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Pages 359-672

# NUCLEAR REGULATORY COMMISSION ISSUANCES

## March 1982


U.S. NUCLEAR REGULATORY COMMISSION

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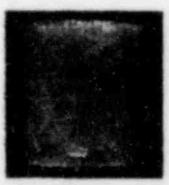

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NUREG-0750
Vol. 15, No. 3
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# NUCLEAR REGULATORY COMMISSION ISSUANCES

## March 1982

This report includes the issuances received during the specified period from the Commission (CLI), the Atomic Safety and Licensing Appeal Boards (ALAB), the Atomic Safety and Licensing Boards (LBP), the Administrative Law Judge (ALJ), the Directors' Decisions (DD), and the Denials of Petitions For Rulemaking (DPRM).

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.

U.S. NUCLEAR REGULATORY COMMISSION

Prepared by the Division of Technical Information and Document Control,
Office of Administration, U. S. Nuclear Regulatory Commission, Washington, D.C. 20555
(301/492-8925).

## COMMISSIONERS

Nunzio J. Palladino, Chairman
Victor Gilinsky
Peter A. Bradford
John F. Ahearne
Thomas M. Roberts

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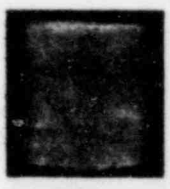
Alan S. Rosenthal, Chairman, Atomic Safety and Licensing Appeal Panel
B. Paul Cotter, Chairman, Atomic Safety and Licensing Board Panel



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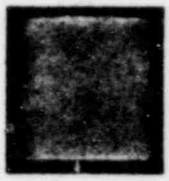



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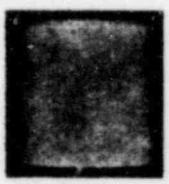

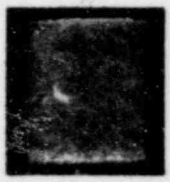



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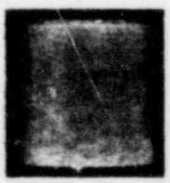

# Commission Issuances

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**BEFORE THE COMMISSION:**

**COMMISSIONERS:**

**Nunzio J. Palladino**, Chairman
**Victor Gilinsky**
**Peter A. Bradford**
**John F. Ahearne**
**Thomas M. Roberts**

**In the Matter of**

**PROTECTION OF UNCLASSIFIED SAFEGUARDS INFORMATION**
**(10 CFR Parts 2, 50, 70 and 73)**
**(45 FR 85459)**

**March 2, 1982**

The Commission denies a petition requesting reconsideration of rules issued pursuant to Section 147 of the Atomic Energy Act (46 *Fed. Reg.* 51718 (October 22, 1981)), and immediate suspension of two of them — one prohibiting the unprotected telecommunications of safeguards information except in emergency situations and the other mandating the use of a GSA approved security container for the storage of such information in areas that do not have protected or controlled access. The Commission rejects petitioners' claim that the new rules will require the purchase of "secure" communication equipment or GSA approved containers and explains how the rules requirements can generally be met without the use of such equipment.

## ORDER

### Background

On the sixtieth day after the Nuclear Regulatory Commission's adoption and entry of final rules governing protections for safeguards information pursuant to section 147 of the Atomic Energy Act of 1954 as

amended,[1] KMC and the Physical Security Coordinating Group (Petitioners), through their attorney Jay E. Silberg, wrote a petition to the Commission requesting reconsideration of those rules and immediate suspension of two of them. In support of their petition they have presented in the main the same allegations and arguments with which they opposed the proposed rule, and which the Commission has already considered and rejected.[2] Thus, the Commission finds that no basis has been provided that warrants reconsideration or suspension of the subject rules.[3]

Because petitioners appear to misunderstand what these rules entail, we take this opportunity to discuss briefly the two regulations sought to be suspended — the one prohibiting unprotected telecommunications, the other mandating various storage requirements.

The Commission has prohibited the use of unprotected telecommunication circuits for Safeguards Information except under emergency or extraordinary circumstances in recognition of the ease of accomplishing an interception and the difficulty or impossibility of detection when information has been compromised by such a tap. Nonetheless, it is our view that this rule will not require the purchase of "secure" communication equipment. Routine communications may be mailed, for example, and there is an exemption for emergencies. Moreover, routine security related transmissions between on-site guard forces or alarm stations can easily be limited to code formats or cryptic language, and discussions of an isolated element taken out of context can be couched in terms that effectively eliminate the identity of any Safeguards Information and therefore would be allowed on commercial telephone. Our own staff has concluded that this restriction will not impede their review of power reactor security plans and has no intention of installing protected circuits to licensed facilities. It is notable that one of the NRC licensed fuel facilities has had a *classified* security plan for many years — subject to a bar against unsecured transmissions — and never found the need for either secure or protected communicating circuits either on or off site.

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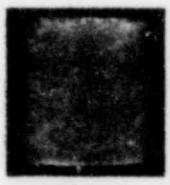
[1] See 46 *Fed. Reg.* 51718 (1981).

[2] A somewhat different legal argument was proffered with respect to the issue whether the Commission has authority to prohibit disclosure of generic studies. The argument was based on an erroneous statement of the legislative history of section 147. Petitioners apparently failed to recognize that the original House Bill H.R. 2608 which authorized nondisclosure protections for generic studies was amended by a later bill, H.R. 5297, which omitted that protection and that the version sent by the House to conference therefore omitted the protection. Thus although petitioners are correct that the Conference Report notes that there was no change to the House version, that fact lends support to their thesis. The plain language of Section 147, the Conference Report and the legislative history indicate that the Commission has not the authority to do as petitioners request.

[3] In view of this disposition, the Commission does not decide whether the petition is a timely request for reconsideration or whether it is more properly treated as a request for rulemaking.



Petitioners complain that the Commission has required a GSA approved security container for areas that do not have protected or controlled access and ask for a change in the regulations to allow the use at any location of the steel filing cabinets now permitted in protected or controlled access areas. They assert that the Commission believes both the steel containers and the filing cabinets afford equivalent protection quoting as support the Commission's statement in the Supplementary Information that "both satisfy this objective [to make more difficult undiscovered compromise of Safeguards Information]".

The Commission believes that each satisfies that objective in the location for which it is required. Because with free access and unlimited time the filing cabinet might more easily be compromised without leaving a trace, it would not satisfy the objective in areas to which access is not controlled. In actuality, however, GSA approved security containers appear to be required only in uncontrolled areas such as might exist at a power reactor construction site. It appears that "in many cases corporation headquarters or other office buildings will qualify as controlled access areas provided they are attended around the clock *or locked at night.*" NUREG-0794 at 5, emphasis provided. We are informed by our staff that after numerous conversations with affected licensees and individuals, they have yet to identify a situation positively requiring the use of a GSA approved storage container, Thus it does not appear that petitioners are adversely affected by this rule. Commissioner Roberts disapproved this Order.

**Conclusion**

For the foregoing reasons, the petition is DENIED.

For the Commission*

SAMUEL J. CHILK
Secretary of the Commission

Dated at Washington, D.C.
the 2nd day of March, 1982.

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* Commissioner Ahearne was not present when this Order was affirmed. Had Commissioner Ahearne been present he would have affirmed the Order.

Cite as 15 NRC 362 (1982) CLI-82-4

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Nunzio J. Palladino**, Chairman
**Victor Gilinsky**
**Peter A. Bradford**
**John F. Ahearne**
**Thomas M. Roberts**

**In the Matter of**

**Docket No. 50-537**
**(exemption request**
**under 10 CFR 50.12)**

**UNITED STATES DEPARTMENT OF ENERGY**
**PROJECT MANAGEMENT CORPORATION**
**TENNESSEE VALLEY AUTHORITY**
**(Clinch River Breeder Reactor Plant)**

**March 16, 1982**

The Commission denies the Department of Energy's request for an exemption under 10 CFR 50.12 for authority to conduct site preparation activities for the Clinch River Breeder Reactor prior to the issuance of a construction permit or Limited Work Authorization.

## ORDER

On November 30, 1981 DOE, for itself and on behalf of its co-applicants Project Management Corporation and the Tennessee Valley Authority (Applicants), requested an exemption from 10 CFR 50.10 pursuant to 10 CFR 50.12 to conduct site preparation activities for the Clinch River Breeder Reactor (CRBR) prior to the issuance of a construction permit or limited work authorization. The scope of those proposed activities is described in the Commission's Memorandum and Order of December 24, 1981 in which the Commission established the informal procedures for considering this request. 14 NRC 1100, CLI-81-35 (1981). Grant of the exemption was opposed by the Natural Resources Defense Council, Inc.

and the Sierra Club (Intervenors) who are intervenors in the now reopened proceeding for a construction permit for CRBR. After receiving comments on the exemption request from Applicants, Intervenors, and several other persons, the Commission conducted an oral presentation on February 16, 1982. Subsequently, in the early part of March, the Commission conducted two public meetings to discuss the exemption request. The Commission has decided to deny the request.

Chairman Palladino and Commissioner Roberts dissent and would have granted the exemption.

Individual Commissioners' views are attached.

It is so ORDERED.

For the Commission

SAMUEL J. CHILK
Secretary of the Commission

Dated at Washington, D.C.
this 16th day of March, 1982.

## COMMISSIONER GILINSKY'S SEPARATE VIEWS ON DOE'S EXEMPTION REQUEST FOR THE CLINCH RIVER BREEDER REACTOR

I have voted against granting the Clinch River Breeder Reactor an exemption from NRC's licensing regulations to permit early site work because I am not persuaded that such an exemption would be in the public interest.

### Background

The Clinch River reactor is subject by law to NRC licensing. Normally, a utility cannot begin site preparation and excavation until it has received a Construction Permit ("CP") after satisfactory resolution of all environmental and safety issues. The NRC's regulations, however, do provide that an applicant may be granted an exemption, known as a Limited Work Authorization 1 ("LWA 1"), from this requirement if the Licensing Board has made all the environmental findings required at the CP stage and has made a preliminary safety finding that the site is suitable.[1]

[1] 10 CFR 50.10.

The Department of Energy ("DOE") is eager to obtain the benefit of this exemption so that it may break ground as soon as possible. But given the state of the licensing proceeding, it does not appear that the Clinch River project will be eligible for an LWA 1 until sometime in 1983. In these circumstances, DOE has asked the Commission for a further relaxation of licensing requirements, under section 50.12 of our regulations, to enable it to begin site preparation now, roughly a year before it can satisfy the requirements for an LWA 1.[2] DOE has, in effect, asked for an exemption on top of an exemption. If the section 50.12 exemption request presently before the Commission is granted, DOE apparently intends to apply as soon as it can for an LWA 2 which, if granted, would permit additional work to be performed in advance of receipt of a Construction Permit.[3]

I will pass over two preliminary legal questions: whether section 50.12 of our regulations, which sets out the standards for granting the exemption in question, is in fact applicable to a one-of-a-kind research reactor which will as an incidental matter produce power; and, whether section 50.12 is consistent with the provisions of the National Environmental Policy Act.[4] The answers are unclear, and will presumably be provided by the courts in due time. For the purposes of this decision I will assume that the Commission can grant an exemption if that is in the public interest. As I stated at the outset, I do not believe it is.

