle. In this case, as in that one, the Licensing Board declined to admit the contention. In *Callaway* the reason for the rejection was the existence of a Commission regulation establishing the weight to be given such factors in "Table S-3" to be applied exclusively in all proceedings; in the matter now before us it was the pendency of the rule-making proceedings looking toward the promulgation of that regulation and Table S-3 which was held to be the bar. See pp. 400-401, *supra*.

Even if we presume that the Licensing Board's decision was valid when rendered, we could not affirm. We are obliged to apply the law as it stands at the time we render our own decision⁶³ and, in the interim, key portions of the Commission regulations which supported the Licensing Board's rejections of the fuel cycle contentions have been invalidated by a court of appeals.⁶⁴ Following the court's decision, the Commission published a *General Statement of Policy* in the Federal Register on August 16, 1976 (41 Fed. Reg. 34707), which announced its intention to reopen the proceedings underlying the regulation overturned by the court, and to reconsider the portions of Table S-3 pertaining to waste management which were there ruled invalid. The *Policy Statement* also announced that the Commission proposes to proceed in this area once again via rule-making procedures and stated that an interim regulation on the waste management aspects of the fuel cycle might be promulgated as early as December 1976, but directed that no new full-power operating licenses, construction permits or limited work authorizations be issued in the meanwhile. (41 Fed. Reg. at 34708). With respect to contested licensing board proceedings, the *Statement* directed that "reprocessing and waste management issues should be deferred pending completion of the interim rulemaking, unless the evidentiary record on those issues has already been completed and is adequate for decision" (*ibid.*), and where, as here, a license has been issued but is subject to review by an appeal board, final action on those issues should be deferred at least pending publication of a new staff environmental survey of the subject. (41 Fed. Reg. at 34709).⁶⁵

Accordingly in line with that policy directive, we follow the path taken in *Callaway* ALAB-347 *supra*, NRCI-76/9 316. As we did there, we are here

Union Electric Co. (Callaway Plant, Units 1 and 2), ALAB-347 NRCI-76/9 216 (1976) (Partial Decision).

Potomac Electric Power Co. (Douglas Point Nuclear Generating Station, Units 1 & 2), ALAB-218, 8 AEC 79, 82-83 (1974).

⁶⁴ *NRDC v. NRC*, *supra* fn. 7

⁶⁵ See *Callaway*, ALAB-347, *supra*, NRCI-76/9 at 219 fn. 7

deferring consideration of the issues precipitated by the Licensing Board's rejection of intervenor's contentions about the environmental consequences of the nuclear fuel cycle. In the absence of a motion giving adequate reasons for doing so, we decline to suspend the Catawba construction permit in the interim *sua sponte*. See *Union Electric Co. (Callaway Plant, Units 1 and 2)*, ALAB-348, *supra*, NRCI-76/9 226, (*Opinion on Reconsideration*); *General Statement of Policy supra*, 41 Fed. Reg. 34709

The Licensing Board's decision is *affirmed* except insofar as it excluded intervenor's contention relating to the environmental consequences of the nuclear fuel cycle; evaluation of the exclusion of that contention is *deferred* pending further guidance from the Commission in accordance with its *Policy Statement*, 41 Fed. Reg. 34709

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Romayne M. Skrutski
Secretary to the Appeal Board

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-36

ATOMIC SAFETY AND LICENSING BOARD

Marshall E. Miller, Chairman
Gustave A. Linenberger
Dr. Cadet H. Hand, Jr.

In the Matter of

Docket No. 50-537

PROJECT MANAGEMENT CORPORATION
U.S. ENERGY RESEARCH AND
DEVELOPMENT ADMINISTRATION
TENNESSEE VALLEY AUTHORITY

(Clinch River Breeder Reactor Plant)

October 5, 1976

In response to guidelines established by the Commission (CLI-76-13), the Licensing Board rules on the admissibility of certain revised contentions.

ORDER REGARDING NRDC'S RESTATED CONTENTION 10

The Nuclear Regulatory Commission on August 27 1976, issued a Memorandum and Order establishing guidelines for the Licensing Board concerning the effect of ERDA's Final Environmental Statement (ERDA-1535), reversing the prior admission of Contention 11 and much of the basis for the admission of Contention 10, and directing the Board *inter alia*, to seek clarification of the subcontentions in Contention 10 and to determine their admissibility NRDC filed a Restatement of Contention 10 dated September 17 and the Board held a special meeting with counsel on September 23, 1976, to consider implementation of the Commission's Order. To the extent that the NRDC restatement went beyond clarification of the original subcontentions and sought to frame contentions within the guidelines of the Order, leave was granted in the interests of substantial justice.

The Commission's Order in effect drew a distinction between the "planning" and "implementation" decisions of ERDA (NRCI-76/8, CLI-76-13, 84). The licensing process must be tailored to avoid NRC "substituting its judgment for that of ERDA with respect to the broad planning decisions embodied in the LMFBR" environmental impact statement (ERDA-1535). Accordingly NRC should not "reexamine the informational goals established by ERDA through its programmatic impact statement, including considerations of timing"

(*Id.*, 77 83, and 89-90). The ERDA impact statement “is dispositive of the issue of need in this proceeding” (*Id.*, 79 81, 82-83, and 91). In determining the admissibility of contentions, the Commission directed that the following be assumed as established by the ERDA impact statement and associated processes:

- a. The need for a liquid metal fast breeder reactor program, including its objectives, structure and timing;
- b. The need for a demonstration-scale facility to test the feasibility of liquid metal fast breeder reactors when operated as part of the power generation facilities of an electric utility system, including its timing and objectives.” (*Id.*, 92).

Conversely the Commission rejected the argument that no consideration need be given to alternatives to the CRBR project that “might vary significantly in terms of design features, location, and other factors.” (*Id.*, 79). It was stated that “matters of greater specificity such as selection of the Clinch River site and reactor design involve implementation of planning decisions,” and hence were cognizable in this proceeding (*Id.* 84). The first three levels of inquiry in a NEPA analysis were held to be applicable, namely (1) consideration of site and facility-related issues; (2) examination whether the CRBR as proposed “is likely to meet the LMFBR program informational goals which the ERDA review process determined should be met by a demonstration reactor, within the desired time frame. The validity of those informational goals—the ‘need’ for the project – would be accepted by this agency as given” and (3) also “undertake limited consideration of possible alternative demonstration facilities and sites to determine, on a rough cost-benefit scale, whether or not alternatives which are substantially better than the Clinch River project, as proposed, are likely to be available to meet ERDA’s demonstration reactor informational goals.” (*Id.*, 77-78 and 79-80). Consideration could be given to the “specifics of the project’s design and siting” (*Id.*, 81), as well as to “alternative modes to meet the established need” (*Id.*, 88-89 and 90-91). In considering alternatives, this agency does not need to determine that CRBR is the “best” or “optimal” alternative, but only that the “applicant’s preferred approach is reasonable” (*Id.*, 91). In summarizing its guidance the Commission further stated:

- “2. The likelihood that the proposed CRBR project will meet its objectives within the LMFBR program—a ‘benefit’ in the NEPA cost/benefit balance—is an issue relevant to this proceeding.
3. Alternatives for meeting the objectives are relevant to this proceeding, and are to be evaluated in terms of the objectives defined in the ERDA impact statement. Alternative sites outside the Tennessee Valley Authority service area are also relevant to this proceeding. In

considering alternatives, including non-TVA siting alternatives, in the present proceeding, the following general principle should be observed: consideration of alternatives need go no further than to establish whether or not substantially better alternatives are likely to be available.” (*Id.*, 92).

The issues sought to be raised by NRDC’s revised Contention 10 will be considered *seriatim* within the framework of these guidelines.

CONTENTION 10(a)

It is alleged that the ER and the DES do not adequately analyze alternatives to the CRBR, because it is necessary to explore whether the CRBR as planned will achieve the objectives established for it by the ERDA impact statement. A limited consideration of alternative design features, demonstration facilities and sites is permitted under the Commission’s guidelines. The likelihood that the proposed project will meet its objectives within the LMFBR program is also a relevant issue.

Subcontention 10(a)(1)

This subcontention states that it has not been established how the CRBR will achieve the listed objectives in a timely fashion. The Staff does not object to this issue, as it regards the question as one involving implementation rather than planning. The Applicants object on the grounds that timing is part of ERDA’s planning prerogative. We do not view this issue as challenging the objectives, structure or timing of the LMFBR program or a demonstration-scale facility which are to be taken as established by the ERDA impact statement. Rather, this contention assumes the validity of the timing objectives as established, but questions whether the CRBR project can achieve such objectives. So construed, the contention is within the guidelines and is admissible.

Subcontention 10(a)(2)

This issue questions whether the specific design of the CRBR, particularly the core design and engineered safety features, is sufficiently similar to a practical commercial size LMFBR so that building and operating the CRBR will demonstrate anything relevant to an economic, reliable and licensable LMFBR. The positions of the Staff and the Applicants are the same as described above. This contention also is addressed to the likelihood that the proposed CRBR will meet its objectives within the LMFBR program, so as to be a benefit within the NEPA cost-benefit balance. It is therefore included in paragraph 2 of the Commission’s conclusion (*Id.*, 92), as well as level 2 of the six levels of inquiry

(*Id.*, 78). The objectives are among those identified by the Commission, including the extrapolation of systems and components of a demonstration facility to a commercial size plant (*Id.*, 77). This subcontention is admissible.

Subcontention 10(a)(3)

This subcontention is premised upon the achievement of a breeding ratio for the CRBR that is unacceptably low for commercial LMFBRs. The contention would require a showing as to how the objectives of economy or resource conservation can be confirmed for the LMFBR concept in the face of such a low CRBR breeding ratio. As such, this subcontention could be read as falling within the purview of paragraph 2 of the Commission's conclusion (*Id.*, 92), and hence construed to be admissible. In the first place, a simple construction in the context of the above-cited paragraph 2 would represent only a slightly more narrow formulation of subcontention 10(a)(1), which has been admitted. On this basis, 10(a)(3) should not be admitted since it would be duplicative. However, the Board views the matter in a different light. In reviewing references to Volumes 1 of WASH-1535 and ERDA-1535, offered by the Commission in its Order and by the Staff at the recent special meeting, the Board finds certain modifications and explanations that provide policy guidance to the scope of the demonstration-scale facility objectives as stated in WASH-1535 at p. 3.5-2, 3. For example, the CRBR by intent will not strive for the achievement of a breeding ratio acceptable to a CBR (WASH-1535 p. 3.5-9 10); and by prior recognition is not likely to achieve power production economy (*Id.*, p. 3.5-11). Also by prior recognition, the CRBR will begin operation with FFTF fuel, rather than with the ultimately more advanced fuels that will evolve for the commercial LMFBRs (*Id.*, 3.5-4). Likewise, with prior recognition, the CRBR will begin operation in the face of fuel fabrication and reprocessing uncertainties that are destined for subsequent resolution.

Each of these matters mentioned above remains unmodified in ERDA-1535 and each is construed by the Board to be a given facet of the total program, representative of planning decisions not to be reexamined by NRC (NRCI-78/8, CLI-76-13, 84). More importantly to the question before the Board, each of the above "given" represents an area of technical uncertainty that may or may not be resolved favorably to the cause of commercial LMFBR's and whose outcome by intent and/or prior recognition postdates at least the start of CRBR operation. Hence, the Board finds it unnecessary to require a probative showing (at the pre-CRBR construction phase of this proceeding) of the nature raised here. Subcontention 10(a)(3) is inadmissible.

Subcontention 10(a)(4)

This issue is also premised upon breeding ratio for the CRBR that is unac

ceptable for commercial LMFBRs. The contention first alleges that a demonstration of the CRBR's economic feasibility is meaningless if (presumably commercial) LMFBRs are to be like the CRBR, in having a low breeding ratio that renders them useless. On the other hand, the issue further alleges that to cure the low breeding ratio of the CRBR would destroy its economic feasibility because of cost increases (redesign toward a more expensive core) and would reduce reliability and/or safety. Thus, viewed perhaps superficially 10(a)(4) would seem to say that the CRBR has minimal programmatic value irrespective of whether it breeds successfully.

The Board prefers not to place such an interpretation upon this issue. The need for the demonstration-scale facility, its timing, and its objectives must be assumed by direction of the Commission (*Id.*, 92), to have been previously established including the stated intent not to optimize the breeding ratio (see breeding ratio discussion above). Thus 10(a)(4), in the face of the Commission's Order, would be inadmissible if its primary thrust were in accord with the preceding paragraph. Perhaps, however, NRDC, *et al.* as argued at the recent special meeting, accepts the Commission's statement about "the need for a demonstration-scale facility" (*Id.*, 92) but seeks to question whether the CRBR, as planned, represents the needed demonstration facility (Tr. 628-629; although the discussion referenced here was offered by NRDC in support of 10(a)(3), the Board interprets their position on this matter to apply equally here). In other words, this construction of 10(a)(4) would say that the program should have (for the reasons given) a substantially or reasonably better alternative than the CRBR for its demonstration facility. The Board rejects this subcontention, if so construed, as lacking in recognition that the criticisms of the CRBR all reflect intentional, previously accepted and planned-for characteristics (as discussed in 10(a)(3)). Finally, the Board is left with one option regarding the intent of 10(a)(4), namely that it seeks to question whether the CRBR is likely to meet its objectives. Such an issue has been admitted via subcontentions 10(a)(1), 10(a)(2), and 10(a)(5). Hence 10(a)(4), for all of the foregoing reasons is not admissible.

Subcontention 10(a)(5)

This issue prefaces its challenge upon 10(a)(4) (Tr. 687) and alleges that for the same reasons that follow from 10(a)(4) the CRBR will not demonstrate the reliability, maintainability, technical performance, environmental acceptability or safety of a relevant central station electric plant. Since subcontention 10(a)(4) has been ruled inadmissible, the instant contention may not properly be based upon it. However, as restated below, subcontention 10(a)(5) is deemed by the Board to be consistent with the Commission's Order, and to be admissible:

The CRBR is not reasonably likely to demonstrate the reliability, maintainability, technical performance, environmental acceptability or safety of a relevant LMFBR central station electric plant.

Subcontention 10(a)(6)

This issue alleges that the timing of the CRBR demonstration plant is inconsistent with the objectives of a demonstration-scale facility because it will neither build on the FFTF experience nor provide input for the PLBR. On the other hand, the overall LMFBR program plan of ERDA explicitly contemplates the very schedules for all three facilities that NRDC here challenges as inconsistent with the objectives of one of them—the CRBRP ERDA also inter-relates their mutually supporting roles within the context of the objectives of the CRBR and the overall reference LMFBR program plan (WASH-1535, p. 3.5-3, 4 ERDA-1535, p. I-6, 7). In view of the Commission's Order respecting the need, objectives, structure, and timing of both the LMFBR program and a demonstration-scale facility the Board could admit this subcontention only in the context of questioning the likelihood of the ability of the CRBR to satisfy the informational needs of the LMFBR program. Since such a contention has already been admitted, subcontention 10(a)(6) is ruled to be inadmissible.

Subcontention 10(a)(7)

This issue substitutes the CBR for the FFTF as an interrelated LMFBR program element and then raises the same basic question as is raised in subcontention 10(a)(6). The reference program plan that establishes the interrelation of timing and objectives of the CRBRP and the CBR is discussed in ERDA-1535, p. I-6, 7 For reasons precisely analogous to the foregoing discussion of 10(a)(6), the Board denies the admissibility of 10(a)(7).

Subcontention 10(b)

It is contended that assuming the completion date for the LMFBR research and demonstration program established by ERDA, it is possible to alter dates for various phases of the program and meet that date. Delaying CRBR to allow FFTF data to be developed and to allow a better analysis of energy growth and energy alternatives is urged as not delaying such completion date. This contention runs counter to the right of ERDA to make broad planning decisions including timing without reexamination of its programmatic or demonstration-scale facility informational goals (NRCI-76/8, CLI-76-13, 77 83, and 89-90). Urging delays in various phases of the program or in constructing a demonstration-scale facility is merely an indirect method of challenging the timing decisions which are to be assumed as established by the ERDA impact statement and associated processes, including congressional. Inquiry is proscribed not only as to the completion date, but also concerning intermediate dates in the step-by-step research and demonstration program. Since the Commission has determined that matters relating to the need, objectives, structure and time of the LMFBR

program or a demonstration-scale facility should not be reevaluated in this proceeding (*Id.* 92), these matters need not be analysed in the ER or the DES. This contention is rejected.

Subcontention 10(c)

This subcontention makes two allegations:

- (i) An alternate core design yielding a higher breeding ratio in the CRBR should be considered (consistent with the Cornell Workshop suggestions); and,
- (ii) Consideration should also be given to the design of foreign breeders.

ERDA has made a reasoned LMFBR programmatic decision that its demonstration-scale facility will adopt a more conservative approach than the foreign LMFBR programs with respect to not initially emphasizing a high breeding ratio nor generally following the foreign design philosophy (WASH-1535, p. 3.5-8, 9 10, 11 unmodified by ERDA-1535). The Board considers this to clearly represent a planning decision not subject to challenge under the guidance of the Commission's Order. The question of whether the CRBR represents substantially the best alternative to meet ERDA's objectives for its demonstration-scale facility is more appropriately addressed via subcontention 10(d), below. The instant contention is not admissible.

Subcontention 10(d)

This subcontention alleges that no determination has been made of whether the informational objectives of the CRBR can be obtained from foreign reactors or from less expensive and ambitious programs than the CRBR. The Board finds only one logical interpretation of this issue, namely whether the LMFBR program can proceed in a satisfactory manner without a demonstration-scale facility. Such a contention collides head-on with the, by now much quoted Order of the Commission, wherein the need for such a facility is accepted. While going neither to merit nor adequacy the Board observes that an alternative program plan analogous to the above contention has been considered and rejected (ERDA-1535, p. I-6 through I-14, especially Plan 6). As stated, this issue is inadmissible.

However, lest consideration of some substantially better alternative be proscribed, the Board will admit the following restatement of 10(d):

No adequate analysis is made to determine whether the informational requirements of the LMFBR program or of a demonstration-scale facility

might be substantially better satisfied by alternative design features such as are embodied in certain foreign breeder reactors.¹

Subcontention 10(e)

It is contended that no analysis is made of alternative methods for oversight and control of CRBR, including complete control by the government, or by the utilities, or by a return to the prior arrangement. Oversight and control are not among the alternatives described by the Commission as open to inquiry nor are they reasonably implicit in such consideration. As the court observed in *East Tennessee Energy Group v. Seamans*, ____ F Supp. ____ (DC DC, 1975), alternative methods of ownership, control and funding of the CRBRP have no environmental significance *per se*. In addition, Congress has specifically approved changes to the existing contract among the applicants relating to these matters, and the Commission relied heavily on congressional action in delineating the scope of review in this proceeding. This contention is denied.

Subcontention 10(f)

This contention alleges that alternative methods for funding the CRBR are not analyzed. It is rejected for the same reasons described with reference to Subcontention 10(e), *supra*.

Subcontention 10(g)(1)-(3)

These contentions relate to the analysis of alternative sites with allegedly more favorable environmental and safety features. The Commission has held that siting alternatives are relevant to this proceeding, in order to determine whether or not substantially better alternatives are likely to be available to meet ERDA's demonstration reactor informational goals (NRCI-76/8, CLI-76-13 77 79 and 92). Accordingly these contentions are admissible.

Contention 10(a) and subcontentions 10(a)(1), 10(a)(2), 10(a)(5), 10(d), 10(g)(1)(2)(3) are held to be admissible. Subcontentions 10(a)(3), 10(a)(4), 10(a)(6), 10(a)(7), 10(b), 10(c), 10(e), and 10(f) are inadmissible.

For the reasons described by the Board at its special meeting with counsel on September 23, 1976, the Staff's objections to NRDC's Fourteenth Set of Interrogatories, number VII, question 1, are overruled; the objections to question 2 are sustained. The Applicants' objections to NRDC's Tenth Set of Interrogatories, number VIII, question 2, are sustained.

¹ Office of Communication of the United Church of Christ v. FCC, 425 F 2d 543 at 546 (CA DC, 1969).

All counsel are requested to initiate and complete all discovery in this proceeding as soon as is reasonably possible. A written report shall be filed by counsel on or before November 1 1976, describing the status of discovery listing all uncompleted discovery and giving firm dates for completion.

IT IS SO ORDERED.

**THE ATOMIC SAFETY AND
LICENSING BOARD**

Marshall E. Miller, Chairman

**Dated at Bethesda, Maryland,
this 5th day of October, 1976.**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-37

ATOMIC SAFETY AND LICENSING BOARDS

In the Matter of

PORTLAND GENERAL ELECTRIC
COMPANY ET AL.

Docket Nos. 50-514
50-515

(Pebble Springs Nuclear Plant,
Units 1 and 2)

PUGET SOUND POWER & LIGHT
COMPANY ET AL.

Docket Nos. STN-50-522
STN-50-523

(Skagit Nuclear Power Project,
Units 1 and 2)

October 6, 1976

Upon motion by intervenors requesting an order requiring preparation of a regional Environmental Impact Statement (EIS) covering all nuclear power plants proposed for construction within the Pacific Northwest region, or, alternatively preparation of a cumulative EIS covering both the Pebble Springs and Skagit units, the Licensing Boards for both proceedings jointly rule that no regional or cumulative EIS is appropriate, since there is no NRC plan for regional nuclear development in the Pacific Northwest.

Motion denied.

NEPA. FINAL ENVIRONMENTAL STATEMENT

A comprehensive environmental impact statement is appropriate only when there is a regional plan of development. *Kleppe v Sierra Club* 49 L. Ed. 2d 576 (1976).

**ORDER CONCERNING JOINT MOTION FOR
PREPARATION OF REGIONAL OR CUMULATIVE
ENVIRONMENTAL IMPACT STATEMENT**

On June 18, 1976, the Intervenor Project Survival, Philip Levy Denison Levy Chris Thomas, Sarah Thomas, Al Bannon and Catherine Bannon, who are intervenors in the Pebble Springs proceeding, together with Intervenor Forelaws on Board/Coalition For Safe Power, who are intervenors in both the Pebble

Springs and Skagit proceeding (hereafter, collectively referred to as Intervenor), filed a motion (Joint Motion), for an order requiring:

- 1 The preparation of a Regional environmental impact statement (EIS) to evaluate the overall social, economic, and environmental effects of all nuclear power plants proposed for construction within the Pacific Northwest Region (West Group).¹
2. In the alternative, preparation of a Cumulative EIS to evaluate the cumulative social, economic, and environmental effects of the Skagit Nuclear Power Project (Units 1 and 2) and the Pebble Springs Nuclear Power Plant (Units 1 and 2).

Further, Intervenor moved for an order postponing the conduct of the hearings in both of the above-captioned proceedings until an adequate Regional or Cumulative EIS has been prepared and filed in accordance with Commission regulations (10 CFR Part 51). Finally Intervenor suggested that the question of the need for and scope of either a Regional or Cumulative EIS might properly be referred to the Council on Environmental Quality (CEQ) for advice and guidance.

On June 28, 1976, the U. S. Supreme Court issued its decision in *Kleppe v Sierra Club*, _____ U. S. _____ 49 Lawyers Edition 2d 576-1976. Applicants in both captioned proceedings (Applicants) and the NRC Regulatory Staff (Staff) requested an extension of time for responding to the Joint Motion, which was granted. On July 9 1976, the Intervenor filed a supplemental memorandum discussing *Kleppe v. Sierra Club* and on July 23, 1976, the Applicants and the Staff filed their responses to the Joint Motion. In this Order the *Pebble Springs* and *Skagitt* Boards deny the Joint Motion.

In order to place the Joint Motion in proper perspective certain background information is appropriate. In August 1974, Portland General Electric Company (PGE) filed an application for construction permits for two nuclear generating units designated as the Pebble Springs Nuclear Plant, Units 1 and 2 (Pebble Springs). In September 1974, Puget Sound Power & Light Company (Puget) filed an application for construction permits for two nuclear generating units designated as the Skagit Nuclear Power Project, Units 1 and 2 (Skagit). Different Atomic Safety and Licensing Boards were established to conduct evidentiary hearings with respect to these two independent applications and the Staff prepared separate environmental impact statements on each project.

On January 23, 1976, an agreement was consummated whereby ownership shares in the Skagit and Pebble Springs projects were established as follows:

¹ The electric utilities in the Pacific Northwest region have formed a regional coordination organization known as the West Group. The West Group area includes Washington, Oregon (with minor exceptions), southern Idaho, the 11 western counties of Montana, and a small portion of northern California.

SKAGIT

Owner	Ownership Shares
Puget Sound Power & Light Company	40%
Portland General Electric Company	30%
Pacific Power & Light Company	20%
The Washington Water Power Company	10%
TOTAL	<u>100%</u>

PEBBLE SPRINGS

Owner	Ownership Shares
Portland General Electric Company	40%
Pacific Power & Light Company	25%
Puget Sound Power & Light Company	20%
Other	15%
TOTAL	<u>100%</u>

The January 23, 1976 agreement made no changes in the projects described in the applications other than the proposed construction completion schedules. Under the agreement the construction schedules call for Skagit Unit 1 to be completed by mid-1983, Pebble Springs Unit 1 by 1985 Skagit Unit 2 by 1986 and Pebble Springs Unit 2 by 1988.

The Intervenor's argue that the agreement has "fused what had been two separate ventures into one joint venture." However, under the agreement, the Applicants will participate separately in each project by owning an undivided interest as a tenant in common in that project. Title to each project will be held separately. Each project will be operated separately. The agreement did not change the facility site or design of either project. The architect-engineer and major contractors and equipment suppliers contemplated in the original applications remain the same for the respective projects. The work on each one will proceed independently. The two projects are also located in separate and distinct environments. The facility sites are more than 200 miles apart and are separated geographically by the Cascade Mountain Range. They are in different climates, on different rivers, and in different watersheds.

The applications and licensing proceedings on each project remain independent. Separate hearings have to date been held on each application. The proceedings themselves differ, for example, in the following respects:

1. The record in the Pebble Springs proceeding on environmental and site suitability matters was closed on January 15, 1976. It was reopened

only to consider what effect the entrance of Puget Sound Power & Light Company and Pacific Power & Light Company as co-applicants and any delay contemplated in the agreement of January 23 1976, had upon the proceeding. The record in the Skagit proceeding on the other hand has never been closed.

2. The Applicants in the two proceedings differ. The Washington Water Power Company is an Applicant in Skagit and not in Pebble Springs.
3. The Intervenor in these proceedings differ. Project Survival, and Philip Levy Denison Levy Chris Thomas, Sarah Thomas, Al Bannon and Catherine Bannon are Intervenor in Pebble Springs and not in Skagit. Skagitomians Concerned About Nuclear Plants is an Intervenor in Skagit and not in Pebble Springs.
4. The proposed reactor vendors in the two proceedings are different.

The only subject which the two Hearing Boards decided to hear jointly was "need for power." On the motion of the State of Oregon, a joint hearing session on this one subject was held for procedural convenience, since there are factual issues common to both projects on this subject. Each Hearing Board was in attendance, and each compiled its own separate evidentiary record and will make its own decision based thereon, thereby preserving the integrity of the two separate proceedings.

In light of the above background, it is the holding of the two Boards that the Joint Agreement has not "fused what had been two separate ventures into one joint venture" and that the two proceedings are separate and distinct.

Intervenor contend that the NRC, as the federal agency responsible for the licensing and the regulation of nuclear power plants, should either prepare a regional (programmatic) EIS or, in the alternative, an EIS which evaluates and assesses the cumulative impacts of the two proposed facilities to legally comply with the requirements of the National Environmental Policy Act of 1969 (NEPA). An issue presented by the Joint Motion is, therefore, whether the NRC is proposing a regional federal action.

The principal authority relied upon by Intervenor in arguing that the NRC should prepare such statements was the opinion of the United States Court of Appeals for the District of Columbia Circuit in *Sierra Club v. Morton*, 514 F 2d 846 (D.C. Cir. 1975). This is the reported case dealing most specifically with the issue of the necessity of preparing a regional impact statement under NEPA. However, this case was reversed by the Supreme Court of the United States in *Kleppe v Sierra Club* on June 28, 1976, ten days after Intervenor filed their Joint Motion. This decision held that the Department of the Interior did not have a "proposal," as that term is used in NEPA, for the development of the coal resources in the "Northern Great Plains Region" and therefore did not have to prepare a regional environmental impact statement. After this Supreme Court

decision the Intervenor, in a supplemental memorandum, endeavored to draw distinctions but the Boards do not find Intervenor's argument persuasive.

The record is clear that there is no NRC plan or program for regional nuclear development in the Pacific Northwest. Not only is there no NRC plan or program for regional nuclear development in the Pacific Northwest, but the NRC is precluded under its enabling legislation, the Energy Reorganization Act of 1974, from engaging in any such promotion or development of nuclear energy. A detailed "regional" statement is impossible in the absence of a proposal for a regional plan of development. As the Supreme Court stated in *Kleppe v Sierra Club*:

"Absent an overall plan for regional development, it is impossible to predict the level of coal-related activity that will occur in respondents' region, and thus impossible to analyze the environmental consequences and the resource commitments involved in, and the alternatives to, such activity "

As an alternative, Intervenor contends that one "comprehensive" environmental impact statement evaluating the Skagit and Pebble Springs project together must be prepared by the NRC. But as the Supreme Court stated in *Kleppe v. Sierra Club*:

"The determination of the region, if any with respect to which a comprehensive statement is necessary requires the weighing of a number of relevant factors, including the extent of the interrelationship among proposed actions and practical considerations of feasibility. Resolving these issues requires a high level of technical expertise and is properly left to the informed discretion of the responsible federal agencies. Absent a showing of arbitrary action, we must assume that the agencies have exercised this discretion appropriately "

Here, as in *Kleppe v Sierra Club* there is no evidence of arbitrary action. There has been no identification of any anticipated environmental impacts associated with the proposed activities at either project which would have any significant cumulative or synergistic effects. This is self-evident because the proposed Skagit and Pebble Springs sites are located approximately 215 miles apart, in different states with different population centers involved, namely Seattle, Washington, with Skagit and Portland, Oregon, with Pebble Springs, and on different river basins. Accordingly it was a proper exercise of discretion for the NRC to prepare separate impact statements for the Skagit and Pebble Springs facilities.

The Intervenor further recommend that the question of the need for and scope of either a regional or cumulative EIS be referred to the Council on Environmental Quality for advice and guidance. The Boards find this recom-

mendation without merit. The decision was properly one for the NRC since the Court stated in *Kleppe v Sierra Club*:

“[T]he determination of the extent and effect of these factors (cumulative environmental impacts), and particularly identification of the geographic area within which they may occur is a task assigned to the special competency of the appropriate agencies.”

The Joint Motion of the Intervenors is denied.
IT IS SO ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING BOARDS

FOR THE SKAGIT BOARD

Samuel W Jensch, Chairman

FOR THE PEBBLE SPRINGS BOARD

James R. Yore, Chairman

Dated at Bethesda, Maryland
this 6th day of October 1976.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-38

ATOMIC SAFETY AND LICENSING BOARD

Daniel M. Head, Chairman
Dr. Paul W. Purdom
Frederick J. Shon

In the Matter of

Docket Nos. 50-556
50-557

**PUBLIC SERVICE COMPANY OF OKLAHOMA
ASSOCIATED ELECTRIC COOPERATIVE, INC.**

(Black Fox Station, Units 1 & 2)

October 13, 1976

The Licensing Board rules on intervenors' motions concerning (1) the applicant's compliance with federal discrimination statutes; (2) reconsideration of the Board's prior ruling on energy conservation issues; (3) a certain proprietary determination previously made by the staff; and (4) scheduling of hearings.

Motions denied (scheduling motion denied without prejudice).

RULES OF PRACTICE. CERTIFICATION OF QUESTION TO COMMISSION

Under 10 CFR §2.718(i) the Board may certify questions to the Commission, under the same criteria as provided for referral under 10 CFR §2.730(f) (*i.e.* to prevent unusual delay or expense or detriment to the public interest).

NEPA. CONSIDERATION OF ALTERNATIVES

Contentions challenging the end uses of electricity are not equivalent to energy conservation contentions and are not within the purview of matters required to be considered by the Commission under *Aeschliman v. NRC* (D.C. Cir. July 21, 1976).

RULES OF PRACTICE. CHALLENGE TO COMMISSION REGULATIONS

A challenge to the constitutionality of a Commission regulation must be made either to the Commission itself (10 CFR §2.758) or to a court.

RULES OF PRACTICE: PROPRIETARY DETERMINATIONS

Any person filing documents with the Commission may request determination under 10 CFR §2.790 that the information included therein be deemed proprietary

GENERAL STATEMENT OF POLICY ON FUEL CYCLE. CONTINUATION OF HEARINGS

Although the *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* (41 Fed. Reg. 34707 August 16, 1976) provides that no new construction permits or limited work authorizations are to be issued pending further study of the fuel cycle issue, the statement explicitly provides that licensing boards are to continue to process applications and hold hearings up to the point of, but not including, licensing.

RULES OF PRACTICE. REPLY BRIEFS ON MOTIONS

Reply briefs to responses on motions will not be considered by an adjudicatory board unless a motion for permission to file such a pleading is made and granted. The reply brief should not be attached to the motion but should only be submitted after permission to file is granted.

MEMORANDUM AND ORDER

The purpose of this Memorandum and Order is for the Atomic Safety and Licensing Board (the Board) to rule upon certain motions that have been filed and now are at issue in this proceeding. These motions, which have been filed by the Intervenors, are: Motion to Certify Questions; Motion to Reconsider Special Prehearing Order or in the Alternative Conference [sic] to Certify Questions; Motion to Strike Proprietary Determination; and Intervenors' Response to Schedule Promulgated by Board Order of August 4, 1976 [Motion to Revoke Hearing Schedule] The Board will deal with these motions seriatim.

MOTION TO CERTIFY QUESTIONS

In this motion, Intervenors request that the Board certify certain questions to the U.S. Nuclear Regulatory Commission (the Commission) pursuant to Section 2.730 of the NRC Rules of Practice, 10 CFR Part 2. The four questions involve compliance by the Applicant with Federal discrimination statutes and their relationship to these proceedings. Intervenors primarily rely on the case of *NAACP v FPC*, ___ U.S. ___ 48 L. Ed. 2nd 284 (1976), a case in which the

Supreme Court held that the FPC could consider racial discrimination issues in its rate hearing under proper circumstances. This motion is opposed by both the Commission Staff (the Staff) and the Applicant.

The Staff and the Applicant argue that the Intervenors have not met the criteria for referral set out in Section 2.730(f), which provides that a licensing board may refer a ruling to the Commission if this is necessary to prevent detriment to the public interest or unusual delay or expense. They also point out that *NAACP v. FPC*, *supra*, does not support Intervenors' position. The Staff notes that the Supreme Court's ruling in the *NAACP v. FPC* indicates that the discriminatory practices must be demonstrably quantified by judicial decree or final action of the administrative agency charged with consideration of the discriminatory practices, and the Applicant argues that the Supreme Court held that a Federal agency is authorized to consider the consequences of discriminatory employment practices on the part of its regulatees only insofar as such consequences are directly related to an issue which is within the scope of the regulatory agency's congressional mandate.

In the Board's view the Staff and the Applicant have presented a proper analysis of the situation and the motion to certify questions must be denied. First, the motion does not attempt to show any specific unusual delay or expense or detriment to the public interest which would require a referral of any ruling by this Licensing Board to the Commission. In fact, the motion does not address itself to any particular ruling but instead seeks to have the Board certify legal questions to the Commission. Therefore, Section 2.730(f) is not the appropriate authority for the motion. This, however, is a minor deficiency and the Board will consider the motion as made pursuant to Section 2.718(i), which provides that the Board may certify issues to the Commission. Section 2.718(i) has been construed to have the same criteria for certification as Section 2.730(f) provides for referral, that is, that the Commission's resolution of the questions certified is necessary to prevent unusual delay or expense, or detriment to the public interest. Since there has been no showing of these requirements by the Intervenors, the motion must be denied.

Also, the Board notes that its ruling in its Special Prehearing Conference Order with regard to the Federal Discrimination statutes did follow the decision in *NAACP v FPC*. On page 16 of the Special Prehearing Conference Order, we note that:

“ if specific violations of these statutes can be asserted and shown to relate to the health and safety or environmental issues that this Board has to adjudicate, it is possible that a valid contention could be formed for Board determination at the evidentiary hearing. However, a nonspecific allegation of failure to comply with Federal law is not a valid basis for dismissing this proceeding.”

In the Board's view the Intervenors have not properly raised these issues nor have they related the alleged employment discrimination to the Commission's statutory mandate and responsibilities in connection with the regulation of nuclear power. Accordingly their motion to certify must be and it hereby is denied.

MOTION TO RECONSIDER SPECIAL PREHEARING ORDER OR IN THE ALTERNATIVE CONFERENCE [sic] TO CERTIFY QUESTIONS

The Intervenors request the Board to reconsider its Special Prehearing Conference Order of August 19 1976, to admit contentions 48d, 48e, 60, 61, and 62. These contentions allegedly relate to energy conservation and Intervenors argue that they are admissible in view of the recent decision of the U.S. Court of Appeals for the District of Columbia Circuit in *Aeschliman v NRC*, Appeal Nos. 73-1776 and 73-1867 decided July 21, 1976. In the alternative, the motion seeks that the question of the admissibility on contentions 48d and 48e be certified to the Commission. Both the Applicant and the Staff oppose this motion although the Applicant would have the Board reconsider contentions 48d and 60 before rejecting them as issues in controversy

The Board does not consider that *Aeschliman v. NRC* requires a reversal of its rulings in the Special Prehearing Conference Order on the contentions involved. As the Board noted in that Special Prehearing Conference Order, it was clear that the issue sought to be raised by contentions 48d, 48e, and 60 was a determination of the value of the end-use to which the electricity to be produced by the facility will be put. The Board rejected this on the basis of the Appeal Board decision holding that contentions seeking the questions of social value of the end-use of electricity expand the need for review beyond the pale of what is required by the National Environmental Policy Act (NEPA). *Consumers Power Company (Midland Plant, Units 1 and 2)*, 6 AEC 331, 351 352 (May 23, 1973). While the Midland proceeding was the subject of the *Aeschliman* case before the Court of Appeals, the ruling on exclusion of end-use contentions was not overturned by the court, and is therefore still binding on this Licensing Board. As the Court noted in the *Aeschliman* case, the argument contesting exclusion of contentions relating to end-use of electricity was not pressed on appeal (Slip Opinion, p. 8, fn. 8). The Board, therefore, adheres to its prior rulings on contentions 48d, 48e, and 60.

With regard to contentions 61 and 62, these contentions as framed do not raise energy conservation issues. Accordingly the *Aeschliman* case does not provide a basis for reversal of the Board's rulings excluding these contentions.

With regard to the requested certification of whether contentions 48d and 48e are admissible as issues in controversy the Intervenors have not met the criteria for referral contained in Section 2.730(f), which requires that there be a

showing of unusual delay or expense, or detriment to the public interest. Absent such a showing, the Board denies the request for certification.

MOTION TO STRIKE PROPRIETARY DETERMINATION

The Intervenors in this motion move to strike a proprietary determination made by the Staff in a letter dated July 14 1976, to Black & Veatch, an engineering firm doing work for the Applicant. Intervenors argue that they were denied due process since this determination was made without notice to them and without an opportunity for them to be heard. They also argue that the determination was not made in compliance with 10 CFR 2.790. The Staff and the Applicant oppose the Motion. They assert that the determination was made in compliance with Section 2.790 and point out that procedures are available under Sections 2.744 and 2.790 which permit access to proprietary documents under appropriate circumstances and which provide a method for contesting the proprietary determination.

The Intervenors have not followed the procedures set out in Section 2.744 for gaining access to or requiring disclosure of material that has been determined to be proprietary. It would appear rather that they seek to challenge the procedures themselves as unconstitutional. Such a challenge to a Commission regulation is not properly made to a licensing board but must be made either to the Commission or to a court. See Section 2.758 of the Commission's Rules of Practice, 10 CFR Part 2.

Further, the Board is not persuaded that there is a violation of due process of law because the Intervenors were not given notice and opportunity for a hearing on this proprietary determination. Presumably Intervenors are relying on the Fifth Amendment of the U.S. Constitution which provides that a person shall not be deprived of life, liberty or property without due process of law. The Intervenors, however, make no argument as to how they will be deprived of any property rights by the proprietary determination¹ and the cases relied upon by the Intervenors all involve infringement of an identifiable right. In fact, the property right involved is that of Black & Veatch and the proprietary procedures are designed to protect that right. Since the Intervenors have not shown the violation of any of their rights by the proprietary determination in question, their claim of a violation of due process is without substance.

Further, the Board rejects the Intervenors' argument that the proprietary determination was not made in compliance with Section 2.790 since only parties can take advantage of this rule. The rule specifies that "a person" may request a

¹ There is, of course, no issue of Intervenors being deprived of life or liberty by the proprietary determination.

proprietary determination and the logical interpretation is that Section 2.790 can be used by any person properly filing documents with the Commission.

Accordingly the Board hereby denies the Intervenor's motion to strike the Staff's proprietary determination of July 19 1976.

MOTION TO REVOKE HEARING SCHEDULE

Intervenor's move that the Board revoke the hearing schedule which was approved in its Special Prehearing Conference Order of August 4, 1976, on the basis of the Commission's General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle (GSP), 41 FR 34707. The argument is that the GSP requires, in view of the recent decisions of the U.S. Court of Appeals for the District of Columbia Circuit in *NRDC v NRC*, Appeal No. 74-1586 and *Aeschliman v NRC*, Appeal Nos. 74-1385 and 74-1586, decided July 21, 1976, that no new construction permits or limited work authorizations be issued pending resolution of the fuel cycle issue. Intervenor's, therefore, request that all hearing activities and the schedule be suspended since an adequate environmental statement cannot be promulgated. Both the Staff and the Applicant oppose this motion. They point out that the Commission in the GSP went on to state that the licensing boards shall continue to process applications and hold hearings up to the point of, but not including, licensing. The Board considers the position of the Applicant and Staff well taken and therefore rejects the motion. However, this denial is without prejudice since intervening circumstances may well require that the parties and the Board review the currently established schedule. Particularly the Board notes the recently filed motion by the Staff for issuance of an amended notice of hearing. Also, consideration must be given to what modifications, if any might be required because of the fuel cycle rule-making. The Board will therefore reconsider the current schedule after it has reviewed the responses from the other parties to the Staff's motion for issuance of an amended notice of hearing.

Further, the Board should note that it will not hold a second prehearing conference on October 21, 1976, as set out in the current schedule. Since there are currently no pending controversies on discovery requests, there is no reason at present to hold such a prehearing conference.²

REPLY PLEADINGS

The Board on October 4, 1976 received an untitled pleading from the

²There had been objections by the Applicant to certain interrogatories previously filed by the Intervenor's. The Board has yet to receive a copy of those interrogatories and therefore is unable to assess the objections made. In any event, no issue has been raised as to those objections since the Intervenor's did not file a motion to compel discovery within five days after the filing of the objections, as provided for in Section 2.740(f).

Intervenors. This apparently was a reply to the responses by the Staff and the Applicant to certain of the Intervenors' motions. In view of the Intervenors' unfamiliarity with NRC proceedings, the Board did consider this reply in its ruling on the motions. However, the Board wishes to make it clear that such reply briefs are not permitted under the Commission's Rules of Practice and will not be considered by the Board unless a motion for permission to file such a pleading is made. The Board should also mention that, if such a motion is made, the reply brief should not be attached to the motion but should only be submitted after permission to file is granted.

IT IS SO ORDERED.

**BY THE ATOMIC SAFETY
AND LICENSING BOARD**

**Daniel M. Head
Chairman**

Issued at Bethesda, Maryland,
this 13th day of October, 1976.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-39

ATOMIC SAFETY AND LICENSING BOARD

Edward Luton, Chairman
Ernest E. Hill
Dr. John R. Lyman

In the Matter of

Docket Nos. 50-354
50-355

PUBLIC SERVICE ELECTRIC AND
GAS COMPANY
ATLANTIC CITY ELECTRIC COMPANY

(Hope Creek Generating Station,
Units 1 and 2)

October 15, 1976

After reviewing the Initial Decision (LBP-74-79), the Appeal Board remanded the case to the Licensing Board to re-evaluate its initial determination regarding the potential impact of accidents involving liquid natural gas (LNG) carriers (ALAB-251). The Licensing Board now finds that several petitioners should be admitted as intervenors and accepts certain contentions bearing upon potential LNG carrier accidents. The Board also denies applicants' motion to issue, without further hearing, a supplemental initial decision resolving the issue directed to be considered on remand.

MEMORANDUM AND ORDER

The Atomic Safety and Licensing Board makes the following determinations on the matters before it:

I. THE CACCIA INTERVENTION EFFORT

The Board's Initial Decision in this case was issued on October 25 1974. The Board expressly found that "the principal design criteria for Hope Creek, Units 1 and 2, conform to the General Design Criteria set forth in 10 CFR Part 50, Appendix A " RAI-74-10, p. 752 (October 25, 1974). It appears that close to the time that the Initial Decision issued, the Regulatory Staff was reviewing a September 1974 report submitted to it by the Licensee, a report entitled, "Analysis of Potential Effects of Waterborne Traffic on Safety of the Control Room and Water Intake at Hope Creek Generating Station." That report contained an analysis of the potential impact on Hope Creek resulting from accidents involving tankers carrying liquid natural gas (LNG) on the Delaware

River. Having thus been made aware of the proposed construction of gasification facilities upriver from Hope Creek, the Staff determined to perform a full safety evaluation of the LNG matter. Therefore, while the Initial Decision was before the Appeal Board for review the Regulatory Staff recommended that the case be remanded to the Licensing Board to enable that Board, on the basis of the new LNG information, to re-evaluate its initial determination that the design bases for Hope Creek conform to the requirements of 10 CFR Part 50, Appendix A. The Appeal Board remanded the case for this purpose on December 31, 1974 (ALAB-251).

Mr. David A. Caccia has never been a party to this proceeding. Nevertheless, while this matter was pending before the Appeal Board, Mr. Caccia directed a November 3, 1974 letter to that Board in which he purported to take "exception" to certain portions of the Initial Decision. Only one of these "exceptions" was concerned with the alleged LNG threat. By letter of November 16, 1974 to the Appeal Board, Mr. Caccia submitted his brief in support of the "exceptions" which he had earlier taken. In ALAB-251 the Appeal Board stated that it had examined each of the areas referred to by Mr. Caccia in his various correspondence and, except for the LNG matter, no good reason had been suggested for disturbing any other determination of the Licensing Board.

After Mr. Caccia had reviewed the Licensee's "Analysis of Potential Effects" study he directed another letter to the Appeal Board (this one dated December 31, 1974) in which he takes issue with several aspects of the analysis. Then, by letter of January 3, 1975 to the Licensing Board, Mr. Caccia expressed his "desire to see that the LNG threat is adequately considered." He says, " if I could best accomplish this as an intervenor, then I request that I be so accepted." Finally by letter dated May 8, 1975 to the Licensing Board, Mr. Caccia made the following statement of his interest in the proceeding and how that interest might be affected by the results of the proceeding:

"I have a personal interest in what happens at Hope Creek. Released radioactive materials could directly affect me and could contaminate my food. I live within thirty miles of the site, and much of my food comes from an area that could be affected by Hope Creek. As a fisherman of the Delaware Bay my family and I would be among the first to ingest radioactive pollutants dumped into the Bay from Hope Creek. This is a direct threat to our health."

The Regulatory Staff supports the attempted intervention, while the Licensee opposes the effort on a variety of grounds.

Section 2.714 of the Commission's Rules of Practice generally requires the filing of a petition identifying the particular aspects upon which intervention is sought. There must be a statement of the facts pertaining to the interest of the would-be-intervenor, and a statement of the basis for each contention that the

intervenor wishes to assert in the proceeding. We find these requirements to have been substantially met by the various filings made from time to time by Mr. Caccia. The above-quoted statement of "interest" is, we think, sufficient to support intervention in this case. Additionally we have carefully considered the requirement that a basis for each contention be stated. We are of the opinion that Mr. Caccia's December 31 1974 letter states a sufficient contention with adequate supporting basis. The contention, which we hereby accept as an issue in controversy in these further proceedings, is as follows:

1. The analysis of interaction between the Hope Creek plants and LNG carrier traffic in the Delaware River (in the Licensee's September 1974 "Analysis of Potential Effects" study) is defective in the following respects:
 - a. The number of LNG carrier trips per year has been understated, and methane carriers have been separated from butane carriers and liquid petroleum gas (LPG) carriers.
 - b. Catchment distance is underestimated, in that it does not allow for rupture of more than a single tank in one accident.
 - c. LNG spills are more probable than those calculated from collisions alone, since such spills may also be caused by grounding and ship-board mishaps.
 - d. The probability of ship collision is greater nearer Hope Creek than in other stretches of the river because of the bend in the river and the congestion in the channel.
 - e. The probability of ship collision is greater for LNG carriers than for average ships because LNG carriers are larger in size but less maneuverable than average ships.
 - f. The figure adopted of .005 spills per collision is unrealistically low.
 - g. The chance that a spill will be to windward of the plants is greater than .028, since the prevailing winds are westerly and the channel is west of the plant.

By the time Mr. Caccia's intervention effort was ultimately completed, the period set out in the Notice of Hearing for the filing of petitions to intervene had long ago expired. A late petition may be entertained upon a determination by the Licensing Board that the petitioner has made a "substantial showing of good cause for failure to file on time" (10 CFR Section 2.714). We make such a determination here. The first information relating to the possible hazards to the Hope Creek plant from LNG carriers was introduced into this case on or about October 2, 1974. That was the time that the Licensee submitted its "Analysis of Potential Effects" study to the Regulatory Staff. We find the "good cause" requirement to be made by the raising of this new matter. As pointed out above, Mr. Caccia was stating his concerns in this regard as early as November 3, 1974.

We also conclude that Mr. Caccia's intervention effort was made within a reasonable time following the introduction of the LNG matter.

II. THE JOINT PETITIONERS' INTERVENTION EFFORT

Before us is a joint petition to intervene on behalf of the Concerned Citizens on Logan Township Safety Stanley C. Van Ness, the Borough of Paulsboro and the Borough of Swedesboro ("joint petitioners"). The petition carries the date of December 24, 1975, almost a full year after ALAB-251 was issued.

We think the joint petitioners have each stated an interest sufficient to support intervention. Citizens on Logan Township Safety is an association of citizens from Logan Township, New Jersey a place located on the Delaware River 25 miles north of the Hope Creek site. The petition represents that since 1973 Concerned Citizens on Logan Township Safety has sought to prevent the marine shipment of LNG into populated areas of the state. By the laws of the State of New Jersey Stanley C. Van Ness, Public Advocate, seeks to represent what joint petitioners characterize as "the public's interest in protecting environmental quality and assuring public health and safety" The Borough of Paulsboro is located about 30 miles from the Hope Creek plant. The Borough of Swedesboro is located about 20 miles from Hope Creek. Both Paulsboro and Swedesboro have intervened in a Federal Power Commission proceeding in opposition to an application to construct an LNG terminal on the Delaware River. Generally joint petitioners "seek to ensure that the Commission take all steps necessary to prevent injury to the citizens of New Jersey from LNG-nuclear power plant interactions."

In assigning a reason for the lateness of their petition, joint petitioners say "Because Petitioners' interest is limited to the issues raised by the Appeal Board's remand order, Petitioners could not have intervened in this docket at any significantly earlier time." But, as pointed out above, a period of one year elapsed between the issuance of ALAB-251 and the filing of this petition. And apart from joint petitioners' bald assertion quoted above, absolutely nothing appears which indicates that the petition could not have been filed much sooner than it was. We find the excuse for the lateness tendered by the joint petitioners to be insubstantial. In these circumstances, an examination of the "four factors" listed in Section 2.714(a) is nevertheless required. This is so because favorable findings on all or even some of these factors may outweigh the effect of the inexcusable tardiness. *Matter of Nuclear Fuel Services, Inc.* (West Valley Reprocessing Plant) CLI-75-4, NRCI-75/4R 273 (April 17 1975). The factors that are required to be examined are the following:

- (1) The availability of other means whereby the petitioners' interests will be protected.
- (2) The extent to which the petitioners' participation may reasonably be expected to assist in developing a sound record.

- (3) The extent to which petitioners' interests will be represented by existing parties.
- (4) The extent to which the petitioners' participation will broaden the issues or delay the proceeding.

First, petitioners assert that they have no other adequate means whereby their interest will be protected because only "this Commission can adequately assess the nuclear hazards threatened by LNG traffic on the Delaware River." The pleadings indicate that at least some of the petitioners are participating in proceedings before the Federal Power Commission involving the applications of certain companies to construct and operate LNG facilities on the Delaware River. The Licensee argues, therefore, that petitioners' "primary concern lies with the construction and operation of LNG facilities and not nuclear facilities." The Licensee's conclusion is that "the proper forum in which to ventilate their views on these issues is the Federal Power Commission." We think the Licensee takes too narrow a view of the petitioners' concerns. It is clear to us that petitioners are concerned, as they say about the *nuclear* hazards possibly to result from the LNG traffic. The pleadings do not indicate whether or not these nuclear concerns would be properly raised in the Federal Power Commission proceedings. But however that may be, it is undoubtedly proper to press such concerns in Nuclear Regulatory Commission proceedings.

The Licensee argues that " both parties (the Applicant and Regulatory Staff) have at their disposal all relevant information which Petitioners have indicated they will raise, and have conducted analyses far more sophisticated and informed than Petitioners, based upon their sparse knowledge as demonstrated in their petition, could hope to offer." We need only say of this argument that on the basis of the representations in their petition, the Board is of the view that joint petitioners participation in this proceeding may reasonably be expected to assist in developing a sound record.

Petitioners claim that no present party to these proceedings is actively representing petitioners or their interest. They point out that participation by the State of New Jersey conflicts in important respects with interests of petitioners; particularly they say that unlike the State of New Jersey they "are not affirmatively interested in seeing Hope Creek built." That is enough for us to conclude that petitioners' interests will not be sufficiently represented by any of the already admitted parties.

Petitioners expressly intend to confine their participation to the issue to be considered on remand. Thus, this intervention will not broaden the issues. Of course, the admittance of a new party does have some potential for delaying the proceeding. But as this case presently stands, we are unable to envision any delay at all that might ensue from the admittance of these petitioners. No evidentiary hearing on the LNG matter has as yet been scheduled. Furthermore, we do not read Section 2.714(a) as declaring that *any delay at all* is intolerable. Finally we

are mindful of the following Commission observations in the *West Valley* case:
“ allowance of a late intervention need not disrupt preparations for hearing. A tardy petitioner with no good excuse may be required to take the proceeding as he finds it.”

In summary of this matter we find that even though the joint petitioners have failed to advance an adequate excuse for their tardiness in submitting their petition to intervene, an examination of the factors set out in Section 2.714 weighs in favor of their admission to this proceeding. Accordingly joint petitioners are hereby admitted as joint intervenors, and are permitted to assert the following contention:

- 1 The Licensee's analysis of interaction between the Hope Creek plants and LNG carrier traffic is defective in the following respects:
 - a. The catchment distance for an LNG plume has been underestimated. As a consequence, the probability that a spill accident on the river will affect the safety of the Hope Creek plants is also increased.
 - b. The thermal hazard generated by a plume fire has been underestimated.
 - c. The Licensee has failed to adequately analyze the problems of explosion of confined and unconfined vapor clouds.
 - d. The number of annual LNG transits that should be anticipated on the Delaware and the probabilities of an accident and a spill have been seriously underestimated
 - e. The determination of a lower accident and spill probability for LNG tankers than for tankers of other types is based upon mere speculation.

III. MOTION FOR DETERMINATION OF NEPA ISSUES

Joint Intervenors' Motion of May 14, 1976, request the Licensing Board to declare the Regulatory Staff's obligation to prepare, under the National Environmental Policy Act, an environmental impact statement on the LNG issue which is the subject of the remanded proceeding. As we understand its responsive pleading, the Regulatory Staff has indicated a desire to present some evidence with respect to this issue. The Licensee may desire to do likewise.

Upon consideration of all the pleadings filed with respect to his matter, the Board is of the view that it should first receive from the parties whatever evidence they may have to present on this issue as well as any argument made necessary thereby. Therefore, the Board determines that the request of the motion should be included as a contention to be asserted by the joint intervenors. The contention shall be as follows:

Consideration of the existence of hazardous shipping on the Delaware River past the proposed Hope Creek plants is not contained in the Final Environmental Statement. Under the National Environmental Policy Act and the Commission's implementing regulations, the Regulatory Staff is required to prepare and circulate a supplemental environmental impact statement addressing this matter.

IV LICENSEE'S MOTION FOR ISSUANCE OF DECISION WITHOUT HEARING

By a pleading dated April 15, 1976, the Licensee requests the Board to issue, without further hearing, a supplemental initial decision resolving the issue directed to be considered on remand. That motion is hereby denied.

By that same pleading, the Licensee moves into evidence three exhibits to be designated Licensee's Exhibits 9 10 and 11. The admission of these exhibits is not opposed by any party Accordingly there are hereby admitted into the record of this proceeding the following:

Licensee's Exhibit 9 "An Analysis of the Potential Effects of Waterborne Traffic on Safety of the Control Room and Water Intake at Hope Creek Generating Station," dated September 1974

Licensee's Exhibit 10 "Responses to Questions on Potential Effects of Waterborne Traffic," dated January 13, 1975

Licensee's Exhibit 11 "Response to Second Set of Questions on Potential Effects of Waterborne Traffic," dated May 8, 1975

V

Evidentiary hearings on the matters set out in this Memorandum and Order will be scheduled to begin as soon hereafter as the Board determines to be practicable.

IT IS SO ORDERED.

**THE ATOMIC SAFETY AND
LICENSING BOARD**

Edward Luton, Chairman

Dated at Bethesda, Maryland
this 15th day of October 1976.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-16

COMMISSIONERS:

Marcus A. Rowden, Chairman
Edward A. Mason
Victor Gilinsky
Richard T. Kennedy

In the Matter of

Docket Nos. 50-458
50-459

GULF STATES UTILITIES COMPANY

(River Bend Station, Units 1 and 2)

November 4, 1976

Commission, pursuant to 10 CFR 50.12, grants request for exemption from *General Statement of Policy on Environmental Effects of the Uranium Fuel Cycle* to broaden the activities permitted under an existing limited work authorization.

ORDER

Gulf States Utilities Company Applicant in a proceeding presently before an Atomic Safety and Licensing Board, is seeking construction permits for its proposed River Bend Station, Units 1 & 2. Applicant currently holds a Limited Work Authorization (LWA) issued pursuant to 10 CFR 50.10(e)(1) on September 5 1975, as amended, on February 17 1976. On July 21 1976, the United States Court of Appeals for the District of Columbia Circuit decided *Natural Resources Defense Council v NRC*, Nos. 74-1385 and 74-1586. Thereafter, on August 13 1976, after issuance of Applicant's LWA but before completion of the authorized work, this Commission issued its General Statement of Policy concluding in relevant part that no new limited work authorizations could be issued pending promulgation of an interim rule on the environmental effects of the uranium fuel cycle.

The excavation work permitted under the outstanding LWA was completed on October 13, 1976, and Applicant seeks a broader LWA in order to place engineered backfill into the existing excavation. As a consequence of the effect of those portions of the General Statement of Policy which constrained the licensing board from authorizing the requested activities, the applicant directed to this Commission a "Specific Exemption Request" pursuant to 10 CFR 50.12, requesting permission to conduct the proposed activities.

Applicant's request is unopposed by any party to the proceeding. It appears that granting permission to undertake the proposed activities would present no adverse environmental impacts, may have impacts to protect the site environment, and would be consistent with any possible outcome of the proceedings below. The request is granted.

It is so ORDERED.

Samuel J. Chilk
Secretary of the Commission

Dated at Bethesda, Maryland
this 4th day of November, 1976

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-17

COMMISSIONERS:

Marcus A. Rowden, Chairman
Edward A. Mason
Victor Gilinsky
Richard T. Kennedy

In the Matter of

Docket Nos. 50-443
50-444

**PUBLIC SERVICE COMPANY OF NEW
HAMPSHIRE, et al.**

(Seabrook Station, Units 1 and 2)

November 5, 1976

Upon review pursuant to 10 CFR §2.786 of ALAB-349 the Commission rules that the construction-permit-suspension proceedings should be suspended and that construction of the facility may continue, pending adoption of an interim rule on the environmental effects of the fuel cycle and also subject to the outcome of two other matters before the Appeal Board. The Commission bases its ruling on (1) the issuance of the revised fuel cycle survey and proposed interim rule; (2) the likelihood that the interim rule will be in place within three months and will closely resemble the proposed interim rule; and (3) the granting by the D.C. Court of Appeals on October 8, 1976 of three stay-of-mandate motions in *NRDC v. NRC*, Nos. 74-1385 and 74-1586. (The Commission also denies a late petition to intervene but grants requests to file *amicus curiae* briefs.)

Proceedings suspended.

**ADJUDICATORY PROCEEDINGS: CONSIDERATION OF NRC STAFF
EVIDENCE**

The NRC staff is not only a party to an NRC adjudicatory proceeding but also an arm of the Commission and primary instrumentality through which NRC carries out its statutory responsibilities. While on some questions (such as interpretation of statutes or judicial decisions) the staff's submissions have no more weight than those of any other party in other cases (as when it prepares a study at the express direction of the Commission) the staff's submissions are entitled to greater consideration.

FEDERAL COURTS: STAY OF MANDATE

When a court's mandate is stayed, the decision has no binding effect, except to the extent that the stay might be conditioned.

Appearances

Thomas G. Dignan, Jr. and John A. Ritscher, for the Applicant, Public Service Company of New Hampshire

Anthony Z. Roisman and David Fleischaker, for the Intervenor, New England Coalition on Nuclear Pollution

Ellyn R. Weiss, for the Commonwealth of Massachusetts

Martin G. Malsch and Michael Graaney for the Regulatory Staff

MEMORANDUM AND ORDER

Introduction and Summary

On September 30, 1976, the Atomic Safety and Licensing Appeal Board, by a divided vote, granted a motion by the intervenor New England Coalition on Nuclear Pollution to suspend the effectiveness of the outstanding construction permits in this proceeding on the basis of the Commission's General Statement of Policy of August 13, 1976, 41 Fed. Reg. 34707 concerning the environmental effects of the uranium fuel cycle. ALAB-349 NRCI-76/9 235. On October 5, 1976, we decided to review ALAB-349 called for briefs from the parties, and set the matter for oral argument.¹ The effect of our order was to stay the Appeal

¹On October 13, 1976, counsel for the intervenor NECNP wrote a letter to the Commission's General Counsel stating that he wished information "with respect to the meeting on Saturday October 2, 1976, between members of the Commission and representatives of the Public Service Company of New Hampshire." The Commission's General Counsel brought the inquiry to the personal attention of each Commissioner individually and each responded that he had participated in no such meeting. The General Counsel communicated these responses to counsel for NECNP who declined to provide any further information. The Commission subsequently met to discuss the matter and unanimously agreed that, in light of the obvious inappropriateness of such a meeting at that time, any Commissioner who had taken part in such a meeting would be disqualified from further proceedings in this case. At the beginning of the oral argument on October 26, 1976, these

continued on next page

Board's action. 10 CFR 2.786(a). In taking review we indicated a special interest in the impact of a forthcoming staff study called for in the General Statement of Policy Thereafter, we asked the parties to address at oral argument several additional developments bearing on whether we should modify the Appeal Board's decision. For the reasons set forth hereafter, we hold that, in the light of these developments, this proceeding is suspended and construction of the Seabrook facility may be allowed to continue, pending anticipated adoption of an interim rule concerning the environmental effects of the fuel cycle and also subject to the outcome of two other proceedings—the appeals pending before the Appeal Board on the merits of the initial decision authorizing their issuance, and the Appeal Board's pending reconsideration of an application for a stay pending appeal.

As suggested by our opening paragraph, the background and procedural history of this matter are quite complex. Various aspects of that history have been set forth in the initial decision of the Atomic Safety and Licensing Board authorizing issuance of the construction permits (NRCI-76/6 857), the Appeal Board's decision in ALAB-338 denying an application for stay pending appeal (NRCI-76/7 10), and the Appeal Board's decision presently under review, ALAB-349 (NRCI-76/9 235). It is unnecessary to review all of that history here. Rather, we will summarize the facts relevant to the basic issue presented—whether the Seabrook construction permits should be suspended pending adoption of an interim rule governing assessment of the incremental environmental impacts of the uranium fuel cycle attributable to an individual light water reactor, like Seabrook, in the NEPA cost/benefit analysis for such a reactor.

continued from previous page

developments were summarized by the Chairman and counsel for NECNP was asked whether he wished to provide any further information or say anything else regarding the alleged meeting. The Chairman stated that the matter "must be laid to rest, and laid to rest on the record of this proceeding." Counsel for NECNP replied that "I have nothing additional to add to what I have already said." Tr. pp. 5-7 Correspondence relating to this matter was read into the record. Tr. pp. 7-10. No such meeting occurred.

We recognize that there are strongly held and conflicting views on many of the issues that fall within our mandate. For that reason, all participants in our proceedings should seek to promote the process of rational decision making. We feel constrained in this context to take note of objectionable portions of the reply submission of counsel for NECNP in this proceeding. For example, counsel for NECNP tells us that "Each Commissioner must ask himself to what master he is loyal. There is no integrity in loyalty to a false master as Messrs. Haldeman, Erhlichman, Mitchell, et al., learned so well." He further states that "Some day some time, each Commissioner must face up to the reality that he has sworn on oath to regulate nuclear power. Today is that day" NECNP Response to Briefs of Applicants and NRC Staff, p. 4. In our judgment, innuendos of this kind cross the line between vigorous advocacy and impropriety

Factual and Procedural Background

The applicant Public Service Company of New Hampshire proposes to build a two-unit nuclear electric generating station in the vicinity of Seabrook, New Hampshire. Following a contested licensing proceeding, in which the environmental impacts associated with the uranium fuel cycle were duly factored into the NEPA cost/benefit analysis for the reactor in accordance with 10 CFR 51.20(e), a divided Atomic Safety and Licensing Board authorized issuance of construction permits on June 29 1976. On July 7 1976, construction permits were issued by the Director of Nuclear Reactor Regulation. Construction commenced shortly thereafter and has been proceeding since that time. Appeals are presently pending on the merits of the Licensing Board decision before the Atomic Safety and Licensing Appeal Board, including a challenge to that aspect of the Commission's rule governing the assessment of waste disposal impacts associated with the fuel cycle. Brief discussion of the background of that rule is necessary to put this matter in perspective.

Prior to 1974 the incremental environmental impacts associated with the uranium fuel cycle were not factored into cost/benefit analyses for individual light water reactors. Such impacts were deemed to be too indirect and remote for consideration in the context of licensing an individual reactor, and properly postponed for consideration in conjunction with the planned licensing of waste management and reprocessing facilities. See *Vermont Yankee Nuclear Power Corp.*, ALAB-56, 4 AEC 930 (1972). In April 1974, the AEC concluded a rulemaking proceeding resulting in the adoption of a table of numerical values which quantify the environmental impacts of the uranium fuel cycle attributable to an individual reactor. This table, denominated Table S-3, is now incorporated in our rules implementing NEPA. 10 CFR 51.20(e), 51.23(a). As reflected in the statement of considerations adopting the present rule, these environmental impacts were found to be very small. 39 Fed. Reg. 14188-91. The rules accordingly provided that the table's numerical values were to be included in applicant's environmental reports and in staff environmental impact statements for individual reactors, but that no further discussion of fuel cycle impacts was to be required. The validity of the new rule was challenged, both in the context of individual reactor licensings, and by an appeal from the AEC's adoption of the rule itself.

On July 21 1976, two weeks after the construction permits were issued in this case, the United States Court of Appeals for the District of Columbia Circuit rendered its decision on these challenges in *Natural Resources Defense Council v NRC*, Nos. 74-1385 and 74-1586 (hereafter referred to as the "fuel cycle decision"). The court found that, regarding most phases of the uranium fuel cycle, Table S-3 rested on an "adequate, even admirable" basis. Slip opinion at 24. However, the court held that the rule embodying Table S-3 was inadequately

supported by the rulemaking record insofar as it treated the effects of reprocessing of spent fuel and radioactive waste. The court further held that NEPA requires analysis of such reprocessing and waste issues, either through rulemaking or in individual licensing proceedings, as a prerequisite to Commission licensing of a nuclear power plant. A majority of the court also indicated that, should the Commission choose to revise its rule, it should do so by procedures more demanding than the notice-and-comment procedures normally required for informal rulemaking by the Administrative Procedure Act.

On August 13, 1976, the Commission issued a General Statement of Policy in response to the court's decision, entitled "Environmental Effects of the Uranium Fuel Cycle." The General Statement of Policy was intended to spell out the Commission's reading of the court decision, to indicate its intended courses of action by way of implementation and possible appeal of the decision, and to provide guidance to licensing and appeal boards and to the regulatory staff during the implementation period. Among other things, the Commission directed the regulatory staff to "review the existing literature thoroughly and to produce on an expedited basis a revised and adequately documented environmental survey on the probable contribution to the environmental costs of licensing a nuclear power reactor that is attributable to the reprocessing and waste management stages of the uranium fuel cycle." The Commission expressed its intention to reopen the rulemaking proceeding on the environmental effects of the uranium fuel cycle for the limited purposes of (1) supplementing the record of the reprocessing and waste management issues; and (2) determining whether or not, on the basis of the supplemented record, Table S-3 should be amended. In addition, the staff was directed to prepare an evaluation of the environmental impact of using a possible interim rule as a basis for licensing until a final rule is in place, and an assessment of the impact of a suspension of further licensing during that time period.

The Commission stated its expectation that, on the basis of notice-and-comment procedures, an interim rule might be promulgated as early as December 1976, providing a basis for further licensing at that time. In the interim, however, the Commission concluded that "no new full-power operating license, construction permit or limited work authorization should be issued." That conclusion was "based on recognition that the grant of each of those authorizations, permits or licenses is premised upon the completion of an adequate environmental impact statement, and that under the court's decision, absent an acceptable substitute for those portions of Table S-3 which the court had found inadequately supported, the basis for a complete environmental impact statement will not be in place." Thus, the Commission made a generic determination that new operating licenses and construction permits, with limited exceptions, could not issue pending adoption of an interim rule or some other resolution of the issues raised by the court's opinion.

The Commission's General Statement of Policy took a different approach with respect to already-issued and outstanding operating licenses and construction permits applicable to operating reactors and to situations, like Seabrook, where construction was already underway. With regard to such licenses and permits, the Commission adopted a case-by-case approach, saying that:

questions of modification or suspension should be resolved in formal proceedings in light of the facts and the applicable law. Since we have decided that reprocessing and waste management issues should be treated generically by rulemaking rather than on a case-by-case basis, the initial question on remand of the *Vermont Yankee* and *Midland* orders [cases involving an outstanding operating license and construction permit, respectively] will be whether the licenses should be continued, modified, or suspended until an interim rule has been made effective. In resolving this question, the Commission intends to assign the matter to licensing boards with instructions to call for briefs from the parties followed by evidentiary hearings if necessary. The same question would arise on a request for a show cause order seeking the suspension or modification on fuel cycle rule grounds of any other nuclear power plant license.

It is the Commission's understanding that resolution of this question turns on equitable factors well established in prior practice and case law. Such factors include whether it is likely that significant adverse impact will occur until a new interim fuel cycle rule is in place; whether reasonable alternatives will be foreclosed by continued construction or operation; the effect of delay and the possibility that the cost/benefit balance will be tilted through increased investment.

On August 18, 1976, the intervenor NECNP filed the subject motion before the Appeal Board seeking suspension of the Seabrook construction permits on the basis of the General Statement of Policy. Following briefing and oral argument, a divided Appeal Board rendered ALAB-349 on September 30, 1976, granting the NECNP motion and ordering suspension of the Seabrook construction permits, but staying the effect of its decision for eight days to maintain the *status quo* until the Commission had an opportunity to decide whether to review the matter. The majority determined that under the particular facts and circumstances of that case, and applying its understanding of the factors specified in the Commission's General Statement of Policy a cessation of construction was warranted pending further resolution of the fuel cycle issues raised by the court of appeals decision. The majority stressed both its conclusion that the increased investment that would take place before adoption of an interim rule might "tilt" a subsequent NEPA cost/benefit balance toward continued construction of Seabrook, and its inability either to fix a limit on the time adoption of an interim rule might take or to guess at the nature of any rule that might be adopted.

The dissenting member of the Board reasoned, first, that it was reasonable to expect that an interim rule would be in place in a six-month period. Adoption of that timing frame of reference altered his view of the environmental impacts to be anticipated by denial of the suspension motion and also the costs that the applicant was likely to incur during that period. As a result of that analysis, he concluded that application of the factors listed in the General Statement of Policy to the record in this case could not justify suspension of the Seabrook permits.

On October 5, 1976, we decided to review the Appeal Board's ALAB-349 decision. CLI-76-15, NRCI-76/10 363. Knowing that the revised fuel cycle survey would be publicly available shortly and that it might well have a bearing on our disposition of ALAB-349 we asked the parties to address its relevance in their submissions. In order to preserve the status quo and as contemplated by 10 CFR 2.786(a), we continued in effect the Appeal Board's temporary stay of its decision. Recognizing the need for expeditious treatment, however, we set an expedited briefing schedule and committed ourselves to a prompt decision following oral argument.²

On October 8, 1976, the Court of Appeals for the District of Columbia Circuit granted three pending stay motions filed with reference to its fuel cycle decision. The stay of mandate was granted on the condition that the Commission would "make any licenses granted between July 21, 1976 [the date of the decision] and such time when the mandate is issued subject to the outcome of the proceedings herein." The court's mandate will not issue before the Supreme Court acts on pending petitions for certiorari and, if certiorari is granted, the decision invalidating portions of Table S-3 may be reversed.

Also on October 8, 1976, the Court of Appeals for the First Circuit, in which an application for a stay of the Seabrook construction permits pending appeal is pending, invited our Appeal Board to reconsider an application to it for a stay based largely upon alleged environmental impacts to be anticipated from continued construction of Seabrook. The Appeal Board is presently entertaining a motion for reconsideration addressed to these matters.

On October 13, 1976, the revised fuel cycle survey entitled "Environmental Survey of the Reprocessing and Waste Management Portions of the LWR Fuel

²Intervenor NECNP sought summary reversal in the Court of Appeals for the First Circuit of our October 5 order, alleging, among other things, that we had violated 10 CFR 2.786 in not announcing reasons for our decision to review. As we recently stated in *United States Energy Research and Development Administration* (Clinch River Breeder Reactor Plant), NRCI-76/8 67 75, the rule does not require any statement of reasons in an order merely announcing a decision to undertake review. Obviously this is an important case of first impression and therefore an appropriate case for Commission review. NECNP's motion for summary reversal is pending before the First Circuit, styled *New England Coalition on Nuclear Pollution v. NRC*, No. 76-1469.

Cycle," NUREG-0116, was made available for public comment. At the same time, the Commission issued a notice of proposed rulemaking, proposing for adoption a revised table as an interim substitute for the waste management and reprocessing values presently set forth in Table S-3. We expressed our present belief that the revised survey can "serve as an adequate foundation" for an interim rule and our judgment that the survey's analysis of reprocessing and waste management impacts would not prove to be "dramatically in error." We believe that an effective interim rule can be in place in January 1977

There was then pending before the Commission a motion by the Vermont Yankee Corporation seeking recall of the Commission's directive, in its General Statement of Policy establishing a hearing board to consider suspension of the Vermont Yankee license and authorizing the convening of similar boards on petition in other cases, until such time as the mandate might issue. By memorandum of October 13, 1976, from the Secretary the parties in all pending suspension proceedings, including this proceeding, were referred to these developments and informed that—

In light of all these circumstances, and in particular the court of appeals' action and the indications that adoption of an interim rule on a timely basis will be feasible, the Commission is considering the suspension of all pending show cause proceedings on fuel cycle issues, as moved by the Vermont Yankee Corporation.

Responses to the Vermont Yankee motion were solicited and several such responses were received.

These developments were called to the attention of the parties in this proceeding by a memorandum from the Secretary on October 20, 1976, in order to focus presentations at oral argument.^{2a} For the reasons to which we now turn, we believe that these developments amply warrant us in suspending this show cause proceeding.

The Revised Survey and Proposed Interim Rule

For purposes of our review several premises of the Appeal Board majority's decision have now become critical. Perhaps most importantly the revised survey of the environmental effects of the fuel cycle called for by the General Statement of Policy was not available when ALAB-349 was rendered. The Appeal Board expressly called attention to this fact and noted that it was not in a position to speculate what the revised survey might disclose. That being so, it

^{2a}That memorandum asked the parties to be prepared to address at oral argument, among other issues:

What relevance have the October 8 Court of Appeals decisions, the environmental survey the notice of proposed rulemaking, and the staff impact statement to the discussion of license suspension in the General Statement of Policy on August 13, 1976?

was also not in a position to speculate when or even whether a rule similar to Table S-3 might be adopted.³ In addition, the Board majority noted that the cost/benefit balance in the Seabrook case appeared to be relatively close. One member of the licensing board had dissented on this issue. Not having reached the merits of the appeals, the Appeal Board was not in a position to decide that issue. It did express the view, however, that Seabrook might be a case where the impacts of the fuel cycle might make a crucial difference in the cost/benefit balance, should the revised survey and/or the reopened rulemaking record show the values contained in present Table S-3 to be seriously in error. NRCI-76/9 at 262. Furthermore, at the time the Appeal Board's decision was rendered, the court of appeals had not ruled on stay of mandate motions pending before it in the fuel cycle case. Accordingly the Appeal Board majority was not in a position to take into account the terms of the stay order later issued by the court on October 8, 1976. In sum, the factual and legal universe with reference to which the Appeal Board majority decided ALAB-349 was markedly different from the universe in which we review that decision.

As we view it, of central importance in our disposition of this matter is the issuance of the revised environmental survey called for by the General Statement of Policy its preliminary review by the Commission, and our resulting proposal of an interim fuel cycle rule. In ALAB-349 the majority summarized its reading of the policy announced by the General Statement for suspension of licenses, saying (NRCI-76/9 at 249):

In short, adjudicatory boards must consider suspension motions arising under the policy statement *with due regard for the presently uncertain duration and outcome of the Commission's reevaluation of the reprocessing and waste disposal issues*. It need be added in this connection only that any judgment reached within that framework in a particular case will be subject to alteration once the uncertainties are removed. Any suspension of an existing license which might be decreed at this juncture would likewise have no certain permanent effect; it too could be terminated at any time if warranted by a change in circumstances. (emphasis added)

While the uncertainties of duration and outcome the majority referred to are not

³ In this regard, the Board stated that (NRCI-76/9 at 248):

To be sure, the policy statement does hold out the possibility that an interim rule might be promulgated as early as this December. It makes it quite plain, however, that the issuance of such a rule (utilizing notice and comment rulemaking procedures) would depend, *inter alia*, upon the revised environmental survey providing sufficient justification for following that path. On this score, the Commission eschewed a prejudgment of either (1) the conclusions which will be reached in the revised survey or (2) the likelihood that, upon analysis of its content, the survey will be found to supply an adequate foundation for putting forth an interim rule months—and perhaps a year or more—before a sufficient record has been developed to permit the adoption of a final rule.

It would be inappropriate for us to do otherwise.

yet totally removed—uncertainties that were pivotal to the majority's result—they have been so greatly lessened as to warrant vacation of the Board's suspension order.

In this respect, we note that these suspension proceedings have the character of stay proceedings or other proceedings for interim relief. Harm may arise from either continuing or ceasing the activities in question for the interim period and so assessments of the degree of change likely and the probable time required to fix the outcome are central. We must make our decision based on the best information available. Now as was not the case when the General Statement of Policy was issued, we have not only the revised environmental survey itself but also the comments filed with us in response to the General Statement of Policy and a Natural Resources Defense Council petition for rulemaking as well. As reflected in the Statement of Considerations accompanying the proposed rule, the lengthy comments of the NRDC, in particular, were taken into account in the survey and so assisted us in reaching our judgment as to the immediacy and likely form of the new rule. 41 Fed. Reg. 45851 (October 18, 1976). As we said at that time "where data necessary for a complete quantitative assessment of impact is lacking, the Commission's expert judgment must be brought to bear on the information available."

The environmental effects on a per-reactor basis of the uranium fuel cycle set out in the existing rule were found to be low and a large portion of those impacts is attributable to those parts of the rule upheld by the Court of Appeals. The revised survey confirms the basic correctness of most of the reprocessing and waste management entries in the existing table. The proposed new rule requires only a few substantial changes from the old rule, none of which appears likely to have any substantial total impact on the environment. See, "Environmental Survey of the Reprocessing and Waste Management Portions of the LWR Fuel Cycle," NUREG-0116 at pp. 2-17 to 2-19 and Table 2.10.⁴ Generally the

⁴In five cases the new rule requires the use of substantially higher numerical values for impact. In three cases the revised survey takes into account times which were not reflected in the old Table S-3: (1) hydrogen chloride gas produced in the incineration of plastics; (2) carbon-14 derived from fuel reprocessing; and (3) buried waste. The hydrogen chloride amounts are small, not radioactive, and no significant impacts are expected. The carbon-14 adds only fractionally to the per reactor whole body dose commitment. No radiological environmental impact from solidified high-level waste is anticipated once it has been buried.

In addition, the revised table shows substantial increases in land commitment and in iodine release at the reprocessing plant. The increase in land commitment amounts to 30 acres per RRY (reference reactor year) temporarily committed and 3 acres per RRY permanently committed. The increased iodine due to iodine in the population thyroid dose commitment is comparable in magnitude to that which occurs incidental to the whole body dose commitment otherwise incurred.

In any event, depending upon the evolution of fuel cycle technology the radiological impacts from actual facilities constructed in the future may be less than estimates based on present technology

impacts will be of a magnitude comparable to those which have long been approved in reactor licensing. Transcript of Oral Argument at 41-43 (October 26, 1976). In these circumstances it seems reasonable to suppose that an interim rule can be adopted, and adopted in approximately three months.

Thus, we believe it reasonable to expect that the interim rule as promulgated will closely resemble the proposed rule published on October 13, and like that proposed rule, will not produce results significantly different from those obtained under the current rule (10 CFR § 51.20(e)) which was in effect and applied with reference to the Seabrook licenses. The relatively slight change in the overall impact is of obvious significance to the suspension question, arguing strongly against suspension. It was a factor we could not properly have anticipated in August. When one also considers that the study produced no reason to doubt our earlier conclusion that changes in LWR design would not arise out of this analysis, it becomes apparent that suspension would be inappropriate.⁵

Furthermore, any uncertainty about the appropriate time frame for use in considering suspension of outstanding licenses and permits has been greatly diminished. In ALAB-349 the majority indicated its belief that the General Statement did not permit it to presume that a new fuel cycle rule would be in place by any particular date (NRCI-76/9 at 248), and raised the possibility that it might be as long as a year or more before such a rule was promulgated. *Id.* But, as we indicated in our October 13, 1976, letter to all parties involved in show cause proceedings based on fuel cycle grounds, the nature and quality of the revised survey now issued provide a basis for some confidence that an interim rule can be in place within three months. Accordingly in considering the suspension remedy with reference to an outstanding construction permit like Seabrook, it is now possible to set the appropriate time frame as three months.⁶ Once an interim rule is in place, whatever results have been reached in the current show cause proceedings, such as Seabrook, might have to be reexamined in the light of that new rule. That would mean that the efforts being put forth by the Licensing and Appeal Boards as well as by the various parties in those proceedings would be largely wasted, since even if decisions were reached in those proceedings, which seems unlikely in most cases, they would be extremely short-lived.⁷

⁵For construction permits the conclusion is even stronger, since actual generation of waste remains many years in the future.

⁶This is the time frame that the Appeal Board recently chose in *Union Electric Company* (Callaway Plant, Units 1 and 2), ALAB-352, NRCI-76/10 371 (October 21, 1976), where it decided that construction should be allowed to continue.

⁷This consideration would be especially true here. The Appeal Board has already made an exhaustive analysis of the suspension question. Now that the circumstances are so greatly changed, it would have to reevaluate each factor in light of those new circumstances.

NECNP points out that the revised survey is the submission of a party the staff; that it has not yet been challenged by the comments of adverse parties; and that in part it rests on judgments, not facts. For these reasons, NECNP concludes that we cannot use the survey in any fashion. We do not accept this view

To be sure, the staff is a party to the proceedings before us. But it is also an arm of the Commission and is the primary instrumentality through which we carry out our statutory responsibilities. It would be contrary to the facts of the administrative process to pretend that the staff is always merely a party whose submissions are to be given no more weight than those of any other party. On some questions, such as interpretation of statutes or judicial decisions, the staff submissions have no more weight than those of any other party. But in other cases that would not be so. It would be particularly wrong to treat the revised environmental survey as merely that of an interested party since the survey was carried out by the staff at the explicit direction of the Commission, was focused along lines set forth by the Commission, and was subject to ongoing Commission guidance during its preparation. And finally we have had some opportunity to review the survey ourselves and our preliminary assessment is that it "can serve as an adequate foundation" for an interim rule. 41 Fed. Reg. 45851 (October 18, 1976).

To the extent that the revised survey indicates that some uncertainties do remain as to certain impacts, it is our judgment that those uncertainties are not such as to create any serious doubt as to the validity of the proposed rule. Finally we note that although counsel for NECNP characterized the survey as a "hasty" one, no party offered any specific criticisms of the survey's conclusions, despite our express invitation to the parties in setting the case for argument.⁸ The survey was a review of existing literature by experts in the various disciplines involved and not an effort to do original research. It was made at a time when the Commission was already substantially engaged in assessing waste management goals and policies.⁹ Consequently much less time was necessary for its production than would have been required to produce new scientific data or to survey a field not already under study.¹⁰

⁸ Transcript of Oral Argument at 84 (October 26, 1976). The survey was made available to the parties October 13, thirteen days before the argument. Obviously more criticism may be forthcoming during the comment period or the subsequent hearings. To repeat what we have said above, however, we must decide the suspension issue on the basis of the information now available to us.

Appendix C of the survey describes the variety of programs presently being undertaken in this area by the NRC.

⁹ Our reliance on the survey prepared by the NRC staff accords with the "presumption of validity accorded to administrative bodies acting within their sphere of expertise." *TNT Tariff Agents, Inc. v. I.C.C.*, 525 F.2d 1089, 1093 (2d Cir. 1975); *Braniff Airways, Inc. v. C.A.B.*, 379 F.2d 453, 460 (D.C. Cir. 1967). In the fuel cycle decision, the court in a

continued on next page

To summarize, we now have more and better information than did the Appeal Board which decided ALAB-349 concerning the timing and likely content of a revised interim fuel cycle, or than we had last August. The Commission now has good reason to believe it likely both that there will be an interim rule in place within three months, and that that rule will closely resemble the existing rule, 10 CFR § 51.20(e). Therefore, it seems unlikely that the cost benefit balance in the Seabrook proceeding would be tipped because of those changed impacts.

Significance of the Stay of Mandate in the Fuel Cycle Decision

Subsequent to the decision of the court of appeals in the fuel cycle case, various motions were presented to the court requesting that its mandate be stayed. Separate stay motions were filed by the Commission, the intervenor respondent Vermont Yankee Corporation, and by a group of utility company participants (Baltimore Gas and Electric Company *et al.*) in the rulemaking culminating in the adoption of Table S-3. The motion of the Commission stated that the Commission was taking certain steps to implement the court's opinion, including that an Atomic Safety and Licensing Board had been reconvened "to consider whether the operating license for Vermont Yankee should be continued, modified, or suspended until an interim fuel cycle rule had been made effective," and that the Commission intended to reopen its rulemaking proceeding on the environmental effects of the uranium fuel cycle. The General Statement of Policy was appended to the motion spelling out how the Commission proposed to otherwise implement the court's decision. The Commission indicated that it would adhere to that Statement subject to possible changed

continued from previous page

footnote implied that staff testimony offered in that proceeding was "peculiarly subject to considerations of self-interest" and would require more than notice and comment before they could be relied on by the agency *NRDC v. NRC, supra*, slip opinion at 25, n.43. The only authority cited by the court for this extraordinary proposition is *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 400 n.95 (D.C. Cir. 1973), *cert. denied*, 417 U.S. 921 (1974), which involved a submission to an agency by a private party not by the agency staff. Also, as the court noted in the fuel cycle decision, the Atomic Energy Commission had both developmental and regulatory responsibilities at the time of the relevant submission. Indeed, the testifying official had predominantly "developmental" responsibilities. The situation here is quite different. Pursuant to the Energy Reorganization Act of 1974, 42 U.S.C. § 5801 *et seq.*, we and our staff have only regulatory functions, thus reducing the possibility of "self-interest" in a staff document. Previous decisions of the D.C. Circuit indicate that the Commission may legitimately rely on staff submissions in appropriate circumstances. *Union of Concerned Scientists v. A.E.C.*, 499 F.2d 1069 1077-80 (D.C. Cir. 1974); *Friends of the Earth v. AEC*, 485 F.2d 1031, 1033 (D.C. Cir. 1973) (separate statement of Bazelon, C.J.). Such limited reliance is particularly necessary where, as here, we must act on the basis of the information now available.

procedures in light of the revised survey and to the possibility that it would seek a further stay of mandate based on its results.¹¹

The motion for stay of mandate filed by intervenor-respondent Vermont Yankee Corp. took issue with the Commission's reading of the court's decision as contained in the General Statement of Policy. It noted that the decision itself had not vacated the order authorizing issuance of the license to operate the Vermont Yankee Nuclear Power Station or the license itself. Yet, Vermont Yankee pointed out, the Commission had construed the decision as requiring reconsideration by the NRC of the continued operation of the Vermont Yankee station. Noting that the Commission had reconvened a Licensing Board to consider the status of the Vermont Yankee operating license, the intervenor argued that shutting down Vermont Yankee for even a short time would cause substantial and irreparable harm. The stay was sought to avoid this harm.

Similarly the third motion for stay of mandate also took issue with the Commission's response to the decision, particularly with respect to show cause proceedings of the kind involved here. That motion argued that reopening proceedings for not only the Vermont Yankee reactor, but "all other licensed reactors as well" during the pendency of Supreme Court review would be inconsistent with the court's decision. As to outstanding construction permits, like the Seabrook permits, the motion cited "delay and disruption of construction schedules" as a reason for a stay. The plain intent of the motion was to produce an order suspending hearings of this kind.

On October 8, 1976, the United States Court of Appeals for the District of Columbia Circuit granted all three pending motions for stay of its mandate in the fuel cycle decision. The court's order granting these motions stated in relevant part as follows:

Further ordered, by the court, that the foregoing motions for stay of mandate are granted, and the clerk is directed not to issue the mandate herein prior to October 31, 1976, on condition that the United States Nuclear Regulatory Commission shall make any licenses granted between July 21, 1976, and such time when the mandate is issued subject to the outcome of the proceedings herein.

¹ The Commission's motion stated,

As the attached General Statement of Policy reflects, the NRC is considering a further request to this court, within a few weeks after September 30, which could form the basis for future licensing actions. Any such request would be based on a revised and documented environmental survey of the uranium fuel cycle's reprocessing and waste management stages, and would assess the likely impact of renewed licensing as against a continued halt.

Motion for Stay of Mandate and Correction of Opinion, August 20, 1976. That motion sought a stay until September 24, 1976, in order to allow time for the Solicitor General to consider whether a petition for certiorari was warranted. The Commission filed a motion for further stay of mandate, making similar representations, on September 15, 1976.

Under applicable rules of appellate procedure (FRAP 41(b)), this means that the mandate in the fuel cycle case will not issue at least until the Supreme Court acts on the pending petitions for certiorari.

The parties take markedly different positions with respect to the significance of the court's order for the issue presently before the Commission. NECNP argues that, by filing with the court a copy of the August 13 General Statement of Policy the Commission had committed itself to continued adherence to the Statement of Policy should a stay be granted, apparently without regard to changed circumstances. New England Coalition on Nuclear Pollution Response to Briefs of Applicant and NRC Staff, October 22, 1976, at p. 6; Tr. of Oral Argument (hereinafter "argument"), October 26, 1976, at pp. 78-79 In issuing the stay of mandate, the NECNP argument goes, the Court of Appeals has, in effect, put its imprimatur on the procedures outlined in that statement, including the procedures for show cause proceedings like the Seabrook proceeding. The practical result of the NECNP position is that the Commission is now bound by the fuel cycle decision, as interpreted in the Statement of Policy even though the mandate has been stayed, and that this suspension proceeding must be allowed to run its course, unless the Commission returns to court and obtains permission to act otherwise.

The applicant, Public Service Company of New Hampshire, reads the order very differently Under its interpretation, the Court of Appeals decision invalidating portions of Table S-3 will have no legal effect until the mandate issues, save that new licenses must be conditioned on the outcome of the reopened rulemaking proceeding. Brief of Applicants, October 18, 1976 (hereinafter "Applicants' Brief"), at p. 29 Since Table S-3 was duly factored into the cost/benefit analysis in the Seabrook proceeding, the applicant's argument runs, its outstanding construction permits could not now be suspended on fuel cycle grounds absent new facts—facts which the revised survey has not uncovered. Beyond that, the applicant reads the Court of Appeals order as, in practical effect, an amendment or clarification of the court's earlier decision. Thus it argues that the court's language calling for conditioning of new licenses and permits on the outcome of the reopened rulemaking proceeding shows that the court never contemplated a cessation on licensing. Applicants' Brief, at p. 29 It argues from this that, *a fortiori*, the court did not contemplate any suspension of outstanding construction permits. Applicants' Brief, at pp. 29-30.

The staff believes that the General Statement of Policy should be viewed as a reasonable interpretation of the court's opinion, at the time it was issued, but one subject to revisitation in light of the completed survey and the court stay Argument, at pp. 40-41. The staff thus rejects the intervenor NECNP's position that, notwithstanding the stay, the Commission is somehow bound by the court of appeals decision now that the stay has issued. In its view the stay reflects the court's recognition that its decision may be overturned and that any mandatory effect can appropriately be postponed until the possibility of a successful appeal

has been resolved. Argument at p. 39 But the Commission remains free, if the facts developed so warrant, to suspend licenses or take any other action required under its ordinary regulatory authority Argument at p. 40. Under the staff's approach, the only legal constraint imposed by the stay is that new licenses issued after July 21 1976, must be conditioned on the outcome of the fuel cycle decision as required by the explicit terms of the stay order. On the facts revealed by the survey and considering the explicit permission given to continue licensing, the staff finds no basis in policy for continuing the present suspension proceedings.

The terms of the court's stay order do not directly answer the present question. However, we think it clear that the staff's position as to its effect is the most logical and reasonable one.¹² There are several difficulties with the intervenor NECNP position. First, their contention that new operating licenses and construction permits may not be issued flies in the face of the explicit terms of the court's order granting the stay Moreover, NECNP's position is directly contrary to hornbook principles of laws governing stays. A court acts only through its mandate. *Bailey v. Henslee*, 309 F.2d 840, 844 (8th Cir. 1962). When a mandate is stayed, a decision has no binding effect, save as the stay might be conditioned, as it was here with respect to the outcome of the fuel cycle decision. Furthermore, the NECNP position simply ignores the fact that the court granted not only the Commission's motion but also the motions of the Vermont Yankee Corporation and the utility group. Those petitions said nothing about continued adherence to the General Statement of Policy On the contrary they argued that suspension of construction permits, like the Seabrook permit, would be improper at least until the Supreme Court had an opportunity to decide whether to review. Finally it would have been a simple matter for the court to say explicitly that its granting of a stay was conditioned on adherence to the General Statement of Policy Thus it did not do.¹³

Admittedly the meaning of the court's order is subject to different interpretations. We are transmitting a copy of this decision setting forth our assessment of the meaning of the order to the court for its information.

³NECNP attempts to explain the language about conditioning of new licenses by reference to the General Statement of Policy's statement that new licenses not requiring NEPA review (see 10 CFR 51.5(b)) and, if warranted by the revised survey licenses in uncontested cases, might issue during the interim period. We see no merit in this contention. Such licenses were not at issue and were not specifically the subject of debate in the stay motions; they were referred to in the Statement of Policy but not prominently discussed. Furthermore, the first category of licenses encompasses activities, such as fuel loading or low-power testing, which are not "major federal actions" within the meaning of NEPA. It would be anomalous for the court to require that such licenses be conditioned on the outcome of a rulemaking designed to implement NEPA. The second category—licenses in uncontested cases—encompasses only a small number of licenses. About 70% of the active proceedings before the Commission, in which an applicant is seeking either a construction permit or an operating license for a commercial nuclear reactor, are presently contested, and the percentage of contested cases has been steadily rising.

We wish to make clear, however, that in rejecting the NECNP position, we are not adopting the position that the Commission is disabled from acting with respect to Seabrook and other similar permits unless it goes through rulemaking procedures. Our discretion is not so cabined and confined. As we have stated, our review of the revised survey leads us to conclude, as a matter of discretion, that the Seabrook permit should not be suspended. However, had the updated survey indicated that the impacts associated with the uranium fuel cycle were much more serious than had heretofore been thought the case, or had the process leading to possible adoption of an interim rule appeared more complex, we might well have continued these suspension proceedings. There is, in our view no serious question about our power so to act on the basis of information at hand in individual proceedings, without need for special rulemaking.

Conclusion

The applicant and regulatory staff contend that the Appeal Board majority made errors of fact and misapplied the standards set forth in the General Statement of Policy in granting the suspension motion. Thus, the applicant claims that the Board's assessment of the amount of money that will not be spent if construction is halted was substantially too high and that the Board overestimated the environmental impacts associated with continued construction. The staff maintains that the increased investment which the Appeal Board majority thought might "tilt" the cost/benefit analysis in favor of Seabrook had already been included in the Licensing Board's cost/benefit analysis and that, in any event, the Appeal Board's "tilting" analysis was unbalanced because it failed to consider whether suspension of construction might "tilt" the balance against Seabrook and in favor of alternatives to it. Tr. pp. 52-53.

We need not, and do not, resolve these complex and essentially factual contentions, for several reasons. As a general matter, this Commission does not sit to review factual determinations made by its subordinate panels. While, of course, we have the authority to do that, and have exercised that authority on occasion (*see Consolidated Edison Company of New York, Inc.* (Indian Point Station, Unit No. 3), CLI-75-14 2 NRC 835, vacating in part ALAB-287 2 NRC 379), it is simply not practical for us to do so in most cases. We have discussed, with the benefit of hindsight, how key premises of the Appeal Board majority's decision have been called into question by subsequent developments. Assuming, then, that there may be merit in some of the exceptions raised by the applicant and staff with respect to the decision below and given practical constraints, these matters could only be resolved by remanding the case to the Board with instructions to reapply the standards set forth in the General Statement of Policy in the light of changed circumstances.

Several considerations lead us not to adopt that course. In the first place,

the parties have made it clear that they do not desire a remand of this matter. Tr. pp. 36, 61 104. Moreover, with reference to environmental impacts to be anticipated in the period between now and anticipated adoption of an interim rule—obviously a prime consideration in considering a suspension of construction to protect environmental values—we note that the Appeal Board majority did not find such impacts sufficient in themselves to justify suspension on fuel cycle grounds, and that the intervenor NECNP does not except to that conclusion. Furthermore, we note that the issue of anticipated environmental impacts is presently under consideration by the Appeal Board in connection with its reconsideration of an application for a stay pending appeal. Thus, the matter of environmental impacts in the near term is being carefully considered.

But while these considerations point away from a remand in this proceeding, we believe that the considerations of broader impact we have discussed—concerning the timing and likely content of a revised fuel cycle rule—warrant suspension of this and other ongoing proceedings concerning outstanding licenses and permits pending anticipated adoption of a revised interim rule, probably by January 1977. Substantially for the reasons given in this opinion, we are in substance granting the Vermont Yankee Corporation's motion by suspending, with one exception,¹⁴ other ongoing proceedings based on the General Statement of Policy. The effect of these actions is to shift from the case-by-case approach we felt constrained to adopt with respect to outstanding licenses in the Statement of Policy before we had the benefit of the revised survey. In the light of the survey we now feel amply justified in making a generic determination that outstanding licenses need not be considered for suspension on fuel cycle grounds during the relatively brief period between this action and anticipated adoption of a revised rule.

The entry of orders in this and other pending show cause proceedings concerning outstanding licenses and permits is also fully consistent with a Supplemental General Statement of Policy we are issuing today setting forth interim procedures to govern assessment of fuel cycle impacts associated with new licenses and permits. In such cases, we are directing the Licensing Boards, until an interim rule is in place, to apply present Table S-3 values and to determine in addition whether the new values indicated by the revised survey would change the cost/benefit balance adversely to the proposed reactor. Should the new values tilt the balance in a particular case, action on the license or permit will be withheld pending adoption of an interim rule. The differing approaches we propose to follow with respect to new as compared with outstanding licenses are fully appropriate. The court of appeals stay of mandate is conditioned upon our making new licenses subject to the outcome of that proceeding. To help ensure

¹⁴ The *Midland* proceeding will continue with respect to other issues, with fuel cycle issues to be held in abeyance pending adoption of an interim rule.

that any licenses issued will, in fact, be able to comply with any such condition, we have directed that Licensing Boards and our staff apply the data supplied by the survey as the best present indication of the ultimate outcome of our reopened proceedings. The stay of mandate's condition does not apply to outstanding licenses like Seabrook that were issued before the court's decision. In view of the necessary disruptions attendant upon the suspension remedy the results of the revised survey and the time frame for a revised rule, we conclude that that remedy is not presently warranted.

This does not necessarily mean that the results of the reopened rulemaking proceeding cannot ultimately be factored into consideration of whether an outstanding license or permit should be suspended, conditioned, or revoked. Indeed, given the time schedule of the present proceeding,¹⁵ it appears that the Appeal Board will be in a position, if necessary to factor the new values in the anticipated interim rule into the cost/benefit analysis when it decides the merits of the pending appeals from the initial decision. See *Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station), ALAB-218, 8 AEC 79 (1974). And when the interim rule is in place, we will reconsider whether the other proceedings we are suspending today should be reopened.

In view of the foregoing, these proceedings are suspended.¹⁶ The outstanding construction permits shall remain in effect, subject to the appeal and stay proceedings pending before the Appeal Board.

It is so ORDERED.¹⁷

Samuel J. Chilk
Secretary of the Commission

Dated at Washington, D.C.
this 5th day of November, 1976.

¹⁵ Oral argument is anticipated in mid-December. Order of September 21, 1976. Given the complexity of the case, it seems unlikely that a decision on the merits of all issues would be rendered any earlier than February 1977

¹⁶ We, of course, reserve authority to take action in the interim, should unexpected developments require.

¹⁷ We have received three requests from non-parties for an opportunity to participate or file papers in this proceeding. Consumers Power Company has filed a motion for leave to file a brief amicus curiae with respect to ALAB-349. The Governor of the State of New Hampshire filed a later petition for intervention, and also requested leave to file an amicus statement. The New England Council for Economic Development requested permission to insert into the record various petitions and letters, and a statement. The intervenor NECNP opposed all of those requests. The staff opposed the petition to intervene but did not object to the requests to file written submissions.

The late petition to intervene is denied. The requests to file written submissions are granted on an amicus curiae basis.

November 5, 1976

Upon motion by Vermont Yankee Nuclear Power Corp. for the recall of so much of the *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* as authorized reconsideration of a permit or license on fuel cycle grounds, the Commission rules that the various proceedings raising those questions should be suspended, on the same grounds as spelled out in *Seabrook*, CLI-76-17

Proceedings suspended.

MEMORANDUM AND ORDER

On September 27 1976, Vermont Yankee Nuclear Power Corporation submitted a document entitled "Motion of Licensee for Recall of Orders in Light of Changed Circumstances." Although the caption of that document indicated that it was only filed in the proceeding directly involving the Vermont Yankee Nuclear Power Corporation (Vermont Yankee Nuclear Power Station), Docket No. 50-271, the requested relief would apply to all of the proceedings listed above.¹ Since that was so, and in view of events occurring subsequent to Vermont Yankee's motion, on October 13 1976, we asked all parties to those proceedings to respond to Vermont Yankee's motion for "the suspension of all pending show cause proceedings on fuel cycle grounds."

The questions raised by Vermont Yankee's motion form a part of the complex set of issues presented to this Commission by the decision in *Natural Resources Defense Council v U.S. Nuclear Regulatory Commission*, 547 F.2d 633 Nos. 74-1385 74-1586 (D.C. Cir. July 21 1976) (the "fuel cycle decision"). Many of those issues and the Commission's response to them are detailed in our Memorandum and Order issued today in *Public Service Company of New Hampshire, et al.* (Seabrook Station, Units 1 and 2), CLI-76-17 NRCI-76/11 451. Therein we explain our reasons for suspending the proceedings seeking suspension of the Seabrook construction permit on fuel cycle grounds. That

¹Formally Vermont Yankee did not make motions in those proceedings but moved the Commission to recall as much of its General Statement of Policy 41 *Fed. Reg.* 34707 (August 16, 1976) as authorized any subordinate element of the Commission to reconsider a permit or license on fuel cycle grounds. As a matter of procedure, we note that Vermont Yankee, which is not a party to any proceeding other than its own, normally could not make any motion in a proceeding to which it is not a party. However, in view of the conclusions we reach, we can suspend further proceedings in the other cases on our own motion.

decision is founded upon our judgment that an interim rule on the environmental effect of the uranium fuel cycle is not likely to be substantially different from the rule now in place, and would be in place in about three months. In such circumstances, suspension of the Seabrook construction permit pending review by the Appeal Board appeared unwarranted. Since our Seabrook decision was not based on the specific facts of the Seabrook situation but depended upon our generic assessment of the issues involved, it is equally applicable to each of the above-styled proceedings.

Accordingly we find suspension proceedings unwarranted in these cases, in many of which licenses have issued following final agency action, and in which the cost/benefit balance as already struck favors the reactor. There is not a sufficient likelihood that the balance would be tipped to warrant the substantial costs that would be imposed by suspending construction or operation for the brief period that appears necessary to resolve these issues.

Our conclusion in Seabrook is also based on our analysis of the stay of mandate of the fuel cycle decision. In the Commission's motion for a stay of mandate it indicated that it would use the General Statement of Policy as a basis for implementing the fuel cycle decision subject to possible changed procedures in light of the revised survey and to the possibility that it might seek a further stay of mandate based on the results of the survey *See, Seabrook* NRCI-76/11 at 463-464 and n.11. It also indicated to the court that suspension proceedings in Vermont Yankee had been undertaken. The stay motions of Vermont Yankee and the intervenor utilities, however, were based on entirely different considerations and sought specifically to prevent shutdown of the Vermont Yankee facility and to halt all suspension proceedings based on fuel cycle grounds. *Seabrook*, NRCI-76/11 at 464. As explained more fully in the Seabrook opinion, we believe that the October 8 order granting their motions introduces new circumstances of which the Commission must take account; it frees us of any constraint which may have been introduced by our representation that suspension proceedings had been undertaken for the Vermont Yankee facility. As we discuss in the *Seabrook* opinion NRCI-76/11 464-466, we believe that the most logical interpretation of the effect of the stay of mandate is that it postpones any mandatory effect of the fuel cycle decision, subject to a condition on any new licenses, until the possibility of a successful appeal has been resolved. The Commission remains free, if later-developed facts so warrant, to suspend licenses or take any other action required in the exercise of its ordinary regulatory authority.² Consequently we do not believe that the fuel cycle decision or

Admittedly the meaning of the court's order is subject to different interpretations. We are transmitting a copy of this decision setting forth our assessment of the meaning of the order to the court for its information.

the stay of the mandate in that decision disables us from suspending these show cause proceedings.

For the reasons stated above, the pending proceedings in these cases are suspended.³

It is so ORDERED.

By the Commission

Samuel J. Chilk
Secretary of the Commission

Dated at Washington, D.C.
this 5th day of November 1976.

³This Memorandum and Order does not apply to the reopened proceeding involving Consumers Power Company (Midland Plant, Units 1 and 2), Docket Nos. 50-329 50-330, which is dealt with in a separate order. We note that ALAB-352, the Appeal Board decision in the Union Electric Company (Callaway Plant, Units 1 and 2), Docket Nos. STN 50-483, STN 50-486 proceeding, NRCI-76/10 371 (October 21, 1976), is presently within the twenty-day review period prescribed by 10 CFR § 2.786(a). Without intimating any opinion on the merits of the issues decided in ALAB-352, we believe that proceeding should also be suspended.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-19

COMMISSIONERS:

Edward A. Mason, Acting Chairman

Victor Gilinsky

Richard T. Kennedy

In the Matter of

Docket Nos. 50-329
50-330

CONSUMERS POWER COMPANY
(Midland Plant, Units 1 & 2)

November 5, 1976

In accord with CLI-76-17 and CLI-76-18, the Commission directs the Licensing Board to defer consideration of the issue of whether the construction permits should be continued, modified or suspended on fuel cycle grounds pending anticipated adoption of an interim fuel cycle rule. The Licensing Board is directed to continue its examination of three other issues.

MEMORANDUM AND ORDER

On August 16, 1976, this Commission reconvened an Atomic Safety and Licensing Board in the above-captioned matter to consider whether the construction permits for the Midland Plant, Units 1 & 2, should be continued, modified or suspended. The Board was instructed that, as a consequence of the decisions handed down by the United States Court of Appeals for the District of Columbia Circuit on July 21, 1976, *Nelson Aeschliman, et al. v. U.S. Nuclear Regulatory Commission*, Nos. 73-1776, 73-1867 ("Aeschliman"), and *Natural Resources Defense Council, et al. v. U.S. Nuclear Regulatory Commission* (the "fuel cycle" decision), Nos. 74-1385 74-1586, it was to consider the following issues: energy conservation as a partial or complete substitute for construction; any changed circumstances concerning the need of the Dow Chemical Company for process steam and the impact of the continued operation of Dow's fossil fuel generating facilities; clarification of a report by the Advisory Committee on Reactor Safeguards; and the environmental effects of nuclear waste disposal and fuel reprocessing.

On October 13, this Commission invited parties in all pending proceedings looking toward possible suspension of outstanding licenses and permits pursuant to our General Statement of Policy of August 13, 1976, including the instant proceeding, to express their views on whether such proceedings should be suspended. The request for parties' views arose in the context of a motion filed in Docket Number 50-271 by Vermont Yankee Nuclear Power Corporation for the

“Recall of Orders in Light of Changed Circumstances.” In its response, filed October 22, 1976, Consumers Power Company supported the motion on the Vermont Yankee Corporation and requested that it be granted and extended to this proceeding.

We have today issued Memoranda and Orders *In The Matter of Public Service Company of New Hampshire*, Docket Nos. 50-443 and 50-444, CLI-76-17 NRCI-76/11 451, and *In The Matter of Vermont Yankee Nuclear Power Corporation*, Docket No. 50-271, CLI-76-18, NRCI-76/11 470. For the reasons stated therein, we believe that developments which have occurred subsequent to the fuel cycle decision warrant the suspension of those proceedings and that outstanding licenses and permits should not be disturbed on fuel cycle grounds alone at this time.

In this case, however, examination of the first three issues listed above must continue. As to these issues, as we have indicated previously in our Memorandum and Order of September 13 1976, the mandate of the court of appeals in the *Aeschliman* case has issued. The *Aeschliman* decision is now fully effective and binding on the Commission, which must proceed to implement it. No sufficient reason has been shown to change our instructions to the reconvened Licensing Board.¹

As to the remaining issue which the Board was also directed on August 13 to consider—whether the construction permit for this facility should be continued, modified or suspended on fuel cycle grounds we are directing that the Board defer its consideration pending anticipated adoption of an interim fuel cycle rule. We anticipate that, as a practical matter, an effective interim rule will be in place by the time the Board is prepared to render a decision on the reopened record. At that time, the Board will have before it all the information it will need to reassess the cost benefit analysis for the Midland plants. Therefore, the request of Consumers Power Company that the Motion of Vermont Yankee be extended to this proceeding is denied.

It is so ORDERED.

Samuel J. Chilk
Secretary of the Commission

Dated at Washington, D.C.
This 5th day of November, 1976

Applicant argues that it has filed petitions for certiorari to the Supreme Court in the *Aeschliman* case and that consideration of the remanded issues would be inappropriate until the Supreme Court acts on the petitions. As noted in our Order of September 13, 1976, at pp. 4-5, we considered this possibility earlier and concluded that the “fact that the court denied the motions for a stay of mandate pending certiorari also indicates that the court expects the Commission to proceed with all remanded issues promptly and without awaiting Supreme Court disposition of whatever petitions for certiorari may be filed.”

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-20

COMMISSIONERS:

Marcus A. Rowden, Chairman

Edward A. Mason

Victor Gilinsky

Richard T. Kennedy

In the Matter of

Docket No. STN 50-482

**KANSAS GAS AND ELECTRIC
COMPANY ET AL.**

(Wolf Creek Generating Station, Unit 1)

November 5, 1976

Upon application pursuant to 10 CFR 50.12 for an exemption from the licensing ban imposed by the *General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle*, to permit certain site preparation activities, the Commission directs the Licensing Board to treat the request as an application for a limited work authorization under the *Supplemental General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle*.

ORDER

Kansas Gas and Electric Company Applicant in a proceeding presently before an Atomic Safety and Licensing Board, is seeking a construction permit for its proposed Wolf Creek Generating Station, Unit 1. This matter was before the licensing board awaiting an initial decision when the United States Court of Appeals for the District of Columbia Circuit decided *Natural Resources Defense Council v NRC*, Nos. 74-1385 and 74-1586, on July 21, 1976. Thereafter, this Commission issued its General Statement of Policy concluding in relevant part that no new construction permit or limited work authorization should be issued pending promulgation of an interim rule on the environmental effects of the uranium fuel cycle.

On September 7, 1976, applicants directed to this Commission a "Specific Exemption Request," pursuant to 10 CFR 50.12, asking that this Commission permit the conduct of certain site preparation activities for the Wolf Creek Generating Station in advance of the issuance of a construction permit or limited work authorization.

We are today issuing a Supplemental Statement of Policy setting forth interim procedures to govern assessment of fuel cycle impacts associated with new licenses and permits pending anticipated adoption of an interim fuel cycle

rule. The Supplemental Statement will provide guidance to the licensing board, which is directed to treat the exemption request to the Commission as an application to it for a limited work authorization.

It is so ORDERED.

Samuel J. Chilk
Secretary of the Commission

Dated at Washington, D.C.
this 5th day of November, 1976

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-21

COMMISSIONERS:

Marcus A. Rowden, Chairman
Edward A. Mason
Victor Gilinsky
Richard T. Kennedy

In the Matter of

Docket Nos. 50-282
50-306

NORTHERN STATES POWER COMPANY

**(Prairie Island Nuclear Generating
Plant, Units 1 and 2)**

November 11 1976

The Commission, prior to determining whether to review ALAB-343, remands the proceeding to the Appeal Board for further consideration of new information bearing upon the issue of steam generator tube integrity

ORDER

Subsequent to the decision by the Atomic Safety and Licensing Appeal Board herein (ALAB-343, NRCI-76/9 169 September 2, 1976), counsel for the staff in this proceeding addressed a communication to the Commission indicating that the staff has recently intensified its investigation of the "denting" problem in steam generator tubes and addressing the possible relevance of that problem to this proceeding. It appears that the "denting" question was considered by the Appeal Board in ALAB-343, although in a somewhat different context. Under the circumstances, we think it advisable that the Appeal Board have the opportunity to consider the denting questions raised by the staff letter before we decide whether to review this matter further. Therefore, we are remanding this proceeding to the Appeal Board. We leave to the Appeal Board the decision of how and to what extent it will examine the denting question in connection with this proceeding.

The action taken by this Order is based upon the Commission's desire to have all possibly relevant issues fully considered before it acts, and the action reflects no judgment on the merits of the Appeal Board decision. This Order does not stay the effectiveness of the Appeal Board's decision.

It is so ORDERED.

By the Commission

**Samuel J Chilk
Secretary of the Commission**

**Dated at Washington, D.C.
this 11th day of November, 1976**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-22

Commissioners:

Marcus A. Rowden, Chairman
Victor Gilinsky
Richard T. Kennedy

In the Matter of

Construction Permit
Nos. CPPR-77
CPPR-78

**VIRGINIA ELECTRIC AND
POWER COMPANY**

**(North Anna Power Station,
Units 1 and 2)**

November 12, 1976

Upon review of ALAB-324, which found that four statements regarding the geology and seismology of the North Anna site made by the utility in connection with its license applications were materially false, within the meaning of Section 186 of the Atomic Energy Act, and imposed civil monetary penalties for such statements, the Commission rules that three omissions of material disclosures also qualify as material false statements and that additional penalties should be imposed for those statements.

Appeal Board decision affirmed in part and reversed in part.

ATOMIC ENERGY ACT MATERIAL FALSE STATEMENT

A statement is "material" within the meaning of Section 186 of the Atomic Energy Act, 42 U.S.C. 2236, if it has a natural tendency or capability to influence—not whether it does so in fact—the decision of the person or body to whom the statement is submitted.

ATOMIC ENERGY ACT MATERIAL FALSE STATEMENT

A statement may be "false" within the meaning of Section 186 of the Atomic Energy Act, 42 U.S.C. 2236, even if it is made without knowledge of its falsity; that is, *scienter* is not a necessary element of a "false statement" for the purposes of that Section.

ATOMIC ENERGY ACT MATERIAL FALSE STATEMENT

The term "statement" as used in Section 186 of the Atomic Energy Act, 42

U.S.C. 2236, is not limited to affirmative representations; the omission of a material fact can be treated, by itself, as a "statement."

APPEARANCES

Mr. Michael W. Maupin, Richmond, Virginia (with whom **Mr. James N. Christman** was on the brief) for the Virginia Electric and Power Company

Mr. William H. Rodgers, Jr., Washington, D.C., for the North Anna Environmental Coalition.

Mr. James E. Ryan, Jr., Assistant Attorney General of Virginia, Richmond, Virginia.

Mr. Milton Grossman (with whom **Mr. William Masser**, **Mr. Daniel T Swanson**, and **Mr. Steven C. Goldberg** were on the brief) for the Nuclear Regulatory Commission staff.

OPINION

This is the first case in which a licensee has been charged with violating Section 186 of the Atomic Energy Act, 42 U.S.C. 2236, by making material false statements in connection with the license application for a nuclear facility. Accordingly we are called upon to resolve basic policy questions concerning an applicant's obligation to provide information to the Commission.

The lengthy history of this proceeding is set forth in detail in the opinions of the Atomic Safety and Licensing Board, LBP-75-54, 2 NRC 498 (1975), and the Atomic Safety and Licensing Appeal Board, ALAB-324, NRCI-76/4 347 (April 15, 1976). We summarize that history to provide the necessary background for this opinion.

In March, 1969 the Virginia Electric and Power Company (VEPCO) applied for permits to construct Units 1 and 2 of the North Anna Power Station, located in Louisa County Virginia. Following an evidentiary hearing, the permits issued in February 1971. VEPCO then sought construction permits for Units 3 and 4 of the same facility. In August, 1973 after a Licensing Board hearing on the application but before a decision had been rendered, the staff advised the Board of a geologic fault which had been discovered at the North Anna site. A consolidated proceeding was promptly convened to determine if the fault required halting of construction on Units 1 and 2 or denial of construction permits for Units 3 and 4. On June 27 1974 the Licensing Board concluded that the fault was non-capable and without safety significance for the facilities in question.

This decision was affirmed by the Appeal Board and by a unanimous panel of the United States Court of Appeals for the District of Columbia Circuit. See *North Anna Environmental Coalition v NRC*, 533 F.2d 655 (D.C. Cir. 1976). Accordingly construction continued on Units 1 and 2. Moreover, on July 26, 1974, construction permits issued for Units 3 and 4.