---

[2] 10 CFR 50.12 governs the grant of an exemption from the requirements of 10 CFR Part 50. The Commission may grant an exemption if it finds that the exemption is authorized by law, will not endanger life or property or the common defense and security, and is otherwise in the public interest. Section 50.12(b) prescribes that, in deciding whether to permit construction prior to the issuance of a construction permit, the Commission will consider and balance: (1) whether the construction will have a significant adverse impact on the environment; (2) whether any adverse impact can reasonably be redressed; (3) whether the construction would foreclose the subsequent adoption of alternatives; and, (4) the effect of delay on the public interest, including the need for the power to be generated by the proposed facility, the availability of alternate sources of energy, and the cost of delay to the applicant and to consumers.

[3] DOE presently seeks permission to clear and grade the site, build access roads and construction facilities, and excavate the reactor's foundations. These are the type of activities normally permitted under an LWA 1. The installation of structural foundations prior to the issuance of the construction permit normally requires the issuance of an LWA 2. This requires the Licensing Board to find that the requirements of an LWA 1 have been satisfied and that there are no unresolved safety issues that would constitute good cause for not allowing the activities proposed under the LWA 2 to proceed.

DOE expects that beginning site preparation in 1982 will enable construction to be completed one year earlier than if site preparation were to begin in 1983.

[4] 42 U.S.C. 4321 *et seq.*

**Effect of an Exemption on NRC and Power Reactor Safety**

The source of my concern is that granting the section 50.12 exemption would be the first step in placing Clinch River on a fast track within the NRC license review process.[5] Such high-priority, fast-track treatment for Clinch River is bound to impact licensing and safety supervision of the power reactors which constitute our principal responsibility.

The Clinch River reactor involves a new technology for which there is no established body of NRC safety criteria. These need to be developed while the safety review is being performed. If this work is to be done properly, it will inevitably make substantial demands on the limited resources and skills of the NRC. In view of the budgetary situation this agency's resources are tight. If Clinch River is placed on a fast track, other projects will likely have to be put on a slow track.

For most of last year, licensing schedule projections seemed to suggest that NRC would not complete power plant license reviews for a number of power plants before their construction was finished and they were ready to operate. It now appears that these fears were exaggerated. We have managed to gain control of these licensing schedules and we are now working apace with plant construction. However, we do not have a wide margin for dealing with unplanned contingencies. Moreover, in order to accelerate our licensing reviews, we have been forced to delay the resolution of a number of safety issues. Any resources which are freed by slowdowns in reactor construction schedules should be devoted to resolving these issues, which affect the protection of this country's $100-200 billion investment in light water power reactors, rather than to accelerating the breeder's licensing.[6]

While the President and Congress have urged us to deal expeditiously with both the breeder and light water reactors, there has not been any suggestion, of which I am aware, that the interests of the latter should be sacrificed in favor of the former. Such a suggestion would in fact be extremely unfortunate. Our predecessor agency was often distracted from

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[5] There is a view that nothing of the sort is involved here, and that we have only to deal with an isolated exemption. This used to be called salami tactics. The modern name is segmentation of decisionmaking.

[6] I am aware that the NRC staff recently informed the Commission that speeding up Clinch River licensing would not require much additional effort. This does not relieve my concern over resources; the staff estimate is implausible unless the Clinch River review and the development of its licensing criteria are to be superficial affairs. If anything, the staff estimate heightens my concern about how the staff would interpret a Commission decision to authorize a speedup in the Clinch River licensing schedule.

the pressing safety and waste problems of the light water power reactors by the demands of the breeder reactor. This has proven to be an expensive mistake.

It is also interesting that the Edison Electric Institute, in its testimony at our hearing in support of the exemption request, was not prepared to recommend that licensing the breeder should take precedence over the licensing of its member utilities' light water power plants.

The issue, let me reiterate, is not whether the NRC will undertake the Clinch River review, but whether NRC will conduct it at a pace which is unnecessarily harmful to NRC's other responsibilities.

**Applicant's Claim that Exemption Will Reduce Costs**

Set against these concerns are the applicant's claims that substantial benefits will result from speeding up this project.

There is presumably some advantage in having a year earlier the information which the project is supposed to generate. The gain is intangible, and no persuasive argument was presented that it would be substantial. Whatever the economic incentives once were for developing breeder reactors, they are much diminished. Breeders, which compensate for their expense by conserving uranium, were economically interesting when uranium was thought to be scarce and large numbers of conventional reactors were expected to use it up quickly. But uranium supplies are plentiful and increasing, while the projections for the number of reactors to be installed have been sharply deflated. The chief problem in the uranium market is not finding uranium but coping with falling prices.

The applicant has also argued that, quite apart from any research benefits, substantial economic savings will result from an earlier start of construction. In its initial presentation, DOE asserted that a one year gain in the construction schedule would result in savings of $120-240 million.[7] When asked to justify these assertions, DOE submitted an analysis[8] which, as was pointed out by one of the parties to the proceeding, failed to consider the time-value of money and, as a consequence, did not suitably discount future expenditures. When this was done properly, the gains which DOE claimed for rapid completion of the project effectively vanished.

[7] Letter from Secretary Edwards to NRC Chairman Palladino, November 30, 1981.
[8] Letter from Deputy Assistant Secretary Chipman to NRC Chairman Palladino, December 31, 1981.

DOE then tried to revive its conclusion with an argument which purported to demonstrate that there would be a difference in the cost attributable to *past* expenditures depending upon whether or not the site preparation exemption were granted.[9] Both the Deputy Secretary and the applicant's expert witness, Arthur Andersen & Co., attempted to defend this argument at the hearing before the Commission. Needless to say, this proposition is wrong. It also contradicts the analysis of an almost identical problem, the cost of delays in licensing commercial power plants, done by DOE for the House Appropriations Committee.[10] That analysis correctly recognized that sunk costs cannot affect the choice among future alternatives. In other words, while it is valid to assign an interest charge to past expenditures, that charge is the same for all future options and therefore drops out of any cost comparison among them. What matters for choosing among future alternatives are *future* benefits and *future* costs.

In response to criticisms made at the hearing, DOE and Arthur Andersen filed additional written statements with the Commission. DOE conceded that from "the economic or resource perspective" interest on past expenditures is not a factor to be considered in deciding between the costs of future options.[11] In spite of this, the Deputy Secretary persisted in presenting a "financial cost" analysis which is the same incorrect analysis DOE originally put forward. DOE thus lists $190 million in interest on past expenditures as the principal cost of not granting the exemption.[12]

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[9] DOE submission to the Chairman, "Re: Clinch River Breeder Reactor Plant", January 28, 1982.

[10] In its report, DOE states that "the monthly carrying costs of the completed units . . . would be incurred even if the units operated and are therefore *not* part of the direct costs of the delay." DOE went on to explain that "any cost that would be incurred with or without the delay does not affect this cost differential and is therefore not part of the cost of the delay." See letter of April 14, 1981, from Richard E. Weiner, Director, Division of Power Supply Reliability, Office of Utility Systems, Economic Regulatory Agency to Darrell G. Eisenhut, Director, Division of Licensing, Office of Nuclear Reactor Regulation, Nuclear Regulatory Commission.

At the hearing, the Commission asked the Deputy Secretary to provide it with the Economic Regulatory Agency's views on DOE's method of calculating the gains to be realized by granting the section 50.12 exemption. DOE's written response states that DOE no longer provides cost analyses to the House Appropriations Committee and that in view of "recent reorganizations within the Department, the Office of Policy, Planning and Analysis is the organization with the relevant responsibility and expertise for this review." Letter from Deputy Secretary Davis to the Commission, "Re: Clinch River Breeder Reactor Plant", February 25, 1982.

[11] Letter from Deputy Secretary Davis to the Commission, "Re: Clinch River Breeder Reactor Plant", February 25, 1982, p. 3.

[12] Ibid., p. 5.

The $190 million figure comes from Arthur Andersen's conclusion that "In the event of *a one-year delay* in the construction of Clinch River, *interest* will be incurred *for one extra year.*"[13]

Arthur Andersen's error lies in comparing project costs measured in dollars of two different years, the accelerated project's costs being measured in dollars of one year and the unaccelerated project's costs measured in dollars of the following year. When a correction has been made to measure the costs in dollars of a common reference year, (which can be any year) the conclusion of every example presented by Arthur Andersen is reversed.[14]

The conceptual difficulty seems to stem from overlooking the fact that the accounting convention for the cost of a project produces a result in dollars of the year of completion. An economic comparison between projects, however, must be made in dollars of a common reference year.

The error is a common one. As a standard textbook on engineering economy puts it, although the principle that a decision made now necessarily deals with the future is simple enough,

> ". . . many people have difficulty in accepting the logical implications of the principle when they make decisions between alternatives. This seems particularly true when sunk costs are involved. Although some of the failures to recognize the irrelevance of sunk costs involve a misuse of accounting figures, these mental obstacles to clear reasoning are by no means restricted to people who have had contact with the principles and methods of accounting."[15]

When interest on past expenditures has been eliminated from the calculation of the cost of not granting this exemption, three items remain: a management charge of about $40 million, a $20 million charge for (discounted) deferred revenue, and a negative figure which reflects the

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[13] Letter from Arthur Andersen & Co. to the Commission, February 23, 1982, p. 3.

[14] Arthur Andersen submitted the attached chart (*see* p. 372) which purports to demonstrate that completing the illustrative project one year earlier will result in a savings of $563 million in the overall project cost. As can readily be seen from the chart, however, the cost of the accelerated project is measured in 1994 dollars while that of the unaccelerated project is measured in 1995 dollars.

If the cost of the accelerated project is measured in 1995 dollars, using Arthur Andersen's assumption of an 11% rate of interest, the cost of the project is $8,903 million ($8,021 plus 11%). This cost is $317 million greater than the cost of the $8,584 million cost of the unaccelerated project (also measured in 1995 dollars).

[15] Eugene L. Grant, W. Grant Ireson, *Principles of Engineering Economy*, New York, 1970, p. 315.

discounting of future expenditures. The sum of these figures, in the example presented by DOE, yields $28 million as the cost of not granting the exemption.

Lest anyone look to the $28 million to tip the balance toward an exemption, it should be noted that the figure is an arbitrary one, based on the artificially low discount rate assumed by DOE.[16] If a more realistic discount rate were employed, the cost might well be zero or, more likely, might become a benefit.[17] In any case, the uncertainty in the analysis is larger that the result.