During the proceeding concerning the safety significance of the fault, the North Anna Environmental Coalition (Coalition), an intervenor, questioned whether VEPCO, in the course of seeking its construction permits, had supplied the Commission with inaccurate information concerning seismic conditions at North Anna. The parties to the proceeding—VEPCO, the Coalition, the Commission's staff, and the Commonwealth of Virginia—agreed this issue should be considered separately from the safety question. Subsequently the Commission granted a Coalition petition for a hearing on the disclosure issue and established a Licensing Board to conduct that proceeding. The result was the Licensing and Appeal Board opinions now before us. Thus this case does not concern the safety of the North Anna site, but rather whether VEPCO fulfilled its obligations in providing information about that site.

Before the Licensing Board and throughout this proceeding, the Coalition proceeded on the following theory: Section 186 of the Atomic Energy Act, 42 U.S.C. 2236, states that a license may be revoked "for any material false statement in the application." Section 234 of the Act, 42 U.S.C. 2282, provides that any person committing a violation under Section 186 shall "be subject to a civil penalty .not to exceed \$5000 for each such violation." The Coalition contended that VEPCO, in the years between 1969 and 1973 had made nineteen "material false statements" while seeking construction permits at North Anna and accordingly should be fined and have its license revoked. Certain of the nineteen allegations were supported by the NRC staff and the Commonwealth of Virginia. All were opposed by VEPCO.

The complex factual setting out of which the nineteen allegations arose is carefully described in the opinions of the Licensing and Appeal Boards. See Licensing Board Opinion at 511, 518-534, Appeal Board Opinion at 364-389. In brief summary there were several relevant investigations of geologic conditions at North Anna. In 1968, the geology of the site was studied by Dames and Moore, VEPCO's consultant on seismic matters, and Stone and Webster, the architect-engineer for the North Anna project. Small shear faults were discovered and a possible geological anomaly was seen. Further analysis convinced VEPCO's consultants that the faults were of no seismic importance and the anomaly did not exist. In February 1970, Stone and Webster employees discovered a chlonite seam, a feature sometimes associated with faulting, in the Unit 1 excavation. A Stone and Webster geologist took samples, sought the views of geologists on the staff of the Virginia Division of Mineral Resources (VDMR) and concluded faulting was not present. At about the same time, a group of geology professors

visited the site and discussed with VEPCO's resident engineer their view that a fault was present. Some months later, a revised Dames and Moore boring program into the chlorite seam uncovered certain anomalous conditions which a VDMR geologist thought might be related to faulting. Dames and Moore maintained that faulting was not present. Finally in April, 1973, a Stone and Webster geologist observed apparent offsets of a pegmatite vein along a chlorite seam in the Unit 3 excavation. VEPCO asked Dames and Moore and Stone and Webster to investigate. By April 26, Stone and Webster experts believed a fault existed. An intensive investigation continued throughout early May. On May 14th, VEPCO and its consultants agreed there was a fault. On May 17th, the Commission's staff was informed. On August 3 1973, the staff informed the Board and the other parties that a fault existed.

Sixteen of the nineteen allegations specified by the Coalition consist of affirmative representations in VEPCO's submissions to the Commission concerning the geology at North Anna. They are typically statements in consultant's reports and safety analysis reports along the lines of "the nearest known fault is several miles from the site" or "faulting of rock at the site is neither known nor is it suspected." Three of the Coalition's specifications are of a somewhat different character. They consist of omissions, that is, complete failures to provide information. Two of the alleged omissions are VEPCO's failures to present evidence about suspected faulting at the Licensing Board construction permit hearings in November, 1970 and May 1973. The third alleged omission is VEPCO's failure to provide the Board or the staff with the "Roper reports," that is, reports prepared by a Dames and Moore consultant in May and July of 1973, which indicated that the fault might be reactivated.

The Licensing Board assessed the question of VEPCO's liability on the basis of an extensive stipulation of fact, numerous exhibits, and a three-day evidentiary hearing. At the outset the Board was confronted with several legal questions. It was stipulated that, at the time the alleged material false statements were made, VEPCO thought each of them was true. Presumably the stipulation reflected the view that in many instances VEPCO was passing on to the Commission statements, made by consultants, which it had not critically evaluated. Thus the first question was whether, as VEPCO contended, a "false" statement under Section 186 of the Atomic Energy Act must not only be untrue, but made with knowledge of its falsity. The Board, along with all of the parties other than VEPCO, rejected this argument on numerous grounds: (1) Section 186 of the Act, unlike other sections of the Act, contains no express requirement of "willful" or "intentional" wrongdoing; (2) the legislative history reveals Congress did not adopt suggestions that Section 186 be limited to willfully false statements; (3) the purpose of Section 186—protection of the public health and safety—requires that applicants "meet the standards of accuracy rather than merely the standards of good faith." See Licensing Board Opinion at 508-509

Next, the Board confronted the meaning of "material" in Section 186. VEPCO contended a statement was not material unless it would have been relied upon, that is, unless it would induce a staff member to undertake a significant amount of further investigation. The Board found no element of reliance in the language or purpose of Section 186. It concluded materiality should be judged by whether a reasonable staff member would or should consider the information in reaching a conclusion. The Coalition contended the test should be whether a reasonable professional or citizen would judge the information as important, but the Board concluded the Atomic Energy Act did not envision forcing applicants to attempt to translate highly technical matter into layman's language for purposes of Section 186. The loss of precision involved in such translation would hinder rather than aid the regulatory process.

The final major legal issue confronting the Board was whether an omission can be a "material false statement." As noted above, three of the nineteen allegations were failures to provide information, rather than affirmative representations. The Board, relying on the Atomic Energy Act's mandate that the Commission protect the public health and safety concluded that an applicant must be accountable for omissions of material facts important to health and safety review

With these legal principles in place, the Board undertook a painstaking review of the factual record concerning each allegation. The Board concluded that twelve of the nineteen allegations constituted material false statements and accordingly assessed a fine of \$60,000.¹

The Appeal Board then held extensive briefing and oral argument on all legal and factual contentions. On April 15, 1976, it published its opinion. The Appeal panel agreed with the Licensing Board on several major legal points. It concluded, based in part on a careful analysis of appellate case law that a statement need not be knowingly false to be culpable under Section 186. It also thoroughly canvassed the relevant cases in reaching its conclusion that materiality depends upon whether a statement has a natural tendency or capability to influence, not whether the statement is in fact relied on. Finally it agreed with the Licensing Board that, if the Atomic Energy Act is to be workable, materiality must be judged by the importance of the statement to the Commission's experts, not to a lay person, as suggested by the Coalition.

The treatment of omissions was the one legal issue on which the Appeal Board disagreed with the Licensing tribunal. While the Licensing Board argued

¹ One Board member, Mr. Kornblith, dissented in part. He found only four material false statements, but for one he would have assessed a penalty of \$75,000 since in his view it was a continuing violation when the licensee failed to disclose information concerning faulting at the 1973 construction permit hearing. Section 234 of the Atomic Energy Act provides that each day of a "continuing" violation constitutes a separate violation; although the total penalty cannot exceed \$25,000 for all violations in a 30-day period.

that a failure to provide information could itself be a material false statement, the Appeal Board believed such an omission simply was not a "statement" and accordingly could not be punished as such, no matter how wrongful the omission might be. Thus the three specifications in this case which alleged failures to provide information could not, in the Appeal Board's view be "material false statements" under the Atomic Energy Act.²

The Appeal Board noted that Section 186 reached not only material false statements, but "violation of, or failure to observe any of the terms and provisions of this act or of any regulation of the Commission." Thus if it could be shown that a particular failure to provide information violated a specific Commission reporting requirement, a civil penalty could be assessed on that theory rather than the material false statement theory. But the Appeal Board noted that this case had been tried wholly on the "material false statement" approach and thus it could not appropriately determine if a penalty was proper on some other theory.

The Appeal Board then went on to review the factual record. The Licensing Board had found twelve material false statements out of nineteen allegations. The Appeal Board eliminated three of the material false statements on the basis of its legal theory concerning omissions. It then carefully analyzed the remaining allegations, considering in particular the context in which they were made, the Commission's requirements at the time they were made, and the likely impression the statements would leave. As to those statements where the Licensing Board found no liability the Appeal Board agreed. As to four of the statements where liability was found by the Licensing Board, the Appeal Board also agreed. On the remaining statements the Appeal Board determined that the Licensing Board's finding of liability was not supported by the record. Accordingly the Appeal Board reduced the civil penalty to \$17,500.³

On June 2, 1976 the Commission announced its intention to review the Appeal Board decision and called for briefing directed to the major point of disagreement between the Appeal Board and the Licensing Board—the treatment of omissions. The parties were asked to brief whether omissions can be material false statements; if they cannot what regulations may have been violated by the

² The Appeal Board recognized that a given affirmative statement could be rendered false by omitted information. But the three omissions in this case were alleged to be material false statements in their own right; no attempt was made to show that they made false other affirmative representations.

A \$5000 penalty was assessed for each of three violations; a reduced fine of \$2500 was assessed in the fourth instance because the violation took place in a written submission to the Commission after the staff had been informed of the fault.

One Appeal Board member, Dr. Buck, dissented since in his view the factual record established no material false statements.

omissions in this case; and finally whether a new proceeding was necessary if omissions cannot be punished as false statements.⁴

On October 5 1976, oral argument was held by the Commission on the briefed issues. Every party to the proceeding—VEPCO the Coalition, the staff, and the Commonwealth of Virginia—participated in argument.

We begin our consideration of this case with the legal questions on which the Licensing and Appeal Boards agreed. We concur in their judgment that knowledge of falsity is not necessary for liability under Section 186 of the Atomic Energy Act, and that materiality should be judged by whether a reasonable staff member should consider the information in question in doing his job. Accordingly on both of these matters, we affirm on the basis of the Appeal Board opinion and the arguments stated below. We add our own observations to those of the Licensing and Appeal Boards in order to stress the importance of these issues to the effective functioning of the Commission.

The requirement urged by VEPCO that liability attach only if a statement is known to be false is inconsistent with the Commission's obligation to protect the public health and safety. If an applicant were liable only for statements it knew to be false, that applicant would have a reduced incentive to insure that its consultants, contractors, and employees were meeting the highest standards in their work. The less the applicant knew the less its vulnerability to civil proceedings. In short, forgiving innocent mistakes puts a premium on innocence. We require instead a regime in which applicants and licensees have every incentive to scrutinize their internal procedures to be as sure as they possibly can be that all submissions to this Commission are accurate. In upholding the view that food distributors are subject to *criminal* liability if food they possess becomes impure, with or without their knowledge, the Supreme Court noted that the goal of the statute is "to make 'distributors of food the strictest censors of their mer-

⁴ The text of the order calling for briefing read as follows:

1. Is the Appeal Board's legal analysis of the meaning of "statement" in section 186 of the Atomic Energy Act (ALAB-324, pages 25-32) correct? See, e.g., *Trussell v. United Underwriters Limited*, 228 F. Supp. 757-762 (D. Colorado, 1964).
2. If the Appeal Board's legal analysis cited in Question 1 is correct, how might complete omissions such as those involved in Statements 22, 23, and 24 be governed under the Atomic Energy Act and regulations in effect at the time such statements were made? How might they be governed by current regulations and the Energy Reorganization Act?
3. If the Appeal Board's legal analysis cited in Question 1 is correct, is a remand for further proceedings on statements 22, 23, and 24 proper?

The omissions are cited above and in the decisions of the Licensing and Appeal Boards as statements 22, 23, and 24 because at the commencement of this proceeding they were so numbered. Later, when certain allegations were dropped, the original numbering was retained.

In light of our disposition of the first briefed question, we need not address Questions 2 and 3.

chandise. “[the distributor] if he does not will the violation, usually is in a position to prevent it with no more care than society might reasonably expect and no more exertion than it might reasonably exact from one who assumed his responsibilities. ” *United States v Park*, ____ U.S. ____ 44 L.E. 2d 489 500 (1975). These considerations apply with at least equal force here, where licensees bear an unavoidable and heavy responsibility for helping insure that nuclear power is utilized safely ⁵

The proper definition of a “material” statement also is worthy of emphasis. The Coalition’s suggestion that materiality be judged in terms of what a lay reader rather than an expert would consider important is simply unworkable. We do not minimize the importance of public participation in our processes. In this case, for example, the Coalition’s participation obviously played a key role. Moreover, the documents alleged to contain false statements in this case were all made available for public inspection. But the proper standard for judging the materiality of a technical submission raises a different issue. Ours is a process of review of technical issues, by technical experts whose objective is to reach sound technical judgments. A statement that seems immaterial to a layman may be of considerable safety significance to an expert, and the converse may also be true. In short, the Coalition’s suggestion is not compatible with the statute’s goals.

On the other hand, VEPCO’s suggestion that materiality contain an element of reliance is also unpersuasive. As the Appeal Board opinion makes clear, the term “material” has often been construed by the courts, and they agree that materiality is judged by whether a statement is capable of influencing a decision-maker, not whether the statement would, in fact, have been relied on. The weight to be accorded relevant information is, in the end, the job of the independent regulatory commission, not the applicant.

Whether a particular bit of information is material in a given context must, as the Court of Appeals for the District of Columbia Circuit has emphasized, “be judged by the facts and circumstances in the particular case.” *Weinstock v. United States*, 231 F.2d 699 701 702 (1956). There is no obvious boundary between material information and trivia, but clear cases of both exist, and a careful attention to context along with a healthy dose of common sense will resolve most problems. Information with no potential bearing on the licensing process is not material. Moreover, materiality is dependent in part on the stage of the proceeding involved. At the very beginning of the licensing process, when initial investigations are being made, the applicant has greater latitude to inquire

Accordingly the Supreme Court’s recent decision in *Ernst and Ernst v. Hochfelder*, ____ U.S. ____, 47 L.Ed 2d 668 (1976) is inapposite. The Court there held that an element of willfulness is necessary for liability under section 10(b) of the Securities Act of 1934. But the Court found that the language, history and purpose of that statute all pointed in the direction of requiring willfulness. The Court did not undercut the *Park* decision, *supra*, which imposes strict liability in a setting much closer to the one before us.

into areas that may prove, when that inquiry is concluded, to be without significance in terms of the licensing decision. At the hearing stage, in contrast, where agency decisionmaking is imminent, arguably relevant data must be promptly furnished if the agency is to perform its function.

Putting aside for the moment the three allegations consisting of pure omissions—allegations which raise separate legal questions—we believe the legal principles discussed above were correctly applied by the Appeal Board. We have reviewed the Appeal Board's painstaking appraisal of the sixteen affirmative representations in the context of the lengthy factual record, and we find no reason to disturb the Appeal Board's conclusion that there were four material false statements in that group of sixteen or their conclusion as to the proper fine for those statements. These are essentially factual judgments, and accordingly we are unwilling to intervene absent clear error. Our licensing process relies upon careful factual determinations by the Licensing Board, with thorough review of those determinations by the Appeal Board. We believe both tribunals performed their task ably in this case.

We turn now to the legal issue on which the Boards disagree—the treatment of omissions. In briefing and oral argument before the Commission, VEPCO supported the position of the Appeal Board that omissions cannot be treated as material false statements, while the remaining parties supported the Licensing Board view that omissions can be so treated.⁶ Several points, however, are agreed upon by everyone. While the legislative history of the Atomic Energy Act does not directly address whether omissions may be treated as statements, the language and history of the Act make clear that the Commission's primary duty is to protect the public health and safety. Moreover, full disclosure by applicants and licensees of all relevant data is vital if the Commission is to fulfill that duty. VEPCO does not disagree: it states in its brief that it has "no argument" with the Licensing Board reasoning that full disclosure of safety information protects the public. Brief for VEPCO at 10. The Appeal Board does not disagree: it states in its opinion that it is "obvious" that there must be "complete disclosure of all information pertinent to a thorough and sound Commission appraisal" of an application. Appeal Board opinion at 360. VEPCO and the Appeal Board argue, however, that the "material false statement" phrase does not require full disclosure since failing to forward information does not constitute making a state-

⁶The staff's position on this point was somewhat ambiguous. In its brief, the staff maintained that "the Appeal Board incorrectly analyzed the meaning of 'statement' as used in Section 186 of the Atomic Energy Act." Brief for staff at page 1. At oral argument, the staff said the Appeal Board was "essentially correct" in concluding omissions cannot be statements, with one "clarification or modification." Transcript of oral argument (October 5, 1976) at page 7. It appears from the substance of the brief and argument that the staff's position is that an omission can be a false statement if it puts a false or misleading cast on the totality or any part of an applicant's submissions. In practice this is similar to the result we reach today, since we emphasize that an omission must be material to be punishable.

ment. They maintain that the portion of Section 186 assessing liability for violation of Commission regulations was Congress' means of requiring disclosure—the Commission should promulgate regulations requiring the data it needs, and the withholding of that data can then give rise to civil liability. VEPCO put the matter as follows in its brief: By proscribing “material false statements,” Congress mandated “true reporting,” but Congress left “full reporting” to agency discretion to be exercised through the promulgation of regulations. Brief for VEPCO at 16.

We find the reading of Congressional intent by VEPCO and the Appeal Board unpersuasive. Regulations undoubtedly perform a major role in guiding the applicant in the licensing process and failure to comply with regulations is quite properly punishable under Section 186. Indeed, we recognize our own obligation to promulgate regulations which provide clear, comprehensive guidance to applicants and licensees. We are directing the staff to exhaustively study existing reporting requirements so that they may be updated and clarified, to the extent necessary, in light of the experience gained in this case and others. But we must nonetheless interpret the Atomic Energy Act as accurately as we can in light of that Act's goals. And the fact remains that no set of specific regulations, however carefully drawn, can be expected to cover all possible circumstances. Information may come from unexpected sources or take an unexpected form, but if it is material to the licensing decision and therefore to the public health and safety it must be passed on to the Commission if we are to perform our task.

When Congress passed Section 186, it did not focus on the question of how to reach the case in which material information had not been forwarded. While such conduct could be reached by regulation, the language of Section 186 does not require, and there is no indication Congress intended, that the failure to forward data could not be reached until the Commission had appropriate regulations in place. We think rather that “material false statement” may appropriately be read to insure that the Commission has access to true *and* full information so that it can perform its job. Nor is “material false statement” such an unlikely choice of language for reaching acts of omission as well as commission. VEPCO itself concedes that a “statement” can include drawings or markings. Brief for VEPCO at 8. The point of a statement is to express something. Silence can be remarkably expressive, a fact recognized in literature, in the law of evidence⁷ and in ordinary usage. Whether or not enforcement consequences for less obvious or central omissions should await clarifying regulations, silence regarding issues of major importance to licensing decisions is readily reached under the statutory phrase “material false statement.”⁸

⁷ See McCormick, *Law of Evidence*, chapter 25, section 229, page 436-479 (1954 ed.), and cases cited therein.

As discussed at pg. 492, *infra*, we believe this to be such a case.

In reading the phrase “material false statement” broadly to effectuate the purpose of the statute, we are following well established judicial guidance. In *SEC v Capital Gains Research Bureau*, 375 U.S. 180 (1963) the Supreme Court had to decide whether the Investment Advisors’ Act of 1940 compelled an investment advisor to disclose to his clients a practice of stock purchasing known as “scalping” which was designed for the private gain of the advisor. The question turned on whether “scalping” operated as a “fraud or deceit upon any client” as that phrase was used in the Act. The Supreme Court expressly conceded that technically “fraud and deceit” included only acts designed to injure clients and “scalping” was not such an act. But the Court concluded based on the purposes of the statute that Congress intended “a broad remedial construction of the Act which would encompass nondisclosure of material facts,” and thus reach “scalping.” *Id.* at 186. When confronted with the argument that failure to disclose material facts was specifically outlawed in other statutes but not in the Investment Advisors’ Act, the Court concluded that the “reasonable assumption” was that Congress “deemed a specific proscription against nondisclosure surplusage.” *Id.* at 198-199⁹ Other security cases similarly read the statutes in question in light of their purpose. See, e.g., *In re Caesar’s Palace Securities Litigation*, 366 F Supp. 366, 386, n. 19 (SDNY 1973); *Trussel v United Underwriter’s, Limited* 228 F Supp. 757 (D. Colorado, 1964). Indeed, the common law of deceit is itself moving toward a standard of full disclosure in many buyer-seller transactions. See, e.g. *Williams v Benson*, 3 Michigan App. 9 141 N.W 2d 650 (1966) (property seller’s obligation to disclose termite infestation); see also Prosser, *Law of Torts* 698 (4th ed. 1971).

Our view that the “material false statement” phrase in the Atomic Energy Act may appropriately be read to require full disclosure of material data is in fact a more obvious result than that reached in the securities cases cited above. Securities law involves buyer-seller relations with indirect consequences for society. The need for full disclosure is more striking here—the regulation of nuclear power directly implicates the public health and safety. Our predecessor agency the Atomic Energy Commission (AEC), stated fifteen years ago, and the Supreme Court reiterated, that “public safety is the first, last and permanent consideration” in the licensing of nuclear facilities. *Power Reactor Development Company v Electrical Union*, 367 U.S. 396, 402 (1961). And a decade ago, the AEC noted the need for full disclosure if the public safety is to be protected:

We find in this licensee’s past performance inadequate reason to believe that it would in the future meet the high standards of compliance which we must

⁹ VEPCO insists that “fraud and deceit” is a different phrase with a different history than “material false statement.” That assertion misses the point. In *Capital Gains*, *supra*, as in other cases, the courts have construed statutory language to effectuate statutory purpose, an undertaking equally incumbent upon the agency charged with administering the statute in question.

require, and respond to proper inquiries with the simple candor on which we must insist, in order to discharge our own responsibility for public health and safety *Nothing less than candor is sufficient.*

Matter of Hamlin Testing Laboratories, Inc., 2 AEC 423 428 (1964). (Emphasis supplied).

By reading material false statements to encompass omissions of material data, we do not suggest that unless all information, however trivial, is forwarded to the agency the applicant will be subject to civil penalties. An omission must be material to the licensing process to bring Section 186 into play. As discussed above, determinations of materiality require careful, common-sense judgments of the context in which information appears and the stage of the licensing process involved. Materiality depends upon whether information has a natural tendency or capability to influence a reasonable agency expert. There will be hard cases in determining which omissions are material, just as there are hard cases in determining which affirmative false statements are material. But the existence of hard cases does not argue for changing the appropriate rule of law. In the case at bar, we have no difficulty affirming the Licensing Board's essentially factual judgment that the three omissions in this case were material false statements, and that a \$5000 fine was appropriate for each.¹⁰ In chronological order, the first omission was the applicant's failure at the November 23-25 1970 construction permit hearing on Units 1 and 2 to present any testimony concerning the recently discovered chlorite seam and the related concerns that a fault might be present. The second was the failure at the May 7-10, 1973 construction permit hearing for Units 3 and 4 to present any testimony concerning what had by then become a highly active study by the licensee and its consultants of possible faulting at the site.¹¹ Finally in May 1973 when the fault was known to exist

¹⁰ As indicated in footnote 1, *supra*, Mr. Kornblith would have assessed a larger fine for the omission at the May 1973 hearing since in his view that was a continuing violation until the Licensing Board was informed of the fault on August 3, 1973. On the facts of this case we agree with the Licensing Board majority that a single \$5,000 fine is appropriate. This is the first case in an area where the applicant's obligations are still in the process of definition. Moreover, as explained in footnote 11, *infra*, the staff was informed of the fault well before August 3. Although these factors do not detract from VEPCO's culpability they may appropriately bear on the proper remedy.

¹¹ The active study was on-going during the hearing. On May 14, 1973, after the hearing ended, the Licensee and its consultants agreed that there was, beyond doubt, a fault at the site. On May 17 1973 the staff was so informed. Yet the staff did not inform the Licensing Board and other parties until August 3, 1973. While this does not impact on VEPCO's liability for its silence during the hearing—a fact conceded by counsel for VEPCO at oral argument (see Tr, *supra* at 48)—it does raise questions about the staff's performance. Ac-

continued on next page

by the licensee, its seismic consultant, Dames and Moore, retained Doctor Paul Roper, an authority on Piedmont geology to prepare certain reports. These reports indicated the fault might be reactivated but they were never forwarded to the Board or the staff. Other reports prepared by Dames and Moore consultants in the course of the investigation were submitted to the staff.

In each of these cases the seismic information involved would clearly have been considered by a reasonable agency expert. Indeed, the Commission's ultimate seismic inquiry concerning North Anna included a careful consideration of these and other factors. Regulatory concern over faulting at reactor sites predates by many years the filing of construction permit applications for North Anna. See e.g., *In the Matter of Department of Water and Power of Los Angeles (Malibu Nuclear Plant Unit No. 1)*. 3 AEC 122 (1966). Moreover, the omissions in this case came late in the process, during and after public hearings, when the materiality of the information to agency decisionmaking could not be reasonably challenged.

In conclusion, we affirm the Appeal Board decision, except for the matter of omissions.¹² We find material omissions to be punishable as material false statements for the reasons given herein, and we reinstate the Licensing Board's

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cordingly at oral argument we asked the staff for the cause of this delay. In a subsequent filing the staff explained that three factors were involved: 1) the staff decided to evaluate in a preliminary fashion the fault's significance; 2) the staff geologist assigned to the matter was on travel for two weeks; and 3) the Licensing Board record was technically still open, since the Board was awaiting receipt of a state water quality submission.

We find the staff's delay in informing the Board and the explanations given for that delay unacceptable. The Licensing Board, the parties and the public have a right to be promptly informed of a discovery of this magnitude, before staff evaluation of that discovery and regardless of whether the record is technically open. No other policy is consistent with the staff's obligation to help the Commission fulfill its statutory mandate. We note that the staff, in its post-argument submission, concludes that it now disapproves the procedure it followed at North Anna: "Our current practice in this regard is to make every effort promptly to report information of this kind to the affected Licensing Boards and parties, and then to provide staff evaluation of the information reported when it is completed." Post-argument submission at 2.

We believe this statement of current practice correctly reflects the staff's obligation, and the staff is hereby directed to insure that this practice is fully enforced.

² Except as otherwise indicated in this decision, we rely on the opinion of the Appeal Board in disposing of this case. This includes the appropriate sanctions. Although we reinstate the Licensing Board fine for the three omissions, this does not, in our view, alter the correctness of the Appeal Board's disposition of the non-monetary sanctions, such as license conditions and license revocation. As to the inappropriateness of license revocation, for example, this is still a case where intention to deceive was not shown and where the Coalition itself conceded, "a strong case can be made for non-revocation on this record." Appeal Board decision at 389.

determination that the licensee is liable for \$15,000 for the omissions involved in this case. Accordingly the licensee's total fine is \$32,500.

It is so ORDERED.

Samuel J. Chilk
Secretary of the Commission

Dated at Washington, D.C.
this 12th day of November, 1976.

UNITED STATES
NUCLEAR REGULATORY COMMISSION

CLI-76-23

In the Matter of
NUCLEAR REGULATORY COMMISSION
(Financial Assistance to Participants
in Commission Proceedings)

Docket No. PR-2

November 12, 1976

After considering a specially commissioned study extensive public comments, the Comptroller General's opinion, and its own experience, the Commission, in this informal rulemaking proceeding, finds that a program to provide funding for participants in licensing, enforcement, antitrust, or rulemaking proceedings is not, in general, appropriate at this time. However, the Commission proposes a framework for the provision of direct financial assistance in its pending GESMO proceeding, because of the extraordinary importance and far-reaching ramifications involved, such funding being dependent on future Congressional appropriation. The Commission also relieves qualified participants in the GESMO proceeding of some procedural cost burdens and decides to study measures available for similar relief in other proceedings.

Rulemaking terminated.

ATOMIC ENERGY ACT INTERPRETATION

In determining an issue such as whether (and if so, to what extent) the Atomic Energy Act authorizes the Commission to provide direct funding of participants in its proceedings, substantial deference is owed to the Comptroller General's opinion.

**STATEMENT OF CONSIDERATIONS TERMINATING
RULEMAKING**

Since August of 1975, the Commission has had under consideration in an informal rulemaking proceeding (PR-2) the matter of possible financial assistance to participants in its proceedings. 40 Fed. Reg. 37056. At the time the rulemaking was initiated, the Commission had the benefit of a specially commis-

sioned study of such funding to assist in identifying relevant issues and to provide a data base for the projected rulemaking. Extensive public comments on the legal, policy and practical questions involved, and on the funding study, have been received and analyzed. The Comptroller General of the United States has rendered an opinion concerning the extent of the Commission's authority to render financial assistance. And the Commission has drawn upon its own experience and that of its regulatory staff and adjudicatory boards in considering the questions presented by the funding concept.

On the basis of these considerations, as set forth hereafter, the Commission has determined not to initiate a program to provide funding for participants in its licensing, enforcement and antitrust proceedings, and, as a general proposition, in its rulemaking proceedings. These determinations rest upon both policy considerations and the limited extent of the Commission's present authority to extend financial assistance under the Comptroller General's ruling. However, the Commission has decided to propose a framework for the provision of direct financial assistance in its pending proceeding to determine whether widescale commercial use of mixed oxide fuel should be authorized (commonly called the "GESMO" proceeding), because of the extraordinary importance and far-reaching ramifications of that particular proceeding. The Commission intends to ask the next Congress for a specific appropriation from which funding for GESMO participants could be provided. The Commission has also decided to relieve qualified participants in the GESMO proceeding of some procedural cost burdens they would otherwise have to bear, and to study measures available for similar relief in other proceedings.

This statement will discuss in appropriate detail the procedural background of this matter, the extent of the Commission's present funding authority the policy and practical considerations bearing on the funding question as viewed by the Commission in the light of the rulemaking record and its own experience, the framework for funding the Commission would establish in the GESMO proceeding if Congress so authorizes, and the Commission's planned study regarding possible relief from procedural burdens in other proceedings.

Procedural Background

The Nuclear Regulatory Commission and its predecessor, the Atomic Energy Commission, have not heretofore provided any financial assistance to participants in their proceedings. With the exception of the Federal Trade Commission, which has express statutory authority to provide financial assistance to qualified participants in rulemaking proceedings, no federal regulatory agency has an established program for provision of financial assistance.¹

The Consumer Product Safety Commission has been reviewing the question of financial assistance. See Report to the Nuclear Regulatory Commission "Policy Issues Raised by Intervenor Requests for Financial Assistance in NRC Proceedings," pp. 44-45 (hereafter *continued on next page*

The first requests to the Atomic Energy Commission for financial assistance were made in 1972 by intervenors in nuclear licensing proceedings. The Atomic Energy Act of 1954 makes no express provision for such funding. In two opinions issued in early 1973, that Commission stated, without any extended discussion of the question, that it did not have authority to provide financial assistance to intervenors.²

In the summer of 1974, acknowledging that the law in this area was not clear, the Atomic Energy Commission denied a request for financial assistance from intervenors in the Midland show cause proceeding for lack of an adequate showing of need, without reaching the statutory authority question. In that proceeding, one of the groups associated with the funding request was the United Auto Workers of America, an organization then having a net worth in excess of \$100 million.³

In the latter part of 1974, requests for financial assistance were filed by intervenor groups in several additional proceedings, both licensing and rule-making. At the same time, the Energy Reorganization Act of 1974 was pending before the Congress. The Senate adopted an amendment to that measure which would have expressly authorized provision of financial assistance to participants in Commission proceedings. However, that amendment was deleted by the conference committee. In its report, the conference committee stated that the deletion of the funding amendment was:

in no way intended to express an opinion that parties are or are not now entitled to some reimbursement for any or all costs incurred in licensing proceedings. Rather, it was felt that because there are currently several cases on this subject pending before the Commission, it would be best to withhold Congressional action until these issues have been definitively determined. The resolution of these issues will help the Congress determine whether a provision similar to title V is necessary since it appears that there is nothing in the Atomic Energy Act, as amended, which would preclude the Commission from reimbursing parties where it deems it necessary

Rep. No. 93-1445, 93d Cong., 2d Sess., p. 37 Thus, Congress left the issue unresolved at that juncture.

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cited as the "Boasberg Report"). The Food and Drug Administration recently initiated an informal rulemaking proceeding on the question. 41 Fed. Reg. 35855. Section 6(c)(4) of the recently enacted "Toxic Substances Control Act," P.L. 94-469, which becomes effective in January 1977, contains express authority for funding of participants in certain rulemaking proceedings.

² See *Metropolitan Edison Company* (Three Mile Island Nuclear Station), CLI-73-5, 6 AEC 43(1973); *Philadelphia Electric Company* (Peach Bottom Atomic Power Station), CLI-73-6, 6 AEC 46 (1973).

³ See *Consumers Power Company* (Midland Plant), CLI-74-26, 8 AEC 1 (1974).

In those circumstances, the AEC concluded that the issue should be explored in a rulemaking proceeding, and that the broad policy issues raised by the funding question should be addressed by the successor Nuclear Regulatory Commission. The Atomic Energy Commission also concluded that it would be desirable to commission a study by persons other than agency employees of the policy and practical issues involved. The particular petitions for assistance then pending before it were denied as premature. See, *Consumers Power Company* (Big Rock Point Nuclear Plant), CLI-74-42, 8 AEC 820 (1974).

In early 1975 shortly following its establishment, the Nuclear Regulatory Commission reviewed competitive proposals received in response to an invitation for proposals and selected the Washington law firm of Boasberg, Hewes, Klores and Kass to conduct a study of funding and report to it. The Boasberg firm was charged to determine the advantages and disadvantages of funding both from a policy perspective and in the light of practical considerations. The firm was asked to make an objective analysis of available options, without a recommendation based on its own assessment of the preferred policy choice. In July 1975, the report of the Boasberg firm, entitled "Policy Issues Raised by Intervenor Requests for Financial Assistance in NRC Proceedings," was presented to the Commission, printed by it as NUREG-75/071, and made available to the public.

In August 1975, the Commission decided to institute an informal rulemaking proceeding on the funding question. A notice was published in the *Federal Register* calling for public comment on the issue of statutory authority the policy and practical issues raised by the funding concept, and whether there might be preferable alternatives to funding. 40 Fed Reg. 37056. No specific rule was proposed at that time. The notice also stated that the question of statutory authority would be referred to the Comptroller General.

Statutory Authority for Funding and the Role of Congress

In February 1976, the Comptroller General issued his decision on the question of the Commission's authority to fund participants in its proceedings. File No. B-92288. The Comptroller General rejected the argument that such funding could not be provided in the absence of express statutory authority. The question, as the Comptroller viewed it, was "whether it is necessary to pay the expenses of indigent intervenors in order to carry out NRC's statutory functions in making licensing determinations." He further expressed the opinion that "only the administering agency can make that determination." In the light of these considerations, the Comptroller General concluded that in any proceeding:

If NRC in the exercise of its administrative discretion, determines that it *cannot make the required determination* unless it extends financial assistance to certain interested parties who require it, and whose *participation is essential to dispose of the matter before it, we would not object* to use of its appropriated funds for this purpose. (emphasis added). B-92288 at 4

Thus, under the Comptroller General's view of our authority we must make two related determinations as preconditions to any provision of funding to a would-be participant: (1) that we "cannot make" necessary licensing or rulemaking determinations—such as that a proposed facility can be constructed and operated without undue risk to the health and safety of the public (10 CFR 50.35)—unless financial assistance is extended to participants who require it; and (2) that the funded participation is "essential" to our disposition of such issues.

While it may be that certain Commission applicants could, in limited circumstances, meet this test, the principal area of discussion, as evidenced by public discussion and by the comments the Commission has received, regards funding of two other classes of participants in Commission proceedings: intervenors in licensing proceedings, and participants in Commission rulemaking hearings. For the reasons detailed below based on the rulemaking record and our extensive experience in licensing and rulemaking proceedings, with and without outside participants, we cannot make the determinations the Comptroller General believes to be essential preconditions to the provision of funding for these groups. While participation has been helpful in particular licensing and rulemaking proceedings and while such participation may serve other valuable social purposes, we certainly cannot say that we "cannot make" the safety safeguards, environmental or antitrust findings required of us by relevant statutes unless we fund these parties, or that the participation of such parties is "essential" to dispose of matters before us.⁴

We note that many of the public comments addressed the question of our statutory authority as well as other issues and we are advised that those commenting did not also submit their comments to the Comptroller General, although they were free to do so. As the Comptroller General's opinion states, our General Counsel provided him "with a number of representative letters of opinion from both proponents and opponents."⁵ The Comptroller General's

⁴ Commissioner Gilinsky in his separate statement, accepts the Comptroller General's standard, but indicates that he believes certain unspecified proceedings could meet that test. We, of course, will continually reevaluate our agency's proceedings to determine whether required determinations cannot be made without funding participants. But in light of our experience to date as well as our view that Congress is the proper institution to provide funding, we cannot agree with Commissioner Gilinsky's suggestion that the Comptroller General's standards provide the basis for submissions by parties on a case-by-case basis. Rather, we believe that an offer of funding to those who satisfy the Comptroller General's standards would be, on the basis of our present analysis, a right in name only, without any practical substance.

⁵ Three sets of comments supplied to the Comptroller General—those of the Atomic Industrial Forum, LeBoeuf, Lamb, Leiby & MacRae, and Lowenstein, Newman, Reis and Axelrad—argued the negative of the authority question. Three sets of comments argued the affirmative case—those of the Natural Resources Defense Council, Council for Public Interest Law, and Ecology Action. The bulk of the comments did not address the authority question in any detail.

opinion addresses the principal arguments made in the comments in opposition to the existence of NRC funding authority. As a matter of legal authority, we could address the legal question independently and we could conceivably reach a different result. However, we find the Comptroller General's analysis of this complex legal question thorough and persuasive, and we believe that, on an issue of this character, his opinion is entitled to substantial deference. Particularly in view of the Comptroller's strong suggestion, in which we fully concur that ultimately Congress should address and resolve funding issues, we will be guided by the Comptroller General's statement of our legal authority in resolving the issues now before us.

We turn now to the question of Congress' role. Following his discussion of NRC's present authority to fund participants in its proceedings, the Comptroller General expressed the opinion that it would be desirable for the extent of such authority to be spelled out in legislation by the Congress, saying that:

Notwithstanding the above, we believe it would be advisable for the parameters of such financial assistance, and the scope and limitations on the use of appropriated funds for this purpose to be fully set forth by the Congress in legislation, as was done in the case of the FTC by the "Magnuson-Moss" Act, *supra*. We note that the Joint Committee on Atomic Energy is currently considering S. 1655 94th Congress, which would accomplish the same objectives as the Kennedy amendment discussed, *supra*. In addition S. 2715 94th Congress, which would provide general authority for payment of expenses of intervenors in proceeding subject to the Administrative Procedures Act, 5 U.S.C. § 551 *et seq.* (1970) as well as in specified types of litigation is now before the Senate Committees on Government Operations and Judiciary.

And following the Comptroller General's ruling on the NRC's authority to fund intervenors, Congressman Moss asked for that official's opinion whether the rationale of the NRC ruling would also be applicable to nine other federal regulatory agencies, the FCC, FTC, FPC, ICC, CPSC, SEC, FDA, EPA, and the National Highway Traffic Safety Administration. In a letter dated May 10, 1976, the Comptroller General stated that:

[T]here is no significant difference in the relevant authorities for the nine agencies you named and those of the NRC. Accordingly the rationale of our February 19 decision to NRC is equally applicable to each agency named.

The Comptroller General went on to suggest that:

For the reasons set forth in the NRC decision, we believe it would be advisable for the parameters of such financial assistance, and the scope and limitations on the use of appropriated funds for this purpose to be fully set

forth by the Congress in legislation, as was done in the case of the Federal Trade Commission

In view of the Comptroller General's second ruling, in response to the inquiry from Congressman Moss, it is now clear that most of the major regulatory agencies in the federal government may have some discretionary authority to fund participants in their proceedings. Many of the considerations which argue for and against such funding would appear to be applicable to most, if not all, of these agencies. As noted by the Comptroller General, the Congress just adjourned had several funding proposals under active consideration. Relatively narrow proposals providing express authority for payment of attorneys' fees to the prevailing party in specified classes of civil rights cases and for attorneys' fees and other expenses in certain agency rulemaking and litigation under the "Toxic Substances Control Act" were enacted at the close of the session. See 121 Cong. Rec. S. 17053 (daily ed.); P.L. 94-469

Such narrow statutory enactments, as exceptions to the traditional and generally applicable American rule that each party to litigation bears its own expenses, have been the prevailing pattern to date. See *Alyeska Pipeline Service Company v. Wilderness Society* 421 U.S. 240 (1975). S. 2715 a proposal that would have overruled the *Alyeska* decision and provided broad authority for funding in agency proceedings was reported favorably from committee in the Senate, but did not come to a vote. In light of these considerations, we fully agree with the Comptroller General that Congress should set forth in legislation the scope and limitations on the use of appropriated funds for funding participants in agency proceedings if it decides, as a matter of policy choice, that such funding is in the public interest. It would be inappropriate for individual agencies like the NRC, on the basis of their necessarily restricted perspectives and mandates, to attempt to resolve this value-laden issue without legislative guidance.

The institutional role of Congress in resolving the funding question must be respected. Funding involves the direct transfer of public money to support a private viewpoint; a viewpoint which is not subject to control or oversight by the public's elected representatives and which may or may not reflect the views of many members of the public. Ordinarily in our society private viewpoints are funded by private sources. Congress, of course, can alter that presumption; a reasonable procedure since Congressmen are elected and thus must answer directly when they spend their constituents' money Congress might feel, for example, that the increased public participation and public confidence that may be brought about by funding private groups calls for the provision of such funding. From our perspective, we lack not only the statutory authority to provide funding, but we also find, as a policy matter, that a non-elected regulatory Commission is not the proper institution to expend public funds in this

fashion absent express Congressional authorization. We recognize, of course, our obligation to provide Congress with our views on whether it should appropriate money for funding participants in our proceedings. Congress can then weigh those views along with the other policy concerns it quite properly considers in determining spending priorities. For the reasons described herein, we do not recommend that Congress provide funding for ordinary licensing or rulemaking proceedings, although we do make such a recommendation in regard to the GESMO matter. But in all of these cases, we believe the final decision rests squarely with Congress.

Policy and Practical Considerations

The funding concept raises a very broad range of policy and practical issues. In our judgment, the Boasberg Report meets its stated purpose “to focus and develop the myriad issues raised by intervenor requests for financial assistance for the rulemaking proceeding.” Report, p. 2. We have found the Report helpful in providing an initial data base for the rulemaking and in analyzing the issues we are addressing now. We have taken into consideration each of the major points raised by the Report and the public comments that are relevant to our disposition of the basic policy questions involved. We will undertake in this statement to set forth the reasons for our conclusions with reference to the major arguments, pro and con, listed in the Report and raised in the comments concerning those questions. Because of the dispositions we are making of these basic policy issues, we find it unnecessary to address in any detail issues of practical implementation. While it would be unrealistic to disregard a number of formidable problems that implementation would entail, we do not believe implementation issues should dictate policy choices.

Before turning to the merits of the basic issues, two observations with reference to the Boasberg Report are in order. First, in accordance with its contract, the Boasberg firm did not make specific policy recommendations as to how the NRC should resolve the funding question. In order to present an objective analysis without specific policy recommendations, express or implied, the Report largely followed a format of listing pro and con arguments on particular issues in a carefully balanced fashion, without assignment of comparative weight to particular arguments. For example, in the chapter entitled “Should Financial Assistance Be Provided to Intervenors”—the basic policy issue presented here—the report discusses five “Arguments in Favor of Intervenor Financing” and five “Arguments Against Intervenor Financing.” Given the terms of its NRC contract, this balanced approach was appropriate. However, as the governmental agency charged with the responsibility of making the policy decisions involved here, it is our duty to attempt to assess the comparative weight to which these arguments are entitled and, within the limits of our competence, to make judgments on the issues they raise. As indicated below we believe that a few of these

arguments on the basic policy issue are of critical importance, and that others are either of lesser significance or of such a political nature that they are largely beyond our competence to assess.

The second observation we would make with regard to the Boasberg Report is that it necessarily relied very heavily on the technique of personal interviews in gathering data and surfacing the issues. The authors conducted in-depth interviews of approximately 100 people, representing a wide spectrum of opinion. We think it important to note, however, that many of the issues contain large subjective elements and resist quantification. For example, the discussion of intervenor contributions to our proceedings in the Boasberg Report (pp. 88-96) appears to be based largely on interviews with intervenors themselves. Yet clearly there will be differences of view as to the significance of a particular intervenor's contribution to a proceeding.

We believe that the arguments asserted, pro and con, are most usefully considered in the context of a specific type of proceeding. In the case of this Commission, the most important opportunities for participation, as borne out by our experience, are by intervention in the licensing of individual reactors and by participation in generic rulemaking proceedings.

Licensing Proceedings for Individual Reactors

There is no questioning the social value of public participation in agency decisionmaking nor, as our later comments make clear, do we underrate the contributions that intervenors have made in the process through outside participation as such. We are, however, unable to make the finding specified by the Comptroller General, *viz.*, that without funding we "cannot make the required [licensing] determination" and that the participation of funded groups is "essential to dispose of the matter."

The issue we turn to now is whether, apart from our present authority we think it reasonable to anticipate that provision of financial assistance from the federal treasury to intervenors in such proceedings would be in the public interest, weighing advantages against disadvantages insofar as we are competent to do so. The question for the Congress here is whether funded intervenors would make sufficiently greater contributions to the resolution of safety and environmental issues in individual licensings than are being made now by intervenors relying on their own resources, to warrant the expenditure of public funds. Our review of the record, in the light of our experience, leads us to doubt whether funding would provide such a benefit.

The principal reasons for our position in this regard are straightforward. The safety considerations raised by modern commercial light water reactors are by now very well understood, and we have a comprehensive, expertly staffed, well-developed regulatory regime to which such reactors are subject. Our regulatory staff has developed in-depth expertise on reactor safety issues over the past two

decades in the course of reviewing safety aspects of hundreds of proposed reactors. The staff's task on every issue is to assure that no facility is licensed unless such action is fully consistent with the public health and safety. We believe the staff performs that task well. Moreover, we are continually scrutinizing the staff effort to insure that every safety concern is brought to light. In a field as complex and important as nuclear power the staff is not monolithic; indeed no one would wish it to be so. On November 4 of this year we published, along with the Director of Nuclear Reactor Regulation, a series of policy statements designed to insure that all staff views are effectively made known, and that dissenting staff viewpoints are carefully considered and made public. It is this kind of policy that helps assure that our processes are thorough and objective and are perceived as such.

In addition to the safeguards of in-depth staff review each proposed reactor is subject to independent safety scrutiny by the Advisory Committee on Reactor Safeguards, composed of outside experts, and by an Atomic Safety and Licensing Board and Atomic Safety and Licensing Appeal Board. The Licensing and Appeal Boards also include technical experts, and their expertise is brought to bear whether or not the application for a construction permit or operating license is contested by an intervenor. Those boards have demonstrated impressive capability for looking into significant safety issues on their own motion when the occasion warrants. See, e.g., *Northern States Power Company* (Prairie Island Station), ALAB-343, NRCI-76/9 169 (September 2, 1976). Given this advanced state of the art in reactor safety the professionalism, depth and experience of our regulatory staff, and the further screening provided by expert committee and board review we simply are unable to make the determinations set forth in the Comptroller General's standard.

Similarly we do not believe that funding intervenors would markedly improve the resolution of environmental issues. As in the safety area, the regulatory staff and the agency review boards have developed substantial expertise in the exploration of environmental issues and their presentation in environmental impact statements and in the hearing process. The staff has frequently obtained utility acceptance of conditions designed to protect the environment as a condition of their support for a construction permit or operating license application. In some cases, staff requests for such conditions have been resisted by applicants and the staff has presented its position on environmental issues in opposition to the applicant and with the support of intervenor groups. See, e.g., *Consolidated Edison Company of New York* (Indian Point Station, Unit 2), ALAB-188, 7 AEC 323 (1974). And, as in the case of safety questions, most of the environmental impacts associated with increasingly standardized commercial light water reactors are by now quite familiar. Relatively standardized remedies have been developed to mitigate these environmental impacts, such as closed-cycle cooling to eliminate thermal discharges into rivers and lakes, radiological monitoring programs covering effluents, and the like.

Moreover, in the environmental area, more so than in the safety area, there is active participation by other government agencies, insuring that no concerns are overlooked. The National Environmental Policy Act itself requires that we obtain input from other agencies. Federal, state and local bodies often participate and even share authority in a broad range of environmental matters involving nuclear licensing.

Apart from the possibility of substantive contributions to the correct resolution of safety and environmental issues, which, as we have indicated, we think would not be substantially greater in the case of funded intervenors, some proponents of intervenor funding argue that intervenors serve a valuable function as "gadflies"—probing questioners who put pressure on the staff and the applicant to do their homework. Our experience suggests that the intervenor as gadfly has performed a useful function in some situations. In contested cases with active intervenors, the staff does seem to be somewhat better prepared and the hearing record developed as a result goes into somewhat greater depth on issues in which the intervenors show an interest. But again, the question here is whether an intervenor discharging the gadfly role merits support with public funds. In light of what has been previously stated respecting the depth and competence of the review process and of what the present intervenor-gadfly can do relying on his own resources, it is questionable whether the case for funding can be made on this basis. And, applying the Comptroller General's standard, we certainly do not believe that the presence of the funded intervenor as gadfly is "essential" to the performance of our statutory mandates.

It is natural to expect that the staff would be somewhat better prepared for hearings which are contested and that such a hearing would produce more of an in-depth record on some issues than would an uncontested hearing. In our judgment, however, it does not follow at all that facilities that have been the subject of a contested hearing are actually safer than those licensed following an uncontested proceeding. In this connection, it is important to note that the great bulk of staff review time is expended outside of the hearing context. As the Commission reported to a Senate subcommittee in the last Congress, approximately 6 man-years (a man-year is 225 days, 8 hours per day) of technical staff effort is devoted to review of a typical commercial reactor application, whether the application is contested or not. Slightly greater technical effort (less than 10% greater) is required for a contested case to provide more in-depth expert testimony describing the staff review during the hearing process. *Hearings on Public Participation in Federal Agency Proceedings*, S. 2715, Before the Administrative Practice and Procedure Subcommittee of the Senate Judiciary Committee, 94th Cong., 2d Sess., p. 780. Moreover, ACRS review takes place whether an application is contested or not and its depth is also substantially independent of whether intervenors are present.

We turn now to consideration of what, in our view are the major possible disadvantages of a Commission program for funding intervenors in our licensing

proceedings. The Boasberg Report reflects concerns about possible delay in the licensing of needed power facilities as a result of intervenor funding and the comments of opponents of such funding in the rulemaking record stress this possibility. Whether an institutionalized program for the funding of intervenors in licensing proceedings would exacerbate present problems of delay is the subject of sharp disagreement among current participants in the licensing process. The prospect of funding does seem almost certain to attract additional interventions. Beyond that, the funded intervenor with greater resources at its disposal will, one may fairly assume, present a more extensive case, in volume, if not necessarily in quality. One can, of course, argue that the provision of government funds to intervenors might actually expedite the hearing process. Some commenters contend that under the present system they cannot afford to hire independent experts, with the result that they are forced to make their affirmative cases through the protracted process of cross-examination. We are told that the provision of funding and the possibility of hiring outside experts could actually expedite proceedings. Moreover, it is argued, the Commission could provide some assurance against undue delay by providing funding only to intervenors who actually make a contribution to the proceeding, and by making that determination after the fact. See, *e.g.*, Comments, New England Coalition on Nuclear Pollution.

The arguments pro and con on the prospect of additional delay are, in our judgment, quite speculative. However, regardless of the merits of those arguments, it is clear that the administration of a funding mechanism will make licensing proceedings more complicated than they are now. Necessarily a significant amount of staff, licensing board, and intervenor time will be devoted to determining who is qualified for funding, whether an intervenor made a contribution, and, if so, how valuable it was; and how much of limited amounts of funds should be made available. Beyond that, we can anticipate appeals through agency processes and ultimately to the courts on the basis of alleged insufficient funding. Resolution of these issues would take time that might otherwise be devoted to timely completion of the licensing process since it is possible the ultimate licensing decision might in some sense remain open until the dispute over funding is resolved. Thus, we think it inevitable that the institutionalization of a funding scheme would have some delaying effect on the licensing process.

A second significant disadvantage of an institutionalized funding scheme would be its substantial cost. We are not in a position to quantify any very precise cost figures for such a system. While the role of intervenors will vary it has been suggested that financing of a full-scale intervention in one of our proceedings might cost in excess of \$100,000. See Comments, Council for Public Interest Law p. 8. The Commission anticipates roughly twenty licensing proceedings for construction permits and operating licenses in the coming year. On that basis, full funding of interventions in many of these proceedings might cost over a million dollars. In this connection, it should be borne in mind that many

proceedings have multiple intervenors, some with as many as eight intervenors. See, e.g., *Public Service Company of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-76-26, NRCI-75/6 857 (June 29 1976). Full financing of all groups could multiply the foregoing cost figures several fold, wholly apart from the additional resources the agency might be required to employ

Moreover, serious social questions are raised by funding the presentation of private points of view in our proceedings. Even though many participating groups denominate themselves as "public interest" groups, they in fact reflect essentially the viewpoints of their members as to what constitutes the public interest. As the comments on the proposed rulemaking make clear, it is reasonable to question whether the positions they espouse, which often reflect members' relatively specific interests, are any more entitled to identification with the "public interest" than those of any other private party. Currently there is a strong presumption that public funds should only be spent for the presentation of positions by government bodies ultimately subject to Congressional control. In the case of NRC, that would be the regulatory staff. It is for the Congress to alter that presumption.

Financial Assistance in Rulemakings

The Boasberg Report points up several considerations suggesting that, if the Commission is to provide funding to intervenors, there is a stronger case for such funding in rulemaking proceedings than in licensing proceedings. The report notes that:

Commenters have noted that, of all agency proceedings, rulemakings probably are best suited for public participation since (a) their very purpose is to seek broad and diverse input; (b) they usually involve issues of great public moment which affect large numbers of people; and (c) their decisions are difficult to collaterally attack on judicial review or challenge in future agency adjudications.

The report adds that:

[R]ulemaking may allow intervenors to consolidate their positions and marshal their resources in a single proceeding, instead of having to contest similar issues in numerous separate licensing cases. In addition, certain rule-making proceedings may reduce intervenor counsel expenses, depending upon the scope of discovery and cross-examination allowed. Boasberg Report at pp. 58-59

We believe that, as a general proposition, the case has not been made for Commission funding in rulemaking proceedings. Applying the criteria laid down in the Comptroller General's ruling, we certainly do not believe that the record in this proceeding or our past experience warrants a finding either that we cannot

make the requisite safety and environmental determinations in rulemakings without funding participation or that Commission financial support of some participants is "essential" to the conduct of such proceedings.

In our view the portion of the Boasberg Report quoted above illuminates conflicting considerations. It is more likely that a variety of participants might make substantive contributions in rulemaking proceedings because of the breadth and novelty of the issues involved and their generic character. On the other hand, the use of rulemaking proceedings rather than a case-by-case approach permits a husbanding of resources and effort which itself makes funding less essential to participation. As Judge Friendly recently pointed out: "The idea that a licensing agency should endeavor to identify environmental issues common to many applications and handle them in 'generic' proceedings would seem to benefit all parties, particularly the poorly financed environmental groups." See, *Ecology Action v AEC*, 492 F.2d 998, 1002 (2d Cir., 1974) (Friendly J.).

Moreover, the groups which typically participate in our broad generic rulemaking proceedings are, we believe, less in need of financial assistance than the small local citizens groups that typically participate in licensing proceedings. To be sure, as the many requests for financial assistance in the GESMO proceeding testify even these national groups do not have unlimited funds, and many of them assert that they will be unable to participate meaningfully without assistance. Given, however, that many of these organizations have funds from many sources, they are not in a position to argue that they cannot participate in our proceedings without financial assistance. Rather, a petition for assistance from such an organization reflects that organization's judgment that it is required to or would prefer to spend its limited resources elsewhere, or to avoid the reduction in other efforts that may flow from funding its own efforts before us.

We note that the Congress has expressly authorized the Federal Trade Commission to provide financial assistance to participants in its rulemaking proceedings under specified circumstances. That statutory experiment in funding has now been in operation for about a year while the FTC staff has reported favorably on it, the Commission itself has as yet given no official indication of how it views that experiment in practice. See Hearing, Senate Committee on Government Operations, June 24 1976, at p. 39 We believe that we should not proceed along that avenue, save in exceptional circumstances, without express Congressional direction.

Antitrust and Enforcement Proceedings

There are two other categories of proceedings in this agency that might be considered for intervenor funding—antitrust proceedings under section 105 of the Atomic Energy Act, and enforcement proceedings initiated by the regulatory

staff. We believe that any case for intervenor funding in these categories of cases would stand on a much weaker footing than funding either in licensing or rulemaking proceedings.

As to the antitrust setting, we see no need for funding of participants. The basic issue in such cases is whether smaller utilities should be granted some form of access to the electricity to be produced by large commercial reactors. Although the smaller utilities do not have the financial resources of the larger utilities who seek the construction permits, they nevertheless have substantial resources at their disposal. They are represented in our sometimes protracted antitrust proceedings by competent counsel and, where necessary have produced expert witnesses. Counsel and witness fees represent the largest single cost factor in participation in such proceedings. If the smaller utilities are in a position to propose purchase of a portion of a nuclear plant, perhaps spending millions of dollars, it would appear to follow that they can afford to represent themselves in proceedings seeking to enforce rights to make such purchases.

For different reasons, we do not believe that funded intervenor participation is necessary or especially desirable in enforcement proceedings. The issues in enforcement proceedings are typically very narrow—*e.g.*, whether the applicant has a satisfactory quality assurance program. While private parties have made and undoubtedly will continue to make important contributions in enforcement matters, the case for funding such parties is not strong—enforcement proceedings typically place the staff and the applicant in a fully adversary posture. It is particularly clear here that the Comptroller General's standard for funding cannot be met.

The foregoing considerations are, in our judgment, the major considerations legitimately bearing on the present question, from this Commission's perspective. We note that we have also taken into consideration several other factors discussed in the Boasberg Report and also in some of the comments in this rulemaking which we believe to be either relatively insubstantial or essentially beyond our competence to assess.

In the former category that of insubstantial factors, we would place the following: (1) that intervenor participation will promote the adoption by an applicant of unnecessary measures for a facility simply to procure the agreement of an intervenor group; and (2) that the Commission should eschew intervenor funding because of the administrative difficulties associated with it.

With regard to the first argument, we do not believe it is entitled to weight. Whether a given safety feature or environmental condition is needed will be decided independently by the regulatory staff and by the licensing board. If a utility believes it can buy the acquiescence of an intervenor group through installing additional safety systems or environmental devices, the staff and the boards may not object and the device may be added, so long as it does not adversely affect safety or the NEPA cost/benefit balance. However, the utilities have their ratepayers, stockholders, and public service commissions to answer to.

In our judgment, this should give them more than adequate motivation to avoid unnecessary expense.

As for the second point, it is obvious that any very ambitious institutionalized form of intervenor funding would carry with it substantial administrative difficulties. However, as indicated in the Boasberg Report, and as borne out by the Federal Trade Commission's experience, these problems are solvable. As indicated previously we do believe that the addition of intervenor financing questions may portend additional delay in the licensing process. Apart from that factor, however, we do not think that anticipated administrative problems should weigh heavily in the scales.

The Boasberg Report and certain of the comments advance some additional arguments in favor of intervenor funding. In the Boasberg Report, for example, under the heading of "Public Education and Confidence," the Report addresses what is seen as the public's need for information and education on nuclear power, the building of public confidence in the commercialization of nuclear power, and the nature of public participation in a democracy's administrative processes. However, as we view it, it is up to Congress to make determinations on issues of broad social significance in the context of national priorities—such issues, for example, as whether public confidence in nuclear power needs to be promoted and, perhaps more fundamentally whether such promotion should be attempted through the mechanism of the NRC hearing process.

Financial Assistance in GESMO

There is one Commission proceeding which we believe stands apart from the licensing and rulemaking matters heretofore discussed. The Commission has begun the process of deciding whether to permit the wide-scale use of mixed oxide fuel in light water reactors and, if so, under what conditions. This proceeding, formally denominated *In the Matter of the Generic Environmental Statement on Mixed Oxide Fuel*, (GESMO), Docket No. RM-50-5 is of singular importance. The question of whether to use mixed oxide fuel impacts on every phase of the light water reactor fuel cycle—mining, milling, enrichment, fuel fabrication, reactors, reprocessing, and waste management. The domestic issues raised by the GESMO proceeding run the entire gamut from economic and national security concerns to health, safety environmental and safeguards considerations. Moreover, the GESMO decision has major international implications, particularly in the area of nonproliferation. Under the circumstances, it is not surprising that GESMO has attracted an unprecedented degree of attention, not alone from the Commission, but from Congress, the Executive Branch, the courts, and the public as well. GESMO is different in kind from the other proceedings currently before the Commission. By way of comparison, perhaps the next most prominent Commission undertaking is the forthcoming rule-

making concerning the Table S-3 (uranium fuel cycle) values for reprocessing and waste management. The issues there are far narrower than those in GESMO. Moreover, the central aspect of that proceeding, waste management, is an area where primary responsibilities are shared by the Nuclear Regulatory Commission and the Energy Research and Development Administration; indeed, waste-related proceedings of a far more fundamental and policy-setting nature than the S-3 proceeding are planned by both agencies.

The Commission has recognized the importance of GESMO in structuring its decisionmaking process. Public participation has been encouraged from the outset and over seventy individuals and groups, representing numerous diverse viewpoints, have become full participants in the GESMO proceeding. The hearing process adopted by the Commission and upheld by the courts is a model procedure for dealing with complex, technical issues. A hearing board will preside over legislative-type hearings, asking questions from among those suggested by the parties, as well as questions of their own. The Commission has appointed a five-member board of independent scientists and attorneys who possess a remarkably broad range of expertise. After the legislative phase of hearings, the parties can suggest to the Commission factual matters where they believe formal cross-examination of one party by another is necessary for a complete record. Such cross-examination will be allowed when it is shown to be necessary

This hearing process will take place in two stages: 1) health, safety and environmental issues, and 2) safeguards issues. Each stage will begin after publication of the relevant portion of the final environment impact statement on mixed oxide fuel. The health, safety and environmental section of the final statement was issued on August 31 1976, and that portion of the hearing has begun. To aid in public participation in that proceeding the Commission's staff has already made available literally thousands of documents relied on in preparation of the final impact statement. The hearing board conducted a prehearing conference on September 15 1976 and has scheduled hearings to begin on November 30, 1976. The final impact statement on safeguards will be available in 1977; appropriate hearings will begin shortly after its issuance.

The unique nature of the GESMO proceeding has led the Commission to consider whether GESMO stands on a different footing from other proceedings as regards funding of participants. A similar question is presented by a petition filed by the Natural Resources Defense Council (NRDC), a GESMO participant, on September 10, 1976. The NRDC petition calls for an interim rule allowing funding of GESMO participants pending the Commission's decision on the generic funding question. Although that generic question is resolved by the Commission in this Notice, the justification given by NRDC for an interim rule applies as well to the question of whether GESMO is sufficiently distinct from other proceedings to merit consideration of funding. NRDC notes that GESMO

“is undoubtedly one of the most significant single decisions which will have ever been made by the Commission.” Funding is necessary the petition concludes “[i]f for no other decision, then certainly for the decision on whether to allow wide-scale civilian use of plutonium ”

On September 23, 1976, the Commission requested comments from GESMO participants on the NRDC petition. Nine responses were received. The following three gave unqualified support to the petition: 1) an environmental group primarily concerned that those promoting nuclear power were overrepresented in GESMO; 2) an individual who described himself as a strong advocate of plutonium recycle lacking the resources to fully present his point of view and 3) an individual primarily concerned with the “assymetry” in resources available to GESMO participants. The remaining six commenters had one common theme: no decision should be made on GESMO funding until a decision has been reached on the generic funding question. Five of these commenters⁶ went on to restate their opposition to funding as a general matter essentially for the reasons they had given to opposing the generic funding petition. Particular emphasis was placed on the need for Congressional authorization.⁷

In addition to these formal comments, in September 1976 the House Subcommittee on Energy and the Environment twice held hearings dealing in part with the funding of GESMO participants. The concept was supported by some Congressmen and opposed by others.

As explained above the Commission is of the view that the Comptroller General’s ruling states the appropriate standard for the Commission’s authority to fund participants without specific legislative authorization. A careful review of the GESMO process results in the conclusion that that standard cannot be met. It is not true that the Commission “cannot make the required [health, safety environmental and safeguards] determination unless it extends financial assistance to certain interested parties who require it. ” On the contrary the Commission is fully confident that the procedures it has set up will result in an adequate record for all necessary determinations. The GESMO rulemaking has already attracted active participation from an unusually broad spectrum of participants, including environmental groups, utilities, professors, nuclear suppliers, and individual citizens. The Commission staff, in its production of the

⁶The five consisted of two utility groups, Westinghouse, the Atomic Industrial Forum, and Exxon. The Commission staff limited itself to the observation that while the generic matter was pending the interim petition should be put aside.

⁷Two comments were received after the deadline. One was from a public interest group opposing the petition on the ground that the Commission itself adequately protects the public interest and that Congress should pass on the funding question. The other was from a private citizen urging the petition be denied because petitioner NRDC does not represent the public interest.

massive final environmental statement on health, safety and environmental matters, as well as in its preparation for the forthcoming hearings, has admirably undertaken its task of insuring that the public health and safety is the primary consideration in all stages of the GESMO process. The Hearing Board, in its conduct of the prehearing conference and in its preparation of several procedural orders, has given every indication that it intends to conduct a searching inquiry

Accordingly we believe the GESMO process, as presently structured, will result, without funding participants, in the creation of a record fully adequate for Commission decision making. As noted above, however, Congress may consider other factors in deciding whether it will appropriate public funds to private participants in an agency proceeding. Expanding the scale of public participation may be viewed as valuable apart from the adequacy of the record which results. Public understanding and acceptance of government action may be enhanced by increased participation, and added insurance is given that no concern, however remote, is overlooked.

As we have explained, for the ordinary licensing and rulemaking proceedings the Commission undertakes, we do not find, based on our experience, that it is necessary or appropriate to urge Congress to provide funding. But the Commission sees GESMO in a different light. The extraordinary breadth and depth of GESMO and the significance of the decision to be reached has led to unprecedented public interest in the GESMO process. In view of the novel nature of many of the issues involved it is possible that the increased public participation which might be brought about by funding, while not indispensable, will not be superfluous either. Finally in the context of GESMO, funding, as described below, will not cause delay in the decision making process.

Given these unique circumstances, the Commission is prepared to recommend to the Congress that it appropriate money to fund qualifying GESMO full participants. It is for Congress to determine whether the public interest warrants this expenditure of public funds. From the Commission's perspective an appropriation is justified. Accordingly, we will propose and support at the commencement of the next session of Congress legislation providing \$200,000 for GESMO funding.

In order to expedite the provision of funding, the process of qualifying for funds will begin before Congress convenes. Eligibility applications for funding, which are described in detail below shall be filed with the Commission by interested GESMO full participants⁸ on or before December 31 1976. By January 10, 1977 any full participant may file with the Commission its support

⁸ This Notice in no way changes the standard set forth in the Commission's January 6 Notice as to who may qualify as a GESMO full participant. See 41 Fed. Reg. 1133, 1134, ¶ 3(c). In particular, the fact that financial assistance is now available may not be a factor in granting or denying a late-filed petition for full participation.

or opposition to such applications.⁹ Thereafter the Commission will issue its decision as to which participants are eligible. After the hearings on all aspects of GESMO (including safeguards) are concluded, eligible participants will submit to the Commission a thorough, itemized accounting of actual costs for which they believe reimbursement is appropriate.¹⁰ The Commission, after consultation with the hearing board, and subject to the authorization and appropriation of funds by Congress, will award compensation based upon its assessment of the participants' responsible contribution to the full development of the record.¹¹

Several points should be noted concerning this procedure. It is not intended to impact in any way on the schedule for GESMO hearings.¹² The preparation of eligibility applications is a necessary burden on those who seek funding. The assessment of these applications will be performed by the Commission, freeing the Hearing Board to devote full attention to the hearings.

We are aware, of course, that the GESMO hearing process has begun and accordingly groups with limited resources have not had the advantage of a funding system in place at the outset of a proceeding. But the GESMO process is far from over, and no group contends that it is too late to set up a meaningful funding system. For example, one advantage of an in-place funding program is that it aids planning by eligible parties. If Congress promptly appropriates money for GESMO participants, planning on that basis may well be possible for the safeguards portion of the GESMO hearing, which, with its broad domestic and international ramifications, is a particularly important step in the GESMO process.

In addition to congressional approval, a key step in our GESMO funding plan is the participant's eligibility application. In determining who shall be eligible for financial assistance the Commission has carefully considered the Boasberg

⁹One commenter on the NRDC interim funding petition—the Westinghouse Corporation—asked for the opportunity to comment on the specifics of any funding rules proposed. This ten-day comment period will enable participants to respond to specific requests. We note, however, that the public participation on both the generic and interim funding petitions afforded an opportunity utilized by many to discuss the pros and cons of various funding schemes. Those public comments have been considered by the Commission in developing the procedures stated in this Notice.

¹⁰The precise format for this submission will be published by the Commission at a later date.

¹¹This procedure is consistent with that suggested in the NRDC interim funding petition. The NRDC petition states at p. 2, note 1.

In lieu of providing for payments in advance of hearings the Commission should allow parties to now qualify for such assistance based upon an appropriate showing of need for financial assistance and to be eligible for such assistance after conclusion of the hearing based upon an assessment of the contribution of their participation to a full development of the record.

Accordingly the Sierra Club's motion, docketed November 1, 1976, asking that the GESMO hearing be rescheduled until funding applications are submitted, is denied.

study the comments on the generic and interim petitions, and the statutes and regulations of the Federal Trade Commission, which provides funding pursuant to express statutory authority See 5 U.S.C. 57a. The central principle the Commission will apply in determining eligibility is that qualification for financial assistance shall be determined on the basis of ability to aid materially in the development of the GESMO record and inability to participate effectively in GESMO without funding. Compensation, based on a determination of responsible contribution to the record of the proceeding, would be provided for reasonable expert witness and attorney's fees, and other costs of participation. The Commission believes that any full participant, regardless of its point of view should have a fair chance to receive assistance.

The question is not which side a participant takes, but rather whether it has made a contribution and whether, and to what extent, it needed funding to make that contribution effective. Accordingly eligibility applications shall contain the following information:

1) A description of the participant, including full name and address. When the participant is other than an individual, this description shall include the organization or instrumentality's general purposes, structure, and tax status.

2) A brief description of what distinctive contribution the participant hopes to make to the GESMO proceeding, with reference to possible overlap with the likely contributions of other participants. This description should include a general outline of how financial assistance would be utilized.

3) A full description of the participant's financial status, including assets and liabilities, sources of income, and current budgetary obligations. This description should include a discussion of what funds are currently available for GESMO and what efforts have been made to obtain additional funding for GESMO, both from inside and outside the participating organization.

Eligibility applications should be accompanied by appropriate affidavits affirming the truth and completeness of the information contained therein. Thorough, informative eligibility applications will greatly enhance the Commission's ability to determine that a given participant is deserving of funding.

Procedural Cost Reductions

Participants in the proceedings of any agency are subject to certain procedural costs which inevitably divert funds from substantive presentations. In all but the most informal proceedings, full participants must serve their filings on all other full participants, an obligation which imposes substantial reproduction and mailing costs. Copies of transcripts must be purchased if the participant desires an up-to-date written record of what has transpired. In some cases, security clearances must be obtained at a significant cost to the participant if one is to fully participate in a hearing. And, in virtually all cases, documents concerning

the agency's proposed action must be obtained and studied, consistent with the Freedom of Information Act.

In regard to these matters, the Comptroller General found, and we agree, that "nothing prevents the Commission from simplifying procedures and eliminating unnecessary or unduly burdensome requirements which increase the cost to parties" of participating in our proceedings. B-92288 at 9 Thus, in regard to our statutory authority reducing procedural cost burdens stands on a wholly different footing than direct financial assistance to participants. Moreover, the appropriate division of functions between an agency and Congress also supports the view that procedural requirements should be handled by the agency We are not directly confronted here with broad social questions concerning which private points of view should be supported with taxpayer's monies. We are, rather, concerned with making agency processes accessible, so that private groups can effectively utilize their resources. Of course, if the agency assumes procedural costs for some participants, taxpayer's money is involved. The same is true when an agency provides a free public document room, which can be used by those who cannot afford to obtain information elsewhere. Common sense dictates that an agency is in the best position to minimize the procedural burdens of participation in its processes. Congress cannot be expected to have the detailed knowledge of agency practice and procedure required for this task. Congress, on the other hand, is equipped in practice and as a matter of democratic theory to decide which groups, if any are entitled to have their substantive presentations substantially underwritten by the taxpayers.

In the past, the NRC has taken steps to minimize the burdens of participating in its processes. When possible, service lists are consolidated to reduce the number of required copies. The GESMO participants and hearing board have recently made admirable efforts in this regard. NRC policy also results in transcripts being available to participants at moderate cost. We also make considerable effort to provide the public with documents concerning agency action in the Public Document Room and elsewhere. Both the Boasberg study and the Comptroller General's opinion note that, in the NRC, public participants receive copies of all documents related to a particular facility simultaneously with their receipt by the staff and other parties.

Nevertheless, we recognize, as did the Boasberg study that more can be done. The importance of GESMO and the unusually large number of participants has led us to reduce further certain of these burdens associated with participation in agency activities. Three areas are appropriate for such action. First, there is the matter of service. The high level of public participation in GESMO has made this an unusual burden. The number of entries on the service list currently stands at 57 making service of papers a major undertaking. Accordingly for those full participants whose eligibility applications are granted by the Commission, service may be performed by the filing of a single original addressed to

Kathleen M. Mason, Special Assistant for GESMO, Office of the Secretary U.S. Nuclear Regulatory Commission, Washington, DC, 20555. The Commission has no reason to believe this privilege will be abused by the filing of frivolous documents, but retains the power to reassess this policy in the highly unlikely event such abuse should occur.

The second area where the Commission will take action concerns transcripts. At present, transcripts of a day's hearing are available the next morning. The one copy placed in the Public Document Room for reading or photocopying, given the large number of participants in GESMO and the necessity that they prepare promptly and fully for the hearings, may be insufficient to supply the needs of those unable to purchase their own copies. Accordingly each full participant whose eligibility application is granted will be provided a single copy of the transcript every morning after a hearing is held.

Finally because the safeguards portion of the GESMO hearing may involve classified data, the Commission will soon be publishing rules governing access to such data. These rules will provide that under certain circumstances full participants may have access to classified data if they have obtained the appropriate security clearance. In order to insure that the cost to participants of such a clearance does not deter otherwise qualified individuals from participating in portions of the hearing, this cost will be waived for one representative for each full participant whose eligibility application is granted.

We realize, of course, that measures such as these need not be limited to GESMO. Service and transcript costs can be substantial in ordinary licensing and rulemaking proceedings. Finally in the rare cases, such as GESMO, where they may be required, security clearance costs can add still another financial burden. The substantial question for us is how much similar changes would cost if made generally in our proceedings, and whether budgetary support is available for these costs. What is now required is an assessment of those constraints. We are directing our staff to undertake a detailed study of them and to determine precisely what measures are available to use for reducing procedural costs. The results of that study will be published as soon as they are available.

Samuel J. Chilk
Secretary of the Commission

Dated at Washington, D. C.
this 12th day of November, 1976.

Separate Views of Commissioner Gilinsky

I support my colleagues decision to seek funds from the Congress to support some participants in our GESMO proceedings, and to take prompt steps within

our existing authority to alleviate some of the incidental burdens of appearing in Commission proceedings. However, I would go further. The authority we now have, recognized by the Comptroller General, could reach a limited number of cases, and I would exercise it to the fullest. Beyond that, I believe we should be seeking funds and authority from the Congress to provide funds to intervenors, subject to appropriate limitations, across the whole range of our activities, not just for the GESMO proceedings. A fraction of one percent of our annual budget, allocated among those who in fact make important contributions to our licensing and rulemaking proceedings, would be a sound investment in public participation, responsive government, and effective regulation; while I pretend no precise analysis, such money would be as well spent for public protection in the regulation of nuclear power as comparable sums expended in our research, regulatory or administrative programs.

This conclusion in no way reflects discredit on our staff. In the licensing and rulemaking activities, which would be the context for any funding, they are assiduous in their efforts to protect the public interest. For all the talk one hears about the bureaucracy its flaccidity and its subjugation to special interest groups, my experience at this agency is that for the most part its staff understands clearly its public mission, is dedicated to the achievement of that mission, and spends whatever effort is required for the task. As professionals, they often work long hours beyond their compensation to secure the public safety and by reasonable measures of performance they have done so with success.

Funding of interventions is desirable, in my view because it will likely tend to promote conditions favorable to this attitude and this effectiveness. In particular, funding during the public stages of Commission proceedings will help to keep our staff on guard during earlier, less formal stages of our proceedings, and at the same time promote a full airing of controversy during the public stages of our regulatory process. Whether in licensing or in rulemaking, the nature of our process is such as to encourage our staff, after careful review of relevant factors, to develop a particular point of view by the time public stages are reached and to become "advocates" for this emergent position. Thus, licensing hearings are preceded by two to three years of staff-applicant discussions regarding the facility in question; during this time, our staff may and does, take strong positions with the applicant regarding safety measures which it wishes to see in place. The public hearing, however, comes after a resolution of these points has been obtained; by this time, the application has been modified, as needed, to the point that our staff is satisfied that issuance of the desired license would be consistent with our statutory mandate,¹ and as a result the staff appears at

¹To be sure there are instances where differences remain between staff and applicant on various discrete issues, but the application cannot advance to the hearing phase until accord has been reached on the great preponderance of safety issues.

hearing in support of the issuance of the license, a posture comparable to the applicant's. The public hearing will rarely see party dispute over the license application unless that dispute is raised by some third party or intervenor.

Similarly in rulemaking the staff does not generally publish a proposal for comment, or submit it to an oral hearing process until the proposal and any underlying documentation have been submitted to the most rigorous internal study and review. Inevitably in these instances, the staff becomes, broadly speaking, a proponent both of the rule and of the view of underlying circumstances thought to support it. While every effort is made to be objective, and minds change, once the proposal has become public serious challenge is more likely to come from external than internal sources.

I find nothing objectionable in the advocacy role our staff thus, and naturally assumes with regard to safety matters. As already remarked, my experience as a Commissioner has been that they do the work which precedes it with devotion to their responsibilities of public protection. The question, rather is one of public policy whether it serves the public interest to take steps likely to promote testing of proposed Commission actions in an adversary context during the public portions of our procedures. I believe it does.

One could take the view of the Commission's public procedures that they serve as a useful vehicle for education of concerned members of the public and for enhancing public acceptance of proposed Commission actions, as an opportunity to confirm the correctness of the staff's work, or as a necessary safety valve, but that they are not essential to produce safe plants or effective, well supported rules. It is quite possible that Congress so viewed the matter when first it established our procedures.

Even on this theory the participation of outsiders in the Commission's hearings and rulemakings assists the effectiveness of its procedures. Our staff is human. The discussion process which precedes staff acceptance of an application and support of it at licensing hearings is intense and highpressured; the analysis which precedes issuance of proposed rules and back-up documentation can be equally so. It is useful that the members of our staff in engaging in these processes, processes in which license applicants and manufacturers understandably and properly make known their strongly held views, know that the outcome will be tested in a public forum.

But, more important, my own experience as a Commissioner, time and again, has been that external intervention has provided the impetus for necessary Commission action, by creating an urgency or suggesting a perspective on issues which would otherwise have been lacking. We cannot, in other words, afford to be neutral about whether participants other than applicants and their industrial suppliers appear in our proceedings. For our proceedings to serve the important public functions which, in my view they now have, there must in many instances, be adversaries present, adversaries capable in terms of their resources

of testing the staff's particularized, publicly taken position from an "outsider's" perspective. This is not to suggest that intervention is necessarily desirable in all, or even most, instances. But in that circumscribed class of cases where outside groups or individuals view their interests to be so seriously threatened by Commission action (or inaction) as to require intervention, the history of this Commission suggests that our decisionmaking, and, hence, the protection of the public health and safety will not infrequently be enhanced by the tension introduced through such intervenor participation.

Of course, it does not follow from the general desirability of having adversaries present in such cases, that such adversaries must be supported by the public purse. Our traditions have been otherwise. And, in general, the level of adversary participation in Commission proceedings is already high. Nonetheless the benefit, as I have explained it, of outsider participation in our licensing hearings and rulemaking activities suggests to me that there could be cases in which the standard set down by the Comptroller General for exercise of our present authority could be met. Accordingly I would view participation of some parties in some proceedings as essential.

Indeed the statutes under which we act support this view. In the rulemaking context, for example, the Commission is required to solicit the views of the interested public before making its decision, notwithstanding what may have been the most thorough analysis by our staff. In this setting one can well imagine a member of the affected public being unable to present his views adequately to the Commission at a rulemaking hearing for lack of funds. Were his position not represented by other public participants and were the issues he raised ones of moment, I believe, it could well be essential to provide him funds so as to insure his effective participation; not to do so would partially undermine the very purpose of this phase of the rulemaking process—the receipt of the broad range of views held by the public—and could, thereby affect the Commission's ability to reach the required determination.

In the context of reactor licensing proceedings, the Atomic Energy Act provides that the Commission permit parties whose interests may be affected to present their views to the Commission through the hearing process—irrespective of the quality of the staff's efforts theretofore. Where an intervenor, be it an environmental group or a local dairy farmer, with the requisite interest seeks to be heard, the Atomic Energy Act tells us our decisional record is not complete until we have listened and, as in the rulemaking context, when such an intervenor raises important questions but lack of funds prevents adequate presentation of the intervenor point of view our ability to reach the required determination as set out by statute, may suffer.

In view of these notable avenues for public participation embodied in the Atomic Energy and Administrative Procedure Acts, not to mention the Commission's discretionary solicitation of public views in the past, I am surprised that my colleagues are unwilling to leave the door ajar even to the extent of the

Comptroller General's ruling and cannot envision circumstances under which public participation could be essential to our decisional process.² In my view the only question is whether a would-be, needy party to a particular proceeding could bring itself within this standard.

I disagree with my colleagues in that I would establish procedures, today by which would-be participants could attempt to meet the standards set out in the Comptroller General's letter and thus qualify for financial assistance. Thus, I believe we should be directing our staff to prepare a rule embodying those standards under which application could be made to a hearing board, or in the case of rulemaking to the Commission, for an order establishing funding eligibility³

I also disagree with my colleagues' assessment of the need for legislation in this area. They are willing to recommend only funding of the GESMO enterprise, which they regard as singular, and see no need for funded participation by outsiders in our other public proceedings. I have already explained the basis on which I conclude that such a need is present. One way for the Congress to reflect that conclusion would be for it to adopt a funding standard less forbidding than that found in present law by the Comptroller General, for example, permitting the NRC to fund participants whose participation appeared substantially likely to, or in fact had proved to, contribute significantly to the conduct of a given proceeding. I would welcome such a statute and the appropriation of the funds necessary for the enterprise.⁴

²With respect to enforcement proceedings, funding may also be essential in appropriate, albeit rare, instances and I would not rule it out. History teaches that intervenors have been instrumental in a number of instances in bringing to light matters leading to enforcement proceedings and that the role of intervenors in such proceedings, once commenced, can be substantial, especially where novel issues are concerned. Indeed the Commission has said as much. In our November 12, 1976, opinion on Virginia Electric Power's North Anna power stations (CLI-76-22 at 487) the Commission noted that the intervenor had "obviously played a key role" in the proceeding, and went on to adopt an interpretation of the term "material false statement," 42 U.S.C. Sec. 2236 which only this party had advanced before the licensing and appeals boards.

³Details for administration of funding once eligibility had been established, should in my view generally follow the pattern suggested by the majority's view, with a limited, pre-established pool of funds, distributed after the hearing on the basis of a retrospective assessment of contribution. Post-hearing payments permit desirable discipline in the expenditure of funds by groups which, if local in character, may lack the incentive of wishing by responsible behavior to commend themselves for additional funding on subsequent projects. Nonetheless, a genuinely indigent participant may encounter difficulty in persuading experts or others to do work on its behalf, against the contingency that funds might later be refused for some reason. Whether by progress payments, occasional waiver, or some other technique, the Commission should make available some outlet for earlier payment in those few cases where the circumstances so require.

As for the question of intervenor funding causing undue delay in our proceedings, under the Comptroller General's test, if fairly applied, funds could be extended to inter-

continued on next page

The principal question Congress will have to face in this regard is one already suggested: outsiders already appear in our proceedings in substantial number, supported by the private and philanthropic funds we usually look to in this society for such enterprises; granted the need for participation, is there a need for public funds? This is not an issue I can pretend to decide, but some comparisons are instructive. A utility may spend upwards of a half million dollars in processing a single application before the NRC; our staff, an amount which is lower, but not by orders of magnitude. We conduct many such proceedings each year, aside from numerous rulemaking proceedings. According to the excellent study recently published by the Council for Public Interest Law the funding available for "public interest" representation concerning environmental/safety policy issues of all types is approximately \$8 million. "Balancing the Scales of Justice: Financing Public Interest Law in America" (1976) p. 95 Important as the nuclear power issue is, funds available for our proceedings, as distinct from those of the EPA, DOT Corps of Engineers, and other state and federal agencies, are unlikely to be more than 10 percent of the total. Even a doubling of this amount spent to assure needed public participation in our proceedings would entail a lesser expenditure than the \$1 million in public funds appropriated to support consumer interests in the FTC.

Finally as the Boasberg study itself notes, the high level of outside participation in our licensing proceedings may be somewhat misleading, as it has tended in recent years to focus on environmental issues rather than the safety questions central to our regulation, and usually proceeds by cross-examination of others' witnesses rather than presentation of an independent case. These characteristics are readily traced to a lack of funds, and while they might not necessarily be remedied by provision of funds efforts could be made to see that they were.⁵ If the effect of funding is to permit injection of a wider variety of expert views, and public testing of safety judgments, needed participation will have been secured even if additional parties do not come forward.

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vening parties only in those instances where the issues they sought to pursue were so vital to the public health and safety as to make their further investigation "essential" to our decision making process. In such a case, any attendant "delay" would surely be warranted in the interest of public health and safety and could hardly be viewed as a cost weighing against funding. The same would be true under a more liberal funding standard implemented pursuant to a Congressional mandate: if presentation of an intervenor's views had made such a contribution to the particular proceeding as to merit public reimbursement, then surely the time taken for the Commission to receive such views would have been well spent, and any cost attributable to delay would have been outweighed by the benefit to our decision making.

A congressional statute, or Commission action implementing new authority might well favor or be limited to funding of expert assistance, or funding of presentations concerning Atomic Energy Act (as distinct from NEPA) issues.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-24

COMMISSIONERS:

Marcus A. Rowden, Chairman
Edward A. Mason
Victor Gilinsky

In the Matter of

Docket Nos. 50-443
50-444

**PUBLIC SERVICE COMPANY OF
NEW HAMPSHIRE, et al.**

(Seabrook Station, Units 1 and 2)

November 17 1976

The Commission declines to review ALAB-356 but notes that such action is taken without prejudice to any renewed motion for a stay which might be based on the recent decision of the Environmental Protection Agency regarding this facility

ORDER

On November 8, 1976, the Atomic Safety and Licensing Appeal Board denied, after reconsideration, a motion for a stay of construction at the Seabrook site. ALAB-356, NRCI-76/11 525 (November 8, 1976). The Appeal Board's reconsideration of its earlier denial of a stay ALAB-338, NRCI-76/7 10 (July 14, 1976), was prompted in part by an order of the United States Court of Appeals for the First Circuit granting the Appeal Board leave to reconsider ALAB-338 and in part by the Board's agreement with the court that there was room to explore in greater depth the environmental impact of construction. Upon reconsideration and after hearing from the parties, the Appeal Board again concluded that it lacked a basis for staying the construction.

On November 9 1976, the day after the decision in ALAB-356, the Regional Administrator for Region I of the Environmental Protection Agency issued an 80-page "Initial Decision" which affects the Seabrook facility. The decision concerns preliminary determinations of terms and conditions of a National Pollutant Discharge Elimination System permit the applicant sought from EPA. The Regional Administrator's opinion has been stayed pending EPA review.

The Commission will not review the Appeal Board's decision in ALAB-356. The record as further developed on the issues addressed in that decision and the Appeal Board's disposition of them are available for the court's consideration in

connection with the application for a stay pending before it on similar grounds.

We note this action in order to indicate that it is taken without prejudice to any renewed motion for stay which might be based on EPA's decision in this matter. In our view, the pendency of ALAB-338 and ALAB-356 before the court of appeals would not disable the Appeal Board from entertaining such a motion or from calling, *sua sponte*, for discussion by the parties of the impact of the decision should that course appear desirable. In either event, of course, the balance of factors bearing on the stay issue would be struck anew

It is so ORDERED.

By the Commission

Samuel J Chilk
Secretary of the Commission

Dated at Washington, D.C.
this 17th day of November, 1976.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-356

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. John H. Buck
Michael C. Farrar

In the Matter of

Docket Nos. 50-443
50-444

**PUBLIC SERVICE COMPANY OF
NEW HAMPSHIRE et. al.**

(Seabrook Station, Units 1 and 2)

Upon reconsideration of ALAB-338, which denied intervenors' request for a stay pending appeal of the Licensing Board's initial decision (LBP-76-26), the Appeal Board rules that (1) its earlier conclusion in ALAB-338 that no demonstration of irreparable injury had been made with regard to archaeological sites or clam flats was not in error; (2) its conclusion in ALAB-349 that no significant adverse impact on wildfowl would occur was also correct; (3) none of the other impacts found to be "significant" in ALAB-349 can be said to threaten substantial and irreparable environmental harm; (4) the alleged impacts resulting from run-off of water from excavations and increased turbidity in adjacent water are capable of being satisfactorily controlled and do not warrant a halt of construction; (5) instrumental monitoring of the temporary settling basin discharge must be conducted; and (6) there is no more reason to conclude that there is a "near certainty" that the intervenors' appeal will succeed on the merits than there was in ALAB-338.

ALAB-338 adhered to.

RULES OF PRACTICE: AFFIDAVITS

In ruling on motions, including ones which request a stay pending appeal, it is appropriate for an Appeal Board to accept relevant affidavits which have not been countered in such manner as to suggest the existence of a genuine issue of fact. 10 CFR 2.730(b); Rule 8, Federal Rules of Appellate Procedure.

**NUCLEAR REGULATORY COMMISSION: ENFORCEMENT OF LICENSE
CONDITIONS**

It is not the Appeal Boards' role to police applicants' compliance with

license conditions; rather, the matter is one for action by the Commission's enforcement branch.

Messrs. John A. Ritscher and Thomas G. Dignan, Jr., and Ms. Eleanor D. Acheson, Boston, Massachusetts, for the applicants, Public Service Company of New Hampshire, et al.

Mr. Robert A. Backus, Manchester, New Hampshire, for the intervenors, Seacoast Anti-Pollution League and Audubon Society of New Hampshire.

Mr. Anthony Z. Roisman, Washington, D.C. for the intervenor, New England Coalition on Nuclear Pollution.

Mr. Donald W. Stever Jr., Assistant Attorney General of New Hampshire, Concord, New Hampshire, for the intervenor, State of New Hampshire.

Mr. Michael W. Graaney for the Nuclear Regulatory Commission staff.

MEMORANDUM AND ORDER

November 8, 1976

In ALAB-350, NRCI-76/10 365 (October 6, 1976), we announced that we were holding in abeyance the motion of the Seacoast Anti-Pollution League and the Audubon Society of New Hampshire to reconsider our denial in July of their request for a stay pending appeal of the Licensing Board's initial decision¹ authorizing the issuance of construction permits for the Seabrook facility ALAB-338, NRCI-76/7 10 (July 14, 1976). Our reason for following that course was that the Court of Appeals for the First Circuit had before it a petition for review of ALAB-338. Without deciding whether that circumstance stripped us of jurisdiction to take a fresh look at the stay question, we concluded on the basis of "considerations of comity between court and agency" that it was appropriate to await action by the court of appeals. In this connection, we noted that the First Circuit could, if it so desired, remand ALAB-338 to us for reconsideration.

Two days after the issuance of ALAB-350, the First Circuit entered an order in which it granted leave to this Board "to entertain the motion for reconsideration of its denial of a stay [*i.e.*, ALAB-338] and to conduct such proceedings as

LBP-76-26, NRCI-76/6 857 (June 29 1976).

it deems fit in any such reconsideration.” *Audubon Society of New Hampshire, et al. v. United States, et al.* (No. 76-1347 October 8, 1976). The court’s order went on to provide that

If the Board chooses not to act on the motion for reconsideration by October 19 1976, this court shall then issue its decision. If the Board does decide to reconsider, this court shall await the Board’s decision and then take appropriate action.

In an accompanying opinion, Chief Judge Coffin explained the basis of the order. As will be discussed in greater detail below a principal consideration was the court’s concern respecting one asserted environmental impact of early construction activities and its doubt whether the portions of the administrative record placed before it were sufficient to enable a fully informed decision on that matter.

By order of October 13, 1976, we granted the motion for reconsideration of ALAB-338. As also will be more extensively developed later in this opinion, this step was not motivated by a belief that the motion of itself provided warrant for reexamining the stay question; to the contrary the motion appeared to us to be patently inadequate. What influenced us instead was agreement with the First Circuit that there was room for exploring in greater depth the environmental impact of construction focused upon in Judge Coffin’s opinion. To be sure, that impact had not even been alluded to—explicitly or implicitly—in SAPL-Audubon’s original motion for a *pendente lite* stay denied in ALAB-338. Nor, indeed, had it been specifically addressed in the motion for reconsideration. Nonetheless, in view of the court’s concern regarding it, there appeared to us to be good reason why we should undertake the additional exploration without regard to the technical nicety of whether at any time it had been properly raised before us.

We have now made that exploration, aided to some degree by affidavits and inspection reports furnished to us by the parties. Moreover, we have evaluated anew all of the other factors relevant to the ultimate question whether construction should be allowed to continue during the pendency of the appeals from the initial decision. For the reasons hereinafter set forth, we conclude that the result reached in ALAB-338 should not be disturbed.

I

A. SAPL-Audubon’s original stay motion was denied for the reason that those movants had not made “a clear and convincing showing that early construction activities will cause substantial and irreparable environmental harm.” We thought that such a showing was a necessary prerequisite to the award of the sought relief in view of “our inability to say at this juncture that there is a high

probability that the Licensing Board's result [i.e., the authorization of the construction permits for the Seabrook facility] will not stand." NRCI-76/7 at 18-19 (footnotes omitted).²

Our conclusion on the question of the magnitude and irreparability of potential environmental damage flowed from an analysis of the specific claims advanced in the moving papers. In this connection, we examined and rejected the SAPL-Audubon insistence, *inter alia*, that serious irreparable harm would stem from the excavation of areas containing archaeological sites and the alleged destruction of clam flats in the course of construction of a barge unloading and offshore service facility NRCI-76/7 at 15-17

Both the archaeological site and clam flat destruction issues had been raised before, and decided adversely to SAPL-Audubon by the Licensing Board. Pars. 98-99 and 175 of the initial decision, NRCI-76/6 at 883, 897 In addition, that Board had been called upon by SAPL-Audubon to consider two other asserted environmental impacts of construction: (1) wildfowl disturbance; and (2) run-off of water from the site causing increased turbidity in adjacent waters. These issues were similarly resolved against SAPL-Audubon in the initial decision (Pars. 100-104 and 138-146, NRCI-76/6 at 883-84, 891-92). They were, however, not renewed in the motion for a stay pending appeal; i.e., SAPL-Audubon made no mention of either wildfowl disturbance or construction water run-off and turbidity in urging that plant construction would occasion irreparable environmental damage. We noted that fact in ALAB-338 by way of explanation why we had not dealt with those matters in considering the irreparable injury question. NRCI-76/7 at 17-18, fn. 14.

The motion for reconsideration of ALAB-338, filed on August 31, 1976, similarly is devoid of any direct reference to either wildfowl disturbance or construction water run-off or turbidity All that the motion tells us is that the SAPL-Audubon brief on the merits of the appeal provides

* * * additional information from the record below, establishing the existence of irreparable harm from the construction activities. In particular, this information will concern the fact that the early phases of construction activity are now taking place in the late summer and fall, instead of the spring, and that the rescheduled final construction effort poses the threat of irremedial harm to the environment.

That brief, filed in early September and some 200 pages in total length, does contain a cursory discussion (at p. 138) of an "increase in turbidity due to altered run off patterns, increased run off, and erosion during the first six months of construction." And there is also to be found therein a passing refer-

As our opinion made clear, we were applying to the motion the well-settled stay criteria enunciated in *Virginia Petroleum Jobbers Association v. Federal Power Commission*, 259 F 2d 921, 925 (D.C. Cir. 1958).

ence (at pp. 136-37) to the asserted failure of the staff's environmental review to consider the disruptive effect that "major blasting and excavation" taking place during the winter might have upon migratory wildfowl then resident in the neighboring Hampton-Seabrook marsh. We entertain considerable doubt, however, respecting our obligation to comb a prolix brief in search of something which might lend support to an unparticularized claim of threatened irreparable injury advanced in connection with a separate and discrete stay application. Be that as it may standing alone neither of the passages in the brief to which we can only assume SAPL-Audubon intended to direct our specific attention is enough to demonstrate that the conclusion reached in ALAB-338 on the irreparable injury question was in error.³

B. It appears from the First Circuit's October 8 order that, in seeking judicial review of ALAB-338, SAPL-Audubon did what was not done in any of their stay papers filed with us. In the words of the court, those parties "specified four areas of alleged irreparable harm: damage to archaeological sites, clam flats, wildfowl, and damage resulting from run off of water from excavations and increased turbidity in adjacent waters." With respect to the first three, the court noted its "tentative conclusion that the record—or at least that part of the record of which we are aware—does not support a finding of such damage as would justify a stay." The court went on, however, to observe that, "[a]s to the fourth, the issue concerning construction water run off and turbidity this is more difficult to resolve." In elaboration, the court stated:

* * * Presently no settling basins have been constructed to control the water on the site. At the hearing, Public Service Company's attorney made representations about the current efforts to control the water. He described how the water uncovered during excavation is pumped from construction hole to hole, and when there are no longer empty holes available, the water is pumped into the ground where hay bales absorb some of the water and filter out much of the mud before this ground water moves onto neighboring land. Counsel also claimed that employees walk the site checking the hay bales and looking for alluvium on the marsh, the first sign of excessive runoff. If the bales are saturated, we were assured that they are immediately replaced. Finally he alleged that in clearing the site, a fringe of trees is retained, which absorbs ground water, providing a barrier to water going into neighboring areas. Although we have no reason to doubt these representations, we have been unable to find this kind of assurance in the transcript material provided to us.

Therefore, to determine whether there has been a showing of irreparable harm, we would have to focus on the length of the period that will transpire

³ See, *infra*, pp. 530-531, 535-540.

before the settling basins are completed. We have accepted, without objection from any party the construction schedule (Exhibit A to Geckler Affidavit). We note that, of the 39 items to have been begun or accomplished in July and August, only 19 seem to have been begun or completed. Most particularly the construction of the temporary settling basin for storm water runoff, scheduled for July has not been commenced; and construction of the permanent settling basin, scheduled for September, had not been begun as of August 30. The excavation for the permanent basin, a necessary precursor to its construction, had been begun, but not completed as of that date. We are told that matters are proceeding "fairly normally" If this is so, then normalcy means substantial slippage.

All this would have left us feeling ambivalent. On the one hand there is no support in the record for saying that Public Service's efforts will not prevent an increase in the turbidity of the Browns River or that, if increased, it would cause irreparable harm to estuarian life. On the other hand, we know that New Hampshire law permits a turbidity rating for the discharge of only 10 JTUs;² that in the period before the basins are constructed there will be a large out-flow of water from both precipitation and "dewatering" of excavations and tunnels; and that the final environmental statement was based on the assumption that 25 JTU turbidity was permitted.³ Although we can conceive of the possibility that two large settling basins and a drainage system may be adequate for the plant in operation, we are not convinced that in the now prolonged interim construction period measures have been adopted which are reasonably certain to avoid violation of the New Hampshire law or long lasting damage to the estuary

A JTU or Jackson Turbidity Unit "is a comparison of the intensity of light scattered by the sample under defined conditions with the intensity of light scattered by a standard reference suspension. The higher the intensity of scattering of light, the higher the turbidity." Tr. 10774.

³Section 4.1.1., page 4-3 of Final Environmental Statement.

Opinion of Chief Judge Coffin, pp. 4-6.

II

A. Insofar as the archaeological site issue is concerned, we have been given no cause to depart from what was said in ALAB-338, NRCI-76/7 at 15-17 For its part, wildfowl disturbance was considered by us in a recent decision in this same proceeding which involved a motion by a different party to suspend construction activities for other reasons. ALAB-349 NRCI-76/9 235 (September 30, 1976), *vacated*, CLI-76-17, NRCI-76/11 451 (November 5 1976). We there expressed the belief that, although the noise occasioned by construction

activities “stands to affect the wildfowl which frequent the [immediate vicinity of the site] during the winter,” nonetheless it could be presumed that “any disturbed birds will be able to find suitable resting areas nearby ” For this reason, we declined to find significant adverse environmental impact, let alone irreparable injury to be associated with wildfowl disturbance. *Id.* at 257 fn. 45 We adhere to that analysis. There is not the slightest indication in the record that the birds would be harmed in any material way by or as a consequence of, the construction noise; indeed, we do not understand SAPL-Audubon to claim anything other than that the birds would be “disturbed.” Surely it takes a great deal more than that to justify a stay of construction on the basis of irreparable injury

B. Turning to the clam flat issue, we had noted in ALAB-338 that the evidence disclosed that the intertidal area to be occupied by the barge landing was not a clam flat; and further that the clams in that area were at “a very low density ” NRCI-76/7 at 17 The First Circuit’s order calls attention to our later observation in ALAB-349 that the record also revealed that the applicants might obtain the fill needed for the barge landing by dredging in an area in which some clam flats were located and that, if they did so, those flats might be destroyed. NRCI-76/9 at 255. But we had also there pointed to the applicants’ testimony that dredging was not a necessary source of the required fill (*id.* at fn. 31) and, in connection with the motion for reconsideration of ALAB-338, the applicants have now supplied us with the affidavit of Richard M. Staples which contains (at p. 3) the averment that “as construction progresses it has become apparent that there will be no need to dredge in the area of any clam flat.”⁴ Inasmuch as Mr. Staples is the civil engineer charged with the oversight of “all construction at the site in the area of the civil activities” (affidavit at p. 1), we regard this statement to provide sufficient assurance that such dredging will not occur and that accordingly as matters now stand, no clam flats will be endangered by the construction work connected with the barge landing.

C. What this leaves for consideration is the matter of construction run-off and turbidity ⁵ As previously noted, the concerns expressed in the First Circuit’s

⁴ For reasons to be discussed later in this opinion, and for the limited purposes of the consideration and disposition of the stay motion now before us, we have permitted the applicants to supplement the record by the submission of affidavits.

⁵ We have reviewed again the other environmental impacts of early construction activities which were discussed in ALAB-349 and which a majority of this Board there concluded to be “significant.” In our judgment, none of those impacts can be said to threaten substantial and irreparable environmental harm. In this connection, we stressed in ALAB-349 the difference between the environmental injury standard which governed the suspension motion there under consideration and that which is to be applied to the SAPL-Audubon stay motion. NRCI-76/9 at 253. We also emphasized the different allocation of the burden of proof. Here, unlike in ALAB-349, the movants must assume that burden. *Id.* at 246-47

continued on next page

October 8 order have prompted us to look into that matter with particular care notwithstanding the failure of SAPL-Audubon to fulfill their affirmative duty of demonstrating irreparable environmental damage.

1 In the wake of the First Circuit's October 8 order, the applicants furnished us with nine affidavits, as well as two site inspection reports prepared, respectively by the New Hampshire Water Supply and Pollution Control Commission and the Office of Inspection and Enforcement of our own Commission. The submission was accompanied by a motion for leave to supplement the record with these documents. Our October 13 order granting the SAPL-Audubon petition for reconsideration of ALAB-338 referred to the submission and motion and called for a response thereto. We indicated that the response should set forth (1) any objection which SAPL-Audubon⁶ might have to the grant of the applicants' motion; and (2) "with particularity and by affidavit or other appropriate means, those assertions in the applicants' materials (if any) as to which it is claimed that there is a genuine issue of material fact."⁷ Additionally the order instructed the applicants to file and serve affidavits addressed to certain specific questions posed by us with regard to instrumental turbidity monitoring.⁸

continued from previous page

We need add only that it may be, as SAPL-Audubon asserts in seeking reconsideration of ALAB-338, that the 20 hour per day construction schedule (4:00 a.m. to midnight) put into effect by the applicants has caused "serious disruption to the community." It appears, however, from the newspaper articles to which SAPL-Audubon have referred us that there likely are remedies available to area residents under local law if, in fact, the work at night gives rise to a nuisance which should be abated. There appears to be no good reason why the residents should not be left to the pursuit of those remedies.

⁶ Although directing a response only from SAPL-Audubon, the order indicated that "[a]ny other party to the proceeding" might also respond if it so desired.

⁷ In a footnote, we noted that

In normal circumstances, we would not call upon SAPL-Audubon to counter the content of the applicants' proposed supplemental materials in advance of our action on the motion for leave to file those materials. In this instance, however, the obvious need for expedition warrants the procedure which we are following.

⁸ Those questions were:

Whether, since the inception of construction activities, the applicants have conducted instrumental monitoring of any water run-off or discharge from the situs of those activities (other than the locale of the proposed barge landing) for the purpose of determining the level of turbidity. If so, when did the monitoring occur, how was it conducted and what were the results obtained therefrom? On what basis was it determined when to monitor or not to monitor? In this connection, are there turbidity monitoring requirements imposed by any governmental body and, if so, what are those requirements?

What instrumental turbidity monitoring of water run-off or discharge from the situs of construction activities will the applicants conduct in the future—either as a matter of governmental requirement or on their own volition?

Both SAPL-Audubon and the applicants timely complied with the terms of the October 13 order. We have also received the views of certain of the other parties with regard to the applicants' *sua sponte* submission and the material later supplied to us at our request. Upon full consideration of all of these filings, we conclude that it is appropriate to accept for the limited purpose of aiding our disposition of the matter now before us (*i.e.*, the SAPL-Audubon stay motion) so much of the supplemental documentation (including affidavits tendered by SAPL-Audubon) as (1) bears upon the turbidity issue and (2) has not been countered in such manner as to suggest the existence of a genuine issue of material fact.⁹

It is, of course, familiar practice in the federal appellate courts to accept affidavits in support of or in opposition to motions for a stay pending appeal. Indeed, that practice now finds firm foundation in Rule 8 of the Federal Rules of Appellate Procedure, which expressly provides that such a motion shall "show the reasons for the relief requested and the facts relied upon, *and if the facts are subject to dispute the motion shall be supported by affidavits or other sworn statements or copies thereof*" (emphasis supplied). Although the Commission's Rules of Practice do not contain a specific counterpart to FRAP 8, its general rule dealing with motions states they shall be accompanied "by any affidavits or other evidence relied on * * *" 10 CFR 2.730(b).

The warrant for the practice seems clear enough. To begin with, it will often be the case that the entitlement or non-entitlement to *pendente lite* stay relief will hinge upon facts which are not fully illumed in the evidentiary record adduced below. Indeed, not infrequently pivotal importance will attach to developments which have occurred subsequent to the closing of that record and the rendition of the decision of the trial tribunal under appeal. That well may be true here insofar as the turbidity question is concerned. Certainly whether (and if so to what extent) construction activities have caused, or might be expected to cause, injurious turbidity can be more readily judged if it is known what the applicants are actually doing to obviate the problem and with what results. In this connection, the First Circuit's October 8 order took particular note of the representations of applicants' counsel "about the current efforts to control the water"—adding, however, that these representations seemingly were without record foundation. See p. 529 *supra*.

The function served by affidavits is, of course, to establish those germane

⁹ In this regard, we shall not consider at all the applicants' supplemental affidavits to the extent that they are addressed not to any matter now before us but rather to observations which we made in ALAB-349, *supra*. Although that decision was rendered in this proceeding, it dealt in large measure with questions unrelated to those here and we are not called upon at this juncture to take any further action on those questions.

facts as to which there is no genuine dispute, as well as to bring to the attention of the tribunal the areas in which there are real factual issues which properly can be resolved only following an evidentiary hearing. As valuable as this mechanism may be on the trial level in terms of sifting out the issues which are susceptible of summary disposition, its availability in connection with the consideration of motions such as the one at bar is crucial. For one thing, appellate tribunals are not that well-equipped to lay the other matters on their dockets aside to conduct evidentiary hearings. Moreover, there is usually if not invariably a need for expeditious resolution of *pendente lite* stay applications. This being so, there is an imperative necessity that, to the extent possible, the pertinent facts not reflected by the record below be developed without resort to additional trial proceedings.

SAPL-Audubon maintain, however, that in this instance an acceptance of the applicants' supplemental affidavits would "work a substantial unfairness." They assert that to "permit a second trial of the issue of construction impacts on the basis of affidavits of this type obviously will favor the side with the overwhelming resources"—*i.e.*, their adversaries. Although no doubt the applicants do possess superior resources, in the circumstances confronting us this assertion is nonetheless unavailing.

As the First Circuit itself observed in its October 8 order (at p. 6), it was the burden of SAPL-Audubon "at this stage of the proceedings to show irreparable harm based on the present record." The court then indicated that it "might have been forced to say that [that] burden has not been met" (*ibid.*). In light of this judicial appraisal (to which we subscribe), it can scarcely be said that the affidavits amount to an endeavor by the applicants either (1) to satisfy some affirmative obligation upon them to disprove the potential for irreparable harm, or (2) to escape the force of revelations in the Licensing Board record which point unmistakably to the presence of that potential. Put another way we do not take the affidavits to constitute, as SAPL-Audubon would have it, an improper use of the applicants' greater resources to retry what has been previously litigated for the purpose of achieving a beneficial result which would or might be foreclosed on the existing record. Rather, we regard the new documentation as essentially an effort to confirm the representations and assurances which applicants' counsel had furnished the First Circuit. In the absence of some basis for questioning their accuracy we perceive no reason why they should not be looked at by us as part of our examination of the turbidity question.

This is not to suggest that we are insensitive to the handicaps under which an underfinanced party must proceed in litigation. These handicaps are real and must certainly be taken into account in assessing the weight that is to be given to submissions of the nature of those which the applicants have put before us. But it would accord with neither our Rules of Practice nor reason to hold that *no* facts can be established by affidavit—*i.e.*, an evidentiary hearing is always re-

quired—unless there is absolute parity among the parties insofar as available resources are concerned.¹⁰

2. As earlier noted, the turbidity question was not raised by SAPL-Audubon in their stay motion to us last July. Rather, the question surfaced in a memorandum later filed with the First Circuit seeking interim stay relief. In essence, their claim to the court was that “[t]here will be uncontrolled rain water and dewatering effluent discharge during the initial six months of excavation and tunneling work (Tr. 10777-78)” and that is “no guarantee” that the legal limitations pertaining to the turbidity of those effluents would be observed.¹¹

At the outset, it must be noted that the cited portion of the record does not suggest that precipitation run-off and dewatering effluents are beyond control; to the contrary what there appears is the recognition of the applicants’ site manager, John H. Herrin, that those waters must be controlled in the period prior to the completion of the settling basins (*i.e.*, the period of particular concern to the court of appeals, see pp. 529-530, *supra*). And, elsewhere in his testimony that witness expressed the view that there are various methods whereby such control can be achieved (Applicants’ Direct Testimony No. 20, foll. Tr. 10767 at pp. 7-8).

SAPL-Audubon did not even endeavor to cross-examine Mr. Herrin on this point. Nor have we been informed by them of any other evidence in the record which might tend to contradict his testimony. In these circumstances, it is not surprising that the most that they could press upon the court of appeals was that there was “no guarantee” that any of those measures would insure that the turbidity level of the precipitation run-off and dewatering effluent entering the Browns River is less than the permissible 10 JTU maximum.

It appears from the papers filed with us subsequent to the court’s October 8 order that SAPL-Audubon still do not maintain that there are no means available to keep turbidity within the limits imposed by both State law and the conditions placed by the Licensing Board on the construction permits. Instead, we interpret the “no guarantee” argument to rest upon SAPL-Audubon’s belief that the applicants cannot be counted upon either to do what is necessary to prevent excessive turbidity or to report accurately to the proper authorities any occurrence of such turbidity.

Licensing boards frequently find themselves called upon to condition construction permits upon the applicant taking those steps required to obviate or minimize a particular form of potential and serious environmental damage.

¹⁰The site inspection reports reflect the observations of NRC and State of New Hampshire personnel during visits conducted on September 15-16 and October 8, 1976, respectively. Although accepting these documents in light of their governmental source, we recognize that, because the inspections were not made available for examination by the parties, limited weight should be given to their content.

Memorandum in Support of Motion to Stay pp. 33, 34.

Underlying such a license condition is the at least implicit assumption that it is possible to achieve that objective. There might nonetheless be a concrete indication in the record that, irrespective of what the applicant might do in an endeavor to fulfill the condition, the damage would be unavoidable. In such circumstances, there might well be occasion for us to lift the permit pending a determination on whether the impact in question is in fact an inescapable consequence and, if so, whether that consideration defeats the facility *i.e.*, tips the NEPA cost/benefit balance against its construction and operation or brings the reactor into a perforce fatal collision with binding demands of federal or state law. But where the matter is not one of inevitability of harm but rather of the extent to which the applicant is carrying out its obligations, the Commission's enforcement arm comes into play.¹² It is in the first instance an enforcement and not an adjudicatory function to make certain that license conditions are being satisfied. If they are not, there are remedies available to the enforcement officials—including the institution of a proceeding to suspend or revoke the permit in question.

For these reasons, we ordinarily restrict ourselves in passing upon stay applications to a consideration of the severity of those environmental impacts which are asserted to be a necessary incident of reactor construction or operation—leaving it to enforcement personnel to insure that an unnecessary or avoidable impact is not incurred because of the applicant's lack of diligence. The unusual circumstances here induce us, however, to go beyond that point and to consider how the applicants plan to keep turbidity within allowable limits and how it is possible to monitor the success of that endeavor.

Ultimately turbidity control is proposed to be achieved by use of the permanent settling basin and its related drainage system. The basin is presently under construction and we are told that the system will be functional by the Spring of 1977.¹³ The principal potential for harm arises in the interim period. Since that period may well coincide with the time it will take us to consider and decide the merits of the several appeals from the initial decision, our focus in considering the request for a stay pending appeal is properly on that period; we need not examine now any question related to the efficacy of the permanent system.

As previously noted, the potential sources of turbid water are two-fold:

²Of course, as we have previously held, an adjudicatory board can take into account an applicant's prior history respecting non-compliance with regulatory requirements. *Duquesne Light Co.* (Beaver Valley Power Station, Unit 2), ALAB-240, 8 AEC 829, 833-34, 839 (1974). No such history is present here.

³Pizzuti affidavit, ¶13. This information is consistent with the testimony at the hearing, which indicated that the settling basin should be operable sometime between the sixth and twelfth month after construction begins. Tr. 10777

precipitation run-off and dewatering effluent. Each brings somewhat different considerations into play and thus we look at them separately

The affidavits furnished to us are silent as to whether construction has proceeded to the point at which there is any significant dewatering taking place. In any event, the applicants tell us that a temporary settling basin, to be used principally for receipt of dewatering effluents, is under construction and will be available "in the near future."¹⁴ As we read the discharge permit which the applicants received from the Environmental Protection Agency last July the instrumental monitoring conditions will come into play once the temporary settling basin is operational.¹⁵ Regardless of whether that reading is correct, we hereby require that instrumental monitoring of discharge from that basin be conducted. If the temporary settling basin, used in conjunction with the system of pumping water from one excavation to another,¹⁶ proves inadequate, steps can be taken to limit future construction activity to that level at which dewatering effluents do not lead to a violation of governing standards.

The situation is considerably different with respect to precipitation run-off. There are, as we see it, no steps that can be taken by way of limiting construction activity that will alleviate the problem caused by the clearing of the site.¹⁷ Whether or not construction proceeds, each rainstorm poses the threat of turbid run-off.

Thus, even if the intervenors could demonstrate that such runoff would lead to irreparable harm, a stay of construction might well not be the appropriate remedy since it would not serve to avoid that harm. Nonetheless, we have examined the materials furnished to us respecting the efficacy of the applicants' efforts to control run-off so as to avoid creating turbid conditions.

Those efforts involve in part the placing of lines of hay bales across drainage paths both to slow the flow of water and to filter out suspended material.¹⁸ According to the applicants, one of their employees, who is charged with the duty of insuring that this runoff-control program is properly implemented,

⁴ Pizzuti affidavit, ¶ 16.

⁵ In response to our inquiry (see p. 532, *supra*), the applicants informed us that they are not now conducting instrumental monitoring. Although they offered no explanation, we surmise it is because it is not possible instrumentally to monitor what are now diffuse sources of run-off into the marsh. Once a specific discharge can be identified, the permit conditions—which by their terms became effective on August 19, 1976—will come into play

¹⁶ Pizzuti affidavit, ¶ 17

⁷ In order to have avoided this problem, then, we would have had to have granted a stay prior to the clearing of the site. But, as we pointed out in ALAB-338, fn. 14 and again in this opinion, SAPL-Audubon did not mention turbidity when the stay motion was first presented to us.

⁸ Pizzuti affidavit, ¶¶ 14-15; Herrin affidavit, ¶ 4. Testimony at the hearing indicated that this approach would be used. Applicants' Direct Testimony No. 20, foll. Tr. 10767, at p. 8.

monitors “what is taking place on the site” on a daily basis (including making a weekly inspection) and sees to it that any bales that become ineffective are replaced and that additional bales are installed where required.¹⁹ As their site manager explains, the bales are changed when they appear visibly clogged with sediment.²⁰ An NRC staff inspector confirmed that the applicants had been using hay bales to minimize the turbidity of effluent water.²¹

Before entering the marsh, run-off is also supposed to be intercepted by the natural fringe of vegetation which was to be retained around the site perimeter.²² More specifically in awarding the construction permits, the Licensing Board required that during construction the applicants “take the necessary mitigating actions” described in Section 4.5 of the FES,²³ which included leaving “[a] 30-ft-wide band of screening vegetation” along the edges of the marsh.²⁴ According to the applicants’ affidavits, they did leave a fringe of vegetation at the border between the uplands and the marsh to filter any suspended material out of the water flowing into the marsh.²⁵

Although an NRC staff inspector has confirmed that “a vegetation band was left along the edges of the marsh * * * ”²⁶ SAPL-Audubon claim that the fringe is “inadequate and, in fact, in some areas does not exist.” In that regard, they have supplied an affidavit from a botanist who, having observed the site on October 20, asserts that the “natural vegetation transition zone * * * has in many conspicuous areas been totally destroyed for the purposes it might have served” for, *inter alia*, turbidity control.²⁷ The affiant claims to have photographic evidence that there are some “large gaps in the fringe,” and that in other places it is “at best one or two scattered trees in depth.”²⁸ In any event, the aerial photograph supplied us by the applicants appears to confirm the intervenors’ claim, and the applicants concede that in some areas “natural vegetation has been removed adjacent to the marsh for construction purposes.”²⁹

It must be again pointed out that it is not our role to police an applicant’s compliance with license conditions. If these applicants have violated the express license condition related to the extent of the fringe of vegetation to be retained,

¹⁹ Staples affidavit, ¶ 3.

²⁰ Herrin affidavit, ¶ 5.

Staff inspection report, p. 5.

²² Pizzuti affidavit, ¶ 15.

²³ NRCI-76/6 at 938.

²⁴ FES, p. 4-13. To be sure, the purpose given for leaving the vegetation was “to reduce visual impacts and noise levels.” As will be seen, however, the applicants are also relying upon the vegetation as a means of turbidity control.