In sum, no compelling argument has been made, on the basis of the cost estimates provided by the applicants, for the proposition that granting this exemption would serve the public interest by significantly lowering the cost of the Clinch River project.

**Putting Clinch River on a Fast Track**

Should Congress, nevertheless, want this reactor to be built earlier than contemplated by the licensing schedule, it would be best for Congress to exempt Clinch River from NRC licensing altogether. If NRC could easily accommodate an accelerated review, I would come a different conclusion. However, it cannot. I am concerned not only about the impact of a fast track breeder licensing review on NRC's other responsibilities, but also about the quality of NRC's work if there is heavy pressure to accelerate the review. Even if this project were exempt from licensing, the NRC could still conduct a safety review, on the same "best efforts" basis as it performs other reviews for DOE.

To exempt Clinch River entirely from licensing may seem at odds with one of the original goals of this program — to demonstrate the licensability of a breeder reactor — but that goal is no longer as important as it once was. Such a demonstration was important when the CRBR was thought to be the prototype for dozens of commercial breeder power plants which were to follow on its heels. It now seems unlikely that there will be any commercial breeder plants in the United States for decades. And, even if breeders are built in the distant future, it is doubtful that the standards applied to this plant will be a satisfactory model for the later plants.

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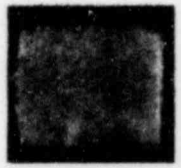
[16] DOE has assumed an inflation rate of 8% and interest rate of 11%. These assumptions result in an effective discount rate of 3% and, in this case a saving of approximately $30 million.

[17] I would also note that DOE initially valued the deferred power output of Clinch River at $6 million per year but that it has revised this estimate to $10-20 million. There does not seem much point in quibbling, however, about this figure.



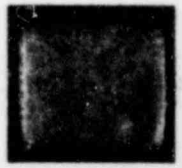


**CHART SUBMITTED BY ARTHUR ANDERSEN (SEE FOOTNOTE 14)**

**ILLUSTRATION OF THE COST OF A ONE YEAR DELAY IN 1981**

| | No Delay (Millions) | | | One Year Delay (Millions) | | | |
|---|---|---|---|---|---|---|---|
| Year | Yearly Investment | Carrying Cost | Total Cost | Yearly Investment | Carrying Cost | Total Cost | Carrying Cost Increase (Decrease) |
| 1974 | $100 | $ 11 | $ 111 | $100 | $ 11 | $ 111 | $ - |
| 1975 | 100 | 23 | 234 | 100 | 23 | 234 | - |
| 1976 | 100 | 37 | 371 | 100 | 37 | 371 | - |
| 1977 | 100 | 52 | 523 | 100 | 52 | 523 | - |
| 1978 | 100 | 68 | 691 | 100 | 68 | 691 | - |
| 1979 | 100 | 87 | 878 | 100 | 87 | 878 | - |
| 1980 | 100 | 108 | 1,086 | 100 | 108 | 1,086 | - |
| 1981 | 100 | 130 | 1,316 | 100 | 130 | 1,316 | - |
| 1982 | 100 | 156 | 1,572 | - | 145 | 1,461 | (11) |
| 1983 | 100 | 184 | 1,856 | 100 | 172 | 1,733 | (12) |
| 1984 | 100 | 215 | 2,171 | 100 | 202 | 2,035 | (13) |
| 1985 | 100 | 250 | 2,521 | 100 | 235 | 2,370 | (15) |
| 1986 | 100 | 288 | 2,909 | 100 | 272 | 2,742 | (16) |
| 1987 | 100 | 331 | 3,340 | 100 | 313 | 3,155 | (18) |
| 1988 | 100 | 379 | 3,819 | 100 | 358 | 3,613 | (21) |
| 1989 | 100 | 431 | 4,350 | 100 | 408 | 4,121 | (23) |
| 1990 | 100 | 490 | 4,940 | 100 | 464 | 4,685 | (26) |
| 1991 | 100 | 554 | 5,594 | 100 | 526 | 5,311 | (28) |
| 1992 | 100 | 626 | 6,320 | 100 | 595 | 6,006 | (31) |
| 1993 | 100 | 706 | 7,126 | 100 | 672 | 6,778 | (34) |
| 1994 | 100 | 795 | 8,021 | 100 | 756 | 7,634 | (39) |
| 1995 | - | - | - | 100 | 850 | 8,584 | 850 |
| Total | | | $8,021 | | | $8,584 | $563 |

The $563 million cumulative cost that would be incurred as a result of a one-year delay represents the future value of the $145 million cost during the year of delay. It is based on the delay being a full year, the succeeding construction period being 13 years and an interest rate of 11%.

## COMMISSIONER BRADFORD'S SEPARATE VIEWS ON CLINCH RIVER

I have only a little to add to the views of Commissioners Gilinsky and Ahearne. I agree in general with the points that they have made and concur specifically in Commissioner Gilinsky's discussion of delay costs[1] and in the latter part of Commissioner Ahearne's discussion of the DOE analysis.[2] In particular, I see nothing useful to be had from DOE's attempt to calculate costs three different ways.[3] The economic costs are what matters, and the Commission majority is in agreement that they do not exceed $28 million using the implausibly low DOE discount rate.

As Commissioner Gilinsky has noted, a more realistic discount rate would show a net benefit from not accelerating this project. Indeed, there is likely always to be a net benefit from deferring a project unless the discounted value of its operation is sufficient to tip the balance the other way. With Clinch River, the value of accelerating the operation is nonexistent. The benefits from its operation occur only when a scarcity of uranium drives the cost of conventional reactor fuel above the cost of reprocessed plutonium. Since that event now does not seem at all likely in this century (a proposition not challenged by DOE or industry witnesses or Commissioners Palladino and Roberts), there is no economic benefit to be assigned to having the Clinch River Breeder in 1988 rather than 1989.

. . .

I agree in general with Commissioner Ahearne's analysis of the noneconomic factors although I do not attach much significance to the history of Section 50.12. Specifically, I agree that the Commission could grant the exemption consistently with Section 50.12.[4] I agree also that nothing in the first three factors under 50.12 appears to preclude the exemption. However, the exemption is emphatically not in the public interest. The economic dimension of the public interest test has been covered. All that remains is a discussion of the implications for the NRC licensing process.

One must start with the realization that the "normal" licensing process defines the public interest as the NRC has come to view it over three

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[1] Gilinsky opinion, pp. 368-71.
[2] Ahearne opinion, pp. 395-99.
[3] Letter from Deputy Secretary Davis to the Commission, "Re: Clinch River Breeder Reactor Plant," February 25, 1982.
[4] Whether such an action would contravene NEPA is less clear. The segmentation question and the foreclosure of alternative points are substantial and would need more careful refutation than they receive in the opinions favoring the exemption. This point is especially important because it is hard to see how the Commission could be keeping an open mind on the NEPA issues while finding that the public interest requires accelerated completion of the project at Clinch River.

cades. During this time it has licensed nearly half of the free world's nuclear generating capacity without any delay of completed plants and with minimal delay of any sort. Consequently, special exemptions are not lightly given, especially to one-of-a-kind reactors.

The difficulty with special exemptions that go beyond the Limited Work Authorization procedures is that they slice applications into inscrutable segments. Bit by bit, plants get built, with their full implications unreviewed until completion. As the economic commitment grows, the safety and environmental reviews are inevitably subject to increasing economic pressure.[5] For all of the Commission's past protestations to the effect that the work is done at the risk of the applicant, this has rarely been completely true and is in any case unpersuasive when the applicant is government funded to so great an extent.

The issue here is not licensability. It is whether anything about this project merits the kind of special treatment that a shortcircuiting of our Limited Work Authorization procedures would involve. The Commission's most tangled and costly proceedings (Seabrook and Diablo Canyon) have come when it has allowed substantial investment prior to completion of difficult licensing reviews. In a recent case, the Court of Appeals[6] declined to allow the NRC to postpone hearing a significant safety issue until after the plant was built.

These cases are not specifically analogous to this exemption request, but they serve to illustrate the broader point about the unwisdom of piling large sunk costs on the licensing process unnecessarily. While it appears that the environmental issues here are clearcut, the Commission should not go by appearances untested in hearings absent compelling circumstances. The NRC has been surprised before, and the allowing of increasing economic commitment to a project before the record merits a Limited Work Authorization is in itself contrary to the public interest.

## SEPARATE VIEWS OF COMMISSIONER AHEARNE

### SUMMARY

The Department of Energy (DOE) has requested an exemption under 10 CFR 50.12 in order to begin site preparation for the Clinch River

[5] As Justices Black and Douglas observed in their dissent in the only previous breeder licensing case, the ill-fated Fermi I plant, ". . . when millions have been invested, the momentum is on the side of the applicant, not on the side of the public. The momentum is not only generated by the desire to salvage an investment. No agency wants to be the architect of a white elephant." *Power Reactor Development Co. v. Electrical Union*, 367 U.S. 396, 417 (1961).

[6] *State of Illinois v. NRC*, No. 80-1163, July 1, 1981, unpublished opinion.

Breeder Reactor (CRBR). In addressing this request, I conclude it is not for the NRC to address (1) the need for an LMFBR program or for a demonstration scale facility or (2) the total cost of the CRBR.

Section 50.12 has a long history. A version of 50.12(a) authorizing specific exemptions has been in existence for over 20 years. When the Atomic Energy Commission (AEC) modified its regulations in 1972 to place restrictions on site preparation activities because of its new National Environmental Policy Act (NEPA) responsibilities, it introduced a version of 50.12(b) to provide a specific method by which applicants could show why work already begun should not be suspended until the AEC did an environmental review.

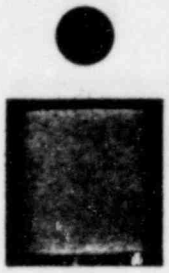
In 1974 the AEC developed an alternative way to approve site preparation activities prior to issuance of a construction permit — the Limited Work Authorization (LWA). A 50.12 exemption was still an option, but the Commission noted it was to be used "sparingly and only in cases of undue hardship." Since the LWA provisions became final in 1974, only one 50.12 exemption for site preparation activities has been issued.

I conclude 50.12 can be applied in this case. However, DOE must make a strong showing on the four 50.12(b) factors since 50.12 is to be used only in very unusual circumstances. The factors to be considered are: environmental impact, redressability, foreclosure of alternatives, and public interest.

The NRC staff has concluded the work that would be done under the exemption would have no significant environmental impact, and the local authorities strongly support the request. Nevertheless, site preparation inherently involves some environmental impacts and $88 million would be spent on project construction. Reasonable restoration is possible, although there may be some potential problems because of funding considerations. No alternative appears to be foreclosed by the proposed work.