²⁵ Pizzuti, ¶ 10, 15, Herrin, ¶ 3-4.

²⁶ Summary of Findings of September 15-16 inspection, p. 5.

²⁷ Richardson affidavit, ¶ ¶ 6-7

²⁸ *Ibid.*

²⁹ Herrin affidavit, ¶ 4.

the matter is one for action by the Commission's enforcement branch. It has the necessary investigative resources to ascertain whether a violation has occurred and can require the applicants to redress the site or can take even more drastic action. But even if the violation has led to a situation where environmental damage is sure to occur, a stay of construction—which is what we are asked to impose—would not serve to ameliorate that harm during the pendency of the appeals before us.

This leaves for consideration the sharp dispute among the parties concerning the efficacy of the hay bales and the reliability of the applicants' monitoring and reporting efforts in that respect. Whatever may be said of the applicants' diligence in the past, they claim now to have embarked upon a program which, if properly implemented, will afford greater assurance that turbid precipitation run-off will be avoided.³⁰ That program stems from recommendations made when, following a heavy weekend rainstorm, an inspection by helicopter detected evidence of turbid run-off which the applicants believe could have been avoided had action been taken during the storm.

The intervenors have not come forward with any showing that the hay bale system is inherently incapable of achieving the desired result. Rather, their criticism involves the apparent casualness of the observations and monitoring previously being done by the applicants; the drawing of favorable conclusions from the absence of adverse reports; and an alleged lack of objectivity on the part of the applicants' employees and consultants who have reported their opinions about the success of the runoff control program in what the intervenors regard as too-glowing terms.

As may be seen, the matters raised by the intervenors are continuing in nature and thus not susceptible of one-time resolution by adjudication. What is required, instead, is policing by enforcement authorities, State and federal, who have the capability to go to the scene on a repetitive basis, examine first-hand the result of the applicants' program, and in short order require that necessary remedial steps be instituted. Even if we were to conduct a hearing to attempt to ascertain just how successful the applicants' program had been in the past, we could not monitor future performance. That is what is needed here, and we can only leave it to the proper officials.³¹ In this connection, by letter of October

³⁰ Beckley October 21st affidavit, ¶4 and attached Exhibit A.

³¹ In saying this, we are conscious of the intervenors' claim that the State has only minimal inspection capability and that little enforcement action can thus be expected to come from that quarter. Be that as it may that is no reason for us to attempt to shoulder the enforcement burden. Stepped-up efforts by Commission enforcement officials may be in order; of course, even those officials must balance the need to inspect the Seabrook site against the other demands made on their limited resources. As we understand it, the enforcement staff does not now have the capability to maintain a "resident-inspector" system (at least during the early stages of construction).

28, 1976, the staff notified us and the other parties that an NRC inspector had made an unannounced visit to the site on October 27 ^{31 a}

In sum, SAPL-Audubon's assertions on the turbidity issue do not warrant a halt of construction. It has not been established that the release of excessively turbid discharges is a necessary incident of the continuation of construction. Steps are available which, if followed, should be adequate to avoid turbid discharges; it is the task of enforcement officials to insure that the applicants follow those steps.

III

We are also asked by the motion for reconsideration to hold that SAPL-Audubon's eventual success on the merits of their pending appeal from the initial decision is "a near certainty" We are no more prepared to make that assessment now than we were when we acted on the stay motion last July True, as SAPL-Audubon point out, at this juncture we have before us both the exceptions to the decision below of the various parties and the briefs filed in support thereof. And we have examined with care both those documents and significant portions of the record adduced below In their totality they certainly do suggest that the appeals present numerous substantial issues of law and fact and that it is at least possible that, upon full consideration of those issues following the receipt of all briefs and the holding of oral argument, SAPL-Audubon will prevail on their position that construction of the facility should not have been licensed. But more than that cannot be said. More particularly it does not so clearly appear that the Licensing Board likely has committed fatal error that we would be justified in finding there to be "a near certainty" that the SAPL-Audubon appeal will succeed without ever having heard the applicants' side of the story ³²

In this regard, it must be noted that SAPL-Audubon have made no attempt to single out what they deem to have been the most glaring and significant errors of the Licensing Board. Had they done so, it would have been reasonable to have expected the applicants to have addressed those specific claims of error in responding to the motion for reconsideration. This in turn would have enabled us to evaluate the degree of merit attendant to the claims without awaiting complete briefing and argument of the appeals. But quite plainly it would have imposed an unfair (if not impossible) burden upon the applicants to have required that they include in their response to the reconsideration motion, due

^{31 a}Copies of the report of that inspection have just been made available to all concerned. Nothing in that report leads us to alter this opinion, which was prepared before its receipt.

³²Under the schedule established by us, the briefs for the appellees are not as yet due. Oral argument on the appeal is expected to be heard in December.

within five days after the receipt of that motion, a point-by-point rebuttal of every assertion of Licensing Board error advanced in SAPL-Audubon's 200 page brief (which brief was not filed until several days after the motion for reconsideration had been submitted).³³

For the foregoing reasons, on reconsideration of ALAB-338 we *adhere* to the result reached therein.³⁴

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Margaret E. Du Flo
Secretary to the Appeal Board

Although fully subscribing to this opinion, Mr. Farrar reserves the right to file at a later date an additional exposition of his views on the matters herein decided.

³³ Despite the fact that SAPL-Audubon had not as yet read, let alone analyzed, the initial decision, the original stay motion had claimed certain specific errors on the part of the Licensing Board. The applicants and the NRC staff answered each such claim. We were satisfied at the time of the issuance of ALAB-338 that none of those asserted errors was so clear as to warrant the requested stay. We are still of that view.

³⁴ The applicants suggested that we conduct a site visit at this time. Although we have concluded that it is not necessary to do so as part of the reconsideration of ALAB-338, it is our present intention to examine the site in connection with our consideration of the merits of the appeal (most likely on the day preceding oral argument). Our order establishing the place, date and time of argument will deal with that matter more fully.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-357

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Michael C. Farrar, Chairman
Dr John H. Buck
Dr. Lawrence R. Quarles

In the Matter of

Docket Nos. 50-3

**CONSOLIDATED EDISON COMPANY
OF NEW YORK, INC.
POWER AUTHORITY OF THE STATE
OF NEW YORK**

50-247

50-286

**(Indian Point Station,
Units 1, 2 and 3)**

Upon motion by licensees requesting an extension of time for compliance with a specific operating license condition, the Appeal Board rules that (1) it has jurisdiction over the requested license amendment; (2) the licensees have not presented an adequate basis for granting their motion; but (3) the public interest warrants continuation of the outstanding temporary suspension of the license condition, pending an evidentiary hearing on the issues involved.

Consideration of motion deferred pending further evidentiary hearing; stay of license condition continued.

RULES OF PRACTICE: JURISDICTION OF APPEAL BOARD

An Appeal Board acquires jurisdiction over a request for a license amendment bearing on the subject matter of a pending adjudicatory proceeding where that Board has been delegated full authority over the issues involved. 10 CFR §§2.717(b) and 50.2(h).

RULES OF PRACTICE. AUTHORITY OF APPEAL BOARD

Appeal board authority to modify license conditions is not limited by the inadequacies of material submitted by parties; the board may take such action as the public interest warrants.

**Mr. Harry H. Voigt, Washington, D.C., for the licensees,
Consolidated Edison Co. of New York, Inc. and Power
Authority of the State of New York.**

Mr. David S. Fleischaker Washington, D.C., for the Citizens' Committee for the Protection of the Environment.

Ms. Sandra Mitchell Caron, Albany New York, for the New York State Atomic Energy Council.

Mr. Michael W. Grainey for the Nuclear Regulatory Commission Staff.

MEMORANDUM AND ORDER

November 10, 1976

Opinion of the Board by Drs. Buck and Quarles:

By motion dated August 27 1976, the licensees requested that we "issue an order modifying the time limits within which [they] must comply" with a particular condition of the Indian Point 3 reactor operating license. By order of September 14, 1976 we deferred decision on the request but stayed the initiation of the affected portion of the license amendment until we had an opportunity to review the record and rule on the motion. For reasons explained in this order, we find good cause to postpone the time limits for compliance with the subject condition pending our receipt of further evidence in this matter at a hearing which we expect will be held early next year.

I

We are presently involved in a special proceeding, initiated by the Commission's memorandum and order of August 4, 1975, CLI-75-8, 2 NRC 173, pertaining to certain seismic issues which have been raised with respect to the Indian Point nuclear site. In ALAB-319 NRCI-76/3 188, at 191-193 (March 16, 1976), we discussed fully the background of this special proceeding and we need not repeat it here.

The motion before us now concerns section 2.C(4) of Amendment No. 2 to the operating license of Unit 3 of the Indian Point facility. That amendment raised the permissible operating level of the reactor to 91 per cent of full power, subject to certain conditions. The condition in question directed further investigations of the Ramapo Fault system, and required, *inter alia*, that an expanded seismic monitoring network be installed with a time limit such that two years' data from it should be obtained by April 5, 1979. The amendment was issued on April 5, 1976, just two weeks prior to the commencement of evidentiary hear-

ings in this seismic proceeding. The staff did not serve it upon us, and no party called it to our attention at the time.¹

We first learned of the existence of the condition during the licensees' cross-examination in this proceeding of the staff witnesses on their testimony with respect to the capability of the Ramapo Fault.² At that time strong objections were raised by New York State Atomic Energy Council, the Staff and CCPE (1) as to the relevance and timing of the licensees' question relating to this condition, and (2) as to this Board's authority to consider or modify that condition. These objections were dealt with by the Board in a statement by Chairman Farrar (Tr. 5509):³

Let me just say this: I am concerned about the matter of notice, and I can assure you that we would certainly take no action with respect to these conditions without either somebody asking us to do so, or without us giving you advance notice that we were thinking about it and giving you full opportunity to be heard on it.

So I want to allay any fears that anything will happen to these conditions based on the fact that they were brought up this afternoon and we have received this testimony on them, because if--well, no one has had an opportunity to be heard on whether they were appropriate or not appropriate.

So we won't take any action with them, on them, without people having that opportunity

Later in the day the Board questioned the staff extensively on the expanded monitoring network required by the license amendment with particular emphasis on the purpose and possible effectiveness of the network with relation to Indian Point reactor safety (Tr. 5521 5546).

II

The licensees' motion deals specifically and exclusively with certain time constraints which section 2.C(4) imposes for compliance with the seismological investigations required by that section. In relevant part, the section currently requires that the investigations under the expanded seismic network

shall be completed within two years following the onset of operation of the complete seismic monitoring network, but in no case shall completion of [those] investigations * * * extend beyond three years from the date of issuance of this license amendment [*i.e.*, beyond April 5, 1979]

The amendment was placed in the Commission's Public Document Room (41 Fed. Reg. 15917-18 (April 15, 1976)) but was not entered into the docket of this proceeding.

² Tr. 5472, *et seq.*

³ See also Tr. 5492.

The licensees are requesting that we modify that provision to read as follows:

The investigations * * * shall be completed within two years following the onset of operation of the complete seismic monitoring network, but in no case shall completion of [those] investigations * * * extend beyond three years from the date of final Commission action (including associated judicial review) with respect to Condition (c) in the proceeding instituted by the Commission's August 4, 1975 Memorandum and Order, CLI-75-8.¹

The proposed modification is underscored.

The licensees assert that the requested modification "is not a substantive change and is consistent with the present condition which requires two years' data in three years' time." They maintain that "[t]he modification is essential, however, to save Licensees and their ratepayers from great and perhaps needless expense," as further amplified in an attached affidavit. And they further assert that, without our modification of the timing requirements, substantial financial commitments must be made immediately in order for them to comply with the license condition.

All of the other parties oppose the motion, they advance a variety of reasons for doing so. The staff and CCPE each claim that the licensees have not met the burden required of a moving party for an amendment of a license. The staff adds that the motion should have been made earlier, "during the hearing with all parties and their expert witnesses present." CCPE further claims that the requested time modification is open-ended and therefore becomes a substantive change. It also reads the requested modification as requiring a postponement of the stress measurement requirement for the same period of time as the postponement of the initiation of the additional monitoring stations, and advances several reasons why the stress measurement requirement should not be modified. In any event, CCPE requests that a hearing be held before any modification is approved.

For its part, New York State Atomic Energy Council bases its objection on its reading of the Commission's regulations. In essence it states that the "specific" license amendment provisions of 10 CFR §50.90 must prevail over the "general" provisions of 10 CFR §2.717(b) under which the licensees are asking us to grant the modification.⁴ It adds that "[t]imely performance of

10 CFR §50.90 reads as follows:

Application for amendment of license or construction permit. Whenever a holder of a license or construction permit desires to amend the license or permit, application for an amendment shall be filed with the Commission, fully describing the changes desired, and following as far as applicable the form prescribed for original applications.

10 CFR §2.717(b) reads as follows:

The Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, may issue an order and take any otherwise proper administrative action with respect to a licensee who is a party to a pending proceeding. Any order related to the subject matter of the pending proceeding may be modified by the presiding officer as appropriate for the purpose of the proceeding.

these conditions is certainly a substantive matter, in view of the potential hazards, and postponement is hardly consistent with the present condition requiring two years' data by April 5, 1979 * * * "

III

We treat first the State's jurisdictional claim. It asserts that in order for the licensees to obtain an amendment to their license, they must do so under the procedures of 10 CFR §50.90, which specifies that an application for a license amendment "be filed with the Commission." (Presumably it would have the amendment acted upon initially by an appropriate official of the NRC staff, rather than by an adjudicatory board.) Since the licensees have founded their request for a license amendment on 10 CFR §§2.717, 2.718, and 2.730, the State claims, "[n]o amendment * * * has properly come before this Board for decision." It adds that, even if the modification request had been properly filed, grant of that request would be barred by 10 CFR §50.91, which requires publication in the Federal Register of a notice of proposed action prior to the issuance of any amendment which "involves a significant hazards consideration."

The position advanced by the State fails to take account of the jurisdictional framework attendant to the handling of license amendments during the course of an adjudicatory proceeding pending before one of the Commission's hearing boards. As used in 10 CFR §50.90, the term "Commission" includes "duly authorized representatives" (10 CFR §50.2(h)). This Board was delegated "full authority" by the Commission to achieve a "comprehensive" resolution of seismic issues raised with respect to the Indian Point site. The condition for which modification is sought bears directly upon that subject matter. Moreover, the condition was initially issued during the pendency of this seismic proceeding. That being so, the terms of 10 CFR §2.717(b) explicitly contemplate our exercise of the authority to rule on the requested license amendment.

As for the publication of a notice of proposed action, we have considerable doubt as to whether the proposed modification "involves a significant hazards consideration" (see pp. 549-550, *infra*). In any event, an appropriate notice of this proceeding did appear in the Federal Register and reflected the broad scope of our authority to consider regulatory actions relevant to geological and seismic questions concerning the Indian Point site. See 40 Fed. Reg. 33498 (August 8, 1975).

IV

1. Turning to the motion itself, the licensees appear to be seeking a postponement of the effective date of the monitoring condition because they question the validity or effectiveness—and perhaps the legality—of the expanded monitoring system which the condition would require them to implement. They

claim that the license condition "could appropriately be brought" to us for review, that they "may" request us to modify the condition, and that the expanded network is of "uncertain value." And they conclude that their commitments to expand the network "may be either mooted, modified, or superseded by the final decision in this proceeding." But they fail to provide any clue as to why this may be so.

In these circumstances, the position of the staff and CCPE that the licensees have not met their burden of proof appears to be well taken.⁵ Further, the licensees have presented no valid excuse for not presenting their motion either during or immediately following the last day of the hearing, when questions on the license condition were first raised.⁶ Faced with these deficiencies in the licensees' motion, we would be clearly justified if we were to deny it out of hand. There are other reasons, however, which cause us to reject that course, at least for the present.

2. To understand why we do not view it as appropriate to dismiss summarily the licensees' motion, it is useful first to look at the expanded monitoring network in terms of its intended purpose. The staff explained that, in issuing the operating license for Indian Point Station, Unit 3, it had concluded that the Ramapo Fault system is "not capable" within the meaning of Appendix A to 10 CFR Part 100; but that because of two recent small earthquakes near the fault, it considered it necessary to have a "confirmatory program directed toward a more definitive determination of the age of the most recent movement and a determination of the potential for earthquake activity on the fault system" (NRC Staff Response to Licensee's Motion To Modify License Condition, pp. 9-10, citing Supplement 3 to SER, Unit 3, April 1976, p. 2-6). One (but not the only) element of this confirmatory program is a microseismic monitoring network which is intended to assist in the "determination of the tectonic environment of the fault" (Tr. 5518).

⁵ We have some question whether the standard which the licensees must meet is the *Virginia Petroleum Jobbers* standard espoused by our dissenting colleague. That standard is premised upon the existence of a presumptively valid adjudicatory determination and may not be applicable to a staff determination such as is here involved. However, in view of the failure of the licensees to provide *any* information casting doubt on the condition in question, we need not determine the exact quantum of data which would adequately satisfy their burden.

⁶ We do not agree with the objection that the licensees necessarily should have raised this question before the last day of the hearing. The hearing commenced before the time for filing an objection to the condition had passed and the Ramapo Fault issue, to which it was related, was scheduled for the last part of the hearing. The final day was the first opportunity for the licensees to cross-examine the staff on this issue. While they may have had some reason to question the condition at an earlier date, they also could reasonably expect their information on this question to be measurably augmented as the result of the cross-examination.

The microseismic monitoring network is premised on a theory that readings of microseismicity can be translated into predictions of macroseismicity (*i.e.*, large earthquakes). Under their existing license, the licensees have already installed a number of microseismic monitoring stations located along the fault systems which are adjacent to and north of the Indian Point site. The contemplated expansion of the monitoring network provides, *inter alia*, for the installation of additional microseismic stations generally adjacent to the Ramapo Fault in a southwesterly direction from the site, extending to the Pompton Lakes, New Jersey region, and also extending in a northeasterly direction to the Fahstock region in New York (Tr. 5518). Although the network is to be expanded laterally to some degree, it will not attempt to measure the microseismicity of the entire area (Tr. 5521-22).

3. Against this overall view of the monitoring network must be placed some of the real questions about its utility or efficacy which the record currently reflects. On cross-examination, Seth M. Coplan, a staff witness, opined that a seismograph network that covers only [a] small subregion does not make a good test of whether or not the subregion is, indeed, different from the region, as a whole. And this is to a very large degree the way I would be inclined to look at this particular situation that we are dealing with here.

Tr. 5454. That witness also made it clear that there are differences in stress between the northern and southern portions of the Ramapo Fault (Tr. 5470).

Later, another staff witness, J. Carl Stepp, responding to questions asked by us, indicated that the monitoring network was being expanded along the Ramapo Fault but that the expansion would "[n]ot entirely" overcome the reservations previously expressed by Mr. Coplan that the network does nothing more than measure the microseismicity along the fault without being able to compare it with microseismicity over the whole area (Tr. 5521). Indeed, Mr. Stepp expressed considerable reservation over the utility in terms of predicting earthquakes, of measuring microseismicity and hence of the entire microseismic monitoring system. He stated (Tr. 5529):

*** There has been over the past ten years a lot of discussion about the possibility of using increases in seismicity micro-earthquakes, as a basis for predicting the occurrence of larger earthquakes..

So far as I am aware *** that has not been a terribly successful approach.

See also Tr. 4793 (testimony of Dr. Charles F Richter).

These questions about the utility or usefulness of the microseismic monitoring network appearing on the record do not, of course, constitute an adequate basis to abandon or even change the requirement. If nothing else, the parties have not had an adequate opportunity to present evidence or to prepare for

cross-examination on this matter. As both CCPE and the staff point out, no change in the license condition should be approved until the parties have had an adequate opportunity to address the issue. But given the real questions which have been raised concerning the monitoring network, we believe that a hearing on that subject is in order and hence we are directing that such a hearing be convened.

4. The next question which we must face is whether, under these circumstances, the licensees should be required at this time to expand the existing monitoring network as provided by their license. If our authority to extend the time limits in the license were dependent upon the licensees' presenting to us an adequate motion, we would have no choice but to deny the extension. But our authority is not so limited. As the Commission itself has aptly remarked earlier in this very proceeding, "[p]rocedural forms * * * are not fetishes." CLI-75-8, *supra*, 2 NRC at 177. Clearly the public interest must be foremost in our consideration, irrespective of the actions of or the positions taken by the parties appearing before us. We cannot just sit back and call "balls and strikes." See *Scenic Hudson Preservation Conference v. FPC*, 354 F.2d 608, 620 (2d Cir 1965); *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-124, 6 AEC 358, 362 (1973). Here the public interest demands a hearing and further exploration of the microseismic monitoring network prior to its being installed.

This conclusion is based on not only the important questions which have been raised concerning the monitoring network but also the lack of safety significance which a short hearing delay—we estimate about four or five months—would entail. In the first place the monitoring condition apparently is only marginally related to the safety of the Indian Point reactor; a major purpose was to establish a research project. Thus, when Mr. Stepp was asked whether the program of microseismicity stations was intended to prove or disprove activity on the Ramapo Fault or whether he was looking at it as a pure research project, he responded (Tr. 5531):

There are elements of both here. So far as my understanding of the problem goes, the principal benefit that we might expect from the micro-earthquake monitoring is one of attempting to define the tectonic environment, I will characterize it, the way the stresses are behaving, the kinds of focal mechanisms that are occurring in the area, and so on.

It is in part a research project. While a number of important people, very prominent people, Page, Isack, and Oliver, among them, Dr Sykes, who have considerable local knowledge in the Eastern United States have postulated that microearthquakes or small earthquakes are occurring along the Ramapo, it is not clear so far as I know in anyone's mind what these small earthquakes may mean so far as the potential for larger earthquakes in this region.

That is really the problem we are trying to address here. * * *

Mr. Coplan similarly treated the project: “* * * there are just some things that we are a little bit uncertain about and we would like to know more about. And that is what we have directed this program toward” (Tr. 5538).

Moreover, even to the extent that the monitoring system might be regarded as having safety implications, the precise date for acquiring the data from the system appears to have little significance. The condition as it stands does not require any data until April, 1979 three years after issuance of the operating license amendment. As a justification, the staff cites the “extremely remote” probability that, before that time, the Indian Point plants would experience an earthquake larger than that for which they were designed (NRC Staff Response to Licensee’s Motion to Modify License Condition, p. 11 citing SER Supp. No. 3, p. 2-6). We have been apprised of no reason why that conclusion would not be equally applicable to a further delay of four or five months.

For the foregoing reasons, we conclude that the public interest warrants continuation of the temporary suspension of the license condition imposed by our order of September 14, 1976, pending a hearing on the monitoring network and our issuance of a further order in connection therewith.

V

One point raised by CCPE warrants further comment. CCPE claims that the license amendment sought by the licensees would postpone not only the expansion of the microseismic monitoring network but, as well, certain “stress measurements to define the current tectonic environment of the area,” which are required by the same license condition.

While the licensees’ proposed license condition (which, we stress, we are *not* approving at this stage) might technically be read as producing the result perceived by CCPE, we do not read the licensees’ request as seeking that result or, indeed, as seeking any change in the requirement insofar as it bears upon stress measurements. In our view the licensees’ request is confined solely to the timing requirements relating to the expanded microseismic monitoring network. In any event, we find no warrant at this time to postpone or change the requirements for stress measurements. The deferral pending further hearing which we are here granting is to be construed as extending *only* to the expanded microseismic monitoring network and not as covering any stress-measurement requirements.

VI

On the basis of the foregoing discussion, our determination of whether the time limits within which the licensees must expand their microseismic monitoring network should be modified is hereby *deferred*, pending an evidentiary hearing by us on that question. The stay imposed by our order of September 14, 1976, of the portion of the operating license for Indian Point Station, Unit No.

3, requiring the installation of an expanded microseismic monitoring network, is hereby *continued* pending the outcome of that hearing and further order of this Board.

While a decision with respect to the microseismic monitoring network should be made as soon as possible, we do not believe that it is of such overriding importance as to delay the submission of the findings of fact and conclusions of law presently being prepared by all of the parties on the major issues involved in this seismic proceeding. With that in mind, direct evidence on this motion is to be filed by each of the parties by December 15, 1976, approximately three weeks following the date of submission of the last briefs on the evidence already presented in this proceeding. The date of an evidentiary hearing, probably in January 1977 will be discussed in a conference call with all parties in early December.

As part of the submissions of evidence on the expansion of the microseismic monitoring network, we request that the presentations address, although they need not necessarily be limited to, the following questions:

1. Is an enlarged microseismic monitoring network warranted for reasonable assurance of the public health and safety in connection with the Indian Point nuclear facility?

2. If not:

a. On what other basis can the licensees be made responsible for the cost of the expanded network?

b. Is the problem concerning the significance of microearthquakes on the east coast of the United States of sufficient importance to be of concern to State and Federal governments because of general danger to east coast residents?

3. In answering the following questions, consideration should be given to the Dames & Moore testimony on the possible location of shallow tensional stress fields surrounding the northern end of the Ramapo Fault:

a. If an expanded seismic monitoring network is found to be warranted, is the presently suggested expansion the best one?

b. If such a stress field exists, should the expanded network be concentrated around it rather than the Ramapo Fault?

c. If the stress field is a more likely source of the microseismicity in the area, should not the research work on the stress field be completed before consideration of an expanded seismic network?

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Margaret E. Du Flo
Secretary to the Appeal Board

Opinion of Mr. Farrar, dissenting:

No party has asked for a hearing on the validity of the monitoring requirement which the staff imposed as a condition upon the Unit 3 operating license. Rather, the licensees' request—which came entirely too late in any event—was only that the effectiveness of the monitoring requirement be deferred until the issues which were the subject of the lengthy seismic hearing earlier this year are resolved. The basis for that request was not that the monitoring requirement was necessarily without foundation, but only that the licensees might wish to challenge it after we decide the other issues.

My colleagues take it upon themselves, however, to convene a hearing now on the merits of the condition. In that connection, they say they are deferring action on the licensees' request for a postponement of its implementation. But by granting an indefinite stay of its effectiveness pending the outcome of the hearing before us, they have granted the essence of the relief sought. Moreover, they have done so without affording the other parties the prior opportunity to be heard to which they are entitled and which we assured them they would have.

I must dissent from this entire course of action. We all agree that the licensees were inexcusably late in filing their request and that they have not met the burden of demonstrating their right to a stay; thus, absent any public interest considerations, their motion would have to be dismissed out of hand. My colleagues are of the view, however, that our role as protectors of the public interest demands that we step in, on our own motion, and examine the monitoring condition, meanwhile deferring its effectiveness. In short, the majority takes action not because the licensees asked for and are entitled to it but because they believe the public interest calls for it. My concept of our role and of the public interest differs radically from theirs.

Of course, we all agree that the public interest requires that, whatever may be the positions taken by the parties, we make such inquiries on our own as are necessary to assure that Commission licensing action does not adversely affect safety or the environment. While that task often requires us to decide whether additional requirements should be placed upon applicants as a condition of obtaining a license, it can also require that we examine staff-imposed conditions—even though not challenged by the affected applicant—to insure that they do not entail adverse safety or environmental consequences.¹ But where no such consequences can possibly flow from a condition imposed by the staff, the

¹ See *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Station), ALAB-194, 7 AEC 431 (1974), involving the so-called "inerting" requirement. There we had to inquire into whether an inert containment atmosphere could cause a more serious safety problem than it purported to cure. No one suggests that any adverse safety or environmental consequences can flow from installation and operation of a seismic monitoring network.

public interest does not (in my judgment) demand that we examine such a condition to ascertain whether it constitutes an undue financial burden on an applicant *unless the applicant asks us to do so* in timely and proper fashion.² The industry has the ingenuity and resources to protect its own interests. In the absence of an appropriate objection from an applicant, it is neither a wise use of our limited time and manpower nor a fitting discharge of our regulatory responsibilities to examine a safety or environmental condition simply to see if it might cause unnecessary financial distress.

Thus, I think we lack justification to reach out and call for a hearing here. There is even less warrant to grant a stay of the monitoring condition. For the licensees have not even addressed, much less met, the criteria which we have always insisted that other parties meet before a stay can be granted.³ The rules must be the same for all and must be applied in an even-handed manner. Moreover, we have not given the other parties—the staff, the State, and the Citizens' Committee—the prior opportunity to be heard upon which they are insisting, which we told them they would have, and to which they are plainly entitled.⁴

To be sure, if the stay is not granted, the licensees will be forced to incur the expenses attendant to installing a monitoring network which might be found at some future time to be unnecessary.⁵ But the licensees could have anticipated that result last April when the license condition was imposed upon them. If this were truly a serious matter, they could have asked us then to broaden the scope of the hearing to include an examination of the merits of the condition. In this regard, the licensees are fully capable of protecting their own interests; the public interest does not demand that we step in to protect them from their own decision to live with a financially burdensome requirement. We should concentrate our efforts on insuring that the regulated industry does not operate in a way that threatens safety or the environment; we should not dissipate our

² See ALAB-194, *supra*, 7 AEC at 447 fn. 32.

³ See, e.g., *Public Service Co. of New Hampshire* (Seabrook Station), ALAB-338, NRCI-76/7 10 (1976), and ALAB-356, NRCI-76/11 525 (Nov. 8, 1976), denying an intervenor's request for a stay

⁴ See *Niagara Mohawk Power Corp.* (Nine Mile Point Unit 2), ALAB-264, 1 NRC 347 354-55 (1975) and *Virginia Electric and Power Co.* (North Anna Units 1 and 2), ALAB-324, NRCI-76/4 347 362-63, 368 fn. 24 (1976) and judicial decisions cited therein; see also *Florida Power & Light Co.* (St. Lucie Unit 2), ALAB-335, NRCI-76/6 830, 839-41 (1976).

⁵ Thus, the question of whether the licensees should expend the money to install the network would become moot if the stay were not granted. But that result would follow because the licensees delayed acting until the matter reached the crisis stage therefore it should not influence our decision. The question of the validity of the condition will not, however, become technically moot and still could be raised at a later stage (if the licensees were interested in doing so as a matter of principle). For even after the network is installed there will remain a question as to the need to operate it, which is enough to keep the controversy alive.

limited resources by looking into whether the staff has been overly zealous unless the affected applicant calls into question—in proper and timely fashion—a condition it finds offensive.

Although the foregoing summary reflects the essence of my thinking on the matter of what the public interest requires, I should like also to put those remarks in context by explaining how this matter arose. Accordingly I set forth below my analysis of the events which preceded the filing of the pending motion, with appropriate comments on why I believe that the belated motion does not show that the licensees' private interests entitle them to any relief.

Earlier this year, in rejecting the request of the Citizens' Committee for a stay of the operating license in this very proceeding, we made it clear that—given the unusual procedural setting of the case—the division of responsibility mandated by the Commission's regulations placed in the staff the responsibility of deciding in the first instance whether to issue an operating license for Unit 3. ALAB-319 NRCI-76/3 188 (March 16, 1976).⁶ As we then said, "in view of the express terms of the Commission order convening this proceeding, we can interfere with the staff's exercise of [its] authority *only if given factual justification for doing so.*" (NRCI-76/3 at 189 footnote omitted, emphasis added). I believe that the same standards must govern when it is the licensees who are challenging the staff's decision as to whether and on what terms to issue the operating license. The facts outlined below demonstrate that those standards call for denial of the relief requested.

Just two weeks before our hearing began, the staff issued the operating license,⁷ incorporating in it the seismic monitoring condition which is the focus of the present dispute. While we knew that the license had been issued, we did not have it before us and no party so much as brought to our attention the fact that it had been freighted with the seismic monitoring condition, much less complained about the substance of that condition.

The hearing proceeded in intervals over a three-month period on the three issues that had been settled upon much earlier and that had been the basis for extensive discovery by the parties. One of those issues concerned the capability of the Ramapo Fault. Although the governing regulations plainly would have given us the authority to entertain a timely attack upon the monitoring condition,⁸ no party sought either to amend the issues or to attempt in any other way to bring the validity of the condition before us.

On the afternoon of the thirty-fifth (and last) day of the hearing, the

⁶The license was to be issued subject to the outcome of this proceeding, which we analogized to a show-cause hearing. NRCI-76/3 at 194.

⁷To be more precise, on April 5, 1976 the staff issued an amendment, authorizing operation at 91% power, to a previously-issued license which had authorized only low-power testing.

⁸See 10 CFR § 2.717(b), set out in the majority opinion, *supra*, p. 545, fn. 4.

licensees, who were cross-examining the staff witnesses, attempted to probe into the justification for the condition. All the parties objected to this surprise line of inquiry.⁹ As the majority opinion points out, we assured the parties that no action would be taken with respect to the monitoring condition without giving them full opportunity to be heard (Tr. 5509 quoted at p. 544, *supra*).¹⁰

The matter was dropped at that point, the record was closed that evening, and nothing further was heard for a month, when the licensees filed the motion at bar. They ask for a lengthy stay of the effectiveness of the monitoring condition: instead of having to have their network in place within one year of the issuance of the license (*i.e.*, by April 5, 1977), they wish to defer having it in place until one year after a final administrative decision is rendered on the issues we have heard and any associated judicial review is completed.

In seeking this extended stay the licensees neither attempted to justify their tardiness nor even referred (at least explicitly) to the *Virginia Petroleum Jobbers* criteria for the grant of a stay.¹¹ And, to the extent their memorandum might have been intended to address those factors implicitly it falls far short of the mark. For example, they do not begin to claim that there is a probability of success on the merits (*i.e.*, that ultimately the monitoring condition will prove unjustified); instead, they simply say that "depending upon the resolution of the issues in this proceeding, Licensees may request this Board ultimately to modify those conditions * * *"

The licensees do little better on another factor. With respect to whether the other parties will be harmed by granting the stay they cite portions of the

⁹ My colleagues agree that the motion is inexcusably late; but they say this is just because a month elapsed between the final day of the hearing and its filing. I think the licensees should have brought the matter to our attention at a much earlier time. In this connection, the majority correctly points out that "the final day was the first opportunity for the licensees to cross-examine the staff on this issue" and the licensees "also could reasonably expect their information on [the basis for the license condition] to be measurably augmented as the result of the cross-examination." (majority opinion, *supra*, p. 547, fn. 6). With all due respect, this misses the point entirely. The question is not whether cross-examination on the validity of the monitoring condition could have taken place earlier, but whether the other parties, as well as the Board, had in some fashion to be put on notice earlier that the licensees wished or intended to make the condition's validity an issue in the case. We have been provided no explanation why the licensees did not raise the matter in any fashion between the time the license was issued and the last day of the hearing.

¹⁰ I view the granting of a stay in advance of hearing as being in complete derogation of that commitment. Although I can envision circumstances in which a board will be justified in departing from an oral statement made hastily in response to a surprising development at a hearing, no circumstances compelling such a departure are present here. I perceive no reason for not standing squarely behind the commitment I made on the Board's behalf.

¹¹ *Virginia Petroleum Jobbers Association v. Federal Power Commission*, 259 F.2d 921, 925 (1958), which furnishes the standards we have repeatedly applied in our proceedings. See, *e.g.*, *Seabrook*, *supra*, p. 553, fn. 3.

transcript in support of the assertion that "given also the uncertain value of the expanded network * * * there is little, if any harm in postponing a commitment to install that network until there is a final determination whether such a network is required." There are two difficulties with that argument. The first is that I do not read the cited portions of the transcript the same way as do the licensees and my colleagues. As I see it, the staff has definitely not conceded that the monitoring network "is only marginally related to * * * safety" and that a major purpose of it was to serve as "a research project;"¹² to the contrary its witnesses made clear the safety ramifications.¹³ Thus, I do not agree that a four-to-five month delay in starting to accumulate data is necessarily inconsequential.¹⁴ Second, and more important, the licensees gave no notice whatsoever that they intended to put this matter in issue at the hearing and thus the other parties were not prepared to address it—and said so. Consequently in my view it would be patently unfair to rely for any purpose on any of the evidence adduced on the subject until the other parties had the opportunity to prepare for, and to be heard on, the matter.¹⁵

The licensees do attempt to show that one factor weighs in favor of a stay by claiming that they will suffer financial harm if the stay is not granted. In that connection, they indicate they will be forced to expend some \$900,000 to set up the monitoring network.¹⁶ But that possibility was foreseeable before the hearing began; the unexplained fact that it has only now been brought to the fore leaves me in some doubt about how serious a matter this is. As already stated, my colleagues agree with me that the stay request is inexcusably late. Had the matter been as serious as the licensees now make it out to be, the way was open prior to or at the outset of the hearing to bring it to our attention and ask us to consider it as part of the hearing. Had the licensees done so, there could have been inquiry made at the hearing into the rationale for the condition

² See majority opinion, p. 549, *supra*.

³ Consequently, I do not join in the majority's *dictum* to the effect that there is "considerable doubt" as to whether the modification requested by the licensees "involves a significant hazards consideration." (*supra*, p. 546.) In other respects, however, I agree with Part III of their opinion.

⁴ The majority relies on the fact that the condition as written does not require any data for three years from the date of the license (p. 550, *supra*). The three years consists, of course, of one year to construct the network and two years to accumulate two years of data.

⁵ See fn. 4, *supra*, p. 553.

⁶ They asserted that, in order to have the network in place by the due date (April 5, 1977), they had to sign contracts and make substantial commitments by September 22, 1976 and then begin to expend substantial sums. On September 14, in order to give ourselves time to consider the matter fully we granted a temporary stay of the effectiveness of the condition and announced that, even if we denied the stay we would extend the due date by at least one day for each day after September 15 it took us to reach a decision.

and we would now have before us some basis for making a sensible judgment on deferring its implementation. The licensees, whose months of silence were the cause of the undeveloped record, and who have the burden of establishing their entitlement to a stay must bear the cost of our inability to pass judgment on the matter at this point.

In sum, I would not let the licensees' claim of financial hardship, presented to us at the last moment, force us into ignoring both suitable restraints on our authority and the legitimate rights of the other parties. I respectfully dissent from the grant of the stay and the convening of another hearing.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-358

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. John H. Buck
Michael C. Farrar

In the Matter of

Docket Nos. 50-458
50-459

GULF STATES UTILITIES COMPANY

(River Bend Station, Units 1 and 2)

Upon motion by the applicant, the Appeal Board dismisses the intervention of one party to the proceeding.

RULES OF PRACTICE: INTERVENTION

An adjudicatory board may dismiss an intervention when the intervenor's change of residence to an area not in proximity to the reactor is coupled with a virtual total failure on the part of the intervenor to have assumed a significant participational role in the proceeding.

Mr. Troy B. Conner, Jr., Washington, D.C. for the applicant-movant, Gulf States Utilities Company

Mr. Richard M. Troy Jr., Assistant Attorney General of Louisiana, Baton Rouge, Louisiana, for the State of Louisiana.

Mr. Richard K. Hoefling for the Nuclear Regulatory Commission staff.

MEMORANDUM AND ORDER

November 22, 1976

This construction permit proceeding is pending before this Board on an appeal taken by the State of Louisiana from the Licensing Board's second partial initial decision, rendered on September 2, 1976.¹ That decision covered all

LBP-76-32, NRCI-76/9 293.

issues not previously ruled upon, with the exception of those relating to the environmental impact of the reprocessing and waste management phases of the uranium fuel cycle.²

The applicant now has moved that, in the exercise of our present jurisdiction over the major portion of the proceeding, we direct the dismissal of the intervention of William H. Pozzi. The reasons assigned for the motion are twofold. First, Mr. Pozzi had been granted intervenor status on the basis of an interest in the outcome of the proceeding stemming from the fact that his Baton Rouge, Louisiana residence was in relatively close proximity to the facility.³ he recently orally informed an Assistant Attorney General of Louisiana, however, of a new address in San Francisco, California. According to the applicant, Mr. Pozzi thus has lost his standing to participate in the proceeding. Second, the applicant points to the fact that Mr. Pozzi has not actively pursued the only contention now remaining of those which the Licensing Board originally admitted to the proceeding on the strength of his intervention petition.

On October 21, 1976, we entered an order directing Mr. Pozzi to file a response to the motion by November 16, 1976. The order cautioned that "[t]he failure to respond by that date may be deemed by this Board as constituting, of itself, sufficient cause to grant the relief sought." Copies of the order were promptly mailed by the Secretary to the Board to both (1) the San Francisco address furnished by Mr. Pozzi to the State's lawyer and (2) the Baton Rouge address which still appears on the official service list maintained by the Office of the Secretary of this Commission. The copy sent to San Francisco was returned by the postal authorities with the stamped notation that it was "not deliverable as addressed" and further that it was "not forwardable." Whether Mr. Pozzi actually received the Baton Rouge copy is not known; in any event, he has not filed the required response. We have, however, heard from the NRC staff, which expresses the view that the dismissal of Mr. Pozzi's intervention might be in order "if it is shown by reliable evidence that [he] no longer resides in reasonable proximity to the proposed River Bend facility." The staff disagrees with the applicant, however, respecting the operative effect to be given Mr. Pozzi's lack of diligence in prosecuting the issues raised by his contention.⁴

In the totality of the circumstances confronting us, we conclude that there

At the time, licensing boards were under a Commission mandate to defer decision on such issues. General Statement of Policy dated August 13, 1976, 41 Fed. Reg. 34707 (August 16, 1976).

³ See ALAB-183, 7 AEC 222 (1974).

⁴ The State of Louisiana also has responded to the applicant's motion. Although taking no position on the grant or denial of the motion, the State notes its disagreement with the applicant that Mr. Pozzi's removal as an intervenor would alter the decisional timetable on what still remains before the Licensing Board. The staff shares the State's view. We do not believe it necessary to go into that matter in ruling upon the motion.

is good cause to grant the applicant's motion. We are less confident than is the applicant that, taken by itself, Mr. Pozzi's apparent transfer of his residence from Louisiana to California⁵ would be enough to require the dismissal of his intervention. But that question need not be decided here. Just last year, we had occasion to observe that "intervention in an NRC adjudicatory proceeding does not carry with it a license to step into and out of the consideration of a particular issue at will." *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-288, 2 NRC 390, 393 (1975). Where, as here, a change of residence to an area not in proximity to the reactor is coupled with a virtual total failure on the part of the intervenor to have assumed a significant participational role in the proceeding,⁶ it is difficult to discern a useful purpose to be served in allowing the intervention to continue. This is so irrespective of whether one views an intervention simply in terms of the protection of the interest of the particular intervenor or, rather, as having a broader significance in the realm of the furtherance of a public interest.

The intervention of Mr. Pozzi is *dismissed*.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Margaret E. Du Flo
Secretary to the Appeal Board

⁵We have received confirmation that Mr. Pozzi did inform the Assistant Attorney General of Louisiana by telephone of a new address in San Francisco. Although, as above noted, the document sent to him by mail at that address was returned as undeliverable (and like service of a document by the State met the same fate), we have no reason to assume that he in fact is not now resident in California. Had Mr. Pozzi changed his plans, presumably he would have either so advised the Assistant Attorney General or reported that fact to us upon receipt of the copy of the October 21 order which was sent to his Baton Rouge address (and not returned by the postal authorities).

At no stage of this proceeding has Mr. Pozzi's involvement in it been more than minimal. In this regard, the Licensing Board noted that he did not appear at the hearings last Spring, NRCI-76/9 at 299. It also appears from the second partial initial decision that he did not file proposed findings of fact and conclusions of law following those hearings. *Id.* at 300. And he neither appealed from that decision himself nor filed a brief on the appeal taken by the State.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-40

ATOMIC SAFETY AND LICENSING SPECIAL BOARD

Robert M. Lazo, Chairman
Andrew C. Goodhope
Daniel M. Head

In the Matter of

THE TOLEDO EDISON COMPANY
THE CLEVELAND ELECTRIC
ILLUMINATING COMPANY

Dockets 50-346A
50-500A
50-501A

(Davis-Besse Nuclear Power Station,
Units 1, 2 and 3)

THE CLEVELAND ELECTRIC
ILLUMINATING COMPANY et al.

Dockets 50-440A
50-441A

(Perry Nuclear Power Plant, Units 1 and 2)

This decision involves the motion of the City of Cleveland, Ohio, an intervenor, to disqualify a law firm from representing any of the applicants because of the firm's prior representation of the City in allegedly related matters. Upon motion by the law firm to dismiss the disqualification proceeding, the Special Licensing Board established on remand by ALAB-332 rules that (1) the doctrine of collateral estoppel precludes relitigation of issues which were settled in the disqualification proceeding in the United States District Court in Ohio and (2) since the District Court rejected all the reasons for disqualification which the City raises in this proceeding, the dismissal of the disqualification charges is appropriate as a matter of law.

Motion to dismiss granted; disqualification proceeding dismissed.

DISQUALIFICATION: STANDARDS

The standard of conduct required of counsel before the NRC is identical to the standard required by the courts of the United States. 10 CFR §2.713.

COMMISSION PROCEEDINGS: RES JUDICATA/COLLATERAL ESTOPPEL

Collateral estoppel is applicable when there was previous litigation between the parties or their privies in a court of competent jurisdiction which resulted in a final judgment of the particular issues involved in the subsequent litigation.

COMMISSION PROCEEDINGS: RES JUDICATA/COLLATERAL ESTOPPEL

A judicial determination in the United States courts acts as a collateral estoppel in Commission proceedings unless such an estoppel would frustrate the Commission's congressionally prescribed regulatory function.

COMMISSION PROCEEDINGS: RES JUDICATA/COLLATERAL ESTOPPEL

The doctrine of collateral estoppel applies when the ultimate remedies sought before the NRC and the U.S. District Court vary slightly but the information needed in both proceedings is substantially identical and the basic issue which was decided in the District Court is the same as the one to be estopped in the NRC proceeding.

COMMISSION PROCEEDINGS: RES JUDICATA/COLLATERAL ESTOPPEL

A decision of a District Court is a final judgment for collateral estoppel purposes even though an appeal to a higher court is pending. 1 B Moore's *Federal Practice* §0.416(3).

DECISION OF SPECIAL BOARD ESTABLISHED FOR 10 CFR § 2.713 PROCEEDING

November 5, 1976

Opinion of the Board by Mr. Goodhope and Mr. Lazo:

This Special Atomic Safety and Licensing Board was constituted to rule upon a motion to disqualify a law firm from representing a party in a proceeding before a Commission Licensing Board because of its prior representation of another party to that proceeding in allegedly related matters.

The underlying proceeding involves antitrust issues arising under Section 105c of the Atomic Energy Act, 42 U.S.C. §2135(c). The City of Cleveland ("City"), a party adverse to the Cleveland Electric Illuminating Company ("CEI") moved pursuant to the provisions of Section 2.713 of the Commission's Rules of Practice (10 CFR §2.713)¹ to disqualify the Cleveland law firm of

¹ In pertinent part, 10 CFR § 2.713 provides:

(b) *Standards of conduct.* An attorney shall conform to the standards of conduct required in the courts of the United States.

(c) *Suspension of attorneys.* A presiding officer may, by order, suspend or bar any

continued on next page

Squire, Sanders, & Dempsey ("SS&D"), along with its Washington affiliate, from acting as attorneys for CEI or any other applicant in this proceeding. The grounds were that SS&D had represented the City for many years as bond counsel, sometimes in matters affecting the City's Municipal Electric Light Plant ("MELP") which is a competitor of CEI; that the firm had also represented CEI on past occasions and in this proceeding and, in so doing, advanced interests adverse to the interests of MELP that SS&D never made full disclosure to the City of the conflicts of interest inherent in its representation of CEI in matters adverse to MELP and that the City never consented to SS&D's representation of CEI in such matters. The City also argued that a partner in SS&D, had been an important official of the City's Law Department before coming to SS&D and, in that capacity might have obtained information which would be useful to CEI in the present antitrust proceeding or had responsibility for matters substantially related to this proceeding. The City therefore argued that the representation of CEI by SS&D in the antitrust proceeding is in violation of the Code of Professional Responsibility and should be proscribed. SS&D took the position that there is no substantial relationship between the matters handled by SS&D as bond counsel for the City and its representation of CEI in the antitrust proceeding before the Commission. It also raised the defense that the City had consented to the dual representation and had therefore waived its right to object to it.

This matter has been before two previous Atomic Safety and Licensing Boards and the Atomic Safety and Licensing Appeal Board. On June 11, 1976, the Appeal Board remanded this matter for further hearings consistent with the Appeal Board decision² and this Special Board was established. Thereafter a

continued from previous page

person from participation as an attorney in a proceeding if the presiding officer finds that such person:

(2) Has failed to conform to the standards of conduct required in the courts of the United States;

Any such order shall state the grounds on which it is based. Before any person is suspended or barred from participation as an attorney in a proceeding, charges shall be preferred by the presiding officer against such person and he shall be afforded an opportunity to be heard thereon before another presiding officer.

² *The Toledo Edison Company and The Cleveland Electric Illuminating Company* (Davis Besse Nuclear Power Station, Units 1, 2 & 3), ALAB-332, NRCI-76/6, 785-803 (June 11, 1976).

prehearing conference was held and discovery was commenced in preparation for a hearing as ordered by the Appeal Board.

On August 26, 1976 counsel for SS&D filed a motion to dismiss the disqualification proceeding before this Special Board on the grounds that the same disqualification issue had been decided by the United States District Court for the Northern District of Ohio, Eastern Division and that the doctrine of collateral estoppel precluded this Board from relitigation of the issue. The plaintiff in the District Court case was the City of Cleveland and the defendants were CEI and four other utility companies, who had together formed the Central Area Power Coordinating Group.

On December 15, 1975 the City of Cleveland filed its motion in the District Court to disqualify SS&D, legal counsel for defendant CEI. This motion charged a conflict of interest arising as a result of earlier legal retainers between SS&D and the City and sought to foreclose SS&D from further participation in the District Court antitrust proceedings.

On August 3, 1976, after a three-day evidentiary hearing the District Court issued a comprehensive Order denying the motion of the City of Cleveland. This decision has been appealed to Sixth Circuit Court of Appeals, but has been suspended pending settlement negotiations by the parties of the underlying antitrust case.

Since the District Court found that there was no conflict of interest in the dual representation by SS&D of the City of Cleveland and its long-time client CEI in the District Court proceeding, that determination is dispositive of the disqualification proceeding at hand, provided the issues before the Nuclear Regulatory Commission's antitrust Board are the same as those before the District Court in its antitrust proceeding. A study of the complaint in District Court proceeding (see attachment to Motion of Squire, Sanders & Dempsey to Quash or Modify pursuant to CFR Section 2.720 or for a Protective Order Pursuant to CFR Section 2.740) and the statement of issues before the Commission's antitrust Board (Prehearing Conference Order No. 2, dated July 25, 1974), establishes that the antitrust proceedings before the District Court are in all essential elements identical to the proceedings before the Commission's antitrust Board. (See also attachment to the Motion of Squire, Sanders and Dempsey to stay temporarily Further Discovery for a copy of the District Judge's Order and opinion p. 30-31).

Since the antitrust issues before the District Court and the issues before the Commission's antitrust Board are essentially identical, it is clear that the District Court reviewed the conduct of SS&D in its role as counsel for the City and for CEI in the same context that this Board has been called upon to examine the same conduct; namely whether SS&D acquired any information or knowledge as counsel for the City in its municipal bond work which could be in conflict with

SS&D's present representation of CEI in the antitrust proceeding before the Commission.³

The District Court specifically found that there was no substantial relationship between SS&D's municipal bond work for the City and the antitrust suit pending before it. (See appendix to Motion of Squire, Sanders and Dempsey to Stay Temporarily Further discovery for the District Court's opinion). At page 32 of its opinion the Court stated: "The Court necessarily concludes that the City has failed to meet its burden of proving a substantial relationship between the instant representations."

Contrary to the position espoused by the Appeal Board the District Court appears to reject the proposition that the disclosure of confidential information to one attorney in a law firm presumes disclosure to all attorneys in the firm. The Court stated that modern legal practice makes this rule too harsh and that this presumption should be rebuttable. This is merely dicta since the court had already found no substantial relationship, and further found that in fact no confidential information was obtained by SS&D as a result of the municipal bond work for the City

In addition the Court found that the City was estopped to assert a conflict of interest and had even waived any such right as a result of seeking the aid of SS&D as bond counsel with the full knowledge that SS&D had represented CEI continuously for many years.

The majority of this Board concludes that the doctrine of collateral estoppel forbids the retrial before the Board of the issues decided by the District Court in its dismissal of the City's motion to disqualify SS&D.

The applicable principles for the application of this doctrine are fourfold: (1) that there was previous litigation between the parties or their privies; (2) in a court of competent jurisdiction; (3) which resulted in a final judgement; (4) of the particular issues involved in the subsequent litigation.

At the outset the question arises as to whether a judicial determination should operate as a collateral estoppel in an administrative agency proceeding. The majority conclude that it should apply to the specific issue before this Board.

The broad doctrine of res judicata has been held to be applicable to an

³The Appeal Board in its decision remanding this matter (ALAB-332, NRCI-76/6, p. 798) specifically adopted the decision in *T.C. Theatre Corp. v. Warner Bros. Pictures* 113 F Supp 265 (S.D. N.Y 1953) as controlling this matter. That decision held that it was only necessary that a substantial relationship between the previous representation and the subsequent one be shown to establish a conflict of interest requiring disqualification. The Appeal Board rejected the proposition that evidence of injury or specific confidences being breached was necessary to find a violation of the Code of Professional Responsibility Canons 4, 5 or 9. Also rejected was an argument that disclosure of nonconfidential information could be permitted by the Canons. (ALAB-332 p. 798).

administrative agency proceeding.⁴ Kenneth Culp Davis in §18.11 of his *Administrative Law Treatise* (1958) states: "Ordinarily a court decision will be res judicata in a later administrative proceeding in the same circumstances in which it would be binding in a later judicial proceeding." As pointed out by the Staff attorney at oral argument, Mr. Davis also discusses a substantial number of exceptions to this rule. None of these exceptions appear applicable to this quite narrow proceeding. The cases generally hold that res judicata or collateral estoppel do not apply to administrative proceedings where their application would frustrate the regulatory function as prescribed by the agencies' congressional mandate. These doctrines, for example, should not be applied so as to interfere with the Commission's function of providing appropriate safeguards for the public health and safety as regards nuclear reactors. The issue before this Board does not present such a situation and the adjudication by the District Court is binding upon the Board.

The argument by the City and the Staff that litigation before the District Court did not involve the same parties or their privies is rejected. The argument is that neither the Staff attorneys nor the Department of Justice attorneys appeared in the District Court case and consequently since they are both parties to the Commission's antitrust proceeding, there was not an identity of parties in the two proceedings. The Staff attorney asserts that the Staff has a duty to participate in any decision as to the qualification or disqualification of attorneys to practice before the Nuclear Regulatory Commission since they are bound to see to it that the Commission's Rules are properly interpreted and applied so as to protect the public interest. However, the real parties in interest to this disqualification proceeding are the City and SS&D as was true in the District Court. The Board is at a loss in finding that either the Staff or the Department of Justice has any interest in who represents CEI in the antitrust proceeding, other than that they comply with the Commission's rules of practice in their representation of their client.

Staff counsel, however, also urges that this Board adopt some of the findings of the District Court, grant the motion of SS&D to dismiss the disqualification proceedings and enter a decision and order consonant with the opinion of the Appeal Board. Staff counsel requests that this be done on some vague theory of comity between the Commission and the District Court, but that the Board decision not be a final decision until the appeal to the Sixth Circuit Court of Appeals is decided, or else without prejudice to the City of Cleveland to move to reopen this proceeding in the event of a reversal of the District Court decision.

Res judicata is the broad principle applicable to an entire cause of action, while collateral estoppel bars the relitigation of the same issues or facts. *Carr v. U.S.* 507 F.2d 191 (5th Cir. 1975) p. 1259, FN1, *Mastrachio v. Ricci* 498 F.2d 1257 (1st Cir. 1974) p. 1259 FN1.

The Board rejects this approach. The decision of this Board to grant the motion to dismiss is based primarily on the District Court finding that there was no substantial relationship between SS&D's prior bond work for the City and its present representation of CEI. The District Court also found the City estopped to make the conflict of interest charge and that the City had waived any objection to SS&D's present representation of CEI. These are the bases for this Board's application of the doctrine of collateral estoppel in this instance. The Court's findings that there in fact had been no passing of confidential information by the City to SS&D and that no information was exchanged among the members of SS&D or that the presumption that such was true should be rebuttable, was merely incidental to that decision once the direct findings of estoppel, waiver, and lack of substantial relationship had been made. This is in harmony with the Appeal Board's remand decision (ALAB-332). Not to grant SS&D's motion at this time and enter a final order based upon the doctrine of collateral estoppel would be to ignore the numerous cases cited below holding that the District Court decision is a final decision.

It is also urged that since the remedy sought by the City before the Nuclear Regulatory Commission is not identical to the remedy sought in the District Court proceeding, that the doctrine of collateral estoppel does not apply. This argument is rejected. It is true that the City is seeking appropriate conditions in the Nuclear Regulatory Commission license to CEI which would eliminate any situation which might be found to be inconsistent with the antitrust laws, while in the District Court it is seeking treble damages as well as injunctive relief as a result of any finding of violation of the Sherman Act. Nevertheless, the information needed in both proceedings is substantially identical and does not change the basic issue as to whether there was any substantial relationship between the prior employment of SS&D by the City and its present representation of CEI in either the District Court or before the Commission.

As to the second element necessary for the application of the doctrine of collateral estoppel there is no dispute that the District Court was a court of competent jurisdiction to decide the issue before it. Nor is there any question as to whether the decision of the District Court was a final judgment. The cases are uniformly clear that a decision of the type here involved is a final judgment even though an appeal to a higher court is pending. 1 B Moore's *Federal Practice* §0.416(3) and cases cited therein. Nor can there be any serious argument whether the decision of the District Court determined the issue as to whether SS&D could continue to represent CEI in that court. This is the identical issue before this Board in this proceeding.

CONCLUSION

The doctrine of collateral estoppel precludes relitigation before the Nuclear Regulatory Commission of issues determined in the disqualification proceeding

held in the United States District Court for the Northern District of Ohio. The findings of the District Court are binding upon the parties in all subsequent litigations, including the Nuclear Regulatory Commission proceeding.

Analysis of the District Court's determinations discloses that all bases for disqualification urged by the City in the proceeding at hand have been rejected by the District Court, some of them on multiple grounds. The standard of conduct required of counsel before the Nuclear Regulatory Commission is identical to the standard required by the courts of the United States, and in the light of the District Court's findings, there can be no disqualification of SS&D in the Nuclear Regulatory Commission proceeding. Accordingly SS&D is entitled to a dismissal of the disqualification charges filed against it as a matter of law

WHEREFORE, IT IS ORDERED, in accordance with the Atomic Energy Act, as amended, and the Rules of Practice of the Commission, particularly Section 2.713 (10 CFR), the Motion to Dismiss filed by Squire, Sanders & Dempsey is hereby *granted* and the disqualification proceeding pending before this Special Board is *dismissed*.

This disqualification matter is returned to the antitrust Board⁵ for entry of an appropriate order denying the Motion filed on November 20, 1975 by the City of Cleveland to disqualify the law firm of Squire, Sanders & Dempsey together with its Washington affiliate, Cox, Langford and Brown.

THE ATOMIC SAFETY AND
LICENSING BOARD ESTABLISHED
FOR A SPECIAL PROCEEDING
CONCERNING 10 CFR §2.713

Andrew C. Goodhope, Member

Robert M. Lazo, Chairman

Issued at Bethesda, Maryland
this 5th day of November, 1976.

Dissenting Opinion:

The subject of this special proceeding is whether the law firm of Squires, Sanders and Dempsey (SS&D) should be disqualified from participation as

⁵ In its decision of June 11, 1976, the Appeal Board held that after the Special Board rendered a decision disposing of the disqualification matter in its entirety, the antitrust Board's function thereafter is limited to carrying out the ministerial duty of promptly entering an order giving effect to the Special Board's decision. ALAB-332, NRCI-76/6, 794 (June 11, 1976)

counsel for the applicants in the U.S. Nuclear Regulatory Commission (Commission) antitrust proceeding involving the Davis-Bessie and Perry nuclear facilities. The background of this action is well set out in the majority opinion, and need not be repeated here. Basically despite the intricate factual circumstances involved in the court and administrative litigation, the present issue before this Board is a clearly defined one. SS&D has moved that the disqualification proceeding be dismissed on that basis of the doctrine of collateral estoppel. Their ground is that the issue of disqualification has been decided by the U.S. District Court for the Northern District of Ohio by Order issued August 3, 1976.