Addressing the effect of delay on the public interest, I considered whether there is (1) a Congressional mandate, (2) a need to move ahead on the project for production of power or research and development (R&D) purposes, or (3) a substantial dollar cost to the taxpayer for delay.

After reviewing many letters from Congress and the Congressional legislative history, I conclude there is no mandate to waive — or not to waive — our standard procedures. The project is not being justified by need for power, and Congress has confirmed such a need is not a factor. Since I defer to DOE on the general need for R&D and it has not made that case, R&D needs do not provide a justification for the exemption. Thus the decision rests on the cost. And it is here the applicant presented its worst case.



We have the following DOE estimates for a one-year delay:

November 30, 1981: $120 million

January 18, 1982: (a) $120 million, "clearly conservative"
(b) $175 million

January 28, 1982: (a) $120 million, "clearly conservative"
(b) $161 million
(c) $166 million
(d) $175 million

February 25, 1982: (a) $129 million, "appropriations perspective"
(b) $ 28 million, "economic perspective"
(c) $218 million, "financial perspective"

I conclude the DOE has finally agreed that as far as the true dollar cost of delay, it is in the region of $30 million — coincidentally, about the cost of the management team.

This is sufficiently different from the original estimate as to indicate the DOE paid little attention in preparing its original statement, although the series of estimates does not lead me to have confidence in *any* of the estimates. In the case of a utility applicant we would look with strong disfavor on such rapidly shifting submissions.

Thus, I conclude the DOE has failed to make the public interest case and, in the cost area, badly.

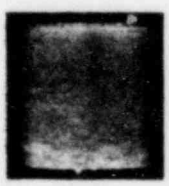
I am also concerned that DOE may not understand the appropriate controls that should be applied when assuming the role of a license applicant. The NRC has high standards for license applicants — which underlie the concept of licensability, which is a CRBR objective. It is because of these standards that showing licensability is an important accomplishment.

Therefore I vote to deny the exemption request.

## I. Areas Not Considered

In addressing the request for an exemption from the Department of Energy,[1] there were two issues which I did not consider.

It is not for the NRC to decide the need for a liquid metal fast breeder reactor program or the need for a demonstration scale facility, e.g.,



[1] The request is from the Department of Energy, for itself and the Tennessee Valley Authority and the Project Management Corporation. In this opinion this group is collectively referred to as the applicant or DOE.

whether such is a sound use of tax monies. Determination of these needs, including the timing and objectives, is more properly determined by DOE.[2] In 1976 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.[3]

Thus these needs are to be assumed. Therefore, we should not address such questions as whether and by how much the drop in reactor orders, the reevaluation of uranium resources, and the drop in uranium prices have delayed the need for a demonstration reactor such as the CRBR.[4] These are not appropriate issues for the NRC. We should defer to DOE.

We also are not estimating the full cost of the CRBR. Considerable debate has taken place over the "true" cost of this project, with much of the debate on how long will it really take to bring a first-of-a-kind machine to successful operation. Although costs of delay are an issue here, the full cost of the project is not.

## II. Application of Section 50.12

There are three issues with respect to the use of Section 50.12: (1) can it be used; (2) should it be used; and (3) if so, does consideration of the factors support granting the present request?

The applicant argues that the section is a valid part of the NRC regulations; was consciously retained following introduction of the LWA procedures; that the Atomic Energy Act of 1954 rquires that procedures such as this be available for demonstration projects; and, therefore, Section 50.12 is usable in this case. The opponents argue that 50.12 is a vestigial remnant — with little applicability after the 1974 LWA procedures were

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[2] This position mirrors the Commission's earlier decision on whether NEPA required the NRC to address broader environmental issues previously addressed in the ERDA Program Statement. *Project Management Corporation, et al.* (Clinch River Breeder Reactor Plant), CLI-76-13, 4 NRC 67 (1976). The Commission was "guided largely by the 'rule of reason' generally applicable to NEPA issues [citation omitted], by the implications of the Energy Reorganization Act and Congressional consideration of the Clinch River project, and by considerations of practicality." *Id* at 79. I find the Commission's reasoning and guidance pursuasive.

[3] *Id* at 92.

[4] *E.g.*, Letter from F. von Hippel to Chairman Palladino (January 13, 1982) (submitted in response to December 24, 1981 NRC invitation for comments on DOE exemption request).

issued, as shown by the fact that virtually all exemptions were issued before the LWA provision was a portion of the regulations; that it was not meant to be used for first-of-a-kind designs; and tha contention in the reopened hearing precludes the use of Section 50.12.

**Background of Sections 50.12 and 50.10**

In 1960 the Commission added a new paragraph to Section 50.10 which provided "No person shall begin construction of a production or utilization facility on a site on which the facility is to be operated until a construction permit has been issued."[5] The new regulation went on to define construction to include pouring of foundations or installation of any portion of the permanent facility. It explicitly excluded activities such as excavation, and construction of roadways, railroad spurs, and non-nuclear facilities such as turbine buildings and temporary construction buildings. This was not an absolute prohibition. The Commission did grant requests for specific exemptions.[6] In fact, in 1969 the Commission proposed specific procedures and criteria for issuing exemptions to allow certain categories of activity prior to issuance of a construction permit.[7] However, this proposal was later withdrawn. The enactment of the National Environmental Policy Act (NEPA) in 1970 caused a significant change in the Commission's approach.

**Changes to Reflect NEPA**

In response to NEPA, the Commission proposed a rule in 1971[8], which became final in 1972[9], to "redefine the 'commencement of construction'" and "provide for Commission environmental review prior to 'commencement of construction.'"[10] Under the new definition of "construction" an applicant could no longer clear land, excavate, build a non-nuclear building, or take other substantial action which would adversely affect the environment. Some activities, such as those reasonably necessary for determining site suitability, were still permitted provided efforts were taken to minimize environmental harm.

In some cases the proposed rule would have affected activities already

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[5] 25 Fed. Reg. 8712 (September 9, 1960).

[6] At that time the regulations included 50.12, "Specific Exemptions," which is virtually identical to the current 50.12(a).

[7] 34 Fed. Reg. 2357 (February 19, 1969) (proposed rule to allow exemptions for installation of foundations and below grade walls prior to issuance of construction permit).

[8] 36 Fed. Reg. 22848 (December 1, 1971).

[9] 37 Fed. Reg. 5745 (March 21, 1972).

[10] *Id.*

underway. Activities which were no longer authorized but which had been authorized, either at the applicant's option (because they were not covered by the original definition of construction) or by a previously issued specific exemption (under 50.12), were dealt with by the addition of two new sections — 50.10(d) and 50.12(b). In essence, affected applicants were required to show cause why their activities should not be suspended until the Commission had an opportunity to do an environmental review. The Commission reached its decision on the show cause requests by considering and balancing a set of factors. The factors to be considered were virtually identical to the factors listed in the current version of 50.12(b). The proposed rule addressed only transition cases.

The final rule added a footnote to the standard exemption provision, Section 50.12(a), which provided "In acting upon an application for an exemption permitting the conduct of the activities prior to the issuance of a construction permit prohibited by §50.10, the Commission will consider and balance the environmental factors [applicable to the show cause determination as] described in paragraph (b) of this section." The Commission explained:

> "In making this relief generally available only to those persons who have commenced actual site preparation activities prior to the effective date of these amendments, the Commission realizes that in individual cases, particularly those instances where plants are in an advanced stage of development, but where no site preparation work has yet been started, undue hardship may be incurred. In those situations, relief may be sought by requesting a specific exemption under §50.12. Although it is expected that specific exemptions will be used only sparingly for this purpose, appropriate relief may be granted in particular cases where the facts so warrant and a favorable determination can be made with respect to the specified environmental considerations listed in the new §50.12(b)."[11]

**Limited Work Authorizations and Section 50.12**

In 1974 the Commission introduced a new set of amendments which "would provide for a procedure different from that set forth in §50.12(a) of the Commission's present regulations in 10 CFR 50 whereby site preparation and excavation and certain other on-site activities could be undertaken prior to issuance of a construction permit for a nuclear power reactor."[12] The procedure, a limited work authorization (LWA), differed

[11] *Id.* at 5746.
[12] 39 Fed. Reg. 14506 (April 24, 1974).

from an exemption in several important respects. Although the LWA was routinely available, the scope of activities was defined and limited, the staff had to complete its final environmental statement before issuance, and the Licensing Board had to make the required NEPA findings before issuance.[13] The proposed rule included an amendment to 50.12 which precluded any exemption from 50.10 authorizing activities *beyond* the scope of an LWA. However this was "deleted as unnecessary in light of the Commission's policy of granting exemptions from §50.10(c) sparingly and only in cases of undue hardship."[14]

The Commission explicitly considered the value of the LWA procedures and the relation to exemptions:

> "A number of comments suggested that the Commission should adopt a more liberal policy regarding granting of exemptions from §50.10(c) pursuant to §50.12(a). The Commission has rejected this suggestion and will continue the present policy of granting such exemptions sparingly and only in cases of undue hardship. A number of comments also suggested that the provisions in §50.10(e) requiring a full NEPA review and hearing prior to grant of authorization were unnecessary and would unduly delay plant construction. The Commission believes however, that such provisions, which facilitate public participation and ensure appropriate consideration of NEPA matters, are in the public interest and should be retained in the rule."[15]

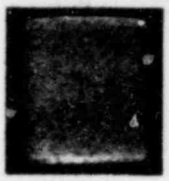
The following comment made by the Commission in 1974 is of interest in the present case:

> "Consideration of the instant amendments arises at a time of deep national concern over energy sources and supply — a concern which the Commission fully shares."[16]

The LWA procedures were an attempt to accommodate the Commission's NEPA responsibilities with a need to bring nuclear power plants on line:

> "Prior to the enactment of the National Environmental Policy Act of 1969 (NEPA) and the amendments to §50.10 adopted by the Commission on March 21, 1972 (37 FR 5745), site excavation for safety-related structures was generally permitted to be undertaken by applicants without any prior Commission review. The essential distinction between the past situation and the present one is that NEPA now applies to certain Commission actions. However, this essential difference is accommodated in the amendments

[13] 39 Fed. Reg. 4582 (February 5, 1974) (proposed rule).
[14] 39 Fed. Reg. at 14507.
[15] 39 Fed. Reg. at 14507-08.
[16] 39 Fed. Reg. at 14508.



by the requirement that there be a full NEPA review and hearing on NEPA issues covered by the Commission's NEPA regulations prior to authorizing any on-site work otherwise generally prohibited by §50.10(c) . . . The Commission believes that this approach reflects a reasonable approach toward timely decision making within the framework of the present Act."[17]

In 1975 Section 50.12 was modified as part of a number of changes issued to reflect the abolition of the Atomic Energy Commission and the creation of the Nuclear Regulatory Commission.[18] The amendments were characterized as technical and conforming amendments rather than substantive amendments. The footnote to §50.12(a) was deleted, and §50.12(b) was revised to cover a request for an exemption from 50.10 rather than an attempt to show cause why the Commission should not suspend activities which were ongoing during the specified transitional period in 1972. Presumably the transitional determinations had been completed and the original 50.12(b) was no longer necessary. Consequently this change appears to accomplish little more than deleting an unnecessary section and transferring a related section from a footnote to a new paragraph.

One final change of interest occurred in 1976 and 1977. While considering early site review regulations, the Commission proposed to "extend the so-called 'limited work authorization' concept to include production facilities such as commercial isotopic enrichment plants and fuel reprocessing plants, and testing reactors."[19] The Commission did extend the LWA procedures to specified utilization facilities rather than just power reactors. However, the final rule did not include production facilities. The Commission simply asserted it decided not to extend the LWA procedure to production facilities "because this would be premature and unnecessary."[20]

**Can Section 50.12 be Used?**

Based on the development of the rules, I reach the following conclusions: The approach currently found in §50.12(b) was originally developed to deal with a transition period which occurred in 1972 when the AEC adopted new restrictions on construction activities to implement its NEPA responsibility. Although it was primarily intended for applicants who had already begun affected activities, there was a recognition from the beginning that exemptions might be justified in a few limited other instances.

[17] 39 Fed. Reg. at 14507.
[18] 40 Fed. Reg. 8774 (March 3, 1975).
[19] 41 Fed. Reg. 16835 (April 22, 1976)
[20] 42 Fed. Reg. 22882 (May 5, 1977).

This exemption option has been deliberately maintained, although the Commission has consistently insisted it should be used "sparingly" and only in cases of "undue hardship" or "extraordinary" circumstances.[21] This high threshhold for exemptions was maintained in the face of serious energy concerns in 1974.

However the AEC may have intended the provision, it is nevertheless present in the regulations. Although plausible, there is nothing in the background of Section 50.12 to suggest the Commission intended to preclude an exemption for a first-of-a-kind facility. The failure to expand the scope for LWA's is consistent with simply not extending a routine procedure to a category of facilities for which there is little experience and little necessity. It does not follow the Commission intended to preclude use of a nonroutine procedure for a nonroutine facility. Finally, to forbid its use because of a contention in the hearing essentially repeals the provision, since such an interpretation would transform a 50.12 exemption into an LWA-1, which can be issued after a hearing.

Basically the Commission appears to have preserved its options to act on a case-by-case basis in the event that unusual circumstances justified unusual actions. Consequently, I do not reject on its face the applicants' request. However, they have a heavy burden.

Thus, I conclude the section can be applied.

**Should Section 50.12 be Used?**

Whether it should be applied turns on whether the exemption route should be used for CRBR. The issue is linked to 50.12(b) (4), i.e., it is a public interest question. In essence, if everyone agrees CRBR should be licensed, then what type of licensing procedure should be followed? The exemption opponents argue that for a first-of-kind reactor, the full, standard (canonical) proceeding should be followed. The applicant argues that what is necessary is for the licensing procedures in the regulations to be followed. Then, since 50.12 is in those regulations, the applicant believes granting the exemption is consistent with following NRC licensing procedures.

I find the applicant's arguments slightly specious. The provision *is* in the NRC regulations — and was used extensively until the LWA provision was included in the NRC regulations. The 50.12 exemption route was used for 49 facilities in the last fifteen years. However, after the LWA rule was

[21] *E.g.*, 39 Fed. Reg. at 14507; *Louisiana Power & Light Company* (Waterford Steam Electric Generating Station, Unit 3), CLI-73-25, 6 AEC 619, 622 n.3 (1973); *Washington Public Power Supply System* (WPPSS Nuclear Project Nos. 3 and 5), CLI-77-11, 5 NRC 719, 723 (1977).

published in April, 1974, LWA-1's were issued for 55 plants. The *only* 50.12 request granted *since* April 1974 was in a case where (a) an LWA-1 had already been granted (and therefore the initial environmental hearing had been held), (b) the applicant wanted approval for construction activities going beyond those approved in the first LWA, (c) the NRC had in place a policy statement prohibiting issuing additional LWA's until a particular rulemaking was completed, and (d) the request (referred to variously as a request for a broader LWA and for an exemption) was unopposed by the parties to the hearing. Thus, while the applicant is correct — a 50.12 exemption is part of the NRC licensing procedures — granting such an exemption would place the CRBR proceeding in the rare category, the category of extremely unusual procedures. To the extent that meeting full NRC licensing procedures is among the objectives of the CRBR program, use of a 50.12 waiver prevents meeting these objectives.

A major issue relating to the public interest is what is meant by licensability. As I recall, one objective of the CRBR project from its beginning has been to demonstrate licensability. The requested exemption is perceived by many as removing CRBR from the NRC's normal process and thereby damaging the possibility that the project can meet the licensability objective. Thus, for example, Senator Quayle wrote:

> "The legislative history of the Clinch River project clearly shows that a major goal of this project is to demonstrate the licensability of the liquid metal fast breeder reactor. Any deviation from licensing procedures established by NRC would obviate this purpose and deprive the nuclear industry of the clear precedents needed to proceed with additional LMFBR plants.
>
> I believe the best way to assure a stable future for the nation's nuclear industry, which represents a vital part of our present and future energy supply structure, is to stabilize and clarify the regulatory environment. Exempting demonstration plants from normal regulatory requirements can only delay progress toward meeting this goal. It will also retard the progress of proving new technology. For these reasons, therefore, I request that you deny DOE's request for exemptions."[22]

These arguments do not lead me to reject the request, however, since it is not an NRC requirement that we follow our normal licensing procedures. However, DOE must make a strong showing on the 50.12(b) factors.

[22] Letter from Senator Quayle to Chairman Palladino (February 5, 1982).

## III. Consideration of Section 50.12(b) Factors

Section 50.12(b) instructs the Commission to consider and balance four factors: (1) environmental impact, (2) redressability, (3) foreclosure of alternatives, and (4) public interest.

### Environmental Impact

The first factor concerns "significant adverse impact on the environment." Inherently this is not a trivial issue for site preparation activities. The Commission originally redefined construction to include site preparation activities because "site preparation constitutes a key point, from the standpoint of environmental impact, in connection with the licensing of nuclear facilities and materials."[23]

In 1977 the NRC staff prepared a final environmental statement (FES) for the CRBR.[24] The staff concluded that site preparation activities, conditioned as proposed in the FES, would not result in significant adverse environmental impacts. Although there have been changes since that evaluation, the NRC staff continues to believe no significant adverse impacts will result.

In addition, the local authorities are strongly in favor of the project. We have received letters of support from the Mayor and the Administrator of Clinton, Tennessee, from the Mayor and City Coordinator of Harriman, Tennessee, from Tennessee State Representative McNally, who represents Oak Ridge, from Governor Alexander of Tennessee, and from Mayor A. K. Bissell of Oak Ridge, who spoke at the Commission's public meeting on February 16, 1982. Such support, while a strong positive indication, is probably not sufficient to show negligible environmental impact (I believe the authorities of West Valley, New York also supported that project when it was proposed). But if the Commission weighs heavily the opposition of local authorities to siting a facility, we should similarly weigh such support. The local authorities also agree with DOE's contention that some of the proposed work would also be valuable for future industrial development of the site. Nevertheless, $88 million would be spent on project construction and, even at today's high prices, that represents a significant construction project — it clearly will have an impact on the area.

Although the impacts are not so trivial that they can be entirely ignored, they do not weigh strongly against the exemption.

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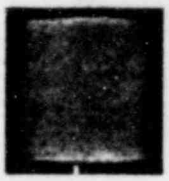
[23] 37 Fed. Reg. at 5746.

[24] "Final Environmental Statement Related to the Construction and Operation of the Clinch River Breeder Reactor Plant," NUREG-0139 (December 1976).



**Redressability**

The second criterion, whether redress of adverse impacts "can reasonably be affected" is not completely separate from the first. The applicant argues that all but the detailed topography can be restored for about 10% of the construction cost, and that some of the activities (e.g., the railroad spur and roads) could be left to enhance industrial development.

I do not read the criterion as asking whether the site *would* be restored but, rather, whether it *could* be restored. The former addresses Congressional funding; the latter, the facts of construction and restoration. Although I am skeptical that what takes $88 million to do can — at a later date — be undone for $8 million, I agree with the applicant that it should be possible to undo what they propose to do. The applicants will not be able to restore all of the original topographic features. However, I believe some consideration should be given to the industrial zoning which indicates local feeling about appropriate uses.

This factor does not weigh against granting the exemption. Reasonable restoration is possible, although there may be some practical problems because of funding considerations.

**Foreclosure of Alternatives**

The third factor concerns whether the activities would "foreclose subsequent adoption of alternatives." The intervenors argue it would foreclose their contention that an LWA cannot be granted for a first-of-a-kind reactor. This is a bootstrap argument. To forbid the use of exemption authority because of a contention in an LWA hearing effectively nullifies the exemption authority. If the exemption must await the LWA-1 hearing, the authority becomes meaningless because an LWA-1 itself can be issued after the hearing. As for the merits of the issue, I see no reason why it needs to be discussed in a hearing. It is basically a legal argument. I do not believe the intervenors' foreclosure argument is pursuasive. No other arguments were raised as to issues that would be foreclosed.

The staff concluded in its 1977 final environmental statement that the ERDA sites at Hanford, Idaho and Savannah River "are better that the proposed site or any of the other alternative sites because the isolation provided would result in lower radiation doses in the event of an accidental release of radioactivity, in terms of both the nearest receptor and the number of people exposed."[25] However:

> "A delay of 2-1/4 years in completion of the project appears to be the minimum result of a change in site location at this time,

[25] *Id.* at 9-22.

assuming current schedules would otherwise be met . . . The staff's overall conclusions hinge on a balancing of the reduction in accident risks achievable with a remote location against the resulting costs and inability of the demonstration plant to accomplish its goals on a time frame compatible with the present timing goals of the LMFBR program . . . In balancing the factors discussed above, the staff's judgment is that the applicant's preferred proposal, utilizing the Clinch River site, is reasonable and that no substantially better alternative is available."[26]

The $88 million for project construction represents a significant investment. More important than the money, the work will give this site an additional edge in terms of timely completion. Thus there is potential prejudice to the alternate sites issue.

However, the Clinch River site already has an edge as evidenced by the staff's decision in 1977, and there is no reason to believe the incremental advantage obtained through work under the proposed exemption is sufficient to foreclose consideration of alternative sites. This conclusion is influenced by the redressability considerations discussed above. In addition, anyone following this project at all closely realizes that there is no real possibility of an alternative site for the CRBR.