The briefs filed by the parties on this issue and the majority opinion adequately discuss and analyze the law relating to the doctrine of collateral estoppel, rendering it unnecessary to set out a lengthy dissertation on the doctrine in this opinion. It is sufficient to say that the doctrine does apply to administrative proceedings, *United States v Utah Construction & Mining Co.*, 384 U.S. 394, 421 22 (1966),¹ and that collateral estoppel has been recognized as applicable in Commission proceedings, *Alabama Power Company (Joseph M. Farley Nuclear Plant, Units 1 and 2)*. CLI-74-12, 7 AEC 203 (March 27 1974). Collateral estoppel does require that certain unities be present for it to be effective. There must be an identity of parties and an identity of issues, and the first decision must be a final one by a tribunal of competent jurisdiction.

In the instant cause, a strong case can be presented that the doctrine of collateral estoppel should be applied. It is, however, an area of law which is susceptible to a wide variety of interpretations and a numerous amount of exceptions. In my opinion, a different result than that arrived at by the majority is warranted.

Professor Davis in his *Administrative Law Treatise* (1968) mentions in Section 18.12 that the doctrine of collateral estoppel is fully applicable to some administrative proceedings, partially applicable to some, and not at all applicable to others. He notes that the doctrine may be relaxed or qualified in any desired degree without destroying its essential service. The reasons for relaxing the doctrine include the public interest aspects of avoiding undesirable policy in some concrete contexts.

Similarly the Commission in *Alabama Power Co.*, (*Joseph M. Farley Nuclear Plant, Units 1 and 2*), *supra*, p. 203, held that collateral estoppel should be applied with a sensitive regard for the possible existence of some special public interest factor in a particular case. In my view the present disqualifica-

¹The Supreme Court in *United States v. Utah Construction & Mining Co.*, discusses the doctrine in terms of res judicata. The distinction between res judicata and collateral estoppel is that in res judicata the cause of action is the same in the two proceedings, whereas in collateral estoppel the cause of action in the two suits is different but the particular issue in controversy sought to be barred is the same. *Commission v. Sunnen*, 333 U.S. 501, 597-98 (1948). This distinction is not of significance for the purposes of deciding the present motion.

tion proceeding and its subject matter is a case where a particular public interest factor requires that this Board not apply the doctrine of collateral estoppel. My analysis is that the responsibility and authority of the licensing boards of the Commission to control their proceedings to ensure uniformity and regularity therein necessitates that there be an independent decision on whether a particular attorney is qualified to practice before the licensing boards. To foreclose an independent decision by the operation of a legal doctrine would appear to run counter to public policy and constitutes an unwarranted intrusion into the ability of the Commission to control its internal proceedings. The power to disqualify an attorney from an NRC proceeding is a power unique to the Commission and it should not be relinquished to a foreign tribunal. While the decisions of the U.S. District Courts are entitled to great respect by the Commission, certain inherent powers cannot be abridged by Court actions. I would, therefore, deny the motion on the basis that the public interest considerations vitiate against use of the doctrine of collateral estoppel.

Also, a persuasive practical argument underlies my concept of the public policy consideration in this matter. Had the decision in the U.S. District Court in Ohio been opposite, it would be difficult to justify an automatic disqualification of SS&D before the Commission because of the serious ramifications to SS&D's professional reputation. Under these circumstances, it seems inequitable to apply collateral estoppel because the result in the District Court in Ohio was favorable to SS&D.

Further, as an alternate reason for denying the motion, I consider that a valid argument can be made that there is not a true identity of issues between the matter before the District Court and the matter before this Special Licensing Board. Thus, admittedly is a matter upon which reasonable men can disagree. While no doubt there is substantial identity in the factual pattern that gives rise to both disqualification matters, the ultimate issue before the District Court is different from the ultimate issue before this Board. In the court litigation, the issue was whether SS&D should be disqualified from participation in that action before the District Court. In our case, the issue is whether SS&D should be disqualified from participation in the NRC antitrust licensing proceeding. While this particular position is technical, it buttresses use of the public policy exception to the collateral estoppel doctrine under the circumstances of this case.

Accordingly I must dissent from the resolution of the SS&D motion made by the majority. In my view the motion to dismiss the disqualification proceeding should be denied and we should proceed to an evidentiary hearing on disqualification as required by the Appeal Board in its decision on remand, ALAB-332, NRCI-76/6, 785 (June 11, 1976).

Daniel M. Head, Member
Atomic Safety and Licensing
Special Board

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-41

ATOMIC SAFETY AND LICENSING BOARD

Marshall E. Miller Chairman
Michael L. Glaser
Sheldon J. Wolfe

In the Matter of

Docket Nos. 50-498A
50-499A

HOUSTON LIGHTING AND POWER
COMPANY ET AL.

(South Texas Project, Units
1 and 2)

Upon motion by the staff requesting reconsideration of an order granting non-timely intervention and antitrust hearing or, alternatively requesting clarification of the order, the Licensing Board rules that (1) it has jurisdiction to decide whether an antitrust hearing is appropriate; (2) NRC antitrust review is available, when necessary after a construction permit has been issued but before an operating license application is filed; and (3) non-timely intervention petition under 10 CFR §2.714 for such an antitrust review is cognizable under the construction permit proceedings.

Order adhered to.

LICENSING BOARD: JURISDICTION

A licensing board established to rule on petitions for non-timely antitrust intervention which are filed after a construction permit is issued but before an operating license application is filed has jurisdiction to decide whether an antitrust hearing is appropriate. 10 CFR §2.714(a).

ATOMIC ENERGY ACT ANTITRUST JURISDICTION

NRC antitrust review is available, when necessary after a construction permit has been issued but before an operating license application is filed, through a reopening of the construction permit proceeding.

**ORDER REGARDING NRC STAFF PETITION
FOR RECONSIDERATION OR CLARIFICATION OF
THE ASLB ORDER OF SEPTEMBER 9, 1976**

November 15, 1976

By our order of September 9 1976, this Licensing Board established to rule on intervention petitions granted a petition for leave to intervene and a request for an antitrust hearing out of time, filed by the Petitioner (and co-licensee) Central Power and Light Company. The Staff filed the instant petition for reconsideration on the grounds that our order of September 9 was erroneous, and that upon reconsideration the intervention petition should be denied and the notice of an antitrust hearing should be withdrawn. In the alternative, the Staff requested clarification of our order to indicate whether the intervention petition was granted in connection with the construction permit proceeding or in connection with an anticipated operating license application. The Staff has also been granted its request to the Appeal Board to extend the time for filing an appeal pending our disposition of the instant petition.

The Petitioner CP&L responded to the Staff's petition for reconsideration, contending that it was simply a reargument of the same matters previously considered. It further urged that the statutory scheme contemplated a continuous oversight responsibility by the Commission, including its safety and licensing boards, and that important questions of antitrust law should be promptly answered before construction was completed in order to permit informed decision-making by CP&L concerning access to the nuclear plant. The acceptance of its late petition for intervention was deemed to be in connection with the construction permit proceeding.

The response filed by Houston Lighting and Power Company (HL&P) supported the Staff's position that no antitrust hearing could be granted with respect to the construction permit. However, it also contended that an antitrust review under Section 105c(2) of the Atomic Energy Act of 1954, as amended, could be held in connection with the operating licenses for the South Texas facility. HL&P reiterated its intention to submit in the near future certain portions of the operating license application, including the antitrust information specified by Regulatory Guide 9.3, and again indicated its shared desire for a prompt resolution of the antitrust controversy. It also suggested procedures to accommodate the Staff's objections, including staying the order of September 9 1976.

Counsel for both CP&L and HL&P had cited and discussed the *Easton case*¹

¹ Philadelphia Electric Company (Peach Bottom Atomic Power Station, Units 2 and 3), 4 AEC 151 (1968), aff'd. *Easton Utilities Commission v. AEC*, 424 F. 2d 847 (CA DC, 1970).

in oral argument before this board on July 27 1976. However, counsel for HL&P felt that the procedural context of that case was not sufficiently apparent from the response of CP&L, and on October 14 it asked the board to accept an additional memorandum and a copy of the petition filed in that case. On October 20 CP&L filed its motion for leave to reply to such memorandum, and attached a sealed reply to be opened if its motion was granted. This board desires to be fully informed as to the position of the parties, and to cut through any procedural entanglements necessary to accomplish that purpose. Accordingly leave is hereby granted to file both the additional memorandum of HL&P and the reply thereto by CP&L, and those documents have been considered by the board.

In passing upon the Staff's petition for reconsideration, we have reviewed the order of September 9 1976, and we adhere to the conclusions reached therein. The major issue dealt with the availability of an NRC antitrust review under Section 105c of the Atomic Energy Act of 1954, as amended. Intervention for this purpose was sought and granted under the provisions of 10 CFR 2.714, which deals in part with untimely petitions for leave to intervene. That section provides in pertinent part as follows:

The petition and/or request shall be filed not later than the *time specified* in the notice of hearing, *or as provided by* the Commission, the presiding officer, or *the Atomic Safety and Licensing Board designated to rule on the petition and/or request*, or as provided in §2.102(d)(3). Nontimely filings will not be entertained absent a *determination by* the Commission, the presiding officer or *the Atomic Safety and Licensing Board designated to rule on the petition and/or request* that the petitioner has made a substantial showing of good cause for a failure to file on time (Emphasis supplied.)

This board's power or authority to enter the order complained of is derived in part from the quoted provisions of Section 2.714, including the time for filing an intervention petition and the determination of a substantial showing of good cause for a nontimely filing. The Commission is authorized to establish such Atomic Safety and Licensing Boards by Section 191a of the Act. The board is an "Atomic Safety and Licensing Board designated to rule on the petition and/or request" within the meaning of Section 2.714. It was duly established for that purpose on June 10, 1976, by the Acting Chairman, ASLBP "pursuant to delegation by the Commission dated December 29 1972, published in the *Federal Register* (37 FR 28710) and Sections 2.105, 2.700, 2.702, 2.714, 2.714a, 2.717 and 2.721 of the Commission's Regulations, all as amended." It is reasonable to construe Sections 2.714, 2.718(1) and 2.721(d) as a delegation by the Commission to an intervention board of the powers necessary to fulfill its

responsibilities under these sections. Attempted interventions for the purpose of securing antitrust review are included within section 2.714.²

In numerous cases the Supreme Court has made it clear that there is a profound national commitment to the purposes and policies of the antitrust laws. It has stated that "Antitrust laws in general, and the Sherman Act in particular, are the Magna Carta of free enterprise. They are as important to the preservation of economic freedom and our free-enterprise system as the Bill of Rights is to the protection of our fundamental personal freedoms."³ Accordingly even regulatory agencies without express antitrust mandates have been required to assess the antitrust consequences of their actions under public interest standards.⁴ The Nuclear Regulatory Commission has been entrusted with an explicit antitrust mandate under the provisions of Section 105c of the Act. Its powers with respect to admitting as parties intervenors whose interests may be affected by any proceeding under the Act for the granting, suspending, revoking, or amending of any license or construction permit, are contained in Section 189a of the Act. These statutory powers of the Commission have been delegated by it to intervention boards under its regulations, including Sections 2.1 2.4, 2.714, 2.718 and 2.721

In the instant proceeding both of the co-applicants and co-licensees, CP&L and HL&P have requested an expeditious resolution of the former's antitrust contentions, although understandably they take opposite views of what the outcome should be. This mutual desire for a prompt disposition of antitrust questions prior to the completion of construction and formal operating license proceedings appears to make good sense, and to be consistent with the fundamental public policy embodied in the antitrust laws and their statutory applicability to NRC proceedings.

The Staff takes the position that there are insuperable procedural obstacles to an antitrust adjudication after a construction permit has been issued and prior to formal operating license proceedings, even though such hiatus might cover a period of several years. It contends that there is no pending proceeding for which an intervention petition may be entertained, because the construction permit proceeding terminated on February 3, 1976, when the Commission's review period expired, and the filing of an operating license application is scheduled for late 1977 or early 1978. Sections 2.714 and 2.717 are cited to support that position.

²Public Service Company of Indiana (Marble Hill), LBP-76-25, NRCI-76/6, p. 847 (June 15, 1976); Union Electric Company (Callaway), LBP-75-20, 1 NRC 438 (1975).

³United States v. Topco Associates, 405 U.S. 596, 610 (1972).

⁴Gulf States Utilities Company v. FPC, 411 U.S. 747 (1973); Denver and Rio Grande Western R.R. Company v. U.S., 387 U.S. 485 (1967); Municipal Electric Association of Massachusetts v. SEC, 413 F 2d 1052, 419 F 2d 757 (CA DC, 1969). See also Kansas Gas and Electric Company et al. (Wolf Creek Generating Station), ALAB-279, 1 NRC 559, 568 (1975).

The Staff's position takes too narrow a view of the regulations, as well as the public policy mandate for antitrust review. Section 2.714(a) provides an opportunity to seek leave to intervene to any person whose interest may be affected "by a proceeding." It goes on to deal with nontimely filings for intervention and the bases for their consideration. There is no express limitation of the timeliness requirements of that section to *pending* proceedings in relation to the time for review of construction permits. Section 2.717 provides that "the presiding officer's jurisdiction in each proceeding will terminate upon the expiration of the period" within which the Commission may direct certification of the record to it for final decision. There is no contention here that the presiding officer of the construction permit licensing board still has jurisdiction of intervention petitions. However, Section 2.714(a) contains a triple option regarding the determination of substantial good cause for nontimely filings. Such determinations may be made by (1) the Commission, (2) the presiding officer, or (3) the Atomic Safety and Licensing Board designated to rule on the intervention petition. The fact that the jurisdiction of the presiding officer may have terminated, as argued by the Staff, would not negate the power expressly conferred by this section upon an intervention board. In view of the overriding antitrust mandate and its fundamental national policy this may well have been the reason behind the options set forth in Section 2.714(a) when the Commission adopted its Regulations.

The power or jurisdiction of a duly established intervention board to rule on a nontimely antitrust petition should not rest upon a simplistic definition of whether or not there is a "pending proceeding" as stated in the petition for reconsideration. Neither the statute nor the regulations relating to attempted interventions for antitrust review require such an interpretation. Indeed, the application to NRC for a license in this, as in other cases, requests the issuance of both a construction permit and an operating license for the proposed nuclear facility. It is hardly reasonable to act as though there is a rigidly circumscribed construction permit proceeding, which terminates when the permit is issued even for nontimely but permissible antitrust proceedings, and assume that the applicants will spend millions of dollars to construct a plant and then decide later whether or not to seek an operating license. The applicants undoubtedly view the NRC licensing procedure as an integrated and continuous process from the initial license application to the ultimate issuance of a license. It is unrealistic to rigidly define two separate insulated boxes, one defined as a construction permit proceeding and the other as an operating license proceeding, and mechanically view a permissible antitrust proceeding as unavailable if it falls into a hiatus box.

The Staff further contends that even if there were pending an application for an operating license, this board would not have jurisdiction because Section 105c(2) of the Act provides the exclusive mechanism for determining whether "significant changes" have occurred subsequent to the previous antitrust review

in connection with the construction permit. However, such an interpretation begs the question of the applicability of the nontimely intervention provisions of 10 CFR 2.714 to construction permit proceedings and the effect of a substantial change of circumstances, wholly apart from any subsequent operating license proceedings which might be affected by Section 105c(2). Although not controlling in the interpretation of Section 105c(2), the fact is that there has been no previous antitrust hearing or proceeding in this case because the Attorney General originally found it to be unnecessary. No request for an antitrust hearing was made by anyone, and the Licensing Board which considered the construction permit phase made no antitrust evidentiary review in its hearings. Under both the regulations and existing practice, contested antitrust evidentiary hearings are conducted by a separate Licensing Board.

It is true that under Section 105c(2) of the Act, paragraph (1) of the subsection does not apply to an application for an operating license unless the Commission determines that significant changes have occurred subsequent to the previous antitrust review in connection with the construction permit. Paragraph (1) provides for submission by the Commission to the Attorney General of license applications and the rendering of antitrust advice by the latter.⁵ However, advice of the Attorney General is not the sole basis for an antitrust proceeding. Both the Joint Committee on Atomic Energy which drafted the statute as well as the Appeal Board⁶ have considered the situation where the Attorney General does not recommend a hearing. In the *Wolf Creek* case, *supra*, the Appeal Board at pages 565-6 stated:

The second situation which may necessitate a formal antitrust proceeding—and the one with which we are concerned here—is described in the Joint Committee Report which accompanied the enactment of Section 105c in 1970 [S. Rep. No. 91-1247 and H.R. Rep. No. 91-1470, 91st Cong. 2nd Sess., p. 30 (1970)] In the case where the Attorney General does not recommend a hearing “but antitrust issues are raised by another in a manner according with the Commission’s rules or regulations, the Commission would [then] be obliged to give such consideration thereto as may be required by the Administrative Procedure Act and the Commission’s rules or regulations. [Joint Committee Report, p. 30] As the phrasing of the Report implies, a hearing is not automatic simply because an intervention petition is filed. Rather, the relevant Commission regulations, 10 CFR Section 2.714(a) and (b), direct any party desiring leave to intervene in a

⁵Of its own volition and pursuant to the request of this board, the Staff submitted the petition for intervention and other relevant papers to the Attorney General on August 3, 1976.

⁶Kansas Gas and Electric Company et al. (Wolf Creek Generating Station), ALAB-279, 1 NRC 559, 565 (1975).

licensing proceeding to submit a timely petition [Footnotes in original opinion summarized in brackets in quotation]

Accordingly a Commission determination of "significant changes" under Section 105c(2) relates to obtaining advice from the Attorney General under Section 105c(1), but not to the second method of triggering an antitrust review by an intervenor as in *Wolf Creek, supra*. This second method is subject to the requirements of 10 CFR 2.714(a), including a determination of a substantial showing of good cause for nontimely filing by an intervention board, which may evaluate the effect of a significant change of circumstances. To hold that an intervention board only has jurisdiction to hold that it has no jurisdiction, which is the thrust of the Staff's argument under the facts in this case, would nullify the discretionary powers reposed in the board by Section 2.714(a).

The Staff further contends that the rejection of the petition does not preclude the Petitioner from seeking relief under 10 CFR 50.90 and 10 CFR 2.206. Even if such remedies are available under the facts of this case (a question we need not decide), there is no showing that they are the sole or exclusive remedies. The Petitioner has stated that it prefers an expeditious adjudicatory hearing under Section 105c of the Act, rather than the administrative type proceedings under 10 CFR 2.206 or 50.90.⁷ An analysis of these two sections may indicate some reasons for such a preference. As to the remedies available under the latter procedures, the Staff contemplates that "If those procedures were invoked, the NRC Staff would, of course, evaluate the antitrust allegations and take such action as may be appropriate including, if warranted, the institution of a proceeding."⁸ Obviously such a role by the Staff in evaluating antitrust allegations and taking such action as it deemed appropriate or warranted, would be somewhat different from the Staff's role as a party to an antitrust hearing conducted by a licensing board.⁹ Section 50.90 refers in the singular to a holder of a construction permit filing an application for amendment of the permit. Since CP&L and HL&P are co-applicants and co-licensees, there is no single license holder authorized to request an amendment, especially where any such action is vigorously opposed by another co-licensee with equal rights. Such a substantial antitrust dispute or controversy among multiple co-licensees scarcely appears to fit the situation envisioned by Section 50.90.

Invoking the remedies of Section 2.206 as suggested by the Staff may also seem unappealing to the Petitioner. That section relates to requests to the Director to institute show cause proceedings to modify suspend or revoke a

⁷ Tr., Oral Argument July 27 1976, pp. 45-6, 50, 59.

Answer Of NRC Staff To Petition For Leave To Intervene, July 21, 1976, p. 8.

⁹ Cf. 10 CFR 2.717(b), 2.719; Vermont Yankee Nuclear Power Corporation, ALAB-214, 7 AEC 1001, 1002-4 (1974); Consolidated Edison Company of New York, Inc. (Indian Point), ALAB-304, NRCI-76/1, pp. 1, 6 (January 6, 1976).

license pursuant to Section 2.202. Once again the fratricidal aspects of such an administrative procedure involving permittees or licensees with equal rights to a license render it of dubious value. In addition, if the appropriate Director decides that no antitrust show cause proceeding will be instituted, the Petitioner does not have any appeal rights to the Appeal Board.

The Commission held in the *Indian Point* case¹⁰ that its rules made no express provision for review of the Director's decisions to issue or to refuse to issue orders to show cause under 10 CFR 2.206. Based on its inherent authority to review such decisions to determine whether the Director had abused his discretion, the Commission granted a review but limited its scope to that which would be accorded by a court, were immediate judicial review obtained. The Commission stated that such review was particularly important where a petition was denied, because otherwise there would be no further proceedings within NRC. It went on to note that "Even here, however, it is important to maintain so far as possible the separation between 'prosecutorial' and quasi-judicial functions within the Commission, which our regulations establish by vesting in the Director the discretion to institute show cause proceedings."¹¹ The Commission then reviewed the record to ascertain whether the Director's decision was demonstrably untenable, and concluded that it could not say that his resolution of factual and other disputes was untenable. However, the instant Petitioner might find cold comfort in the Commission's further observation that "In holding that the Director did not demonstrably abuse his discretion in refusing the CCPE request, we do not decide that he was right to do so or that he correctly resolved any contested factual issues."¹² Some additional remarks of the Commission might also be applicable here. At page 177 it stated:

Procedural forms, however, are not fetishes. Here, CCPE, the licensee and the Staff all agree that the subjects raised warrant hearing in an adjudicatory proceeding. We are therefore prepared to order the requested hearing. In this respect, the licensee raises an objection that warrants comment. While it does not deny the appropriateness of the proposed inquiry it insists that the place for that inquiry is (or was) the operating license hearing for the Indian Point 3 plant, which was coming to a close just as the NYAEC paper was filed. It ought not, it argues, be forced simultaneously to argue its case in two separate forums. We think there is considerable merit to this contention. As CCPE points out in another context, parties must be prevented from using 10 CFR 2.206 procedures as a vehicle for reconsideration of issues previously decided, *or for avoiding an existing forum in which they more logically should be presented.* (Emphasis supplied.)

⁰Consolidated Edison Company of New York, Inc., (*Indian Point*); CLI-75-8, 2 NRC 173, 175 (1975).

¹ *Id.*, p. 175.

Id., p. 178.

The contrast between appeal procedures under Section 2.206 review and those available for licensing board review is highlighted by the Appeal Board's decision in the recent *Catawba* case.¹³ In that case the Appeal Board flatly rejected the Staff's contention that the "substantial evidence rule" controlled its evaluation of licensing board decisions. This conclusion stemmed from the distinctions Congress made in the Administrative Procedure Act between the functions of courts and agencies. The Appeal Board stated that "To reiterate, the APA does not bind any agency to accede to its examiner's—or licensing board's—initial decision because it is supported by 'substantial evidence' or is not 'clearly erroneous. Where the administrative record considered as a whole will fairly sustain a result deemed preferable by the agency to the one selected by its initial decision maker, the law is clear that the agency may substitute its judgment for its subordinate's."¹⁴ The Appeal Board stands in the shoes of the Commission in exercising such appeal powers in reviewing the decisions of licensing boards.

Finally the Staff has requested if its petition for reconsideration is denied, that we clarify whether the petition for leave to intervene was granted in connection with the construction permit proceeding or an anticipated operating license application. To the extent that an antitrust intervention sought under Section 2.714 must come within the rubric of either type of proceeding, we hold that the nontimely petition is cognizable under the construction permit proceedings.

IT IS SO ORDERED.

**THE ATOMIC SAFETY AND
LICENSING BOARD**

Michael L. Glaser, Member

Sheldon J Wolfe, Member

Marshall E. Miller, Chairman

Dated at Bethesda, Maryland,
this 15th day of November, 1976.

³Duke Power Company (Catawba Nuclear Station, Units 1 and 2), ALAB-355, NRCI-76/10, October 29, 1976.

⁴*Id.* at 403.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-42

ATOMIC SAFETY AND LICENSING BOARD

Samuel W. Jensch, Chairman
George C. Anderson
Lester Kornblith, Jr.

IN THE MATTER OF

Docket No. STN 50-482

KANSAS GAS AND ELECTRIC COMPANY
KANSAS CITY POWER AND LIGHT COMPANY

(Wolf Creek Generating Station,
Unit No. 1)

November 24, 1976

After reviewing a Licensing Board order which required disclosure of uranium fuel contract prices, the Appeal Board remanded the case to the Licensing Board to reconsider its initial determination and to determine whether there is a rational basis for the confidentiality of such data (ALAB-327). The Licensing Board now holds that the uranium fuel contract prices must be disclosed, since the supplying company which is no longer in the uranium supply business, has failed to establish a rational basis or to show how it might be injured by such disclosure. An additional ground for requiring disclosure was asserted in a separate decision by one member who held that the Westinghouse claim reflected in the fuel supply contract, to keep fuel prices secret, violated the anti-trust laws by the furtherance of a monopoly.

Disclosure of prices directed and protective order vacated (subject to conditions spelled out in ALAB-327).

**ORDER DIRECTING PUBLIC DISCLOSURE OF
PRICES OF FUEL IN THE URANIUM SUPPLY CONTRACT**

Opinion of the Board by George C. Anderson and S.W. Jensch:

The State of Kansas and Mid-America Coalition for Energy Alternatives (MACEA), intervenor parties to this proceeding, filed a motion for an order requiring disclosure of the prices set by Westinghouse Electric Corporation (Westinghouse) in its fuel supply contracts with Kansas Gas and Electric Company and Kansas City Power and Light Company (companies). The motion was directed to the companies, which seek to construct and operate a nuclear power facility. The motion was presented in aid of an endeavor to adequately assess the

costs and benefits of a proposed construction and operation of a nuclear power facility generally identified as the Wolf Creek facility. The motion recited that the information was sought for consideration of the companies' claim of the savings in costs of a nuclear project as contrasted with a fossil fuel plant. The motion is thus related to the determination to be made under the National Environmental Policy Act (NEPA) for a cost-benefit analysis.

The Atomic Safety and Licensing Board, after receipt of the views and contentions of other parties, held that the motion:

is granted only to the extent of requiring disclosure to State of Kansas and MACEA of all terms and conditions of the nuclear fuel supply contract related in anywise to the price or cost in such fuel supply contract, and said disclosure shall be made of the foregoing by the Applicants without any restriction or restraint on the use of such price or cost data ¹

Upon review, the Appeal Board held that:

In view of the foregoing, we might possibly be justified in upholding the result reached by the Licensing Board (albeit for reasons other than those assigned by that Board). Since, however, the applicants (companies) proceeded below in at least partially uncharted waters, we have decided that fairness requires that they be given a second chance to demonstrate entitlement to the protective order which they seek. (Second parentheses added)

In providing this second presentation for the companies and Westinghouse, the Appeal Board, *inter alia*, specified that:

1 The applicants (companies) are to be afforded a reasonable opportunity to establish that there is a 'rational basis' for treating as confidential the cost and pricing provisions of nuclear fuel supply contracts; *i.e.*, that significant commercial injury might be sustained by one or more of the parties to such contracts were those provisions to be publicly disclosed.

¹ This Order was considered further by the two technical members of this same Atomic Safety and Licensing Board in another SNUPPS (Standardized Nuclear Unit Power Plant System) case specifically Union Electric Company (Callaway Plant), Docket Nos. STN 50-483, STN 50-486, and was explained as follows in reference to accepting estimates of costs of fuel supply in *Callaway*, and not in *Wolf Creek*:

We did not disagree with the ultimate order (in *Wolf Creek*)—that the fuel supply cost terms of the contract be disclosed—for a reason that clearly distinguishes the two cases: in *Wolf Creek* the Applicant was at that time basing its fuel cycle cost estimates on the Westinghouse contract; in *Callaway* it is not. (Parentheses added)

The statement that cost estimates were based on the Westinghouse contract is not clear in how estimates were derived from the contract terms; the general legal requirement is that estimates must be supported by (and using the legal term) proper foundation, which, of course, would be the cost figures of the fuel contract. The disclosure of the support for the estimates will resolve the matter here.

2. In the event of the applicants' (companies') failure to make the requisite showing, the interim protective order put into effect by ALAB-307 is to be vacated.

3. If the applicants (companies) make the requisite showing, the interim protective order is to become permanent unless the Board further finds there to be countervailing considerations militating in favor of public disclosure which clearly outweigh the potential harm to Westinghouse and/or the applicants (companies) which might inure from such disclosure. In such circumstances, the Board is to vacate the interim protective order. (Parentheses added)

Westinghouse has executed contracts with the companies for the delivery of a nuclear steam supply system and the supply for 20 years of an uranium fuel supply. In addition, the contract also provided for fuel fabrication. The construction permit for this project has not been issued. The evidence adduced in the proceedings has established that Westinghouse no longer feels obligated to supply the uranium fuel for its proposed nuclear steam supply system, and litigation is pending.² Westinghouse contends that prices of uranium fuel have increased beyond its expectations, and that pursuant to the Uniform Commercial Code, Westinghouse is excused from going out into the market and purchasing the uranium needed to supply the fuel for the proposed project. The evidence also shows that in one of the proceedings which involve some 28 electric generating utilities which relied on Westinghouse for a fuel supply West-

² The Kornblith statement attached includes the following:

While we, obviously cannot predict the results of this litigation, there is a reasonable chance that the matter may be decided in favor of Westinghouse or that some compromise may be reached.

Perhaps another prediction would be, consistent with our laws, that contracts are expected to be performed, and if damage claims are asserted against Westinghouse, the costs of the uranium fuel supply will be disclosed in aid of accurate measurement. It is certain, and not a prediction, that rate payers will be presented with claims to pay any amounts unrecovered from Westinghouse.

Since this is the first official decision work since the incident occurred, I believe that it may be well to make reference to the matter. At the February hearings on the health and safety and environmental contentions, it appeared, as explained in a private discussion within the Board, that the Project Manager for this nuclear power plant sought by Kansas Gas and Electric and Kansas City Power and Light Company and Atomic Safety and Licensing Board member Kornblith are friends, with their friendship extending from the time both were associate electrical engineers at the General Electric nuclear research laboratory in Pleasanton, California. I am sure that I speak for Dr. Anderson as well as myself that we do not believe that that friendship plays any part in the decisions made by Board member Kornblith. After a discussion of this matter within the Board, the matter of this association at General Electric was disclosed to the parties on the record, and upon inquiry no party objected to the further participation by Mr. Kornblith in the case.

inghouse has offered to parcel out or allocate the amount of uranium presently on hand, and the form of stipulation was also shown in this record.

The intervenors have contended that the claimed cost savings of the proposed project, especially in its present status, have not been established. The intervenors imply that if actual price or cost data were supplied, that the record would be compelling in that regard.

The determination regarding disclosure of the price or cost data for the uranium fuel supply involves several legal principles which, though some of the parties apparently feel are contained in separate and unrelated compartments of law, are in fact within the composite of legal requirements that cannot be disregarded.

The motion seeking public disclosure refers to data respecting cost savings. That aspect is primarily a consideration under the NEPA and the cost-benefit analyses developed thereunder. Cost is an actual figure, not an estimate nor an extrapolation from some current market data. Utilities engaged in the rate proceedings well know that distinction. This Commission, while not undertaking rate determinations, will treat utilities' costs in the same sense as do those commissions which regulate rates. No case law supports the use of estimates of costs when prices are available to establish costs. NEPA will not be satisfied with less,³ and public disclosure is needed for the reason that these proceedings are not solely for the benefit of the parties, but include the public and its rightful concerns⁴ in its involvement. Thus, the stipulation among the parties to accept certain figures for costs does not satisfy the public's right to actual cost data.

Westinghouse presented its position of a rational basis for treating the fuel supply contract prices as confidential by a recital of conclusions of the manner in which Westinghouse "might" be hurt.⁵ Conclusions tend to be figments of the imagination unless they are supported by statistics. Some examples of the Westinghouse claims are: competitors would know how large a manufacturing

³The Appeal Board stated that a "full explanation" would be warranted if reliance is placed on actual costs or prices for NEPA. The entire body of utility law, particularly rate regulation, which is too expansive for this consideration (*i.e.*, using that well worn phrase: on the "firing line"—without months to formulate a decision), is the explanation needed for the relationship to NEPA.

⁴In its brief to the Licensing Board, the Staff (page 4) argued in reference to the intervenors' motion:

One such contention relates to the correctness of the cost-benefit determination set forth in the FES. Since the cost of fuel is a constituent part of the overall costs of constructing a nuclear power plant, it is undisputed that the 'any possible showing of relevancy' test has been met.

⁵The recital by Westinghouse of conclusions, but with no statistical data, of possible injury seems similar to that in another case where such a recital was termed as " .too speculative " *U.S. v. International Business Machines Corporation*, 67 F.R.D. 40 (1975).

machine makes the fuel elements, competitors can consider the prices and know the Westinghouse marketing strategy (this claim would seem negated by the ultimate Westinghouse revelation that it did not possess adequate uranium for a fuel supply); Westinghouse also asserted that price disclosure could (or "might" as the Appeal Board defined the inquiry) alter the nature of the nuclear fuel supply industry but (is Westinghouse a part of that industry—since it is no longer either accepting or possibly receiving orders for a uranium fuel supply it is not in the business) it has no competitors, and thus has no competitive injury. This should be obvious and axiomatic. Westinghouse also stated that disclosure of fuel supply prices would erode the price of its stock through loss of future nuclear fuel supply business. Westinghouse claimed that competitors could defeat the Westinghouse strategies (it is not clear whether this claim is that there would be more active competition in the market place, in which Westinghouse is no longer competing). Westinghouse stated that its prices are based on business judgments, but no examples were given. The substantial judgment appears to have been to offer a supply of fuel from uranium not then possessed. Other examples are similarly undefined conclusions.⁶ It would have been more helpful to the Board if statistical evidence had been presented and if Westinghouse would seek to present such data, the Board might be inclined to grant such a request.

A further aspect pertinent in this proceeding is the consideration of the agreement sought by Westinghouse that the companies would not publicly reveal the prices or cost of the uranium fuel supply for the project. The agreement restrains the companies from making any public disclosure of these market place

⁶The Staff clearly enunciated the lack of foundation, for Westinghouse's conclusions, as follows:

what we have is not adequate it is really a matter of very generalized conclusions without any kind of specific demonstration of the particular manner in which competition would be—in which Westinghouse's competitor position would be significantly impaired. (Tr. 5219)

To the same effect is Judge Edelstein's regard for similar conclusions:

Burroughs does allege that the information involved would be valuable to its competitors, but this suggestion is made in only general and in hypothetical terms. None of this data is current; it covers the years 1960-1972 (the Westinghouse uranium fuel supply contract was executed in 1974). Burroughs alleges that an analysis of and an extrapolation from this data would reveal its product and marketing strategy but no showing is made that Burroughs marketing strategy would not be evident to or open to extrapolation from earnest observation of the EDP industry or of Burroughs activities in that industry. The information at issue is not an open presentation of Burroughs current marketing strategies; its value as a matrix with which to construct Burroughs present strategies is too speculative. Burroughs is to file the Peirce deposition testimony and related exhibits. (Parentheses added) *U.S. v. International Business Machines Corp.*, 67 F.R.D. 40 (1975), or *infra*.

items.⁷ Much more focus of attention should be directed to the terms, scope and effect of the agreement. In this proceeding, there is not any need, however, to make an expansive review of relevant markets and related items. The consideration here can be limited to the nature of the restraint and its effect on the market, whatever be its size.

Many of the Westinghouse contentions respecting the fuel prices are directed to the assistance that competitors might receive from knowing what are the prices established in 1974 for a uranium fuel supply. Those data would thus appear, from the Westinghouse contentions, to be in aid of competition and the free flow of market data. Price is one of the most important items in all of competitive market considerations. As the Court stated:

Price is too critical, too sensitive a control to allow it to be used even in an informal manner to restrain competition. *U.S. v. Container Corporation*, 393 U.S. 333 (1969).

Westinghouse has constantly referred to the effect of price disclosure on competitors as well as on Westinghouse itself. That reference raises the inquiry: What is the competition and what are the market factors and how do they affect the competition. Fundamentally what is the competition that exists and is there any interest in free and open competition. The latter term can be defined by some characteristics as follows:

- (1)
- (2) Each consumer registers his subjective preferences among various goods and services through market transactions at *fully known market prices*.
- (3) All relevant prices are known to each producer, who also knows of all input combinations capable of producing any specific combination of outputs. Phillip Areeda: *Anti-Trust Analysis* (Sec. Ed.) page 6. (Emphasis added)

Those characteristics may describe the perfect competition and the market may not always achieve that delight, partly because of contracts such as under consideration here.

The contract not to disclose cost prices of fuel, aside from the effect on

A principal witness for Kansas Gas and Electric Company (KG&E) stated regarding the restraint on disclosing the uranium fuel price:

If the restraint wasn't there we would certainly disclose it; yes, sir. We would be required to. (Tr. 5181)

The same witness stated that he was familiar with the claim made by KG&E that: The favorable uranium contract offered by Westinghouse served as an inducement in Plaintiff's selection of the Westinghouse nuclear steam supply system and subsequent entrance into the NSSS contract with Westinghouse in preference to the selection of the NSSS of other manufacturers. (Tr. 5183)

electric consumers and their interests in knowing the cost of the service received, is an agreement that restrains the free flow of communication of a vital component of market data.⁸ To that extent, the restraint tampers with the market structure. The Courts have over the years considered the several and various forms of contracts, arrangements and schemes to tamper with the market, some instances have involved agreements to fix prices, either maximum or minimum, by formulae, or turns of the moon, etc. The form of the arrangement to affect or limit price data is immaterial. In the instant agreement, if upheld, the market will never be permitted to know what competition should do to improve or lower prices, and the electric consumers must apparently rely upon some "big brother" arrangement⁹ to fully consider the lowest reasonable costs for their electric service.

This member of the Board believes that Court decisions compel an invalidation of this restraint on data dissemination. An early case involved a rule adopted by the Board of Trade in Chicago to prevent secret pricing in sales. A practice had apparently developed in that market for after hour trading at secret prices. The rule required that all pricing of the commodity be at the last publicly posted price. Mr. Justice Brandeis affirmed the principle of open disclosure of all pricing and he approved the rule that would prevent secret pricing. He stated that the rule would thus permit everyone to know the prices on that market and this

helped to improve market conditions thus:

- (a) It created a public market for grain 'to arrive. Before its adoption, bids were made privately Men had to buy and sell without adequate knowledge of actual market conditions. This was disadvantageous to all concerned, but particularly so to country dealers and farmers.

⁸ The Appeal Board asserted: we know of no provision of any statute in that area which might be deemed to foreclose an agreement between a buyer and a seller to withhold from competitors or the public at large the cost or price terms of a negotiated contract." The reference by the Appeal Board to a need for a statutory identification of a particular kind of contract may have overlooked that the anti-trust statutes are particularly general in character, and that the substantive body of anti-trust law, dealing extensively with contracts, is found in the Court decisions. Thus the omission of contracts in the statute does not prevent consideration of the contracts as guided by Court decisions. In addition, of course, is the generally uniform utility rate regulatory requirement to publicly disclose all costs, as actually provided by contracts, when those contracts are used as the basis of ratemaking, as was done here by the relevant Commission.

⁹ The Kornblith statement has the following: "Further, having examined the data presented in the *in camera* exhibit, it is apparent to me that the information therein would be of very little use to the public in ascertaining overall fuel cycle costs and that the other information in the record is much more useful for this purpose." That statement may not be, but appears to be a soothing syrup to let big brother tell the public his conclusion what is good enough for the public; however, the latter has always shown itself as fully capable to decide for itself what is useful and how it may be used.

(b) It brought buyers and sellers into more direct relations, because on the Call they gathered together for a free and open interchange of bids and offers. *Chicago Board of Trade v. United States*, 246 U.S. 231 (1918)

One of the landmark cases is the *Socony-Vacuum* case that has a general proscription against any agreements which affect a price that should be known in the free and open competitive market.

Any combination which tampers with price structure is engaged in an unlawful activity. Even though the members of the price fixing group were in no position to control the market, to the extent that they raised, lowered, or stabilized prices they would be interfering with the free play of market forces. The act places all such schemes beyond the pale and protects that vital part of our economy against any degree of interference. *Socony-Vacuum v. U.S.*, 310 U.S. 150, 223, 210-28 (1940)

The Court in *Socony-Vacuum* also commented on the rule in the *Chicago Board of Trade* case, *supra*, as follows:

Among its effects was the creation of a public market for grains under that special contract class, where prices were determined competitively and *openly*. (Emphasis added)

The market place with all its imperfections need not be further limited by lack of knowledge of what the prices are of the commodity. It has been held that an agreement for a restraint on full disclosure of prices, by prohibiting advertising of prices, was invalid, even though a partial public disclosure was made.

U.S. v. Gasoline Retailers Association, Inc.,
285 Fed 2d 688 (1961)

A later case also emphasized the need for prices to be determined by the full force of market conditions, without any agreed upon limitations. The Court stated:

The limitation or reduction of price competition brings the case within the ban, for as we held in *United States v. Socony-Vacuum* *interference with the setting of price by free market forces is unlawful per se*. *United States v. Container Corporation of America*, 393 U.S. 333 (1969), or *infra*.

The Sherman Act proscribes restraints on potential competition as well as restraints on actual competition.

U.S. v. Am. Smelting and Refining Co.,
182 F S 834 (1960)

An unusual arrangement was considered in the following case, wherein the defendants rule was sought to be upheld because it did not require a sale, but by

a formula would fix a price if someone wanted to buy. The Court held that the rule, agreed upon by the group, was invalid as contrary to market determined prices, which, of course, means determined by full knowledge of price factors. As such, the rule was a restraint on open competition.

Since the *Socony-Vacuum* decision, the Courts have restated the unlawfulness of price arrangements in terms which leave little room for justification

Vandervelde v. Put and Call Brokers and Dealers Association, 344 F Supp. 118 (1972)

A recent case has held that where the public interest establishes the need to know, alleged confidential (and presumably proprietary) information must be disclosed. The public disclosure must be made especially if it is in aid of the performance of regulatory duties, here, the cost-benefit analysis which must be made. The public interest in the pending case is established by the requirements of NEPA. *Pennzoil Co. v. Federal Power Commission*, 534 Fed 2d 627 (1976). In addition, of course, public interest develops from the invalidity of the contractual restraint on disclosure.

There are no alternatives to public disclosure since the public's right to know does not have any limitations or restraints. No practicable mechanism can be devised to let innumerable individual members of the public "peek and look" at the cost figures in the cost-benefit analysis.

The totality of the applicable law may well include First Amendment considerations which have been the basis to invalidate restrictions by a group preventing public disclosure of prices. If not solely controlling, the trend and tenor of the decisions are confirming the principle of the public's right to know and certainly electric power consumers are needing something more than secret pricing of the components for their electric rates.¹⁰

In consideration of all of the foregoing, this member of the Board concludes as does the Staff that Westinghouse has "made no case whatever with respect to the price and price related terms of the uranium supply contract." The Staff has added an additional and important basis (which again statistics might prove even more persuasive) that Westinghouse "is no longer in the uranium supply business in a meaningful sense" ¹¹

¹⁰The Appeal Board stated that: "applicants (companies) are entitled to seek a protective order in the furtherance of Westinghouse's interests is no longer open to question." Westinghouse is not a party to the proceeding and, of course, on that basis, is not bound by the decision, which may prejudice the companies. On the review of the Licensing Board Order, the Staff had urged the Appeal Board to require Westinghouse to proceed to become a party in accordance with the Rules of the Commission. The Appeal Board decided that was not necessary and relied upon a decision by the Appeal Board.

¹¹The Westinghouse witness stated "That's correct" (Tr. 5249) to the following question: "Westinghouse is no longer making further sales of uranium to utilities ..."

Separate Statement of Dr. Anderson:

I agree with the Chairman's conclusion that the Westinghouse uranium fuel supply contracts with Kansas Gas and Electric Company and Kansas City Power and Light Company be publicly disclosed and that the protective order to prevent public disclosure be vacated. In reaching this decision, I refer to the three specific instructions from the Appeal Board which are repeated in the introductory portion of the present order. Specifically in my opinion, I find that in the first instance the Applicants (companies) were afforded a reasonable opportunity but did not establish that there is a "rational basis" for treating as confidential the cost and pricing provisions of the contracts; *i.e.*, that significant commercial injury will not result due to public disclosure. It follows then that the second instruction be followed, *i.e.*, the interim protective order put into effect by ALAB-307 be vacated. After reaching the above conclusion, I find it unnecessary to address the third instruction since, in my opinion, the Applicants (companies) did not make the requisite showing.

I, therefore, adopt the Chairman's arguments which pertain to the first instruction. These are contained in the following two paragraphs^{1 2} from his decision.

Westinghouse presented its position of a rational basis for treating the fuel supply contract prices as confidential by a recital of conclusions of the manner in which Westinghouse 'might' be hurt.⁵ Conclusions tend to be figments of the imagination unless they are supported by statistics. Some examples of the Westinghouse claims are: competitors would know how large a manufacturing machine makes the fuel elements, competitors can consider the prices and know the Westinghouse marketing strategy (this claim would seem negated by the ultimate Westinghouse revelation that it did not possess adequate uranium for a fuel supply); Westinghouse also asserted that price disclosure could (or 'might' as the Appeal Board defined the inquiry) alter the nature of the nuclear fuel supply industry but (is Westinghouse a part of that industry—since it is no longer either accepting or possibly receiving orders for a uranium fuel supply it is not in the business) it has no competitors, and thus has no competitive injury This should be obvious and axiomatic. Westinghouse also stated that disclosure of fuel supply prices would erode the price of its stock through loss of future nuclear fuel supply business. Westinghouse claimed that competitors could defeat the Westinghouse strategies (it is not clear whether this claim is that there would be more active competition in the market place, in which Westinghouse is no longer competing). Westinghouse stated that its prices are based on business judgments, but no examples were given. The substan-

² See original paragraphs in the Chairman's decision for footnotes.

tial judgment appears to have been to offer a supply of fuel from uranium not then possessed. Other examples are similarly undefined conclusions.⁶ It would have been more helpful to the Board if statistical evidence had been presented and if Westinghouse would seek to present such data, the Board might be inclined to grant such a request.

* * *

In consideration of all of the foregoing, this member of the Board concludes as does the Staff that Westinghouse has made no case whatever with respect to the price and price related terms of the uranium supply contract. The Staff has added an additional and important basis (which again statistics might prove even more persuasive) that Westinghouse is no longer in the uranium supply business in a meaningful sense. '11

In developing these arguments further, I would agree with those portions of the Staff's brief which indicated that Westinghouse's case for a protective order must rest upon an evaluation of the *in camera* record since none of the statements in the public record was supported by adequate explanations. I have the same difficulty with the *in camera* record. In Westinghouse's presentation of contentions as to the manner in which disclosure of particular contract terms could cause commercial injury many inferences would have to be made by its competitors: In evaluating these contentions, the Staff's brief noted:

The staff has some difficulty in accepting all the conclusions which the Westinghouse officials drew from these three specific references to the contract. None of the contract provisions directly reveal any of the sensitive information but merely would support some rather elaborate chains of inference. It seems to us that one or more of the pieces of information would have just about as much potentiality for misleading Westinghouse's competitors to incorrect conclusions as leading them to correct conclusions. (Tr. *In Camera* 33-34) Moreover, we are left with an impression that if Westinghouse's competitors really wished to apply themselves diligently to obtaining of information about Westinghouse strategies, assessments of risks and technological progress, they would probably find more direct evidence with the same amount of effort.

It would appear to me that the number of permutations and combinations that could be made from the chain of inferences would lead to an exceedingly low probability of a competitor stumbling upon a piece of information that could be utilized in a manner that would prove injurious to Westinghouse.

In the dissenting opinion, Mr. Kornblith argues that public disclosure of the costs and price terms in these uranium fuel supply contracts is not necessary in arriving at a valid cost-benefit balance in compliance with NEPA. In this respect, I wish to state that I am in agreement with Mr. Kornblith.

SUMMARY

The Board by its majority thus concludes, and

WHEREFORE, IT IS ORDERED, in accordance with the Atomic Energy Act, as amended, and the Rules of Practice of the Nuclear Regulatory Commission, that public disclosure is directed to be made of prices in the uranium fuel supply contracts as provided by this Licensing Board's Order of January 9 1976, and that the protective order to prevent public disclosure is vacated. In accordance with the Appeal Board Order of April 27 1976 (ALAB-327 NRCI-76/4 page 408), the companies or Westinghouse may seek further review as follows:

Should the Licensing Board determine in accordance with either paragraph 2 or paragraph 3 above that the interim protective order should be vacated rather than made permanent, its order so decreeing shall contain a provision staying its effectiveness *for a period of 14 days* to enable the applicants to apply should they be so inclined, for further relief from this Board. In the event that such an application is filed, the order vacating the interim protective order shall automatically be further stayed pending this Board's order on the application.

ATOMIC SAFETY AND LICENSING BOARD

George C. Anderson

Samuel W. Jensch, Chairman

Issued:

November 24, 1976

Bethesda, Maryland

Mr. Kornblith, dissenting:

In ALAB-327 NRCI-76/4 408 (April 27 1976) the Atomic Safety and Licensing Appeal Board remanded to this Board the issue of whether the nuclear fuel supply contract between Westinghouse Electric Corporation and the Applicants should be disclosed to the public. This Board had issued an Order on January 9 1976 in which it directed the disclosure to the Intervenor of "all terms and conditions of the nuclear fuel supply contract related in anywise to the price or cost in such fuel supply contract," which disclosure was to be "without any restriction or restraint on the use of such price or cost data" by the Intervenor. The Applicants promptly moved the Appeal Board to direct certification of the order to the extent that it did not preclude the Intervenor from making public disclosure of the contractual provisions and asked for an

interim protective order barring public disclosure of the information. The Appeal Board issued such an order in ALAB-307 NRCI-76/1 17 (January 20, 1976). After briefing and oral argument, the Appeal Board decided, in ALAB-327 that the motion for directed certification be granted, that the certified issue be remanded for further consideration in accordance with the instructions of ALAB-327 and that the interim protective order issued in ALAB-307 remain in effect *pendente lite*.¹³

The instructions to this Board contained in ALAB-327 were as follows:

1 The applicants are to be afforded a reasonable opportunity to establish that there is a 'rational basis' for treating as confidential the cost and pricing provisions of nuclear fuel supply contracts; *i.e.*, that significant commercial injury might be sustained by one or more of the parties to such contracts were those provisions to be publicly disclosed.

2. In the event of the applicants' failure to make the requisite showing, the interim protective order put into effect by ALAB-307 is to be vacated.

3. If the applicants make the requisite showing, the interim protective order is to become permanent unless the Board further finds there to be countervailing considerations militating in favor of public disclosure which clearly outweigh the potential harm to Westinghouse and/or the applicants which might inure from such disclosure. In such circumstances, the Board is to vacate the interim protective order.¹⁴

Mr. Jensch and Dr. Anderson find, in the majority opinion above, that an adequate showing of a "rational basis" as required by Instruction 1 was not made. I disagree. Although compliance with Instruction 3 is not required in the event that the showing is found not to be adequate, Mr. Jensch believes it desirable nonetheless to consider the question raised therein. Mr. Jensch finds, in effect, that disclosure should be required, regardless of the finding in response to Instruction 1. Again I disagree. Dr. Anderson, although he does not find it necessary or desirable to address Instruction 3 fully agrees with me that public disclosure is not necessary in order for the Board to reach a proper cost-benefit balance.

Adequacy of Showing of "rational basis"

The Appeal Board has defined for us what is meant by a "rational basis" for treating as confidential the cost and pricing provisions of nuclear fuel supply

³The question of whether the information was discoverable was not in issue either before us or before the Appeal Board. The information was made available to the parties under the interim protective order in ALAB-307

⁴The Appeal Board also instructed that any order vacating the interim protective order provide for a 14 day stay of effectiveness to allow Applicants to apply for further relief.

contracts: that significant commercial injury might be sustained by one or more of the parties to such contracts were those provisions to be publicly disclosed. The Applicants' showing of this was through testimony of two Westinghouse witnesses,¹⁵ part presented in open session and part *in camera*. The two witnesses were Sam W. Shelby and Robert A. Wiesemann. Mr. Shelby is the General Manager of Water Reactor Divisions Marketing and he, for the last 15 years, has been responsible for nuclear fuel marketing. He currently is responsible for world-wide marketing of both nuclear fuel and nuclear steam supply systems. Mr. Wiesemann is Manager of Licensing Programs in the Nuclear Safety Department of the Pressurized Water Reactor Systems Division. His responsibilities include direction of Westinghouse participation in public hearings and review of Westinghouse decisions regarding proprietary classification of documents and protection of Westinghouse proprietary information. No witnesses or testimony was presented by any other party.

At the outset, I note that the requirement set by the Appeal Board is for a showing that Westinghouse *might* sustain significant commercial injury. It neither requires that it *would* sustain such harm nor, as the Applicants point out,¹⁶ does it quantify the degree of risk of such harm as "a serious risk" or "a substantial risk." Further, as the Staff points out,¹⁷ the critical question is whether disclosure might cause Westinghouse some harm, not whether it would tend to affect the overall state of competition in the nuclear supply industry. Thus, Westinghouse need not supply a full-scale market analysis of its industry as might be required for an antitrust case, but need only make a *prima facie* showing that it might suffer significant commercial injury. Finally, as the Staff also notes,¹⁸ in view of the relatively few fuel contracts entered into each year, a demonstration of a risk of losing one such sale would be an adequate demonstration of the possibility of substantial commercial harm.

The first objective of the Westinghouse testimony was to show that public disclosure of the price and price-related information would provide competitors with valuable information about Westinghouse business affairs, thereby enabling such competitors more effectively to combat and defeat Westinghouse strategies on subsequent proposals and offers. As the Westinghouse witnesses explained it, its competitors seek to gain an advantage by learning whatever they can about Westinghouse's pricing policies, manufacturing capacity, facility and research investment, work staff, future plans and similar matters. Such knowledge, Westinghouse asserts, would enable the competitors to understand how Westinghouse

Although there was some testimony indicating that Applicants might suffer some injury, the principal potential injury would be suffered by Westinghouse and only that aspect will be dealt with here.

Applicants' Reply to NRC Staff's Brief (August 17, 1976), fn. 1.

⁷ Staff Brief (July 30, 1976), pp. 2-3.

⁸ Staff Brief, fn. 1.

conducted its business and, being able to construct a model of how Westinghouse makes its decisions, be able to predict into the future how Westinghouse would be likely to make decisions under other circumstances. Being able to do this, of course, would allow them to underbid Westinghouse. The witnesses pointed out that a competitor, starting with publicly available information, could add individual additional bits of information that it could acquire from contract term disclosures, as well as from other sources, until eventually enough information would be accumulated to make the entire pattern clear. They asserted that even though no single bit of information had an ascertainable value, each bit added to the picture helped, as in a jig-saw puzzle, to make the remainder of the picture apparent. They described, and convincingly explained, several examples of this in the *in camera* testimony. The kind of detective work that they described would require substantial effort by an astute competitor. It may or may not actually be taking place, but in my view the testimony was persuasive that it could be done, and if successful, could result in injury to Westinghouse. The witnesses further pointed out that, since the contracts were of long duration and the business plans and investments of Westinghouse covered many years, the fact that the information at issue was from a contract executed several years ago did not detract from its value.

The second principal point made by Westinghouse was that it would be further harmed because disclosure of the information would allow competitors to take advantage of technological development by Westinghouse. This loss of trade secrets would tend to negate the value of the substantial investments made and to be made by Westinghouse in such development and in research and confirmation test programs. With this information on Westinghouse trade secrets, the witnesses asserted, the competitors could avoid doing such development work themselves and correspondingly reduce prices. Westinghouse, in turn, would have to forego additional development investments in order to remain competitive. The net result would ultimately tend to turn the market in the direction of less technically advanced nuclear fuel, as well as impair Westinghouse's ability to recoup its investment.

Taken as a whole, the evidence presented persuades me that public disclosure of the price and price-related contract information might result in Westinghouse sustaining unquantifiable but substantial commercial injury.

Countervailing Considerations

Having found that public disclosure might cause Westinghouse significant commercial injury I address the question of whether there are countervailing considerations militating in favor of public disclosure which clearly outweigh the potential harm to Westinghouse which might inure from such disclosure.

I have not found any such weighty considerations. In my view such considerations could be found only in two areas—in some need of the ratepayers for

the information or in a need for the Board to have such information for its evaluations of alternatives and of cost-benefit balancing and to have it in the unrestricted public record.

The original request of Intervenors was for disclosure of the full contract. Motion to Produce, May 1975 and Motion to Compel Discovery July 17 1975 In the latter Motion, Intervenors asserted that production under a protective order would prejudice their case. This point was elucidated by Intervenor Kansas in its Memorandum of February 27 1976 to the Appeal Board where it stated that it needed the contract to perform an independent cost-benefit analysis and that use of the information under a protective order would make its analysis subject to attack on the basis that its information source was either speculative in nature or incomplete. Further, Kansas asserted that consideration of the matter *in camera* would "compromise the State's counsel because of the State's Open Meeting Law K.S.A. 1975 Supp. 75-4317 " Kansas further argued, since "[i]t is, after all, the citizens who are ultimately going to be required to pay that cost, with little or no choice," that "the citizens of the state have a direct and compelling interest in ascertaining the cost of the fuel to be used in the nuclear facility " On the very same day that that Memorandum was prepared, the Intervenors started meetings with the Applicants (based on examination of the fuel price data provided under the protective order ordered in ALAB-307) which resulted in a stipulation as to fuel costs which was presented to this Board three days later. Tr. 3046-3051. Now the State seems to have changed its position and to have "basically" accepted the Staff position that the contract provisions for the supply of uranium should be disclosed and a "non-proprietary version" of the provisions for fuel fabrication should be provided. Although the State seems thus to have forsaken its position that there is a clear and compelling reason for its citizens to have full contract provisions, it is not clear precisely what its position was or is because it says in a single paragraph of its brief,¹⁹ "It has at no time been the position of the State of Kansas that all elements and particulars of the contracts be publicly disclosed," "the public should know and have available on the public record the projected cost of operation " and "previous requests have been for full contract disclosure." If Kansas' need is for anything less than disclosure of the actual contract terms, it appears to me that the requisite information is available to the public in our initial decision and in the voluminous open record of the proceeding. Further, having examined the data presented in the *in camera* exhibit, it is apparent to me that the information therein would be of very little use to the public in ascertaining overall fuel cycle costs and that the other information in the record is much more useful for this purpose.²⁰

¹⁹ State of Kansas' Brief (August 10, 1976), p. 2.

²⁰ This conclusion is reached even neglecting the possibility that the contract terms might never be fulfilled.

The second area to be explored is the need for the data in order for us to carry out our regulatory function. Such need could arise in connection with Contention I-14 which asserts, *inter alia*, that the Applicants' analysis of costs severely underestimates the entire costs of the facility by underestimating fuel costs. The record shows that the Applicants have presented a series of fuel cost estimates based on a variety of alternative values for various cost components, including uranium costs ranging from those predicated on the Westinghouse contract to a high cost of \$46 per pound in 1980. As alluded to earlier, Applicants and Intervenors have agreed upon a stipulation as to the costs to be used in the proceeding. The stipulated values²¹ are based on the upper side of the Applicants' ranges of component cost elements. In my view the stipulation of costs is dispositive with respect to this contention. Contention I-18 deals with the cost comparison between nuclear and coal-fired plants. For this contention, the stipulation again appears to me to be dispositive.