On balance, I believe factor (3) of Section 50.12(b) is neutral regarding this exemption request.

Finally, the public interest factor must be addressed — as has been obvious from the beginning. Since the Applicants have a heavy burden and the other three factors are marginal, it is clear that consideration of the public interest criterion will be determinative for me.

## IV. Public Interest

In considering the effect of delay on the public interest, there are three issues: (1) Is there a Congressional mandate for the exemption? (2) Is there a need to quickly move ahead on the project for either the power or the R&D? (3) Is there a substantial dollar cost to the taxpayer for delay?

If some or all are strongly "yes," then it would seem 50.12(b) (4) would carry the waiver request.

### Congressional Mandate

On December 24th the Commission asked the DOE: "Is there any indication in the acts providing for CRBRP authorizations or appropri-

[26] *Id.* at 9-23.

ations, associated committee or conference reports, or legislative history that speaks to the licensing procedures to be used by the NRC?"[27] In response, the applicant quoted the Omnibus Appropriations Bill:

> "The Omnibus Budget Reconciliation Act of 1981, Pub. L. No. 97-35, includes a Congressional mandate for expeditious project completion. The Conference Report accompanying this legislation and the contemporaneous statements of the floor managers at the time of the enactment conclusively demonstrate the following elements of Congressional intent:
>
> a. The plant must be constructed in a timely and expeditious manner; construction must be undertaken as expeditiously as possible; the cooperation of all agencies is required."[28]

However, in testimony before us, the lead spokesman for the applicant, Mr. Edgar, was less positive:

> "Commissioner Ahearne: My question is, do you read the omnibus budget bill as at least implying Congressional intent that the NRC should grant the exemption?
>
> Mr. Edgar: It implies Congressional intent, or in fact reflects the Congressional intent that Clinch River should be completed as expeditiously as possible. It does not address 50.12 per se. It provides a basis upon which the Commission can take that into account as a matter of policy in whether to exercise its discretion to use 50.12.
>
> Commissioner Ahearne: My question is, do you read it as implying that it's the Congressional intent that we should grant the exemption?
>
> Mr. Edgar: It reinforces it."[29]

Several Senators and Congressmen have warned us not to interpret the language as endorsing the waiver and others have advised us it is consistent with the waiver request.

Those endorsing the request all point out the exemption would be consistent with the Congressional intent.

The Chairman of the House Committee on Science and Technology, Representative Fuqua, joined by fourteen other members, including the Chairman of the Subcommittee on Energy Research and Production, Representative Bouquard:

> "We would, therefore, confirm that the Secretary's request is consistent with Congressional intent."[30]

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[27] "Memorandum and Order," CLI-81-35, Attachment A, Question 2 (December 24, 1981).

[28] "Applicants' Answers to Questions Set Forth in Attachment A to the Commission's December 24, 1981 Order" at 5-6 (January 18, 1982) (footnotes omitted).

[29] Unofficial transcript of Commission meeting on February 16, 1982 at 188

[30] Letter from Representative Fuqua *et al.* to Chairman Palladino (February 11, 1982).

The Chairman of the Senate Subcommittee on Nuclear Regulation, Senator Simpson, joined by Senator Domenici, Chairman of the Senate Budget Committee:

> "We believe that NRC approval of the Secretary of Energy's request pursuant to Section 50.12, provided the Commission finds that all other requirements of that section are met and that such action is consistent with its statutory responsibilities for protection of the public health and safety, would be fully consistent with the expressions of Congressional intent respecting this project . . . ."[31]

The Chairman of the Senate Committee on Energy and Natural Resources, Senator McClure:

> "I therefore confirm that the Secretary's request is consistent with Congressional intent."[32]

And, finally,[33] the Senate Majority Leader, Senator Baker said:

> "If the Commission finds in its deliberations and considerations that the four criteria of 10 CFR 50.12 are satisfied, then I believe it is consistent with the established and continuing purpose of section 50.12 and in the public interest as expressed repeatedly by the Congress, for the Commission to act favorably on the submission by the Secretary of Energy. The intent of the Congress has most recently again been expressed in the Conference Report on the Omnibus Budget Reconciliation Act of 1982, (P.L. 97-35), wherein the Clinch River Breeder Reactor Project is identified as an essential element of the Liquid Metal Fast Breeder Reactor program. The Conferees directed that the Project should be constructed in a timely and expeditious manner. The accompanying floor statements by the managers of the Reconciliation Act in both Houses of the Congress interpret and amplify that report language.
>
> In my judgment, if the Commission finds that the requirements of section 50.12 are met, favorable action on the DOE request would be entirely in harmony with the Commission's statutory role to protect the public health and safety, while continuing to reserve

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[31] Letter from Senators Domenici and Simpson to Chairman Palladino (February 25, 1982).

[32] Letter from Senator McClure to Chairman Palladino (February 17, 1982).

[33] It should be noted that the Science Advisor to the President, Dr. Keyworth, has also advised us that:

> "From the standpoint that Congress has funded the program and that the President has directed the completion of the CRBR, the requested exemption is consistent with national policy and the public interest." Letter from Dr. Keyworth to Chairman Palladino (February 24, 1982).

for the Congress the policy determination related to the funding, timetable, and role of the Project in the LMFBR program."[34]

However, the quoted letters do not indicate a belief that Congress *considered* the 50.12 waiver provision and *intended* for us to use it. This point has been made by several other Congressmen:

The Chairman of the Senate Appropriations Committee, Senator Hatfield, joined by Senator Cohen:

> ". . . If the NRC were to authorize site preparation activities at this time, it would be compelled to grant exemptions from established regulatory procedures for the CRBR. We have serious doubts about the wisdom of granting such exemptions.
>
> The Clinch River Breeder Reactor was authorized in 1970 by P.L. 91-273 as a demonstration project that would lead to the early commercialization of breeder reactors. Since its inception, NRC licensing of the CRBR has been an integral part of the project.
>
> . . .
>
> Throughout the annual debates over the CRBR, Congress has never expressed support for regulatory exemptions for the project. To the contrary, the Omnibus Budget Reconciliation Act conference agreement reaffirms the need for proceeding with the established regulatory course for the CRBR in order to make future commercialization possible. The Conference report states, 'The conferees intend that the plant should be constructed in a timely and expeditious manner, so that a decision on the commercialization and deployment of breeder reactors can be made on the basis of information obtained in the operation of the plant.'"
>
> We do not agree with Secretary Edward's assertions that the CRBR '. . . must be expeditiously constructed to meet the objectives of the CRBR program.' To the contrary, we believe it is in the best interests of future commercial development of LMFBRs for the CRBR to undergo the established regulatory procedures without exemption. Furthermore, we believe granting exemptions to the CRBR could seriously erode the public's confidence in the federal nuclear energy programs in general and breeder reactor programs in particular."[35]

The Chairman of the House Committee on Interior and Insular Affairs and Chairman of the Subcommittee on Energy and the Environment, Representative Udall:

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[34] Letter from Senator Baker to Chairman Palladino (February 26, 1982).
[35] Letter from Senators Hatfield and Cohen to Chairman Palladino (December 15, 1981).

". . . As chairman of the Committee with primary jurisdiction in the House over the nuclear regulatory process, I am concerned about the implications of the Commission's actions (pursuant to the Secretary's request) on the siting and licensing of the CRBR.

Existing regulations (10 CFR Part 50.10) provide for a procedure whereby site preparation and excavation and certain other onsite activities could be undertaken prior to the issuance of a construction permit for the CRBR. The purpose of this regulatory procedure is to lessen the impact of the licensing process on an applicant's construction schedule and expedite completion of the project. The Secretary has determined, however, that this orderly procedure is inadequate in the case of the CRBR. He has requested, therefore, that the Commission provide the extraordinary regulatory relief of granting an exemption (under 10 CFR Part 50.12) that would allow CRBR site preparation prior to and without fulfilling the requirements for issuance of a limited work authorization (LWA). To my knowledge, the Commission has not granted an exemption under 10 CFR 50.12 in a contested proceeding since the adoption of the LWA regulations in April 1974; a practice in keeping with the Commission policy of granting such exemptions sparingly and only in cases of undue hardship.

Prior to a final decision on the Secretary's request, I hope the Commission will consider fully the adequacy of established LWA procedures to allow a timely commencement of CRBR site preparation while protecting the integrity of the licensing process and the rights of all parties to participate in the proceeding.

. . .

Finally, to the extent that Clinch River is intended as a demonstration of the commercialization potential of breeder reactors (including their ability to be licensed by NRC), it appears somewhat self-defeating to shortcut the normal licensing process at the first opportunity. In the event that the Commission grants the exemption sought by the Secretary, public confidence in the regulatory process as it applies to Clinch River and future breeders may suffer unnecessary and irreparable harm."[36]

The ranking minority member of the Senate Subcommittee on Nuclear Regulation, Senator Hart, joined by Senators Tsongas, Humphrey, Bumpers, and Bradley:

"We do not believe that it has ever been the intent of Congress to encourage such exemptions, nor do we believe that such exemp-

[36] Letter from Representative Udall to Chairman Palladino (December 8, 1981).

tions are in the best interests of possible future commercial development of Liquid Metal Fast Breeder Reactors (LMFBRs).

The legislative and contractual history of the Clinch River project clearly state that one of the goals of this project is to demonstrate licensability of LMFBRs for commercial application. To exempt this project now would merely postpone this determination and cause extensive delay and increased cost of any LMFBR plant that might follow. The time to clearly demonstrate LMFBR licensability is now.

. . .

This report language [Conference Report accompanying the Omnibus Budget Reconciliation Act of 1981] is not a request for regulatory exemptions. To the contrary, it reaffirms the need to go through all steps of established regulatory procedure now to pave the way for possible future commercialization.

We urge you to consider these points and deny DOE's request for exemptions."[37]

Examination of the legislative history does not show any indication that a 50.12 waiver request was addressed — even by suggestion — in discussions on the bill. Hence, although it is clear Congress supported moving ahead expeditiously on the CRBR, there is nothing to show this was not intended to direct DOE to get the licensing process restarted — rather than to direct the NRC to waive our normal procedures. Consequently, I do not read the Congressional action as a directive to waive — or not waive — our normal procedures.

**Need for Power or for R&D**

Turning to the second point, "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."[38] In addition, the Conference Report for the Appropriations Bill stated:

"The conferees intend that the plant should be constructed in a timely and expeditious manner, so that a decision on the commercialization and deployment of breeder reactors can be made on the basis of information obtained in the operation of the plant. The plant should therefore be constructed on the basis of that objective, and not on the basis of providing needed power in the specific region of the Clinch River site."[39]

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[37] Letter from Senator Tsongas *et al.* to Chairman Palladino (December 9, 1981).
[38] CLI-76-13, 4 NRC at 77.
[39] H.R. Rep. No. 97-208, 97th Cong., 1st Sess. at 827 (1981) (Conference Report for the Omnibus Budget Reconciliation Act of 1981).

Of course, this should also remove need for production of power as a factor supporting the exemption. (Fortunately, since with TVA deferring power rapidly and with an extremely aggressive conservation program[40] it would have been difficult to rest on the need for 350 MWe for the TVA system.) As for the R&D need, in its 1976 decision the NRC decided to defer to DOE on questions of the general need, including timing. DOE has made little effort to support this exemption on the basis of the adverse impacts of delaying R&D results. (Although I defer to DOE's judgment, I note DOE has merely provided a few conclusory statements with little supporting material.) Thus the need for R&D does not provide a justification for the exemption request.

**V. Dollar Costs of Delay**

Which rests the decision upon the cost. And it is here that the applicant has presented his worst case. The cost of delay has been the subject of substantial discussion, both in filings by the applicants and the NRDC and in the public meetings held by the NRC. The applicant has presented several substantially different cost estimates - for the most part unrelated - and has used creative accounting.

It has been difficult to get a firm estimate from the DOE. The DOE has shifted position substantially. On November 30th, when DOE initially submitted their application, Secretary Edwards wrote:

> *"Absent approval of this request, procedural delays will cause undue hardship in the form of another 1-2 years of delay and $120-240 million of increased costs.*. . . Approval of this request would avoid hardship to the project and Federal taxpayer, since it would avoid another 1-2 years of delay and $120-240 million of increased costs."[41]

Secretary Edwards went on to reiterate this last point:

> "Approval of the request would . . . save the taxpayers $120-240 million."[42]

And later,

> "Additional . . . cost increases of $120-240 million can be avoided if the Commission recognizes the unique and extra ordinary circumstances surrounding the project."[43]

Secretary Edwards enclosed a November 1981 Site Preparation Activities Report, [44] which he said "provides the detailed justification and support

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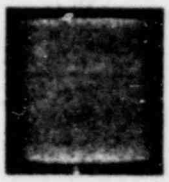
[40] Office of Power, Division of Energy Conservation and Rates, Tennessee Valley Authority, "Program Summary" (October, 1981) (TVA/OP/ECR-82/1).
[41] Letter from DOE Secretary Edwards to Chairman Palladino at 2 (November 30, 1981).
[42] *Id.* at 3.
[43] *Id.* at 3-4.
[44] "Clinch River Breeder Reactor Plant: Site Preparation Activities Report" (November 1981).



for this 50.12 request." The only addressal of the delay cost came in Section 7.0., "Effect of Delay on the Public Interest," where the total discussion of the cost consists of the following:

> "If approval to initiate site preparation activities identified herein is granted by March 1, 1982, it is estimated that the current Project schedule can be shortened by at least 12 months. Taking into account only the costs of those activities that are sensitive to schedule changes, the estimated 12 months reduction in schedule is conservatively estimated to result in a direct savings of $120 million."[45]

Certainly this magnitude of cost would be a significant factor and would weigh heavily on the side of granting an exemption in the public interest. Therefore, the Commission requested DOE in our order of December 24th to:

> "(a) Provide the documentation which forms the basis for projected cost of delay and environmental impact estimates referred to in the Site Preparation Activities Report and Secretary Edwards' letter.
>
> (b) Demonstrate the validity of the cost estimate."[46]

The DOE responded on January 18th:

> "Applicants estimate that, absent authorization pursuant to Section 50.12 to begin site preparation activities the Project will incur (1) additional delays at one-to-two years duration and (2) corresponding increased costs in the amount of $120-240 million"[47]

The DOE went on to state:

> "The range of delay costs can be conservatively estimated on the basis of: (1) an estimate of cost increases for certain unavoidable management activities which are particularly sensitive to delay; (2) an estimate of the effects of inflation assuming a delay in initial criticality from September 1988 to February 1990; and (3) an estimate of the cost of capital expended on hardware for the period of delay. Each of these estimates are more fully described below; they show that the cost estimate of $120-240 million in the SPAR is clearly conservative."[48]

. . .

[45] *Id.* at 7-2.
[46] CLI-81-35, Attachment A, Question 9.
[47] Applicants' January 18, 1982 Answers at 40.
[48] *Id.* at 41 (footnote omitted).

"The Applicants' estimate that the cost of maintaining the various management groups for an additional one-to-two year period is $42.3 million per year."[49]

Turning to inflation, the DOE noted:

". . . the CRBRP Project is funded through Congressional appropriations and thus operates with, and all costs are estimated based upon, year of expenditure dollars. Total project costs are estimated using a standard 8% escalation value. Any increased costs due to delay in this case will be borne by the nation's taxpayers, and the Commission should not ignore the adverse effects of inflation upon the taxpayer.

The Applicants estimate that the impact of a one-to-two year delay amounts to $88.8 million per year . . . ."[50]

Finally, the DOE argued:

"Whenever an organization, including the United States Government dedicates funds to a capital project, it foregoes the opportunity to invest those funds in alternative projects which will earn an equal or greater return on investment *or* to pay off debt on which the capital costs are being incurred. In short, the organization 'ties-up' capital and incurs an opportunity cost. Although certain components of the cost may be difficult to measure, it is, in an economic sense, a real cost and is included as a cost in an investor owned utility's accounting and ratemaking.

. . .

A one-to-two year delay in the Project schedule will result in additional cost on expended capital during the delay period. In order to arrive at a conservative estimate of the cost of capital during the delay period, a rate of 10 percent* was applied only to the capital costs for hardware.** The delay costs amount to $43.9 million on a yearly basis . . . .

* The interest rate applied is substantially less than that established by the Secretary of Treasury pursuant to Public Law 92-41. See CAS 417.50. As of January 1, 1982, the rate established by the Secretary of Treasury was 14 3/4 percent. 47 Fed. Reg. 366 (Jan. 5, 1982).

** Applied to *total* capital costs the yearly cost of capital attributable to delay amounts to approximately $110 million per year."[51]

[49] *Id.* at 42.
[50] *Id.* at 44.
[51] *Id.* at 45-46.

Therefore the DOE concluded a one-to-two year delay would result in cost increases per year of $42.3 million for unavoidable management activities, $88.8 million for inflationary impact, and $43.9 million for "increased interest on expended capital for hardware alone."[52] Thus, although the DOE never totalled the numbers, the reader could reasonably infer a one year delay would cost $175 million.

However, government agencies, departments, etc., are financed by fund accounts.[53] That is, they are given money for specific purposes — those identified in their annual budgets. If the money is not used for this purpose, it must be "returned" to the Treasury. Some monies must be spent in the given fiscal year, although much R&D funding is "no-year" money and is available until expended. Nevertheless, fund money cannot be saved and invested for profit. Expenditures from fund money then have no real opportunity cost while monies spent from the asset or expense accounts of the private sector do.

The money raised in taxes by the Treasury is distributed to the various agency funds via the budgeting process. However, the government does not tax to accumulate capital. Thus Treasury monies have no real opportunity because they are also funds. It follows then that no cost accrues to the use of government funds, e.g., to government monies spent on government activities or projects directly operated by the government other than the one-for-one depletion of the fund. This is true if and only if fund money is used.[54]

On January 18th, NRDC and the Sierra Club filed comments on the November DOE application. They pointed out that "delay costs appear to be based almost solely on anticipated inflation . . . . When the time value of money is taken into account, inflation-related costs of delay vanish, because of offsetting savings from postponing expenditures."[55] They argued

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[52] *Id.* at 46.

[53] Funds differ from cash accounts in that assets are placed in funds for *specific* purposes. The use to which these monies may be put is restricted to the purpose of the fund. Idle fund money cannot be used to pay the rent, invested for revenue, etc. (unless it is an investment fund). Only the monies needed to finance the responsibilities of the fund are assigned to it. The fund does not have title to the money, only the use of it.

[54] Normally, when the government wants to build a costly project, it hires a private contractor to do the work. The contractor pays the cost of the effort and is reimbursed, often at intervals during the process of construction. The contractor must borrow to pay operating expenses. The private contractor, because he must borrow at a real cost (interest) or use his own funds which do have real opportunity costs, may claim the cost of interest as a cost to the project. Therefore, if CRBR were being built by a non-government entity, interest costs would be a cost to the project. Since CRBR is being built largely by DOE with government funds, no opportunity cost should be imputed to the government money.

[55] "Comments of the Natural Resources Defense Council, Inc. and the Sierra Club in Opposition to Applicant's Exemption Request Under 10 CFR §5012" at 32 (January 18, 1982).

that "Because the interest rate at which the Treasury borrows is currently greater than the inflation rate, there would be an actual savings by deferring expenditures on the project."[56] The intervenors cost expert, Charles Komanoff, estimated "that a 1-year deferral in construction actually creates a savings, in present value terms, on the order of $30 million."[57,58]

Mr. Komanoff also calculated the effect of loss of revenue from the CRBR to be $20 million for a one year delay. (He obtained that by neglecting CRBR fuel processing and fabrication costs and assuming CRBR maintenance costs would be the same as the 1980 U. S. nuclear plant average and the CRBR capacity factor would be the same as the U.S. nuclear average to date.)

On January 28th, the DOE provided comments on the NRDC comments.

DOE agreed that time value of money should be taken into account, but said:

> "Unfortunately, NRDC fails to understand that in calculating the cost or saving from delay, not only unexpended funds but also expended funds must be taken into account. In fact, the Project incurs a substantial cost on expended funds as a result of any delay in beginning site preparation activities . . . ."[59]

DOE stated that they "continue to rely on their earlier cost submission made in Response to Question 9 of the Commission's Order of December 24, 1981."[60]

They did present a table giving a present worth analysis of anticipated project expenditures and concluded "The net effect after discounting anticipated expenditures to present worth, is a $30.2 million savings."[61] They went on to consider "the elements of the 'time value of money' neglected by NRDC."[62] Chart B (following p. 31) shows "Cost of Annual Interest of Expended Capital at 11%" to be $189.9 million. This is arrived at by taking each year expenditures, from 1979 to 1981, inflating at 11% per

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[56] *Id.*

[57] "Statement of Charles Komanoff Presented to the Nuclear Regulatory Commission in Opposition to Applicants' Exemption Request Under 10 CFR §50.12" at 6 (attached to January 18, 1982 NRDC/Sierra Club opposition to DOE request).

[58] I believe that the arguments introduced by Komanoff and taken up in later presentations by DOE on the time value of money are invalid in the context of a government run, fund-supported project such as the CRBR. I summarize the submissions here to document the changing DOE position.

[59] "Applicants' Response to Natural Resources Defense Council, Inc. and Tennessee Attorney General's Comments" at 28 (January 28, 1982).

[60] *Id.* at 29 n. 32.