The final possible need for the data is in connection with our ultimate cost-benefit balance. One of my colleagues has taken the position that cost is an actual figure, not an estimate, and that no case law supports the use of estimates of costs when prices are available to establish actual costs and that NEPA will not be satisfied with less. I disagree with this conclusion. In my view NEPA requires an objective balancing of costs and benefits based on the best available information. The determination of which of the available information is best requires the exercise of informed judgment by the evaluator. In making such a judgment in this instance, several factors have been considered. First, we must recognize that the figures established in the contract relate only to two of the components of fuel cycle costs—uranium supply and fuel element fabrication. Other components include enrichment, burn-up, reprocessing and waste storage, and transportation, as well as non-hardware oriented items such as interest rates and escalation rates. Second, the present market price of U_3O_8 is very substantially higher than the contract price. Third, although the contract is for twenty years, the prices are firm for only the first seven years and even during that period are subject to escalation. The escalation is to be based on indices described in the contract, but the dollar value, of course, is presently unascertainable. Fourth, the question of whether the actions covered by the contract will actually be performed is presently in litigation. While we, obviously cannot predict the results of this litigation, there is a reasonable chance that the matter may be decided in favor of Westinghouse or that some compromise may be reached.

Under these circumstances, it is my view that NEPA not only allows us, but *requires* us to abandon the contract costs, which would result in the most favorable cost-benefit ratio, and adopt instead the costs which in our judgment would produce the most realistic cost-benefit balance. Based on these considera-

10.5 mills/kwh at 75% capacity factor, 10.7 mills/kwh at 65% capacity factor, and 11.1 mills/kwh at 55% capacity factor.

tions, I would use, in my cost-benefit balance, the costs in the stipulation arrived at by the Applicants and Intervenors. The values proposed by the Staff tend to confirm this choice. In view of this conclusion, I see no need for disclosure of the contract terms in order to allow us to carry out our regulatory responsibilities.²²

Other Matters

The Staff has proposed that we require disclosure of the price and price-related terms of the contract with respect to uranium supply only on the basis that Westinghouse is no longer in the uranium supply business. Applicants disagree with this, although admitting that Westinghouse is no longer accepting orders for future supply of uranium, on the basis that disclosure of the information will nonetheless provide competitors with usable information on Westinghouse's business plans and practices. While Westinghouse's case here is substantially weaker than its case with respect to fuel fabrication costs, I am inclined to agree that disclosure would be harmful. Further, I see no useful purpose that would be served by such disclosure.

Further, the Staff has proposed that Applicants or Westinghouse provide a "non-proprietary version" of the fuel fabrication provisions. Again I see no useful purpose to be served, since such information is available in the present record.

In summary I would find that a "rational basis" has been established for treating as confidential the cost and pricing provisions of the nuclear fuel contracts and that there are no countervailing considerations militating in favor of public disclosure which clearly outweigh the potential harm to Westinghouse which might inure from such disclosure. I would make permanent the interim protective order.

Lester Kornblith, Jr.

²² Since I would not use the contract prices, the Commission's policy of keeping the bases of regulatory actions open to the public to the extent possible does not apply here. I need not reach the question of whether the prices should have been disclosed had we used them.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-43

ATOMIC SAFETY AND LICENSING BOARD

Samuel W. Jensch, Chairman
R.B. Briggs
Franklin C. Daiber

IN THE MATTER OF

Docket No. 50-247

CONSOLIDATED EDISON COMPANY
OF NEW YORK, INC.

OL No. DPR-26

(Indian Point Station,
Unit No. 2)

November 30, 1976

Upon request by the licensee to amend its operating license to designate a preferred type of closed-cycle cooling, the Licensing Board accepts the stipulation of the parties and approves the recommended selection of a natural draft wet cooling tower system for the plant. The Board also determines that, upon issuance of the requested amendment, all necessary government approvals for the closed-cycle system will have been received and construction may begin.

Operating license amendment authorized.

**PARTIAL INITIAL DECISION IN REFERENCE TO
STIPULATED PREFERRED TYPE OF CLOSED-CYCLE
COOLING SYSTEM AND RECEIPT OF
GOVERNMENTAL APPROVALS**

Appearances

Leonard M. Trosten, Esq., Eugene R. Fidell, Esq., Edward J. Sack, Esq., Joyce P. Davis, Esq., on behalf of Consolidated Edison Company of New York, Inc., Applicant

Sarah Chasis, Esq., Ross Sandler Esq., on behalf of Hudson River Fishermen's Association, Intervenor

Werner Kuhn, Esq., on behalf of the New York State Atomic Energy Council, New York State Department of Environmental Conservation

Michael Graney Esq., Stephen H. Lewis, Esq., Richard Browne, Esq., on behalf of the Regulatory Staff of the U.S. Nuclear Regulatory Commission

Consolidated Edison Company of New York, Inc., Licensee authorized to operate a nuclear power facility designated as Indian Point Unit No. 2 (IP-2) filed on December 2, 1974 a proposed amendment to its operating license designating a natural draft wet cooling tower system as the preferred type of closed-cycle cooling system for IP-2. Under the conditions of the operating license (paragraph 2.E(1)), the licensee is required to terminate once-through cooling at IP-2 after an interim period, the reasonable termination date for which appeared, at the time the license was issued, to be May 1 1979. A closed-cycle cooling system is required for operation thereafter, unless the licensee can establish by later data that an extension of that date should be granted, or other relief given.

In addition to the proposed amendment, the Licensee filed a three volume report entitled "Economic and Environmental Impacts of Alternative Closed-Cycle Cooling Systems for Indian Point Unit No. 2."¹ On the basis of general considerations such as land requirements and topography compatibility with the existing plant, and status of development, the Licensee selected the natural draft wet cooling tower and the linear mechanical draft cooling towers of the wet and wet/dry designs as the only feasible alternative closed-cycle cooling systems for IP-2. The Licensee's report analyzed in detail the environmental and economic impacts of these cooling tower systems. The conclusion and recommendation of the report advised the selection of the closed-cycle, natural draft, wet cooling tower system. The recommendation was based upon considerations, among others, of the physical location of the proposed cooling towers, site preparation and excavation, system components and piping needed, as well as all other equipment requirements. The recommendation also was based upon considerations of operating characteristics, which included chemical treatment of the circulating water system, cooling tower blowdown, evaporation and drift, makeup water and water inventory. The Licensee's report reflects analyses of atmospheric effects (such as cloud and precipitation formation, ground level fogging and icing, also drift and salt deposition), as well as terrestrial impacts (such as effects of excavation, grading and construction, and botanical effects of the operation of the several cooling systems). Important to the consideration were the effects of the added noise, distribution and concentration of salt deposited by the drift, and plume visibility and interaction with the generally prevailing weather conditions. Finally the Licensee's report reflected data on hydraulic and aquatic effects, including depletion of surface and ground water

¹This report was supplemented on August 6, 1975 and on October 6, 1975 by Supplements No. 1 and 2, respectively

resources and biotic damage and thermal discharges. Radioactive releases, both liquid and gaseous were considered.

The Licensee also analyzed the costs of the feasible systems. This analysis included the capital costs, operating costs and costs associated with the loss in capacity incurred with closed cycle cooling and with replacing that capacity. The net result of balancing all the factors in these analyses was the recommendation for the closed-cycle natural draft, wet cooling tower system.

This report from the Licensee, together with two supplements thereto, was filed in the publicly available depository in the Hendrick Hudson Free Library in Montrose, New York, and in the Public Document Room in Washington, D.C. The Regulatory Staff has prepared both a Draft Environmental Statement (DES) and a Final Environmental Statement (FES) likewise available to the public.² In accordance with regulations of the Commission, comments on the DES were requested and considered from Federal, State and local agencies, including the Departments of Agriculture, Commerce, and Interior, the Environmental Protection Agency and the Energy Research and Development Administration. Comments were also requested from Hudson River Fishermen's Association, Save Our Strippers, Consolidated Edison Company of New York, Inc., New York State Department of Environmental Conservation, Village of Buchanan, City of Peekskill, and Westchester County.

In addition to the closed-cycle systems examined by the Licensee, the fan-assisted natural draft and the circular mechanical draft wet cooling tower systems were considered by the Staff in the FES. Based on a balancing of the economic and environmental costs and the benefits of the various closed-cycle cooling systems relative to each other, the Staff concurred in the Licensee's selection of the natural draft wet cooling tower system. The Hudson River Fishermen's Association (HRFA) and the New York State Energy Office,³ the other parties in this proceeding, also agreed with the selection.

The purpose of this detailed recital of the submittal of Licensee's report and Regulatory Staff work is to indicate the extensive consideration given to the Licensee's proposed amendment.

After completion of the foregoing analyses, all parties to this proceeding who have actively participated on the cooling system issues and water quality

² Notice of the Filing of the Licensee's Report and request for amendment to the facility operating license was published in the *Federal Register* on March 3, 1975 (40 FR 8855). In addition, on July 23, 1975, the Commission gave notice, also in the *Federal Register* (40 FR 30882-3), that it would consider issuance of the requested amendment after completion of a safety evaluation and an environmental review, and would also provide for a public hearing if one were requested. The Licensee requested a hearing on August 20, 1975, and after petitions seeking intervention had been approved, a public evidentiary hearing was held.

³ Effective August 25, 1976, the New York State Energy Office assumed all the functions of the New York State Atomic Energy Council, the original intervenor for the State in this proceeding.

concerns stipulated their agreement with the Licensee's proposal that the preferred type of closed-cycle cooling system is the recommended natural draft wet cooling tower system. A copy of the stipulation is included as Appendix A of this initial decision.

The Atomic Safety and Licensing Board has given extensive review to the submittals made by the Licensee, the Regulatory Staff and the parties on this proposed amendment and to the many comments on the DES. In addition, the Board has considered the various statements given at the public prehearing conference held on September 22, and at the public evidentiary hearing held October 6, 1976 presented by several members of the public respecting Licensee's proposal for this type of closed-cycle cooling system. In general, the public is concerned about injury to esthetic values, from the height and general size of the proposed cooling tower and its location near the Hudson River, as well as noise from operation of the tower, and the effects of salt deposited by the drift from the tower.

The Village of Buchanan appeared and objected to the proposed cooling towers on similar grounds. After the hearings, the City of Peekskill objected, in a letter, to the use of cooling towers of any type at Indian Point and filed a report that proposed power spray modules in articulated ponds or canals on land or in floating ponds in the river as viable alternatives to cooling towers for a closed-cycle cooling system at IP-2. Because of the great concern of the nearby communities for the visual impact of the natural draft cooling tower, the Board gave special attention, during and after the hearings, to the less viable cooling pond and spray canal alternatives. After reviewing the Licensee's report, the FES, and the supplementary information, the Board concludes that the objections raised by the limited appearance participants have received serious consideration. Analyses and data have been developed to provide specific estimates of environmental injury to the extent that it can be quantified, and the analyses and data support the selection of the natural draft wet cooling tower system over the other feasible alternatives. That a closed-cycle cooling system be selected and installed if IP-2 is to be operated beyond an interim period of once-through cooling is required by decisions of the Commission's Licensing Board in September 1973 (6 AEC 751) and the Appeal Board in April 1974 (7 AEC 323). The concerns expressed about operation of the recommended closed-cycle system did not reflect an objective analysis of the information presented in the Licensee's report and the FES. This information need not be repeated here, but it includes detailed descriptions of the various closed-cycle systems and their operating effects.

The Board has considered all aspects presented and concludes that the Licensee's report and the FES reflect a competent review of the effects of operating closed-cycle systems and that the parties have fully considered the feasible alternatives. In summary the Board accepts the stipulation of the parties

and approves the Licensee's recommended selection of the natural draft wet cooling tower system as the preferred type of closed-cycle cooling system for IP-2.

The parties have raised a related issue that the Board has considered and decided as part of this initial decision. The issue is whether all governmental approvals, other than that of the Commission, required to proceed with construction of the closed-cycle cooling system have been granted. This issue arises as a result of a condition in the Appeal Board decision at 7 AEC 408 which is repeated in paragraph 2.E(1)(b) of the facility operating license. The condition is:

The finality of the May 1 1979 date also is grounded on a schedule under which the applicant, acting with due diligence, obtains all governmental approvals required to proceed with the construction of the closed-cycle cooling system by December 1 1975. In the event all such governmental approvals are obtained a month or more prior to December 1 1975 then the May 1 1979 date shall be advanced accordingly. In the event the applicant has acted with due diligence in seeking all such governmental approvals, but has not obtained such approvals by December 1 1975 then the May 1 1979 date shall be postponed accordingly.

As indicated in the condition, the termination date of May 1 1979 for once-through cooling was determined to provide a reasonable time within which the Licensee should assess the various closed-cycle cooling systems, obtain all the governmental approvals necessary to construct the preferred system and complete certain phases of construction. The finality of that date is contingent on the date when the Licensee, acting with due diligence, receives the last required governmental approval. All parties agree that approval of this recommended closed-cycle system is needed from the Nuclear Regulatory Commission. This initial decision authorizes the Director of Nuclear Reactor Regulation to make the necessary findings and to issue an amendment to the Facility Operating License which will constitute the Commission's approval. The issue to be determined here is whether any other governmental approvals have yet to be obtained before construction can proceed. Determination of a new termination date is a separate issue that will be resolved by a later partial initial decision.

The Licensee contends that, in addition to the Commission's approval, approval is needed from the Village of Buchanan in which IP-2 is located before construction can begin. The other parties disagree with this contention. No other approvals are at issue. The determination to be made, therefore, is whether the approval of the Village of Buchanan (Village) is needed. The Licensee has sought from the Village variances from the zoning regulations which, first, would limit the height of structures constructed in an industrial zone within the Village, and second would restrict the use of a facility by provisions respecting vapor dis-

charge.⁴ The Village Zoning Board of Appeals denied the Licensee's request for the variances.

The Licensee petitioned the Supreme Court of the State of New York, Westchester County to set aside the denial by the Zoning Board of Appeals. The Court ruled that federal regulatory statutes have preempted local regulation of the Licensee's facility and that actions of the Zoning Board of Appeals in requiring the Licensee to seek a building permit and in attempting to regulate or prohibit construction of the closed-cycle cooling system are illegal and void. The final order of the Court was that the Village Zoning Board of Appeals, as respondents:

are enjoined from enforcing or attempting to enforce the provisions of the Buchanan Zoning Code as against construction by petitioner (Licensee) of a closed-cycle cooling system at its Indian Point No. 2 facility

The Village of Buchanan appealed that decision to the Appellate Division of the Supreme Court which also found in favor of the Licensee. The Appellate Division agreed with the Special Term that the action by the Zoning Board of Appeals in denying the variance contravened federal law and concluded also that such action contravened state law. The Appellate Division modified the earlier judgment to state that the respondents are:

directed to issue the variance to the petitioner (Licensee) for the construction of a tower as part of a closed-cycle cooling system, and respondents may regulate local and incidental conditions relative to the construction of the proposed facility

The Appellate Division permitted

limited regulation of local and incidental conditions with respect to the proposed facilities, in accordance with the Zoning Ordinance, so long as such regulation is reasonable and is not inconsistent with the construction of the proposed facility

According to the Licensee, the time from the Order on Appeal from Judgment of the Appellate Division expires on December 13 1976. There appears to be disagreement among the parties as to the date and whether the Village must secure permission from the New York State Court of Appeals with no appeal as of right. In the considerations at the prehearing and evidentiary

⁴The limit on height is 40 feet, but the zoning regulations also provide that "utility towers" are exempted from the 40 feet restriction. That this might apply to cooling towers is suggested in a decision of the Supreme Court of the State of New York. There has been no determination whether cooling towers of the proposed closed-cycle system come within the scope of that exemption on height. Apparently the Licensee did not request that determination and none was given by the Village Zoning Board of Appeals.

hearings of the necessity for an approval or issuance of variances by the Village, Licensee stated that it had always been the practice of the company to secure local support for any proposed construction. The Board also believes that local support and approval are desirable. However, the Village Zoning Board of Appeals denied the Licensee's requests for variances from the Zoning Ordinance. Two Courts, at successive levels, have now invalidated the action of the Zoning Board of Appeals. The Order of the Appellate Division resulted from a unanimous decision. This Board concludes that approval by the Village is not a governmental approval that is required to proceed with construction of the closed-cycle cooling system. The Licensee agrees that the law of the State is uniform that a Village cannot prevent construction by a utility of a facility needed for the rendition of its service. Licensee is obligated to continue to render service and the conditions of the Facility Operating License make cooling towers as needed as its generators.

Important, in addition, is somewhat of a "law of the case" ruling established by the decision of the Supreme Court of New York, which stated that it reads: the provision of the license which refers to 'government approvals' to exclude zoning approvals.

The Board concludes that the Court's statement is an expression reflecting the existing requirements of the New York State law as indicated by the Licensee, to the effect that a Village cannot prevent utility construction by use of zoning ordinances. The Licensee has made no objection to the Court's statement.

The wording of the condition applied to the Facility Operating License suggests that a finding of "due diligence" in the Licensee's pursuit of governmental approvals must be made before the May 1 1979 date can be extended. That date was based on the granting of all necessary governmental approvals by December 1, 1975 and the Commission's approval has not yet been granted in November 1976. No party has formally raised this issue, but one of the parties hereto, HRFA has urged in a brief that Licensee appeared a reluctant petitioner for variances from the Village, and stressed all the evils or annoyances of its recommended closed-cycle cooling system without mentioning that a closed-cycle system would reduce fish mortality enhance the usefulness of the Hudson River for both visitors and fishermen, and comply with environmental protection requirements as determined by the then Atomic Energy Commission. With agreement by the parties hereto, the Board has examined a transcript of the proceedings initiated by the Licensee before the Village's Zoning Board of Appeals and the Board agrees that HRFA has a substantial basis for its comments.

If the Board had concluded that issuance of variances and a building permit by the Village was required before construction could proceed on the closed-cycle cooling system, further examination of the Licensee's efforts to obtain the

variances from the Village might be warranted. However, the conclusion that the Commission's amendment to the Facility Operating License is the last required approval makes such an examination unnecessary. There has been no suggestion, and the Board finds no reason to believe, that the Licensee has acted with other than due diligence in its efforts to obtain the amendment to the Facility Operating License. The Board finds, therefore, that the Licensee has "acted with due diligence in seeking all such governmental approvals."

In conclusion, the Board further determines that with this approval by the Board of the recommended preferred type of closed-cycle wet draft cooling tower system and the issuance by the Commission's Director of Nuclear Reactor Regulation of the requested amendment that all necessary governmental approvals will have been received by the Licensee and that construction preliminaries and activity can now be undertaken. The New York Supreme Court held:

It is absolutely clear that under the provisions of petitioner's license as it now exists, petitioner will have to cease operation of its nuclear plant with the open-ended cooling system on May 1 1979. While the license provisions do not on their face constitute an informative direction to build, the effect is the same.

The Board agrees with this interpretation, and on that basis Licensee should commence construction of its recommended closed-cycle wet draft cooling tower system.

WHEREFORE, IT IS ORDERED, in accordance with the Atomic Energy Act of 1954, as amended, the National Environmental Policy Act of 1969 the Rules of Practice of the Nuclear Regulatory Commission, and based upon the findings and conclusions set forth herein, that the proposed amendment sought by Consolidated Edison Company of New York, Inc. is approved and accepted and it is determined that the preferred type of closed-cycle cooling system for installation at Indian Point Unit No. 2 is the closed-cycle natural draft, wet cooling tower system recommended by the Licensee in its request for an amendment filed on December 2, 1974. The Director of Nuclear Reactor Regulation is hereby authorized to make appropriate findings in accordance with the regulations of the Commission and to issue an amendment to the Facility Operating License which states:

(5) Subject to all of the foregoing provisions of this Paragraph 2.E., the Nuclear Regulatory Commission has determined, following review of the document entitled 'Economic and Environmental Impacts of Alternative Closed-Cycle Cooling Systems for Indian Point Unit No. 2' dated December 1, 1974, that a closed-cycle, natural draft, wet cooling tower system is the preferred closed-cycle system for installation at Indian Point Unit No. 2.

IT IS FURTHER ORDERED, in accordance with Sections 2.760, 2.762, and 2.764, 2.785 and 2.786 of the Rules of Practice of the Nuclear Regulatory Commission, that this Partial Initial Decision should be effective immediately and shall constitute the final action of the Commission subject to review thereof under the above-cited Rules. Exceptions to this Partial Initial Decision may be filed by any party within seven days after the service of this Partial Initial Decision. A brief in support of the exceptions shall be filed within fifteen days thereafter (twenty days in the case of the Staff). Within fifteen days after service of the brief of appellant (twenty days in the case of the Staff), any other party may file a brief in support of, or in opposition to, the exceptions.

**ATOMIC SAFETY AND
LICENSING BOARD**

R.B. Briggs

Samuel W Jensch, Chairman

Member of the Board Dr. Franklin C. Daiber has considered all aspects of this Partial Initial Decision and concurs in the result although not available to sign this decision.

Issued:

November 30, 1976

Bethesda, Maryland

[Appendix "A" has been omitted from this publication but is available in the NRC Public Document Room, 1717 H Street, Washington, D.C.]

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-25

COMMISSIONERS:

Marcus A. Rowden, Chairman

Edward A. Mason

Victor Gilinsky

Richard T Kennedy

In the Matter of

Docket Nos. 50-443
50-444

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE,
et al.**

(Seabrook Station, Units 1 and 2)

December 3, 1976

The Commission corrects one sentence in its order of November 17 1976 (CLI-76-24).

ORDER

In our order of November 17 1976, concerning ALAB-356 and the recent opinion of the Regional Administrator of the Environmental Protection Agency concerning a cooling system for the proposed Seabrook facility we stated that "The Regional Administrator's opinion has been stayed pending EPA review " CLI-76-24, NRCI-76/11 522. The intervenor New England Coalition on Nuclear Pollution has asked us to strike this sentence from the order, calling to our attention a dispute among the parties concerning the effect of a request for review of the Regional Administrator's decision under EPA regulations. When we issued our order we were unaware of the dispute in this regard, intended only to describe background circumstances, and did not intend by our statement to resolve any disputed issue. Accordingly the above-quoted sentence is stricken from the order and replaced by the following sentence: "Under the applicable EPA regulation, the effect of an applicant's timely request for review is that the initial decision of the Regional Administrator shall not become the final action of the Administrator. 40 CFR 125.36(n)(7)." Should the Appeal Board be called upon to resolve any dispute among the parties in this regard, it should do so without regard to the sentence we are striking by this order.

It is so ORDERED.

By the Commission

Samuel J. Chilk

Secretary of the Commission

Dated at Washington, D.C.

this 3rd day of December, 1976.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-26

In the Matter of

Docket Nos. 50-514
50-515

PORTLAND GENERAL ELECTRIC COMPANY
et al.

(Pebble Springs Nuclear Plant,
Units 1 and 2)

PUGET SOUND POWER AND LIGHT
COMPANY et al.

Docket Nos. STN 50-522
STN 50-523

(Skagit Nuclear Power Project,
Units 1 and 2)

December 22, 1976

Upon motion by intervenors for consolidation on certain assertedly inter-related issues of two licensing hearings, the Commission declines to interpose its judgment where both Licensing Boards have rejected such consolidation.

Motion dismissed.

RULES OF PRACTICE. CONSOLIDATION

Where Licensing Boards have addressed the issues involved on a motion to consolidate two licensing hearings on certain issues, the Commission will interpose its judgment only in the most unusual circumstances.

ORDER

Intervenors Forelaws on Board and the Coalition for Safe Power, pursuant to 10 CFR 2.716, have moved for consolidation of the Pebble Springs licensing hearing and the Skagit licensing hearing on the issues of (1) need for power, (2) site alternatives, (3) alternatives to power, and (4) cost-benefit analysis. In support Intervenor cite arguments advanced earlier in a motion before the Licensing Boards on June 18, 1976 for inclusion of issues (2), (3) and (4) for consideration in a joint hearing session scheduled by the Pebble Springs and Skagit Boards on need for power. These arguments stress that the designated issues with respect to both plants are sufficiently interrelated that separate consideration would detract from the quality of the analysis by the Licensing Boards.

Neither Licensing Board found these arguments persuasive. Both boards denied the motion of June 18 insofar as it related to additional consolidation. The NRC staff opposes the present motion, arguing that the Licensing Boards

are in the best position to determine whether the benefits of consolidation on particular issues outweigh the difficulties. The staff also argues that a minor potential saving of effort in the fact-finding process does not in this case outweigh the procedural difficulties of consolidating these hearings before a single board for purposes of decision.

Taking into account the familiarity of Licensing Boards with the issues most likely to bear on a consolidation motion, where the Boards have addressed these issues, the Commission will interpose its judgment only in the most unusual circumstances. In this case a joint hearing for the purpose of evidence-taking on need for power has already been held. With regard to the remaining issues on which consolidation has been requested, in rejecting consolidation the Boards have passed upon identical contentions after evident consultation among themselves. In this situation we do not find circumstances which call for interposition. Accordingly the motion is dismissed.

It is so ORDERED.

By the Commission

Samuel J. Chilk
Secretary of the Commission

Dated at Washington, D.C.
this 22nd day of December, 1976

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-27

COMMISSIONERS:

Edward A. Mason, Acting Chairman

Victor Gilinsky

Richard T. Kennedy

In the Matter of

Docket Nos. 50-514
50-515

**PORTLAND GENERAL ELECTRIC
COMPANY et. al.**

**(Pebble Springs Nuclear Plant,
Units 1 and 2)**

December 23, 1976

The Appeal Board, pursuant to 10 CFR 2.785(d), certified to the Commission two legal issues regarding standing to intervene in domestic licensing proceedings (ALAB-333). The Commission rules that (1) judicial concepts of standing should be applied by adjudicatory boards in determining whether a petitioner is entitled to intervene as a matter of right and (2) these boards may however, grant intervention as a matter of discretion, exercised according to specific guidelines, to petitioners who are not entitled to intervention as a matter of right but who may nevertheless make some contribution to the proceeding. The Commission also holds that the Pebble Springs petitioners lack standing to intervene as a matter of right but that the Appeal Board should decide whether to grant intervention as a matter of discretion.

Matter remanded to Appeal Board.

RULES OF PRACTICE. STANDING TO INTERVENE

Intervention as a matter of right in NRC domestic licensing proceedings is governed by the judicial standing doctrine which requires a petitioner to allege both (1) some injury that has occurred or will probably result from the action involved to the person asserting it and (2) an interest "arguably within the zone of interest" protected by the statute. *Sierra Club v. Morton*, 405 U.S. 727 (1972); *Warth v. Seldin*, 422 U.S. 490 (1975).

ATOMIC ENERGY ACT STANDING TO INTERVENE

Contemporaneous judicial concepts of standing should be used in considering whether a petitioner for intervention has alleged an "interest [which] may be affected by the proceeding," within the meaning of Section 189a. of the Atomic Energy Act, 42 U.S.C. 2239(a).

RULES OF PRACTICE: STANDING TO INTERVENE

Adjudicatory boards may grant intervention as a matter of discretion to petitioners who are not entitled to intervention as a matter of right but who may nevertheless make some contribution to the proceeding.

RULES OF PRACTICE: STANDING TO INTERVENE

Adjudicatory boards deciding whether to grant intervention as a matter of discretion should consider all the facts and circumstances of the particular case, including some of the factors specified in 10 CFR 2.714(a) and (d).

RULES OF PRACTICE. STANDING TO INTERVENE

Adjudicatory boards deciding whether to grant intervention as a matter of discretion should permit intervention more readily where petitioners show significant ability to contribute on substantial issues of law or fact which will not otherwise be properly raised or presented, set forth these matters with suitable specificity to allow evaluation, and demonstrate their importance and immediacy, justifying the time necessary to consider them.

RULES OF PRACTICE. STANDING TO INTERVENE

Adjudicatory boards may demand specificity from prospective intervenors and, further, may limit the participation of intervenors in discretionary cases to the issues they have specified as of particular concern to them.

MEMORANDUM AND ORDER

Exercising its discretion pursuant to 10 CFR 2.785(d) to “certify to the Commission for its determination major or novel questions of policy law or procedure,” the Atomic Safety and Licensing Appeal Board has framed two legal issues for our resolution:

1. In determining whether a petitioner for intervention in a domestic licensing proceeding has sufficiently alleged “an interest [which] may be affected by” the proceeding within the meaning of Section 189a. of the Atomic Energy Act and Section 2.714(a) of the Commission’s Rules of Practice, are the adjudicatory boards strictly to apply contemporaneous judicial concepts of standing? If not, what principles are to be applied?

2. In circumstances where a petition for intervention in a domestic licensing proceeding does not allege an interest which would entitle the petitioner to intervene in the proceeding as a matter of right, may intervention nevertheless be permitted as a matter of discretion? If so, is the exercise of that discretion reserved to the Commission itself or may it be exercised by the adjudicatory boards as well? If the adjudicatory boards do have that discretion, what are the standards which should govern its exercise generally and in this case in particular?

For the reasons expressed below we are of the opinion that judicial concepts of standing should be applied by adjudicatory boards in determining whether a petitioner is entitled to intervene in our proceedings as a matter of right under Section 189 of the Atomic Energy Act. These boards may however, as a matter of discretion exercised according to guidelines furnished herein, grant intervention in domestic licensing proceedings to petitioners who are not entitled to intervention as a matter of right, but who may nevertheless make some contribution to the proceeding.

Background

A proceeding on an application for construction permits to build two nuclear power reactors in Gilliam County Oregon, designated as the Pebble Springs Nuclear Plant, Units 1 and 2, is pending before an Atomic Safety and Licensing Board. Intervention has been granted to an individual and two organizations, Forelaws on Board and Coalition for Safe Power. By virtue of an agreement for co-ownership of the facilities entered into on January 23, 1976, between the original applicant, Portland General Electric Company and Puget Sound Light and Power Company and Pacific Power and Light Company the Licensing Board issued an "Amended Notice of Hearing on Application for Construction Permits" on February 18, 1976, which named the three utilities as joint applicants. The Amended Notice provided an opportunity for any person whose interest might be affected by the entrance of Puget Sound Power and Light Company and Pacific Power and Light Company as joint applicants to file a petition for intervention in accordance with 10 CFR 2.714. The Licensing Board granted the petition to intervene of an organization, Project Survival, and six members thereof, which asserted an interest in the Pebble Springs proceeding solely on the basis that those members were customers of Pacific Power and Light Company one of the joint applicants.¹ The applicants appealed this decision.

In affidavits each of the individuals averred that:

He [or she] is a ratepayer of Pacific Power & Light Company and makes this affidavit in support of his [or her] petition to intervene in these proceedings. As a ratepayer, he [or she] will be adversely affected if the Pebble Springs Nuclear Plants are constructed because he [or she] will be burdened by rate increases to pay for the power to be generated thereby. The granting or denying of a construction permit for a nuclear facility reflects an accurate assessment of all costs and benefits of the project, including social, economic, and environmental costs and benefits. As a customer of Pacific Power & Light Company he [or she] has an interest in seeing that the Company makes an economically socially and environmentally sound decision with regard to its participation in this project and that the cost-benefit analysis be accurate. As a consumer of electricity, he [or she] is concerned with the reliability of the utility's generating facilities. In connection with this, a full and adequate evaluation of the economic, social and environmental impacts of the proposed facilities must be made to ensure that the plant will be constructed without delay and operated without interruption.

The Appeal Board determined that if judicial standing doctrines govern the question of whether a petitioner for intervention has the requisite "interest [which] may be affected" by the proceeding within the meaning of the Atomic Energy Act² and the NRC's Rules of Practice,³ petitioners lacked standing. ALAB-333, NRCI-76/6 804 (June 22, 1976). The Appeal Board refrained from rendering judgment accordingly however, because it read in our recent decision in *Edlow International Co.*, CLI-76-6, NRCI-76/5 563, 573 (May 7 1976), a suggestion that judicial standing requirements need not be strictly applied in Commission administrative proceedings, and that in domestic licensing proceedings there may be discretion to grant intervention even where standing to intervene as a matter of right is lacking.

Intervention as a Matter of Right

To have "standing" in court, one must satisfy two tests. First, one must allege some injury that has occurred or will probably result from the action involved. Under this "injury in fact test" a mere academic interest in a matter, without any real impact on the person asserting it, will not confer standing. One must, in addition, allege an interest "arguably within the zone of interest" protected by the statute. For example, if a statute were exclusively concerned with safety allegation of a purely aesthetic concern would not satisfy this "zone of interests" test. See, e.g., *Sierra Club v. Morton*, 405 U.S. 727 (1972); *Warth v. Seldin*, 422 U.S. 490 (1975).

In our recent *Edlow International* decision, we recognized that standing requirements in the federal courts need not be the exclusive model for those applicable to administrative proceedings. On the other hand, applicability of judicial standing rules to questions of standing to intervene in administrative proceedings is clearly permissible. See *National Welfare Rights Organization v. Finch*, 429 F.2d 725 732-733 (D.C. Cir. 1970). And we noted in *Edlow* the Commission's reliance, as a general proposition, on judicial precedents in deciding issues of standing to intervene. We have found the standards announced by the federal courts to be useful guides in determining the kinds of interests a petitioner must establish to sustain a claim for participation in a proceeding as a matter of right. *Edlow International Co.*, *supra*, NRCI-76/5 at 569-570. Our administrative process benefits from the concrete adverseness brought to a proceeding by a party who may suffer injury in fact by Commission licensing action, and whose interest is arguably within the "zone of interests" protected by the statutes administered by the Commission.

Accordingly in determining whether a petitioner for intervention in NRC domestic licensing proceedings has alleged an "interest [which] may be affected

² Section 189a., 42 U.S.C. 2239(a).

³ Section 2.714(a), 10 CFR 2.714(a).

by the proceeding” within the meaning of Section 189a. of the Atomic Energy Act and Section 2.714(a) of NRC’s Rules of Practice, contemporaneous judicial concepts of standing should be used.⁴ We affirm the Appeal Board’s determination that the instant petitioners, Project Survival and its members, do not meet the judicial standing test. With respect to the “zone of interest” requirement, these ratepayer petitioners seek a complete economic analysis of nuclear power as part of the licensing proceeding in order to avoid even the possibility of increased future electric rates. While this “interest” is understandable, it does not come within the “zone of interest” protected by the Atomic Energy Act.⁵ Apart from that, the petitioners here seek intervention to assure an “economically socially and environmentally sound decision” will be made and state their “concern with the reliability of the utility’s generating facilities.” As the Appeal Board pointed out, these allegations are not sufficiently particularized to afford a basis for judicial standing. Petitioners lack standing to intervene as a matter of right.

Discretionary Intervention

It remains for us to discuss the second of the certified questions—may intervention be permitted as a matter of discretion in domestic licensing proceedings to petitioners who lack standing to intervene in such proceedings as a matter of right? We have no doubt that there is no legal impediment preventing administrative agencies from allowing wider participation in their proceedings than is required by statute. As Member Salzman noted, in his separate opinion in *Long Island Lighting Company* (Jamesport Nuclear Power Station, Units 1 and 2), ALAB-292, 2 NRC 631 655 (1975), “Indeed, in *Cities of Statesville v. AEC*, 441 F.2d 962, 976-77 (1969), the District of Columbia Circuit told the Commission that it is entitled to be ‘accorded broad discretion’ in determining the extent of public participation allowable in its proceedings beyond that of parties

⁴We do not find persuasive Mr. Farrar’s argument in *Virginia Electric and Power Company* (North Anna Power Station, Units 1 and 2), ALAB-342, NRCI-76/8 98, 117 (August 31, 1976), that petitioners for intervention under the Atomic Energy Act need not meet the “zone of interests” test in addition to a showing of injury in fact. As pointed out in that case by Mr. Rosenthal, nothing in the legislative history of the Atomic Energy Act suggests such an expansive reading of section 189a.’s “person whose interest may be affected” language. *Id.* at 103, n.6.

⁵Section 103b. of the Atomic Energy Act provides for issuance of licenses for nuclear facilities “which will serve a useful purpose proportionate to the quantities of [nuclear material] to be utilized.” This suggests that the statute includes within its zone of interests not only safe but “economical” uses of nuclear material. It would, however, be a long and unjustified step to find that such uses must be economical from the consumer’s standpoint in relation to competing fuels in the commercial power setting, particularly in light of the preservation of ratemaking jurisdiction of other Federal, State and local agencies pursuant to Section 271 of the Act. We do not reach the question of whether a ratepayer asserting such an interest would have standing to intervene in an antitrust proceeding.

who have an absolute right to intervene.” See also, *Hi-Ridge Lumber Co. v. United States*, 443 F.2d 452, 456 (9th Cir. 1971). The courts have encouraged administrative agencies to adopt creative approaches to maximizing productive public participation in their proceedings. In the landmark case of *Office of Communication of United Church of Christ v. FCC*, 359 F.2d 994, 1005-1006 (D.C. Cir. 1966) then Judge Burger stressed the potential contributions of public intervenors and, concomitantly the power of the agency to structure proceedings, stating that:

The Commission should be accorded broad discretion in establishing and applying rules for such public participation, including rules for determining which community representatives are to be allowed to participate and how many are reasonably required to give the Commission the assistance it needs in vindicating the public interest. The usefulness of any particular petitioner for intervention must be judged in relation to other petitioners and the nature of the claims it asserts as basis for standing.⁶

We have previously stressed the important role of public participation in our regulatory process. Thus, in the first adjudicatory decision of this Commission, we stated that:

we wish to underscore the fundamental importance of meaningful public participation in our adjudicatory process. Such participation, performed in the public interest, is a vital ingredient to the open and full consideration of licensing issues and in establishing public confidence in the sound discharge of the important duties which have been entrusted to us.

⁶The Second Circuit Court of Appeals, in an opinion authored by Judge Friendly has also suggested, in a case upholding an FTC order allowing intervention, that agencies can exercise their discretion in this area:

Agencies could well consider revision of their rules on intervention to distinguish between persons whose property rights are at stake and are thus entitled to all the rights of a party and persons with a more generalized interest, a sort of super *amicus curiae*, whose participation can well be restricted to avoid undue prolongation of the hearing. *Pepsico, Inc. v. F.T.C.*, 472 F.2d 179, 184 n.4 (1972). (emphasis added).

The rules of practice of some agencies presently provide for discretionary intervention. For example, the Civil Aeronautics Board provides that: “Any person who has a statutory right to be made a party to such proceeding shall be permitted to intervene. Any person whose intervention will be conducive to the ends of justice and will not unduly delay the conduct of such proceeding may be permitted to intervene.” 14 CFR 302.15(a). The Federal Trade Commission’s rule in relevant part provides: “The administrative law judges or the Commission may by order permit the intervention to such extent and upon such terms as are provided by law or as otherwise may be deemed proper.” 16 CFR 3.14. The Securities and Exchange Commission allows intervention if it is satisfied on the basis of a written application that “ participation as a party will be in the public interest and that leave to be heard. would be inadequate for the protection of his interests.” 17 CFR 210.9(e).

Northern States Power Company (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-75-1 1 NRC 1 2 (1975).

Because of the value perceived in such participation, this Commission and its predecessor, the Atomic Energy Commission, have always followed a liberal construction of judicial standing tests in determining whether a petitioner is entitled to intervention as a matter of right in our domestic licensing proceedings.⁷ This same perception leads us to the conclusion that our regulatory responsibilities can best be carried out by allowing intervention as a matter of discretion to some petitioners who do not meet judicial standing tests.

In determining in a particular case whether or not to permit intervention by petitioners who do not meet the tests for intervention as a matter of right, adjudicatory boards should exercise their discretion based on an assessment of all the facts and circumstances of the particular case. Some factors bearing on the exercise of this discretion are suggested by our regulations, notably those governing the analogous case where the petition for intervention has been filed late, 10 CFR 2.714(a), but also the factors set forth in 10 CFR 2.714(d), governing intervention generally.⁸

(a) Weighing in favor of allowing intervention—

- (1) The extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record.
- (2) The nature and extent of the petitioner's property financial, or other interest in the proceeding.
- (3) The possible effect of any order which may be entered in the proceeding on the petitioner's interest.

(b) Weighing against allowing intervention—

- (4) The availability of other means whereby petitioner's interest will be protected.
- (5) The extent to which the petitioner's interest will be represented by existing parties.
- (6) The extent to which petitioner's participation will inappropriately broaden or delay the proceeding.

Clearly these are not the only factors which might be considered. Other factors may be suggested by the practice of other agencies or by judicial cases, such as *United Church of Christ v FCC*, *supra*, which deal explicitly with the

⁷ *Washington Public Power Supply System* (Hanford Nos. 1 and 4), LBP-75-11, 1 NRC 252 (1975); *Long Island Lighting Company* (Jamesport Nuclear Power Station, Units 1 and 2), ALAB-292, 2 NRC 631 (1975).

⁸ In the instant case another factor is present which must be considered by the Licensing Board in determining whether the balance weighs in favor of discretionary intervention. Since the decision of the Licensing Board on May 25, 1976, Project Survival (individuals and the organization consolidated as one party) has been participating in the proceedings. We feel that this circumstance is a factor which weighs in petitioner's favor.

discretionary character of some interventions. As a general matter, however, we would expect practice to develop, not through precedent, but through attention to the concrete facts of particular situations. Permission to intervene should prove more readily available where petitioners show significant ability to contribute on substantial issues of law or fact which will not otherwise be properly raised or presented, set forth these matters with suitable specificity to allow evaluation, and demonstrate their importance and immediacy justifying the time necessary to consider them.

In permitting adjudicatory boards to exercise discretion in ruling on questions of participation, we recognize that judicial standing criteria for intervention as a matter of right may in a particular case, exclude petitioners who would have a valuable contribution to make to our decision-making process. Administrative procedures are sufficiently flexible to accommodate such petitioners. To avoid any possibility of adventitiousness or delay however, the adjudicatory boards may demand specificity from prospective intervenors and, further, may limit the participation of intervenors in discretionary cases to the issues they have specified as of particular concern to them. By contrast, intervenors in proceedings as a matter of right are now entitled to participate in all issues in contention.⁹ This consequence arguably flows in part from the Atomic Energy Act and the Administrative Procedure Act. *Siegel v. AEC*, 400 F.2d 778 (D.C. Cir. 1968). Apart from legal requirements, it is reasonable to anticipate that intervenors meeting judicial standing tests of actual injury and assertion of interests in our areas of statutory responsibility may constructively participate with respect to a broad range of issues. The same expectation generally would not arise with respect to a petitioner who does not meet traditional standing tests.

The certified questions are answered in accordance with this opinion and the matter is remanded to the Appeal Board for further proceedings.

It is so ORDERED.

By the Commission

Samuel J. Chilk
Secretary of the Commission

Dated at Washington, D.C.
this 23rd day of December, 1976

⁹ See *Northern States Power Company* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-244, 8 AEC 857 868-869, *petition for reconsideration denied*, ALAB-252, 8 AEC 1175, *affirmed*, CLI-75-1, 1 NRC 1 (1975).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

CLI-76-28

COMMISSIONERS:

Edward A. Mason, Acting Chairman

Victor Gilinsky

Richard T. Kennedy

In the Matter of

**Docket Nos. 50-413
50-414**

DUKE POWER COMPANY

**(Catawba Nuclear Station,
Units 1 and 2)**

December 27 1976

The Commission approves the Appeal Board's deferral in ALAB-355 of fuel cycle issues pending anticipated adoption of a revised interim rule.

MEMORANDUM AND ORDER

This decision comes before us in the wake of our *Seabrook* and *Vermont Yankee* opinions and our Supplemental General Statement of Policy all of which were issued on November 5, 1976. The Appeal Board here indicated that it would await Commission guidance before acting on the fuel cycle issues which had been raised in this case. ALAB-355, NRCI-76/10 397 (October 29 1976). This was the correct course to follow. Until a decision regarding a revised interim rule has been made, we believe, on the basis of our reasoning in *Seabrook*, that fuel cycle issues in cases such as this, where a construction permit has been issued but the action has not become final within the Commission because of pending appeal or possible Commission review should be deferred pending anticipated adoption of a revised interim rule.

It is so ORDERED.

By the Commission

Samuel J. Chilk

Secretary of the Commission

Dated at Washington, D.C.
this 27th day of December 1976.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-359

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Richard S. Salzman, Chairman
Dr. Lawrence R. Quarles
Michael C. Farrar

In the Matter of

Docket Nos. 50-413
50-414

DUKE POWER COMPANY

(Catawba Nuclear Station,
Units 1 and 2)

Upon petition by intervenor for reconsideration of ALAB-355, which declined to overturn the Licensing Board's prior authorization of construction permits for the Catawba nuclear facility the Appeal Board finds no reason to reopen the record. The Appeal Board also finds no occasion to grant relief requested with respect to the McGure facility

Petition denied as to Catawba facility and dismissed as to McGure facility

RULES OF PRACTICE. REOPENING OF PROCEEDINGS

A party seeking reopening of the record and reconsideration of an issue because of the observance of a new trend or the discovery of a new fact bears a very heavy burden. *ICC v. Jersey City* 322 U.S. 503, 514 (1944)

MOTION FOR RECONSIDERATION: RAISING MATTERS FOR FIRST TIME

An issue waived on direct appeal because not briefed may not thereafter be raised on a motion to reconsider the decision on appeal.

RULES OF PRACTICE. BRIEFS

Where a party has declined to brief an issue on appeal, thereby waiving its right to pursue that issue on appeal, it may not resurrect that issue through a petition for reconsideration.

Mr. J. Michael McGarry III, Washington, D.C., for the applicant.

Mr. Jesse L. Riley Charlotte, N.C., for the intervenor.

Mr. Bernard M. Bordenick for the Nuclear Regulatory Commission staff.

MEMORANDUM AND ORDER

December 15, 1976

I

Intervenor Carolina Environmental Study Group has petitioned us to reconsider our refusal to overturn the Licensing Board decisions authorizing Duke Power Company to construct the Catawba nuclear facility ALAB-355, NRCI-76/10, 397 (October 29 1976). The Study Group further asks that we stay construction not of Catawba, but of Duke Power's McGuire nuclear facility also now being built under Commission license. The ground advanced for relief is the assertion that in the interval following the close of the record below, the growth of electric power demand on Duke Power's system has not met the Company's predictions and therefore, in the Study Group's opinion, the question of "need [for the facility] and the closely related [question of] financial capability of the applicant, [should] be reopened for the incorporation of new matter and that construction of McGuire be stayed."

The staff recommends that we deny the petition on the grounds that its assertions for the most part are not based on new information and in any event are insufficient to warrant reconsideration.

The applicant expresses confusion over the proper forum to consider the Study Group's petition because its papers, although captioned in this proceeding, also seek relief respecting the McGuire reactor. Applicant therefore says it needs additional time to respond.

II

Insofar as the petition for reconsideration is addressed to the Catawba proceeding, the petition is *denied*. After a decision has been rendered, a dissatisfied litigant who seeks to persuade us—or any tribunal for that matter—to reopen a record and reconsider "because some new circumstance has arisen, some new trend has been observed or some new fact discovered," has a difficult burden to bear. The reasons for this were cogently given by Mr. Justice Jackson more than thirty years ago in *ICC v. Jersey City* 322 U.S. 503, 514 (1944):

One of the grounds of resistance to administrative orders throughout federal experience with the administrative process has been the claims of private litigants to be entitled to rehearings to bring the record up to date and meanwhile to stall the enforcement of the administrative order. Administrative consideration of evidence—particularly where the evidence is taken by an examiner, his report submitted to the parties, and a hearing held on their exceptions to it—always creates a gap between the time the record is closed and the time the administrative decision is promulgated. This is especially true if the issues are difficult, the evidence intricate, and the consideration

of the case deliberate and careful. If upon the coming down of the order litigants might demand rehearings as a matter of law because some new circumstance has arisen, some new trend has been observed, or some new fact discovered, there would be little hope that the administrative process could ever be consummated in an order that would not be subject to re-opening.

Accord, United States v ICC, 396 U.S. 491, 521 (1970); *Northern Indiana Public Service Co.* (Bailly Generating Station, Nuclear-1), ALAB-227 8 AEC 416, 418 fn. 4 (1974). The issues sought to be raised anew by the Study Group are basically dealt with in our decision; nothing in the petition persuades us that the record should be reopened so that those questions can be reshaped.¹

To the extent that it seeks relief relating to the *McGuire* facility the petition is *dismissed*. Our decision upholding the construction of that nuclear plant has been reviewed by the court of appeals at the behest of this same intervenor and affirmed. *Carolina Environmental Study Group v United States*, 510 F.2d 796 (D.C. Cir. 1975), *affirming Duke Power Company* (McGuire Nuclear Station, Units 1 & 2), ALAB-128, 6 AEC 399 (1973). Even assuming *arguendo* that we possess jurisdiction to grant the relief now sought, we find no occasion described in the petition which would incline us to do so.

In light of the foregoing, the applicant's motion for an extension of briefing time is *dismissed as moot*.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Margaret E. Du Flo
Secretary to the Appeal Board

¹Two matters in the Petition for Reconsideration cannot be permitted to pass without comment. The first is the assertion that ALAB-355 relied on the applicant's predictions of the need for power from Catawba. This is a misstatement of the record. As we took pains to point out, the Licensing Board independently derived its own predictions of future power demands and our decision rests on those calculations, not on the "load forecasts submitted by any party." See NRCI-76/10 at 407. Second, the intervenor waived its right to challenge the Licensing Board's finding that the applicant was financially qualified when it chose not to brief the issue on appeal (*Id.* at 413-414). Accordingly, it may not resurrect that issue on petition for reconsideration.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-360

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Michael C. Farrar, Chairman
Dr. John H. Buck
Dr. Lawrence R. Quarles

In the Matter of

Docket Nos. 50-3
50-247
50-286

CONSOLIDATED EDISON COMPANY
OF NEW YORK, INC.

(Indian Point, Units 1 2 & 3)

Appeal Board denies staff's and intervenor's petitions for reconsideration of ALAB-357

ORDER

December 23, 1976

The petitions for reconsideration of ALAB-357 (NRCI-76/11 542, November 10, 1976) filed by the NRC staff and the Citizen's Committee for the Protection of the Environment are hereby *denied*. The written direct testimony on the seismic monitoring condition, called for in ALAB-357 but later postponed, is to be filed by January 17 1977

It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Romayne M. Skrutski
Secretary to the Appeal Board

Mr. Farrar, dissenting:

I adhere to the view expressed in my dissent from ALAB-357 that the Board majority is following an improper course in calling for a hearing on the seismic monitoring condition and in staying the effectiveness of that condition

pending the outcome of the hearing. I would add to what I said before and to what is contained in the petitions for reconsideration only a brief comment on the licensees' response to those petitions.

In the first place, the licensees make no attempt in that response to justify their own inexcusable tardiness in requesting relief from the monitoring condition. They would shift the focus from their conduct, however, by arguing that the consumer will have to bear any costs that might ultimately prove to have been needlessly incurred (Response, p. 7). But the consumer (or the stockholder) always has to bear the financial burden of a utility company's mistakes; acceptance of the licensees' argument would mean that time limits for challenging staff action would not ever be binding upon the industry

Secondly the licensees' attempt to compare the situation before us to the "inerting" controversy is not well-founded (Response, p. 14). As I pointed out in dissenting from ALAB-357 we questioned and stayed the staff-imposed condition on our own motion in *Vermont Yankee*, prior to holding an evidentiary hearing but on the basis of materials in the record, because it threatened to cause a more serious safety problem than it purported to cure.¹ Far different considerations control the need for us to take action *pendente lite* in such circumstances than in the circumstances involved here, where only money is at stake.

Finally the licensees improperly try to play down the significance of what the Board majority has done by insisting that "nothing more" is involved here than a continuation of our September 14 stay order. (Response, p. 14 see also pp. 15-16, suggesting that "no action has been taken" in derogation of the commitment we made to the parties). To be sure, in ALAB-357 the majority did say it was continuing the stay imposed on September 14. But that was a matter of form only² The reasons for (1) granting the stay on September 14 (an action in which I joined) and (2) continuing it on November 10 (an action from which I dissented), were entirely different. The September 14 stay was granted on an emergency basis simply to give us time to think about the licensees' eleventh-hour motion before the condition to which they objected became effective.³ The November 10 stay in sharp contrast, was based on the majority's

See NRCI-76/11 at 552, fn. 1 (dissenting opinion), and *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Station), ALAB-194, 7 AEC 431 (1974) and ALAB-214, 7 AEC 1001 (1974).

²The licensees again rely on semantics in arguing that they sought not a "stay" but a "license amendment." (Response, pp. 12-13). The Board majority and I all believe a stay was granted. Contrary to what the licensees say more than "prospective" matters are involved here—indeed, the licensees came to us precisely because the license condition was having immediate impact upon them.

³We expressly said at that time that our action in granting relief "on a temporary basis only" reflected "in no way any view on the merits of the motion."

preliminary assessment of the record. On that score, I continue to believe that it is entirely inappropriate to take any action in the licensees' favor on the basis of a record that not only is woefully incomplete but is in that state precisely because the licensees delayed raising this question for months and then surprised everyone with it on the afternoon of the last day of the hearing.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-361

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. John H. Buck
Michael C. Farrar

In the Matter of

Docket No. 50-376

PUERTO RICO WATER RESOURCES
AUTHORITY

(North Coast Nuclear Plant, Unit 1)

Appeal Board denies intervenor's motion for directed certification of certain procedural questions.

Mr. Maurice Axelrad, Washington, D.C., for the applicant,
Puerto Rico Water Resources Authority

Mr. Gonzalo Fernos, Santurce, Puerto Rico, intervenor *pro se*.

Mr. Gregory Fess for the Nuclear Regulatory Commission
staff.

MEMORANDUM AND ORDER

December 28, 1976

Intervenor Gonzalo Fernos asks that we exercise the directed certification authority conferred by 10 CFR 2.718(i) to step into this construction permit proceeding at an interlocutory stage. The relief which he seeks is entirely procedural in character (involving essentially the handling of prehearing motions) and by no means is required in order to avoid injury to the public interest or the avoidance of unusual delay or expense. *Public Service Company of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-271, 1 NRC 478, 483 (1975). Nor is there any other discernible basis for concluding that sufficiently extraordinary circumstances are present to justify our involvement in the proceeding at this time.

Motion for a directed certification *denied*.

It is so ORDERED.

**FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD**

**Romayne M. Skrutski
Secretary to the Appeal Board**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-362

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. Lawrence R. Quarles
Richard S. Salzman

In the Matter of

Docket Nos. 50-514
50-515

PORTLAND GENERAL ELECTRIC
COMPANY et al.

(Pebble Springs Nuclear Plant,
Units 1 and 2)

Upon appeal by the applicants from the Licensing Board order granting leave to intervene, the Appeal Board certified to the Commission certain questions regarding standing to intervene in domestic licensing proceedings (ALAB-333). The Commission answered those questions in CLI-76-27 Acting on the basis of the guidelines set forth in CLI-76-27 the Appeal Board rules that, given petitioners' active participation in the proceeding for seven months, intervention should be permitted as a matter of discretion.

Licensing Board order affirmed.

RULES OF PRACTICE. STANDING TO INTERVENE

As a general rule, adjudicatory boards faced with whether to grant intervention as a matter of discretion must consider the various factors identified in CLI-76-27 especially the significance of the contribution which might be expected of the petitioner.

Mr. Warren Hastings, Portland, Oregon, for the applicants,
Portland General Electric Company *et al.*

Mr. Frank Josselson, Lake Oswego, Oregon, for the petitioners for intervention, Project Survival, *et al.*

Mr. Lloyd K. Marbet, Portland, Oregon, for the intervenors,
Coalition for Safe Power and Forelaws on Board.

Mr. O. Gregory Lewis for the NRC staff.

DECISION

December 29, 1976

This is an appeal by the applicants from a June 3, 1976 order of the Licensing Board granting the amended petition of Project Survival and six of its members for leave to intervene in a construction permit proceeding involving the Pebble Springs Nuclear Plant, Units 1 and 2. Standing to intervene was asserted in the petition solely on the basis that the individual petitioners are customers of the Pacific Power and Light Company one of the applicants. The applicants' principal contention on the appeal is that status as a rate-payer is not sufficient to confer such standing.

In ALAB-333 NRCI-76/6 804 (June 22, 1976), we announced our intention to withhold disposition of the appeal pending our receipt of the response of the Commission to the following questions:

1. In determining whether a petitioner for intervention in a domestic licensing proceeding has sufficiently alleged "an interest [which] may be affected by" the proceeding within the meaning of Section 189a. of the Atomic Energy Act and Section 2.714(a) of the Commission's Rules of Practice, are the adjudicatory boards strictly to apply contemporaneous judicial concepts of standing? If not, what principles are to be applied?

2. In circumstances where a petition for intervention in a domestic licensing proceeding does not allege an interest which would entitle the petitioner to intervene in the proceeding as a matter of right, may intervention nevertheless be permitted as a matter of discretion? If so, is the exercise of that discretion reserved to the Commission itself or may it be exercised by the adjudicatory boards as well? If the adjudicatory boards do have that discretion, what are the standards which should govern its exercise generally and in this case in particular?

As explained therein, we had elected this course because, although convinced that the petitioners do not satisfy established judicial standing tests, a then recent Commission decision¹ had left us in doubt respecting whether such tests are to be rigidly adhered to in NRC domestic licensing proceedings. In the circumstances, it seemed appropriate to solicit an elaboration of the Commission's views before rendering our decision.

Edlow International Co., CLI-76-6, NRCI-76/5 563 (May 7, 1976).

The Commission has now spoken. In a memorandum and order entered on December 23, 1976,² it ruled that

judicial concepts of standing should be applied by adjudicatory boards in determining whether a petitioner is entitled to intervene in our proceedings as a matter of right under Section 189 of the Atomic Energy Act. These boards may however, as a matter of discretion exercised according to guidelines furnished herein, grant intervention in domestic licensing proceedings to petitioners who are not entitled to intervention as a matter of right, but who may nevertheless make some contribution to the proceeding.

Further concluding, as had we, that these petitioners have not alleged a basis for judicial standing, the Commission has left it to us to decide whether intervention should be permitted here as a matter of discretion.

We answer this question in the affirmative and accordingly affirm the Licensing Board order under challenge. As the Commission itself noted, a factor weighing in the petitioners' favor is that during the seven-month interval since the Licensing Board granted their intervention petition last Spring, they have actively participated in the proceeding. NRCI-76/12 at 616, fn.8. In the totality of circumstances, we think that this factor should carry the day in this instance. It is quite true that the petitioners' participation was undertaken with full knowledge that the Licensing Board's order was receiving appellate review. But inasmuch as the proceeding was not being held in abeyance while that review was in progress, the petitioners could ill-afford to sit on the sidelines until our decision was rendered. Moreover, although it is our usual practice to expedite the resolution of intervention appeals, on this occasion it proved impossible to do so. In sum, petitioners' involvement in the proceeding for a protracted period despite the cloud hanging over their entitlement to intervene was both due to unusual circumstances and entirely proper. In view of that involvement and the attendant commitment of their time and resources, it would be manifestly inequitable to require them to withdraw at this relatively late date.

We stress that the result that we reach here should not be taken as a precedent for application in future cases in which the question of discretionary intervention must be determined. In such cases, neither licensing boards nor appeal boards should be confronted with a situation akin to that now at bar—*i.e.* with an intervention which has been allowed to proceed for a substantial time while existing uncertainties pertaining to governing standing doctrines were being resolved. Absent such an exceptional state of affairs, the determination whether to grant intervention as a matter of discretion must be made on a consideration of the various factors identified by the Commission in its

² CLI-76-27, NRCI-76/12, 610, 612.

December 23 opinion, starting with the one it stressed—the significance of the contribution which might be expected of the petitioner.

The June 3, 1976 order of the Licensing Board is *affirmed*.³
It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Romayne M. Skrutski
Secretary to the Appeal Board

In its December 23 opinion, the Commission noted that “the adjudicatory boards may limit the participation of intervenors in discretionary cases to the issues they have specified as of particular concern to them.” NRCI-76/12 at 617 We leave it to the Licensing Board to decide whether such a limitation should be imposed here.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ALAB-363

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Alan S. Rosenthal, Chairman
Dr. John H. Buck
Michael C. Farrar

In the Matter of

Docket Nos. 50-338 OL
50-339 OL

**VIRGINIA ELECTRIC AND POWER
COMPANY**

**(North Anna Power Station,
Units 1 and 2)**

Upon appeal by the applicants from the Licensing Board order granting a tardy petition for leave to intervene, the Appeal Board found that "good cause" had been established for the tardiness of the petition but that judicial standing was lacking (ALAB-342). The Board deferred final determination of the appeal pending a response to certain questions regarding standing to intervene in domestic licensing proceedings, which had been previously certified to the Commission in ALAB-333. The Commission answered those questions in CLI-76-27. On the basis of the guidelines set forth therein, the Appeal Board rules that intervention should be permitted as a matter of discretion.

Licensing Board order affirmed.

RULES OF PRACTICE. STANDING TO INTERVENE

Intervention as a matter of right in NRC domestic licensing proceedings is governed by the judicial standing doctrines which require a petitioner to allege both (1) "some injury that has occurred or will probably result from the action involved" and (2) an interest which satisfies the "zone of interests" test. CLI-76-27

RULES OF PRACTICE. STANDING TO INTERVENE

As a general rule, adjudicatory boards faced with whether to grant intervention as a matter of discretion must consider the various factors identified in CLI-76-27 especially the significance of the contribution which might be expected of the petitioner.

Mr. Michael W. Maupin, Richmond, Virginia (Mr. James N. Christman with him on the brief) for the applicant, Virginia Electric and Power Company

Mr. John J. Runzer, Philadelphia, Pennsylvania (Messrs. A. H. Wilcox and Richard M. Rindler with him on the brief) for the petitioner for intervention; Sun Shipbuilding and Dry Dock Company

Mr. William Massar (Mr. Daniel T Swanson on the brief) for the Nuclear Regulatory Commission staff.

DECISION

December 30, 1976

This appeal by the applicant challenges the grant by the Licensing Board of the tardy petition of the Sun Shipbuilding and Dry Dock Company (Sun Ship) for leave to intervene in the operating license proceeding involving Units 1 and 2 of the North Anna Power Station. In ALAB-342, NRCI-75/8 98 (August 31, 1976), this Board determined by a divided vote that (1) "good cause" had been established for the untimeliness of the petition within the meaning of 10 CFR 2.714(a) as previously construed by the Commission in *West Valley*,¹ but (2) Sun Ship's alleged interest in the outcome of the proceeding was not arguably within "the zone of interests" to be protected or regulated by the Atomic Energy Act and, therefore, judicial standing was lacking in light of *Association of Data Processing Service Organizations v. Camp*, 397 U.S. 150, 153 (1970). We noted, however, that two months earlier we had certified to the Commission the questions whether contemporaneous judicial standing tests are to be strictly applied in determining the entitlement of a petitioner to intervene as a matter of right and, if so, whether there is nonetheless discretion in the adjudicatory boards to permit intervention on the part of a petitioner who does not satisfy those tests. *Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), ALAB-333 NRCI-76/6 804 (June 22, 1976). Because of this circumstance, we thought it appropriate to defer determination of the appeal here to abide the Commission's decision on those questions.

That decision is now in hand. CLI-76-27 NRCI-76/12 610 (December 23, 1976). What the Commission has concluded is, first, that intervention as a matter of right is governed by judicial standing doctrines which require the petitioner to allege both (1) "some injury that has occurred or will probably result from the action involved" and (2) an interest which satisfies the "zone of

Nuclear Fuel Services, Inc. (West Valley Reprocessing Plant), CLI-75-4,1 NRC 273 (1975).

interests” test. *Id.* at 613.² On the basis of what we determined in ALAB-342 on the latter score, it thus can now be said with greater confidence that Sun Ship is not entitled to intervene as a matter of right.³ The Licensing Board’s contrary holding was erroneous.

But the Commission went on to determine that adjudicatory boards may “as a matter of discretion exercised according to guidelines furnished herein, grant intervention in domestic licensing proceedings to petitioners who are not entitled to intervention as a matter of right, but who may nevertheless make some contribution to the proceeding.” *Id.* at 612. The guidelines to which the Commission had reference were spelled out later in the opinion. Foremost among the factors which are to be taken into account in deciding whether to allow participation in the proceeding as a discretionary matter is whether such participation would likely produce “a valuable contribution to our decision-making process.” As the Commission put it, “[p]ermission to intervene should prove more readily available where petitioners show significant ability to contribute on substantial issues of law or fact which will not otherwise be properly raised or presented, set forth these matters with suitable specificity to allow evaluation, and demonstrate their importance and immediacy justifying the time necessary to consider them.” *Id.* at 617

Applying this teaching to the “concrete facts” of the “particular situation” before us (*id.* at 617), we think there to be ample justification for permitting Sun Ship to participate here. In this connection, little need be added to what was said by us in ALAB-342. As we there observed, “it is scarcely open to dispute that the safety issue which Sun Ship has raised in its intervention petition [*i.e.* the integrity of the steam generator and reactor coolant pump supports installed in the North Anna facility] is a most serious one.” That “issue must be explored in sufficient depth to permit a confident judgment on it before reactor operation is licensed [and] it would appear that, given the role that it played in the fabrication of these particular supports, Sun Ship is well equipped to make a ‘genuinely significant’ contribution to that exploration.” NRCI-76/8

²In arriving at this conclusion, the Commission explicitly rejected (at fn. 4) the view expressed by Mr. Farrar in his concurring opinion in ALAB-342 (NRCI-76/8 at 115-17) that the Atomic Energy Act contains a “party aggrieved” provision with the consequence that a showing of “injury in fact” is enough to establish judicial standing to enforce the terms of that Act.

³In his concurring opinion in ALAB-342, Mr. Farrar expressed his disagreement with the conclusion of the majority of this Board that Sun Ship’s asserted interest in this proceeding is not at least arguably within the “zone of interests” protected or regulated by the Atomic Energy Act. NRCI-76/8 at 117-19. He adheres to that disagreement and would note that the Commission itself has not had occasion to pass upon that question. In that connection, the interest asserted by the *Pebble Springs* petitioners—and held by the Commission to be insufficient—was that of rate-payers. The interest asserted by Sun Ship is a considerably different one.

at 110-11. A reexamination of those conclusions has given us no cause to depart from them. Nor do we discern the existence of any consideration militating against Sun Ship's participation in the proceeding which might outweigh the desirability of obtaining Sun Ship's contribution to the resolution of the matter raised by its intervention petition.⁴

The June 9 1976 order of the Licensing Board is *affirmed*.⁵
It is so ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING APPEAL BOARD

Romayne M. Skrutski
Secretary to the Appeal Board

Opinion of Dr. Buck, dissenting:

I fully concur that Sun Ship has not asserted an interest in the outcome of this proceeding which is arguably within the "zone of interests" protected or regulated by the Atomic Energy Act (the only enactment here involved) and therefore that, under the teachings of the Commission's *Pebble Springs* opinion, the company has no right to intervene. I also agree that the principal factor to be taken into account in deciding whether to allow intervention as a matter of discretion is the extent and significance of the contribution which likely would be made by the petitioner to the resolution of the issue or issues which its

Another factor which might support the result we reach here is the participation of Sun Ship in the proceeding since June 9, 1976, when the Licensing Board granted its intervention petition. See *Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), ALAB-362, NRCI-76/12 627 (December 29, 1976). In the circumstances confronting us here, it is unnecessary to rely upon that factor. Accordingly, we do not pause to explore the extent, if any to which Sun Ship has been called upon to expend its time and resources in the furtherance of its intervention during the interval that the applicant's appeal has been under appellate review.

⁵With respect to the entitlement of Sun Ship to participate actively on issues not involving the integrity of the steam generator and reactor coolant pump supports, we call to the Licensing Board's attention both fn. 19 in ALAB-342 (NRCI-76/8 at 111) and the Commission's statement in its December 23 *Pebble Springs* opinion to the effect that "the adjudicatory boards may limit the participation of intervenors in discretionary cases to the issues they have specified as of particular concern to them." NRCI-76/12 at 617. Although we leave it to that Board to fashion the precise outer limits of Sun Ship's participation in light of what the Commission and we have said, it seems unlikely to us that the company will be able to demonstrate a genuine concern in issues other than that raised by its petition, let alone the ability to make an especially significant contribution to their resolution.

petition seeks to raise. I cannot, however, subscribe to the conclusion of my colleagues that that factor weighs heavily enough in Sun Ship's favor here that we should exercise our discretion to allow it to participate in the *North Anna* proceeding.

My reasons are detailed in my dissenting opinion in ALAB-342, NRCI-76/8 at 121-31 and need not be now repeated at length. Suffice it to say that, in light of all of the attendant circumstances, I remain firmly of the view that Sun Ship's motivation in seeking intervention is suspect and that its course of conduct leaves in substantial doubt whether it can be expected to render significant assistance in the development of a sound record even on the issue which it seeks to litigate. In this connection, I note again that the NRC staff has been conducting its own thorough investigation of the support integrity matter and that the Licensing Board has committed itself to a full exploration of that matter without regard to Sun Ship's participation.¹ It still seems to me that the endeavors of the staff and the Board will be enough to insure that the issue is examined in sufficient depth to permit a fully informed judgment to be made on it.

For these reasons, coupled with the absence of any other factor compelling a different result, I would not grant intervention on a discretionary basis.² Accordingly I would reverse the Licensing Board's June 9 1976 order.³

Moreover, the Advisory Committee on Reactor Safeguards has likewise looked into the subject. See its October 26, 1976 letter to the Chairman of the Commission entitled "Report on Partial Review of North Anna Power Station Units 1 and 2," at pp. 2-3.

¹I recognize that, in *Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), ALAB-362, NRCI-76/12 627 (December 29, 1976), we allowed intervention as a matter of discretion for the reason that the petitioners there had been permitted to participate in the proceeding for several months while the Commission's views on governing standing doctrines were being obtained. Although I have no quarrel with that rationale as applied to that case, in light of my perception of the circumstances underlying Sun Ship's intervention attempt I would not invoke it here.

³Needless to say if Sun Ship is to be permitted to participate, the Licensing Board should give particular heed to what has been said in fn. 5 of the majority's opinion.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-44

ATOMIC SAFETY AND LICENSING BOARD

John F. Wolf, Chairman
Dr. J. Venn Leeds, Jr.
Dr. Forrest J. Remick

In the Matter of

Docket Nos. STN 50-518
STN 50-519
STN 50-520
STN 50-521

TENNESSEE VALLEY AUTHORITY

(Hartsville Nuclear Plant
Units 1A, 2A, 1B and 2B

December 10, 1976

Upon applicant's request for an authorization to undertake additional construction activities pursuant to 10 CFR §50.10(e)(3)(LWA-2), the Licensing Board concludes that (1) there are no unresolved quality assurance or safety questions to constitute good cause for withholding authorization for the proposed LWA-2 activities and (2) certain unresolved safety questions with respect to LWA-1 activities previously authorized require that the existing authorization be modified.

Requested LWA-2 activities authorized; LWA-1 ordered to be modified.

TECHNICAL ISSUE DISCUSSED: Aircraft crash risk.

**SECOND SUPPLEMENTAL PARTIAL INITIAL DECISION
LIMITED WORK AUTHORIZATION 2 – PART II**

Appearances

David G. Powell, Esq., Alvin Gutterman, Esq., William Dunker, Esq., and Nicholas Della Volpe, Esq., for the Applicant, Tennessee Valley Authority

Leroy J. Ellis, Esq., for Intervenors William N. Young, et al.

William B. Hubbard, Esq., and William Barrick, Esq., for State of Tennessee

William Paton, Esq., and Lawrence Chandler Esq., for the U.S. Nuclear Regulatory Commission

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I. BACKGROUND

1. This Second Supplemental Partial Initial Decision--Limited Work Authorization 2--Part II involves the application of the Applicant (Tennessee Valley Authority or TVA) for a limited work authorization pursuant to 10 CFR Part 50.10(e)(3). Under 10 CFR 50.10(e)(3)(i) the Director of Nuclear Reactor Regulation may authorize the installation of structural foundations, including any necessary subsurface preparation, for structures, systems and components which are subject to the provisions of Appendix B. Such authorization may be granted only after the presiding officer in the proceeding, in addition to making the findings and determinations required by 10 CFR Part 50.10(e)(2), has also determined that there are no unresolved safety issues relating to the proposed activities that would constitute good cause for withholding authorization.

2. On April 20, 1976, this Board issued its Partial Initial Decision which contained the findings and determinations required by 10 CFR Part 50.10(e)(2).

3. Based on the findings by the Board contained in LBP-76-16, the Director of Nuclear Reactor Regulation, pursuant to the authority contained in 10 CFR 50.10(e)(1), issued a limited work authorization (LWA-1) to the Applicant on April 22, 1976.

4. On June 1, 1976, TVA filed a letter with the Director of Nuclear Reactor Regulation requesting an amendment to the LWA-1 which had been issued on April 22, 1976. By letter dated July 23 1976, the LWA-1 was amended effective August 6, 1976 by permitting the Applicant to clear, grub and construct the facility transmission lines. On September 30, 1976 this Board ordered that the LWA-1, as amended by the Staff, be modified to exclude permission to clear, grub and construct facility transmission lines.

5. On July 27 1976, this Board held a prehearing conference in Nashville, Tennessee, regarding the Applicant's request for an LWA-2. At that prehearing conference, the Applicant described the nature of the work it proposed to do

under the LWA-2.¹ The parties presented an agreed schedule which called for an evidentiary hearing on August 17 1976. On September 30, 1976 the Board filed its "First Supplemental Partial Initial Decision—Limited Work Authorization II—Part I" with respect to the August 17 1976 evidentiary hearing. The Board found that there were no unresolved safety issues relating to the proposed activities (drilling, grouting and placement of dental and fill concrete) that would constitute good case for withholding authorization. The Board's September 30, 1976 decision was made subject to the strictures contained in the Nuclear Regulatory Commission's General Statement of Policy dated August 13, 1976.

6. On September 21 1976 TVA filed an application with the Director, Office of Nuclear Reactor Regulation for authorization to conduct certain additional activities pursuant to 10 CFR 50.10(e)(3). The application was for the installation of structural foundations, including necessary subsurface preparation, for the auxiliary building, the fuel building and the reactor building.

7 An evidentiary hearing regarding TVA's September 21 1976 application was held in Nashville, Tennessee on September 27 28 and 29 1976.

8. Appendix 1 to this decision contains a list of exhibits received in the hearings on September 27 28 and 29 1976.

9 Appendix 2 to this decision approves the transcript corrections.

II. FINDINGS OF FACT

A. Risk of an Aircraft Crash

10. At the hearing on site suitability and environmental matters, evidence was presented concerning the suitability of the site from the standpoint of the risks posed by an aircraft crash. In its partial initial decision issued on April 20, 1976 the Board found the evidence presented to be an insufficient basis at that time for a decision as to whether this risk is acceptably small. However, there was sufficient evidence in the record for the Board to find that if the risk was later found to be unacceptable, the plants could be constructed to withstand airplane crashes without altering the conclusion of the Board's cost/benefit balance.

11. Subsequent to the issuance of the Partial initial decision, Intervenor William N. Young, *et al.*, moved to add an additional contention to the effect that the plants must be hardened to withstand an airplane crash. The motion was opposed by the Applicant and not opposed by the Staff. By Order dated August 25, 1976, the Board permitted Intervenor to supplement their contentions by adding the following:

Intervenor contend that the Hartsville Plants will need to be hardened against the possible effects of an airplane crash into the essential safety related structures.

Tr. p. 5024.

12. The Board ordered that the contention would be limited to issues raised by the Board *sua sponte* during the course of the evidentiary hearing on environmental matters and to issues raised on cross-examination of witnesses who submitted affidavits in response to the Board's Memorandum and Order dated February 2, 1976.

13. Evidence introduced by the Staff indicates that there are two-level airways (Victor 140 and 243) that intersect within two miles of the proposed site.² Approximately 85 flights per day crossed the intersection in 1974 and 77 per day in 1975. Utilizing 85 flights per day an inflight crash rate for aircraft of 3×10^{-9} per mile, an effective plant area of 5×10^{-3} square miles and an airway width of 8 miles, the Staff obtained a value of 6×10^{-8} per year per unit as the probability of an aircraft flying along either of the airways crashing into one of the units. This crash rate probability is less than the Staff's screening criterion of 10^{-7} per year contained in its Standard Review Plan.³

14. In further prepared testimony the Staff provided an additional calculation which included an assumed 4% compounded annual growth rate in air traffic, and which also assumed that a four unit plant has a crash risk which is approximately 4 times as great as a single unit plant.⁴ The Staff made one other change in its earlier calculations; 3×10^{-10} was used as the inflight crash rate per mile for aircraft using the airway instead of 3×10^{-9} used in the Safety Evaluation Report. The more conservative value of 3×10^{-9} includes accidents occurring in the vicinity of airports.⁵ A Staff witness testified that approximately two-thirds of air crashes occur near an airport and are associated with landing⁶ and therefore the crash rate of 3×10^{-10} is a more appropriate figure to use for Hartsville which is located more than 30 miles from the Nashville airport.⁷ The resulting recalculation for a four unit plant assuming a 4% compounded annual growth rate of traffic yields an average probability per year over the 40 year period of approximately 7×10^{-8} . The Staff indicated that the probability of an aircraft crashing into the plant and causing off-site radiological consequences in excess of 10 CFR Part 100 guidelines is so small that it need not be considered in the design of the facilities.⁸

15. In response to Board questioning the Staff provided the basis for the value of 5×10^{-3} square miles used as the effective area of each of the four units in the original computation in the Safety Evaluation Report. The Board requested that the Staff provide their assumed crash angle, the shadow area

² Staff Ex. 2-7 (§ 2.2 of SER).

§ 3.5.1.6 of Standard Review Plan, NUREG-75/087

⁴ Prepared testimony following Tr. p. 5465.

⁵ P 1 of prepared testimony following Tr. p. 5465.

⁶ Tr. p. 5476.

⁷ P 2 of prepared testimony following Tr. p. 5465.

⁸ P 2 of prepared testimony following Tr. p. 5465.

assumed and the assumptions made about the skid area ahead of the point of impact.⁹ A Staff witness testified that he had used the area estimated by the Applicant for the physical area of the vital structures that make up one of the units. Included were the reactor building, the fuel building, control room building and all the areas that would be vital in the case of an accident.¹⁰ That area was 0.00224 square miles¹¹ which was increased to the 0.005 square miles used in the formula by assuming an aircraft crash angle of 45° and including a skid distance of 100 feet.¹²

16. The Applicant introduced evidence of its analysis of the probability that an aircraft might crash into one of the critical areas of the plant. Utilizing the same formula used by the Staff¹³ the Applicant calculated a probability that an in-flight aircraft might crash into one of the reactor critical structures as 4.2×10^{-9} per year per reactor unit. Data utilized in the calculation included: an inflight crash rate of 4.88×10^{-10} per aircraft mile, which incorporated data from a sabotage event which occurred in 1975 an average of 81 flights per year along the airways (V-140, V-243 and J-42); a critical area of 0.0268 square miles per unit; and an airway width of 9.2 miles.

17 Applicant's evidence indicates that some growth in airway use above current rates is expected,¹⁴ but the Applicant did not include a growth factor in its calculation. An Applicant witness testified that the Staff assumed annual growth rate of 4% would overestimate the growth and should be viewed as an upper bound.¹⁵

18. The Applicant's calculations of the probability of an airplane crashing into a critical plant structure was on a single reactor unit basis and not on a four unit basis. In response to Board questions Applicant's witness argued that the probability of aircraft accidents should be on a per reactor unit basis.¹⁶ However, the witness indicated that if the Applicant's calculated probability was multiplied by a factor of five to account for an upper bound on traffic growth and then multiplied by a factor of four to place it on a four unit basis, the probability would still be less than 10^{-7} per year. Therefore, even in this case the witness concluded that the risk of an airplane crash was not a design basis event.¹⁷

19 Intervenors raised the question of whether a saboteur might intentionally crash an airplane into the plant and called a witness who testified that this risk

⁹Tr. pp. 5518-19.

¹⁰Tr. p. 5608.

Tr. p. 5609.

¹¹Tr. pp. 5608-9.

§ 3.5.1.6 of Standard Review Plan, NUREG-75/087.

Applicant Ex. 2-3 at 2.2-1c.

¹²Tr. pp. 5669-70.

¹³Tr. pp. 5665-68.

(Tr. pp. 5655-56, 5670).

is very real.¹⁸ However, the witness had never performed an airplane crash risk analysis,¹⁹ based his testimony primarily on newspaper accounts²⁰ and testified that his special expertise resulted from being a student of people.²¹

20. Applicant's witness testified that the Applicant's airplane crash analysis included sabotage of airplanes as part of the data base used in determining the in-flight crash rate, and thus sabotage events are included as a part of its aircraft crash risk assessment.²²

21. The Staff called a witness with experience in industrial security who testified that the Staff does not consider an intentional aircraft crash as a viable act of sabotage to a nuclear plant²³ because there has never been an act of sabotage at any operating nuclear power plant,²⁴ and there have been no known incidents of intentional airplane crashes into any facility in the United States.²⁵

22. The Board finds that the Applicant and the Staff have adequately considered the risk of an aircraft crashing into the plant. The Board further finds that the evidence of record does not indicate that the accidental or intentional crashing of an aircraft is an event which should affect the design of the proposed plant. Therefore, the Board finds that the plant will not need to be hardened against the possible effects of an airplane crash into the essential safety related structures.

B. Quality Assurance

23. Section 17 of the Hartsville Safety Evaluation Report contains the Staff's evaluation of the organization and the quality assurance program of the Applicant, of the General Electric Company and of the C.F. Braun & Company²⁶ Section 17 of the Staff's Safety Evaluation Report of the General Electric Standard Safety Analysis Report (GESSAR) contains the Staff's evaluation of the quality assurance program of the General Electric Company²⁷

24. A Staff witness testified that each quality assurance organization reports at least on an organizational level equal to the highest line manager whose work that it oversees or verifies; has the freedom and authority to identify quality assurance problems, recommend solutions and verify implementation of the solutions; can stop work or reject material as necessary; has adequate and well

¹⁸ Young *et. al.*, Ex. 10.

¹⁹ Tr. p. 5677

²⁰ Tr. p. 5679.

Tr. p. 5677

²² Tr. pp. 5624-26.

²³ Tr. p. 5583.

²⁴ Tr. p. 5565.

²⁵ Tr. pp. 5592-93.

²⁶ Staff Ex. 2-3.

²⁷ Staff Ex. 2-4.

defined procedures, independent design reviews, independent verification inspections, and adequate personnel with training and qualifications to meet the requirements of the program; has documented the systems of quality records and the audit systems to measure the effectiveness of the quality assurance program; and involves management in the operation and assessment of the quality assurance programs.²⁸

25. Another Staff witness testified that the following LWA-2 construction activities would be observed by the Staff: site preparation; placement of concrete in Class I structures; welding of steel containment liners and fuel pool liners; installation of the reactor pressure vessel pedestal; installation of the dry well vent structures; and installation of reinforcing materials.²⁹

26. Section 171A of the Preliminary Safety Analysis Report (PSAR) describes the Applicant's quality assurance program; Section 171B describes the General Electric and the C.F Braun quality assurance programs.³⁰

27 The Board finds that the quality assurance programs of the Applicant, the General Electric Company and the C.F Braun & Company as described in this record, comply with Appendix B of 10 CFR Part 50.

C. Requested LWA-2 Activities

28. The Applicant in a September 21 1976, letter to the Director, Office of Nuclear Reactor Regulation³¹ requested authorization to complete the structural portions of the auxiliary building, fuel building and reactor building up to about finished grade level of 545 feet above mean sea level. The Staff testified that the structural foundation work proposed by the Applicant, when performed in accordance with applicable codes, standards and specifications, loads and load combinations, design and analysis procedures, structural acceptance criteria, special construction techniques and materials quality control will perform their intended function without impairment of their structural integrity or safety function and that TVA's proposed construction activities are technically sound.³²

29 The Staff testified that in its opinion none of the concerns expressed by the ACRS in its May 13 1976 letter affect the LWA-2 work proposed by the Applicant; that none of the unresolved safety issues reflected in the Staff's Safety Evaluation Report for the Hartsville facility are related to the LWA-2 work proposed by the Applicant; and that the location of the natural gas pipeline, the question involving hardening of the facility to withstand aircraft

²⁸ Tr. pp. 5296-8.

²⁹ Prepared testimony following Tr. p. 5301.

³⁰ Applicant's Ex. 2-1.

Attachment A to prepared testimony following Tr. p. 5311.

³² Prepared testimony following Tr. p. 5367

crashes, and the ability of the Hartsville plants to comply with Appendix I requirements do not raise unresolved safety questions with respect to TVA's proposed activities.³³

30. The only unresolved safety issue discussed in the Safety Evaluation Report that could have affected the work proposed by the Applicant was the safety/relief valve blowdown loads, an aspect of the GESSAR-238 Nuclear Island reference design. In Amendment 43 to GESSAR-238 Nuclear Island application, General Electric provided an analysis of pressures for the Mark III containment for safety/relief valve actuation using a quencher discharge device. The Staff concluded that, subject to confirmatory tests, the General Electric approach and methodology for establishing pressures resulting from safety/relief valve actuation in the Mark III containment is acceptable.³⁴

31. Based on a review of the following sections of the Hartsville Safety Evaluation Report, 1.1 1.2, 1.5 1.6, 1.7 1.8, 1.9 1.11 2.2, 2.4, 2.5 3.1 3.2, 3.3, 3.4, 3.5 3.6, 3.7 3.8, 12.1 18.0, and 21.0, and of the GESSAR Safety Evaluation Report, 1.1 1.2, 1.5 1.6, 1.7 1.8, 1.9 1.10, 2.4, 2.5 3.1 3.2, 3.3, 3.4, 3.5 3.6, 3.7 3.8, 12.1, 15.3, 15.4, 18.0 and 19.0, the Staff concluded that there were no unresolved safety questions relating to the work to be considered by the Board that would constitute good cause for withholding authorization.³⁵

32. The Applicant's witness discussed the proposed work: construction of structural foundation mats, the lowgrade exterior walls and water-proofing, interior concrete, walls, slabs, and equipment foundations, certain structural framing and miscellaneous steel, and placement of embedments for the facility reactor buildings, auxiliary buildings and fuel buildings.³⁶ The Applicant's witness concluded that there are no unresolved safety issues relating to the proposed activities that would constitute good cause for withholding authorization.

33. The Board finds that there are no unresolved safety issues relating to the Applicant's proposed LWA-2 activities that would constitute good cause for withholding authorization of the proposed LWA-2 activities by the Director of Nuclear Reactor Regulation.

D. Amendments to the LWA-1

34. This Board in its partial initial decision of September 30, 1976, held that it had the authority to review and modify the offsite construction activities that had not been considered as part of the LWA-1 by the Board. The offsite construction activities involved important environmental considerations but did

³³ Prepared testimony following Tr. p. 5365.

³⁴ Prepared testimony following Tr. p. 5365.

⁵ Staff Exs. 2-5; 2-6.

³⁶ Applicant Exs. 2-3; 2-4; prepared testimony following Tr. p. 5311.

not involve radiological health and safety issues. The recent amendments to the LWA-1³⁷ permit onsite construction of parts of the pumping station, the central services facility and the turbine building. In contrast to the previous amendments, these activities involve issues relating to radiological health and safety. One issue is fundamental: Do the buildings or the systems housed within the buildings perform any safety functions?

35. The Commission's regulations require this Board to determine "whether the issuance of a permit for the construction of the facility will be inimical to the health and safety of the public."³⁸ Furthermore, this Board must decide on the basis of the record and after considering the site criteria of Part 100 if the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public.³⁹ Even if the proceeding is uncontested, the Board must determine if the Staff's review has been adequate and the record made by the Applicant and the Staff is adequate to support findings on the above questions.⁴⁰ Thus in contested and in uncontested cases, the Board must make the same fundamental findings with respect to health and safety issues. In making these findings, the Board must determine if the Staff's work is adequate. Furthermore, the Board, in rendering its decision, can condition the construction permit or deny the permit. An LWA is a subpart of a construction permit.

36. Any safety issue raised by the Board with respect to LWA activities is an unresolved safety issue until that issue has been resolved by the Board. The regulations clearly prohibit the issuance of the LWA-2 unless no unresolved safety issue remains with respect to the proposed activities that would constitute good cause for withholding authorization.⁴¹

37. The Staff has concluded in regard to the LWA amendments that no safety related activities are involved.⁴² As indicated below the Board disagrees in part.

38. With respect to the pumping station, the testimony is uniform: the pumping station performs no safety related function.⁴³ [The Applicant is considering changing the pumping station which would cause the pumping station to have a safety related function. The Applicant stated that if the change was made it would not begin construction without first notifying the Staff.]⁴⁴

39. The Board finds that the pumping station as currently designed per-

³⁷ Ltr. dated 9/9/76 from R.S. Boyd of NRC to G. Williams of TVA.

³⁸ 10 CFR 2.104(b)(1)(iv).

³⁹ 10 CFR 2.104(b)(1)(i)(d)(2).

⁴⁰ 10 CFR 2.104(b)(2).

10 CFR 50.10(e)(3)(ii).

² Ltr. dated 9/9/76 from R.S. Boyd of NRC to G. Williams of TVA.

³ Tr. pp. 5400; 5426.

⁴⁴ Tr. p. 5402.

forms no safety related function and, therefore, no unresolved safety issue exists with respect to the pumping station.

40. A witness for the Applicant testified that one basement wall of the central services facility must be constructed to withstand a safe shutdown earthquake because that wall serves as a foundation for the control building and the diesel generator building, both Category I structures.⁴⁵ The Applicant has indicated that the wall is being designed to withstand the safe shutdown earthquake. Clearly the wall mitigates the risk to the health and safety of the public caused by an earthquake. Without the wall so designed and constructed, the other buildings might not be capable of withstanding the safe shutdown earthquake. Hence, the basement wall performs a safety function.

41. The Board finds that the basement wall of the central services facility supporting the fill material functioning as foundation for the control building and the diesel generator building is a structure that mitigates the consequences of postulated accidents that could cause undue risk to the health and safety of the public; that the wall is designed to withstand the safe shutdown earthquake; and that Appendix B of Part 50 applies.

42. The Staff witness confirmed the Applicant's testimony that the turbine building must not suffer a gross collapse during a safe shutdown earthquake in order to protect the nearby Category I buildings.⁴⁶ No contradictory testimony was introduced. Without such design and construction, the collapse of the turbine building could cause the Category I buildings to fail to perform their safety function. Thus the turbine building, designed to prevent gross collapse, mitigates the risk to the health and safety of the public caused by the safe shutdown earthquake. Without the turbine building being so designed and constructed, the other Category I buildings may not survive the safe shutdown earthquake. Hence, the turbine building performs a safety function.

43. The Board finds that the turbine building performs a safety related function in that its design and construction must be such that a gross collapse does not occur and damage other Category I buildings; the turbine building is a structure which mitigates the consequences of a postulated accident which could cause undue risk to the health and safety of the public; and Appendix B of Part 50 applies to the design and construction of the turbine building.

44. However, that finding does not end the Board's concern with the design and construction of the turbine building including the systems and components located within the building. In answer to questions by the Board, the Staff's witness stated that the building does contain some trips to the reactor protection system.⁴⁷ The response was incomplete but did indicate that the trips were "backup;" may be fail-safe; but the witness was not prepared to discuss the

⁵Tr. p. 5403.

⁴⁶Tr. pp. 5403, 5423-5424.

⁷Tr. pp. 5442-52.

safety aspects of the trips. The witness also testified that the criterion used to determine if an item is safety related is whether or not the reactor coolant pressure boundary might be breached.

45. After the hearing was closed, the parties and the Board were served with a copy of the Supplement to the Safety Evaluation Report.⁴⁸ That Supplement discusses the turbine trips. Apparently the trips are not qualified to survive the safe shutdown earthquake and are primary trips to the reactor protection system. Based on analysis supplied by the General Electric Company to the Staff, the Staff has accepted the trips as not being seismically qualified and not meeting the design standards.⁴⁹ Such a position appears in conflict with Commission regulations and has not been considered by this Board. (The health and safety hearings are yet to be held.)

46. The Commission's regulation, 10 CFR 50.34(a)(3)(i), states that the general design requirements of Appendix A to Part 50 are the minimum requirements. This statement is reinforced by Part 100 which states that "General Design Criterion 2 of Appendix A to Part 50 of this chapter requires that nuclear plant structures, systems, and components important to safety be designed to withstand the effects of natural phenomena such as earthquakes without the loss of capability to perform their safety functions."⁵⁰ Criterion 22 requires that "[t]he protection system shall be designed to assure that the effects of natural phenomena do not result in the loss of the protection function or shall be demonstrated to be acceptable on some other defined basis."⁵¹ Considering these two criteria, the turbine trips to the reactor protection system apparently do not meet the Commission's regulations.

47 Furthermore, Criterion 21 requires that the protection system have redundancy and independence to assure that no single failure results in loss of the protection function.⁵² Appendix A defines single failure as "[a]n occurrence which results in the loss of capability of a component to perform its intended safety function," and "[m]ultiple failures resulting from a single occurrence are considered to be a single failure."⁵³ An earthquake is a single occurrence. The failure of the turbine trips and the event causing the trip as well as failure of the turbine bypass system could result from the earthquake. Hence, Criterion 21 appears not to be satisfied.

48. Last, Appendix A, 10 CFR 100, after defining a safe shutdown earthquake, states:

⁴⁸ Safety Evaluation Report, Supplement No. 1 (October 1976).

⁴⁹ Supplement No. 1 to Staff's Safety Evaluation Report to GESSAR pp. 15-3, 4. (Appendix A to Supplement No. 1 to SER).

⁵⁰ Appendix A to 10 CFR 100.

Appendix A to 10 CFR 50.

⁵² Appendix A to 10 CFR 50.

⁵³ *Ibid.*

It is that earthquake which produces the maximum vibratory ground motion for which certain structures, systems, and components are designed to remain functional. These structures, systems, and components are those necessary to assure:

1. The integrity of the reactor coolant pressure boundary
2. The capability to shutdown the reactor and maintain it in a safe shutdown condition, *or*
3. The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposure comparable to the guideline exposures of this part. (Emphasis added)

49 Thus the regulations list three criteria to determine if a structure, system, or component must be capable of withstanding the safe shutdown earthquake. The Board notes that the Safety Evaluation Report (SER)⁵⁴ quotes the same Part 100 criteria in discussing classification of structures, systems, and components.

50. The Supplement to the SER, which has been served on the parties but not yet received in the record states that the failure of the turbine trips simultaneously with a failure of the turbine by-pass system can result in a two-hour dose of 95 rem to the thyroid and 4.5 rem to the whole body. The Part 100 guideline exposures are 300 rem to the thyroid and 25 rem to the whole body. The calculated exposure, though alleged to be conservative, are comparable to the guideline exposures.

51. Thus, the protection system and the design of the turbine building appear to fail to meet the Commission's criteria in 10 CFR 50 and 10 CFR 100. Therefore, the Board will require the Applicant and Staff to respond to this issue at the health and safety hearing.

52. The Board finds that an unresolved safety issue exists with respect to the construction of the turbine building and some of the components and systems installed therein.

53. The Board adds the following issues to the health and safety phase of the hearing, *sua sponte*:

- 1 Should the turbine trips of the reactor protection system and the turbine bypass system be seismically qualified?
2. Should the turbine building be seismically qualified?
3. Should the reactor protection system receive shutdown signals from buildings outside the nuclear island?

⁵⁴ Staff Ex. 2-5, p. 3-1.

III. CONCLUSIONS OF LAW

54. The Board finds that the plant will not need to be hardened against the possible effects of an airplane crash into the essential safety related structures.

55. The quality assurance program for the plants, including the quality assurance programs of the Applicant, General Electric Company and C.F Braun & Company comply with Appendix B to 10 CFR Part 50 and are adequate for the design, procurement, and construction of the plant.

56. The Board finds that there are no unresolved safety questions relating to the LWA-2 activities proposed by the Applicant in its letter of September 21, 1976 to the Director, Office of Nuclear Reactor Regulation, that constitute good cause for withholding authorization to conduct such activities.

57 The Board concludes that the turbine building and a basement wall of the central services facility perform safety functions and Appendix B of 10 CFR 50 applies to their construction.

58. The Board concludes that an unresolved safety issue exists with respect to the turbine building and some of the systems and components contained therein and that further proceedings are necessary to resolve this issue.

IV ORDER

59 IT IS ORDERED that amendments to the LWA issued by the Director of Nuclear Reactor Regulation be modified in that Appendix B of Part 50 applies to the construction of the central services facility basement wall supporting the fill material for the Category I buildings.

60. That the amendments to the LWA issued by the Director of Nuclear Reactor Regulation shall be further modified in that the turbine building shall not be constructed until the unresolved safety issue with respect to seismic qualification of the building and systems, and components contained therein is resolved.

61. IT IS ORDERED that this Second Supplemental Partial Initial Decision shall constitute a portion of the Decision to be issued upon completion of the radiological health and safety phase of this proceeding.

62. IT IS FURTHER ORDERED that in accordance with Sections 2.760, 2.762, 2.764(a), 2.785, and 2.786 of the Commission's Rules of Practice in 10 CFR 2, that exceptions to this Partial Initial Decision must be filed within seven (7) days after service of this Partial Initial Decision. A brief in support of the exceptions shall be filed within fifteen (15) days thereafter, twenty (20) days in the case of the Regulatory Staff. Within fifteen (15) days after service of the

brief of appellant [twenty (20) days in the case of the Regulatory Staff] any other party may file a brief in support of, or in opposition to, the exceptions.
IT IS SO ORDERED

**ATOMIC SAFETY AND
LICENSING BOARD**

J Venn Leeds, Jr.

Forrest J Remick

John F Wolf, Chairman

**Issued and Dated at Bethesda, Maryland,
this 10th day of December, 1976.**

**[Appendices 1 & 2 have been omitted from this publication but are available in
the NRC Public Document Room, Washington, D.C.]**

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-45

ATOMIC SAFETY AND LICENSING BOARD

John F. Wolf, Chairman
Dr. J. Venn Leeds, Jr.
Dr. Forrest J. Remick

In the Matter of

Docket Nos. STN 50-518

TENNESSEE VALLEY AUTHORITY

STN 50-519

STN 50-520

STN 50-521

(Hartsville Nuclear Plant,
Units 1A, 2A, 1B, and 2B)

December 15, 1976

Upon applicant's motion for summary disposition on the environmental effects of the uranium fuel cycle, the Licensing Board, in accordance with the Commission's *Supplemental General Statement of Policy on the Environmental Effects of the Uranium Fuel Cycle* (41 Fed. Reg. 49898 (November 11, 1976)), concludes that the proposed revised values for Table S-3, 10 CFR 51, would not tilt the cost-benefit balance against the issuance of construction permits or a limited work authorization for the plant.

Motion for summary disposition granted.

MEMORANDUM AND ORDER

In *Natural Resource Defense Council v NRC* dated July 21, 1976, the United States Court of Appeals for the District of Columbia held that the NRC's final fuel cycle rule (39 FR 14188) was not sufficiently supported by the record where it treated two facets of the fuel cycle, i.e., radioactive waste management and impacts from reprocessing spent fuel.

In light of the Court's decision, the Commission issued a General Statement of Policy (41 FR 34707 August 16, 1976) announcing its intention to reopen rulemaking proceedings in regard to the environmental effects of the fuel cycle in order to supplement the record in regard to reprocessing and waste management to ascertain if the rule should be amended. The Staff was instructed to prepare a documented supplement to WASH-1248 to set up a basis for identifying environmental impacts associated with fuel reprocessing and waste management activities that are attributable to the licensing of a model light water reactor (LWR). In October 1976, in compliance with the Commission's instructions, the Staff issued NUREG-0116, *Environmental Survey of the Reprocessing and Waste Management Portions of the LWR Fuel Cycle*.

The Nuclear Regulatory Commission in its *Supplemental General Statement of Policy* dated November 5, 1976, stated that:

licensing may resume on a conditional basis using the existing Table S-3 if, but only if, the revised values are examined to determine whether, if those values are used, the result would tilt the cost/benefit balance against the issuance of the license.

On November 26, 1976, the Applicant filed a motion for summary disposition stating:

Pursuant to 10 CFR § 2.749 Applicant moves the Board for a summary decision in its favor on the question of whether, if the revised values proposed for Table S-3 (41 Fed. Reg. 45849 (1976)), if used, would tilt the cost/benefit balance against the issuance of licenses for the Hartsville Nuclear Plants. The grounds for this motion are that there is no genuine issue of material fact and that Applicant is entitled to a favorable decision as a matter of law

Applicant's motion was accompanied by a statement of facts, as to which it contends there is no genuine issue, three affidavits and a brief in support.

On December 10, 1976, the Staff filed a response in support of Applicant's Motion for Summary Disposition. Attached to the response was an affidavit and a document entitled "*NRC Staff Evaluation of the Impact of Revised Table S-3 Values on the Hartsville Cost-Benefit Balance.*"

On December 10, 1976, the Intervenor, Young et al., filed an answer in opposition to the granting of Applicant's Motion for Summary Disposition. The Intervenor deny the Applicant's contention that there is no genuine issue to be heard regarding the following material facts:

1. The proposed revisions to 10 CFR 51.20(e), Table S-3 (41 Fed. Reg. 45849) would not significantly alter the environmental impacts of the uranium fuel cycle as quantified in the existing Table S-3 and as previously considered in this proceeding.

2. If adopted, the proposed revisions to Table S-3 would not tilt the cost-benefit balance against licensing the Hartsville Nuclear Plants.

Young et al. oppose the Motion for additional reasons, *inter alia* "that the proposed revisions to Table S-3 are just that, proposed rather than adopted in accordance with NEPA and the Administrative Procedures Act, thus reliance on those proposed revisions is premature and violative of NEPA, the Administrative Procedures Act and NRC regulations." Intervenor also contend that: "granting of Applicant's Motion would deprive Intervenor of the right to amend their contentions so as to place in issue the cost/benefit as affected by the proposed revisions to Table S-3 (assuming arguendo, their applicability) and to have the impact of the values contained therein subjected to the evidentiary process."

Attached to Intervenor's answer is an affidavit by their attorney Mr. Ellis pointing out that Intervenor's contentions dealing with the storage of nuclear waste had been abandoned when he concluded that, under the rules, the Licensing Board had no jurisdiction to consider them.

On the basis of its analysis, the Board finds that the Commission's proposed revisions to 10 CFR 51.20(e), Table S-3 (41 Fed. Reg. 45849) would not significantly alter the environmental impacts of the uranium fuel cycle as quantified in the existing Table S-3 and as previously considered in this proceeding.

The Board finds that if adopted the proposed revisions to Table S-3 would not tilt the cost/benefit balance against licensing the Hartsville Nuclear Plants.

Accordingly the Board grants the Applicant's Motion for Summary Disposition on the environmental effects of the uranium fuel cycle. On the authority of the United States Nuclear Regulatory Commission's Supplemental General Statement of Policy dated November 5, 1976, and in view of the Board's finding regarding the cost/benefit balance, licenses may issue in this matter on a conditional basis where otherwise qualified.

The details supporting the conclusions reached in this Memorandum and Order will be set out in a Supplemental Memorandum to be issued by this Board in the next few days. (Time for motions and/or appeals will run from the date of service of the Supplemental Memorandum.)

IT IS SO ORDERED.

**FOR THE ATOMIC SAFETY AND
LICENSING BOARD**

**John F Wolf
Chairman**

Dated at Bethesda, Maryland,
this 15th day of December, 1976.

**SUPPLEMENT TO
LICENSING BOARD'S MEMORANDUM AND ORDER
DATED DECEMBER 15, 1976**

I. BACKGROUND

On September 30, 1976, this Board issued its First Supplemental Partial Initial Decision—Limited Work Authorization II—Part I in which it granted Applicant's request to carry out certain LWA II activities "subject to the strictures contained in the Nuclear Regulatory Commission's General Statement of Policy

dated August 13, 1976." In the General Statement of Policy the Commission concluded that no full power operating license, construction permit, or limited work authorization should be issued pending further proceedings with respect to the environmental effects of the uranium fuel cycle.

In its November 5, 1976 Supplemental General Statement of Policy regarding the environmental effects of the uranium fuel cycle¹ the Nuclear Regulatory Commission stated:

licensing may resume on a conditional basis using the existing Table S-3 if, but only if, the revised values are examined to determine whether, if those values were used, the result would tilt the cost benefit balance against the issuance of the license.

On November 26, 1976, the Applicant filed a motion for summary disposition on the environmental effects of the uranium fuel cycle, claiming that there is no genuine dispute as to any material fact with respect to the impact of revised Table S-3. The Applicant's motion was accompanied by supporting affidavits, a statement of "Material Facts as to which there is No Genuine Issue to be Heard" and a brief in support of the motion.

On December 10, 1976, the NRC Staff filed its response to Applicant's motion for summary disposition which included a supporting affidavit and document² as attachments. The Staff indicated that they had reviewed all facts set forth in the Applicant's affidavits (accompanying the motion for summary disposition) and find them to be true, and fully consistent with the Staff's own evaluation of impacts of revised Table S-3 on this proceeding.³ On this basis, the Staff indicated that it found no objection to summary disposition under 10 CFR 2.749⁴

On December 10, 1976, Intervenor William N. Young, *et al*, filed an answer in opposition to the Applicant's motion for summary disposition. This answer was accompanied by an affidavit, a statement of "Material Facts as to which there is a Genuine Issue to be Heard" and a supporting brief. Intervenor oppose the motion and disagree with the Applicant's statement of material facts as to which it asserts there is no genuine issue to be heard.⁵

On December 10, 1976 the Board issued its second Supplemental Partial Initial Decision—Limited Work Authorization 2—Part II in which it held that there are no unresolved safety questions relating to the LWA-2 activities proposed by the Applicant in its letter of September 21, 1976 to the Director, Office of Nuclear Reactor Regulation. However, the Board held that an un-

¹41 Fed. Reg. 49898.

²NRC Staff Evaluation of the Impact of Revised Table S-3 Values On the Hartsville Cost-Benefit Balance.

Accompanying Staff affidavit at 1.

⁴Staff response of December 10, 1976 at 1.

⁵Intervenor's answer at 2.

resolved safety issue exists with respect to the turbine building and that further proceedings are necessary to resolve this issue.

In a conference call on December 15, 1976 participated in by all Board members and attorneys for the Applicant, Staff, Intervenors and the State, the Board announced that it had granted the Applicant's motion for summary disposition of the uranium fuel cycle issue. Following this a memorandum and order was issued on December 15, 1976 verifying the oral announcement but without setting forth the basis for the Board's Order. This supplemental memorandum is issued to indicate the details which led to the granting of the motion.

II. FINDING OF FACT

The Applicant in its statement of material facts alleges that the proposed revisions to 10 CFR 51.20(e), Table S-3⁶ would not significantly alter the environmental impacts of the uranium fuel cycle as quantified in the existing Table S-3 and as previously considered in this proceeding. The Applicant further alleged that if adopted, the proposed revisions to Table S-3 would not tilt the cost/benefit balance against licensing the plant. The Staff indicates that it finds these facts to be true.

The Intervenor in its statement of material facts alleges that the proposed revision to Table S-3 would significantly alter the environmental impacts of the uranium fuel cycle as previously considered in this proceeding and that the proposed revision would tilt the cost/benefit balance against licensing the plant.

A comparative summary of the impacts of reprocessing and waste management (on a per reference reactor year basis)⁷ between the existing and proposed revised Table S-3 values is shown in Table 2.10 of the Commission's proposed rule making dated October 13, 1976 and published in the *Federal Register* on October 18, 1976.⁸ This comparative summary also appears as Table 2.10 in the related survey⁹ published at the time of the proposed rulemaking.

The environmental effects of the uranium fuel cycle as summarized by the existing Table S-3 was discussed in the Staff's Final Environmental Statement¹⁰ and was weighed by this Board in arriving at its Partial Initial Decision (Environmental and Site Suitability) of April 20, 1976.

Table 2.10 shows a comparison of impacts between the existing and proposed revised Table S-3 under the categories of land use, water discharges,

41 Fed. Reg. 45849.

⁷Reference reactor year abbreviated as RRY below.

⁸41 Fed. Reg. 45849.

⁹"Environmental Survey of the Reprocessing and Waste Management Portions of the LWR Fuel Cycle," NUREG-0116 (Supplement 1 to WASH-1248) dated October 1976.

¹⁰FES, §5.4.3 including Table 5.9, NUREG-75/039, June 1975.

fossil fuels consumed, chemical effluents, radiological effluents and thermal discharges. The principal changes in the magnitude of the environmental impact occur under the categories of land use, chemical effluents and radiological effluents.

The principal change in land use would be an increase of temporarily committed land for the fuel cycle of about 155 acres for the four unit plant over its full lifetime. The use of land permanently committed to the fuel cycle would increase by about 12.5 acres per year for the plant.

The principal increase in chemical effluents is in the addition of the gaseous effluent hydrogen chloride (HCl) from the combustion of plastics in the waste incineration process. However, the amount released is small compared to other gaseous effluents from the fuel cycle.¹

The review of changes in radiological effluents is enhanced by referring to Table 2.11² as well as Table 2.10. Table 2.11 is a summary of dose commitments from radiological effluents in man-rems or man-rem/RRY whereas Table 2.10 summarizes radiological activity releases in curies/RRY

Principal changes in radiological effluents include increased releases of tritium, iodine-129 and 131, krypton-85, and carbon-14 as well as buried solids. The principal addition in radioactive gaseous effluents is from the inclusion of the release from C-14 in the proposed revised Table S-3. However, when one includes the decrease in liquid radiological effluents resulting principally from the decrease in tritium release, the total gaseous and liquid dose commitment to the U.S. population does not change significantly. The principal change in buried solids is in an approximate 4700 curie/RRY from low level radioactive waste burial. However, population dose commitments will not be significant and even in the event of hypothetical accidents will be only a small fraction of established guidelines.

In the Board's Partial Initial Decision on Environmental and Site Suitability Matters, the Board found that power from the plant was needed and that the principal benefit of the plant was the production of power. Nothing related to the uranium fuel cycle affects the need for the power. Hence the Board must now determine if the change from the existing Tables S-3 to the proposed revised Table S-3 will tilt the cost balance from a nuclear plant to a fossil fuel plant.³

The disposal of sludge from an operating SO₂ scrubber or a coal plant of comparable size will require approximately 175 acres of permanently committed

¹The Board questions whether a typographical error has not occurred in the value of 0.14 MT/RRY in Table 2.10. Internal comparison within Table 2.10 as well as Tables 2.1, 2.3, 2.8, 2.9 and 4.16 (NUREG-0116) leads the Board to believe that this value should be 0.014 MT/RRY.

²NUREG-0116.

³Cost includes both environmental costs and economic costs.

land while the fuel cycle for the nuclear plant required approximately 36 acres or about 1/5 of the land for the coal plant.¹⁴ The temporarily disturbed land for a nuclear plant is about 1/10 of that required for a coal plant.¹⁵

As noted in the Applicant's affidavit, the increase in dose to the public from the proposed revised Table S-3 is small when compared to the natural background dose.¹⁶ The Staff notes that though the gaseous effluents have increased, the liquid effluents have decreased resulting in approximately the same dose as the original Table S-3.¹⁷

Another change is the appearance of HC1 in the proposed revised Table S-3. Both the Staff and the Applicant conclude for different reasons that the amount of HC1 is insignificant. The Staff note that the amount is small compared to other acid gaseous effluents in the same table.¹⁸ The Applicant concludes that in comparison to incineration of waste from other sources, the impact is insignificant.¹⁹ The Board in considering these expert opinions and its knowledge of the common use of hydrochloric acid in industry and educational institutions and even in the home, concludes that the amount is insignificant.

The Board in making its Partial Initial Decision on Environmental and Site Suitability matters considered the environmental impact of the uranium fuel cycle as indicated in the existing Table S-3 of 10 CFR 51. In accordance with the Commission's Supplemental General Statement of Policy²⁰ on the environmental effects of the uranium fuel cycle of November 5, 1976, the Board has examined the proposed revised chemical reprocessing and waste storage values set forth in the Commission's Notice of Proposed Rulemaking of October 18, 1976.²¹

The Board finds that the proposed revised values would not significantly alter the environmental impacts of the uranium fuel cycle as quantified in the existing Table S-3 and as previously considered in this proceeding. Further, the Board finds that if adopted, the proposed revised values would not tilt the cost-benefit balance against the issuance of a construction permit or limited work authorization for the plant.

III. CONCLUSIONS OF LAW

In accordance with the Commission's Supplemental General Statement of Policy of November 5, 1976, the Board examined the proposed revised values

Affidavit (Darling) accompanying Applicant's motion at 3.

Accompanying Staff affidavit at 4.

Affidavit (Belvin) accompanying Applicant's motion at 3.

Accompanying Staff affidavit at 5.

⁸ Accompanying Staff affidavit at 4.

Affidavit (Burdick) accompanying Applicant's motion at 3.

²⁰ 41 Fed. Reg. 49898.

41 Fed. Reg. 45849.

for Table S-3, 10 CFR 51, as well as the arguments of the parties in this matter. The Board concludes that the proposed revised values would not tilt the cost-benefit balance against the issuance of a construction permit or limited work authorization for the plant. Accordingly the Memorandum and Order of December 15 1976 granting the Applicant's motion for summary disposition is hereby reaffirmed.

IT IS SO ORDERED.

**ATOMIC SAFETY AND
LICENSING BOARD**

J Venn Leeds

Forrest J Remick

**John F Wolf,
Chairman**

**Issued at Bethesda, Maryland
this 21st day of December, 1976.**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-76-46

ATOMIC SAFETY AND LICENSING BOARD

Samuel W. Jensch, Chairman
R.B. Briggs
Franklin C. Daiber

In the Matter of

Docket No. 50-247
OL No. DPR-26

CONSOLIDATED EDISON COMPANY
OF NEW YORK, INC.

(Indian Point Station,
Unit No. 2)

December 27 1976

The Licensing Board clarifies and supplements its earlier initial decision (LBP-76-43) concerning the preferred alternative closed-cycle cooling system for the plant.

**SUPPLEMENTAL PARTIAL INITIAL DECISION CONCERNING
ISSUES OF DATE FOR TERMINATION OF
CLOSED-CYCLE COOLING AND OF BIRD MONITORING**

Appearances

Leonard M. Trosten, Esq., Eugene R. Fidell, Esq., Edward J. Sack, Esq., Joyce P Davis, Esq. on behalf of Consolidated Edison Company of New York, Inc., Applicant

Sarah Chasis, Esq. on behalf of Hudson River Fishermen's Association, Intervenor

Carl R. D'Alvia, Esq., on behalf of the Village of Buchanan, New York

Werner P Kuhn, Esq., Richard C. King, Esq. on behalf of the New York State Energy Office

Paul S. Shemin, Esq., Assistant Attorney General of the State of New York

Michael Grainey Esq., Stephen H. Lewis, Esq., Richard Browne, Esq. on behalf of the Regulatory Staff of the U.S. Nuclear Regulatory Commission

In an initial decision of November 30, 1976,¹ the Atomic Safety and Licensing Board (the Board) disposed of two of the four issues identified by the parties,² Consolidated Edison Company of New York, Inc. (the Licensee), the Hudson River Fishermen's Association, the New York State Energy Office, and the Staff of the U.S. Nuclear Regulatory Commission (the Staff), and accepted by the Board for decision in this proceeding. The first issue was concerned with the Licensee's request for an amendment to Facility Operating License DPR-26 that would identify a closed-cycle natural draft, wet cooling tower system as the preferred alternative closed-cycle cooling system for installation at Indian Point Unit No. 2. The parties agreed and so stipulated that, on balance, the system selected by the Licensee is the preferred system and that the amendment requested by the Licensee should be granted. The Board accepted this resolution of the issue after its independent review of data in the record.

The second issue was concerned with the receipt of governmental approvals necessary to begin construction of the closed-cycle cooling system. The Board determined that with issuance of the requested amendment to the facility operating license by the Director of Nuclear Reactor Regulation all necessary governmental approvals will have been obtained. That amendment was issued on December 1, 1976.³ The Licensee has taken exception to this determination.

The third issue concerns the date on which operation of Indian Point Unit No. 2 with once-through cooling must be terminated. In accordance with the decision of the Atomic Safety and Licensing Appeal Board (the Appeal Board) in ALAB-188 (7 AEC 323 April 4, 1974), Amendment No. 6 to License No. DPR-26 established May 1, 1979 as the reasonable date for termination of once-through cooling. However, paragraph 2.E.(1)(b) of Amendment No. 6 states as follows:

The finality of the May 1, 1979 date also is grounded on a schedule under which the applicant, acting with due diligence, obtains all governmental approvals required to proceed with the construction of the closed-cycle cooling system by December 1, 1975. In the event all such governmental approvals are obtained a month or more prior to December 1, 1975 then the May 1, 1979 date shall be advanced accordingly. In the event the applicant has acted with due diligence in seeking all such governmental approvals,

Partial Initial Decision in Reference to Stipulated Preferred Type of Closed-Cycle Cooling System and Receipt of Governmental Approvals (LBP-76-43, NRCI-76/11 598).

Ibid., Appendix A, Stipulation for Partial Settlement of Proceeding and Identification of Remaining Issues.

Amendment No. 22, License No. DPR-26, December 1, 1976.

but has not obtained such approvals by December 1 1975 then the May 1, 1979 date shall be postponed accordingly

Because all necessary governmental approvals were not obtained by December 1, 1975, the May 1, 1979 date is postponed. All parties agree that if all necessary governmental approvals are obtained by January 1 1977 the termination date for once-through cooling should be postponed to May 1 1980.⁴ The Board agrees that this is an appropriate postponement based on its reading of paragraph 2.E.(1)(b) of Amendment 6 to License No. DPR-26 and of ALAB-188. Consistent with its prior findings concerning necessary governmental approvals and with issuance of Amendment No. 22 to License No. DPR-26 on December 1 1976, the Board finds and concludes that the reasonable termination date for once-through cooling of Indian Point Unit No. 2 shall now be postponed from May 1, 1979 to May 1 1980.

The final issue concerned the routine monitoring about the cooling tower for the purpose of recording large episodic occurrences of bird mortalities should they occur. The Staff proposed that a requirement for such monitoring be incorporated in the amendment to License No. DPR-26. The Licensee objected to the scope of the monitoring as originally conceived by the Staff. No other parties were involved in this issue. During the proceeding, the Licensee and the Staff reached agreement on a monitoring program and agreed that this issue no longer required consideration by the Board.⁵ In the Board's opinion, matters such as this should normally be resolved between the Licensee and the Staff without the need for public hearings and attention by an Atomic Safety and Licensing Board. The record establishes that the issue has been resolved in this manner and the Board concludes that no further consideration of this matter by the Board is necessary or desirable.

WHEREFORE, IT IS ORDERED, in accordance with the Atomic Energy Act of 1954, as amended, the National Environmental Policy Act of 1969 the Rules of Practice of the Nuclear Regulatory Commission, and based upon the findings and conclusions set forth herein, that the Director of Nuclear Reactor Regulation is hereby authorized to make appropriate findings in accordance with the regulations of the Commission and to issue an amendment to License No. DPR-26 which changes the reasonable date for termination of once-through cooling of Indian Point Unit No. 2 from May 1, 1979 to May 1 1980.

IT IS FURTHER ORDERED, in accordance with Sections 2.760, 2.762, and 2.764, 2.785 and 2.786 of the Rules of Practice of the Nuclear Regulatory Commission, that this Supplemental Partial Initial Decision should be effective immediately⁶ and shall constitute the final action of the Commission subject to

⁴ Tr. 319-329.

⁵ Tr. 316-317

⁶ Transcript corrections not the subject of objections and as proposed will be accepted by separate order.

review thereof under the above-cited Rules. Exceptions to this Supplemental Partial Initial Decision may be filed by any party within seven days after the service of this Decision. A brief in support of the exceptions shall be filed within fifteen days thereafter (twenty days in the case of the Staff). Within fifteen days after the service of the brief of appellant (twenty days in the case of the Staff), any other party may file a brief in support of, or in opposition to, the exceptions.

**ATOMIC SAFETY AND
LICENSING BOARD**

R.B. Briggs

**Samuel W. Jensch,
Chairman**

Member of the Board Dr. Franklin C. Daiber has considered all aspects of this Supplemental Partial Initial Decision and concurs in the result although not available to sign this decision.

Issued:
December 27 1976
Bethesda, Maryland

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