[61] *Id.* at 30.

[62] *Id.* at 31.

year to the present, and then taking 11% of the total. The DOE also calculated the present worth of lost revenue from a one year delay in operating the CRBR to be $5.9 million.[63]

The DOE concluded:

> "A complete analysis which accounts for the 'time value of money' results in the following project costs and savings due to delay:
>
> | | |
> |---|---|
> | Net Savings on Anticipated Expenditures | $30.2 |
> | Interest on Past Expenditures | $189.9 |
> | Loss Due to Deferral of Revenue | $5.9 |
>
> In summary, in the event of a one year delay, the project will incur substantial increased costs. The elements of the delay costs on a yearly basis include: (1) increased management costs in the amount of $42.3 million;[30] (2) inflation in the amount of at least $88.8 million;[31] (3) using NRDC's analysis methods, interest on expended capital on a net basis of $23.5 million;[32] and (4) losses due to the deferral of revenue in the amount of $5.9 million. As these analyses demonstrate, the range of costs estimated in the SPAR OF $120-240 million is clearly conservative.
>
> [30] See Applicants' Answers at 77.
>
> [31] See Applicants' Answer at 46, 78.
>
> [32] The net interest on capital of $23.5 million was derived by deducting the gross cost savings attributable to a one year delay from the interest costs on expended capital. Applicants' previous submittal estimated this value at $43.9 million. Applicants Answers Question 1 Answers 9 (a)-(b), Appendix C. The additional refinements suggested by NRDC's methods of analysis provided a basis for the more rigorous analysis herein."[64]

The reader was thus left to conclude the true cost is $161 million (using the summary), $166 million (using "time value of money"), or $175 million (from the January 18th response).

NRDC-Sierra Club responded on January 28th, again using Komanoff:

> "'[T]he future rate and level of expenditures on CRBRP have no bearing on the cost of past expenditures.' Applicants' capital investments in the project are essentially sunk costs. They will have to pay interest on these investments at the same rate regardless of the project's start-up date. Put another way, 'There is no linkage whatsoever between progress of CRBRP and the Government's obligation to pay fixed costs of financing past expenditures.'"[65]

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[63] *Id.* at Chart C (following Chart B).

[64] *Id.* at 32-33.

[65] "Supplemental Comments of the Natural Resources Defense Council, Inc. and the Sierra Club in Opposition to Applicants' Exemption Request Under 10 CFR §50.12" at 6 (January 28, 1982) (quoting "Supplemental Statement of Charles Komanoff Presented to the Nuclear Regulatory Commission on January 28, 1982 in Opposition to Applicants' Exemption Request Under 10 CFR §50.12" which is attached to the supplemental comments).

The DOE position was aggressively questioned by the Commission in the February 12th public meeting. The Commission requested that the costs be examined by the group that had been calculating cost of utility delay (for use in monthly NRC submissions to the House Appropriations Subcommittee on Energy and Water Development).

The DOE responded, in a February 25th letter from Deputy Secretary Davis,[66] stating:

(1) The DOE no longer provides cost analyses to Mr. Bevill.

(2) In view of recent department reorganizations, the Office of Policy, Planning and Analysis has the relevant responsibility and expertise and therefore has developed the response.

(3) There are "three distinct perspectives on the cost of delay"[67]

(A) The Appropriations or Fiscal Perspective. Mr. Davis stated:

"Each year, as Congress debates the funding to be appropriated to the project, the legislator's viewpoint for the decision will be in terms of inflated dollars. The cost of the project to date is always expressed in inflated dollars, not constant dollars. . . .

From the appropriations perspective, a one year delay will cause the project costs to increase because of inflation on labor and materials, as well as the added costs of management during the delay. Offsetting these costs will be revenues that are higher due to inflation during the delay. These have been estimated to be: $136 million in cost inflation; $42 million in management costs; and higher revenues (a net credit) of $49 million. This results in a net total of $129 million in increased appropriations over the life of the project."[68]

(B) The economic or resource perspective. Mr. Davis identified these by distinguishing them from the third perspective;

"Economic costs measure the total burden upon the productive capacity of the national economy. Financial costs measure the relative burden upon individual parties and provide a useful perspective when considering individuals, firms or governments as operating entities. Thus, while in a given case, past expenditures may have no economic cost, the individual, firm or government making those expenditures may sustain a real financial cost because capital is tied up unproductively."[69]

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[66] Letter from DOE Deputy Secretary Davis to NRC Commissioners (February 25, 1982).

[67] *Id.* at 2.

[68] *Id.* at 3 (footnotes omitted).

[69] *Id.*

He calculated this economic cost to consist of $38 million for maintaining the necessary management, $20 million for deferred revenues (DOE now accepts the Komanoff estimate, and a savings of $30 million from deferral of anticipated expenditures. Thus he concluded "Total Quantifiable Economic Costs" would be $28 million.[70]

(C) The Financial Cost Perspective. Mr. Davis stated:

> "By analogy to commercial power or industrial plants, the effect of a one year delay in project completion will result in the capitalization of an additional year of interest measured at the time of plant completion."[71]

He then calculated a present worth total financial cost of $218 million.

Thus we have the following DOE estimates for a one-year delay:

| | |
|---|---|
| November 30, 1981: | $120 million |
| January 18, 1982: | (a) $120 million, "clearly conservative" |
| | (b) $175 million |
| January 28, 1982: | (a) $120 million, "clearly conservative" |
| | (b) $161 million |
| | (c) $166 million |
| | (d) $175 million |
| February 25, 1982: | (a) $129 million, "appropriations perspective" |
| | (b) $ 28 million, "economic perspective" |
| | (c) $218 million, "financial perspective" |

I conclude the DOE has finally agreed that as far as the true dollar cost of delay, it is in the region of $30 million — coincidentally, about the cost of the management team. Thus, I need not go into detail as to why I disagree with the earlier DOE estimates. The DOE has dropped them, insofar as we are to address "economics."

This is sufficiently different from the original estimate as to indicate the DOE paid little attention in preparing its original statement, although the series of estimates does not lead me to have confidence in *any* of the estimates. In the case of a utility applicant we would look with strong disfavor on such rapidly shifting submissions.

Thus, I conclude the DOE has failed to make the public interest case and, in the cost area, badly.

I am also concerned that DOE may not understand the appropriate controls that should be applied when assuming the role of a license applicant. The NRC has high standards for license applicants — which underlie the concept of licensability, which is a CRBR objective. It is because of these standards that showing licensability is an important accomplishment.

Therefore I vote to deny the exemption request.

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[70] *Id.* at 4.
[71] *Id.* at 5.

## DISSENTING VIEWS OF CHAIRMAN PALLADINO

I firmly believe that the DOE request for an exemption under §50.12 should be granted so that preparation activities can proceed at the CRBR site.

I arrive at this conclusion because I believe that the criteria under §50.12 are satisfied in this case. The information and analysis which we have received on the public record from the participants and the Commission offices demonstrate that:

1. the site preparation activities will not have a significant adverse impact on the environment of the CRBR site;

2. the impacts of site preparation can be redressed and the site returned to a condition suitable for future uses;

3. the site preparation activities do not foreclose future alternatives, including the use of the site for other purposes; and

4. delay in conducting site preparation activities, in view of the readiness of the applicant and the national policy to go forward with the CRBR project, can only result in harm to the public interest.

I do not understand the position of my fellow Commissioners who oppose the DOE request on the basis that granting the exemption would not be in the public interest. It appears to me that in opposing the exemption request they are saying the public interest is better served by denying the petition than by granting it. How is the public interest served in not going forward with the CRBR project where the Congress has approved its construction and operation on an expedited basis, where the applicant is ready, willing and able, and where the activities proposed pose no lasting threat to the environment or to the public health and safety?

If one agrees that there are no environmental or health and safety reasons to deny the exemption, one must ask the question, "What can be the basis for denying it?"

One reason that has been suggested is that the "licensability" of CRBR would not be proved if this exemption were granted. However, an exemption for site clearing and preparation will *not* remove the requirement of a construction permit before CRBR is built. The granting of this exemption would not foreclose the consideration of any proper question about CRBR in that CP proceeding. I do not understand how "licensability" is at stake in our decision on the exemption unless one aspect of CRBR licensability is to test its ability to withstand unnecessary delay in regulatory approval of site clearing and preparation.

In addressing licensability, Commissioner Ahearne quotes Senator Quayle that an exemption for DOE would be a deviation from NRC licensing procedures and would not serve the Congressional purpose for CRBR to demonstrate licensability. However, a number of other members of the Senate disagree. For example, Senator McClure has stated that "the Secretary's request [for exemption] is consistent with Congressional intent." Letter to Nunzio J. Palladino, Cnairman, NRC, from James A. McClure, Chairman, Committee on Energy and Natural Resources, dated February 17, 1982. The issue is not licensability, but rather whether or not the criteria of 50.12 are satisfied. I believe that they are.

Commissioner Ahearne concludes that Congressional action is not "a directive to waive — or not waive — our normal procedures." However, this statement should not end the matter of Congressional intent for our deliberations. I believe our decision on the exemption can and should be consistent with Congressional policy. The Congressional policy for "expeditious construction of CRBR clearly favors the exemption. The Commission majority does not take issue with my conclusion that denial of the exemption will delay CRBR construction. They simply choose to ignore the delay.

Much attention has been given to the economic costs of delay. I do believe that CRBR will be more costly if we deny the requested exemption. Unfortunately, §50.12(b)(4) of our regulations, which was probably drafted with a commercial generating station in mind, has unduly narrowed the Commission discussions about the public interest criterion.

In this respect, I cannot agree with several of Commissioner Ahearne's statements. For example, he "rests the [CRBR] decision on cost . . ." Why is no weight to be given to the Congressional policy for expeditious construction of CRBR? Also, he states that "R&D need . . . is not an NRC issue." However, our regulations make it an issue, and our prior decisions require us to accept DOE's statement as establishing the need for a demonstration facility, including its timing. *United States Energy Research and Development Administration et al.*, 4 NRC 67, 79, 83-84, 92 (1976).

Commissioner Gilinsky believes that to grant the exemption would adversely impact NRC's licensing and safety responsibilities for power reactors. The information which the staff has given us does not support this view. Rather, we have been told that granting the DOE exemption may require less than one staff year of additional effort. I do not believe that the success of our licensing and safety efforts for power plants depends on one staff year.

In summary, I believe that granting the exemption is in the public interest. The criteria for the exemption are statisfied, and completion and operation of the CRBR has already been determined by Congress to be in the public interest. The Congressional intent for expeditious completion of the project is furthered; the R&D purpose and benefits of the project for our nation will occur sooner; and the hardships and uncertainties created by unnecessary delay of the project are minimized.

Therefore, I dissent and would approve the exemption.

## SEPARATE DISSENTING VIEW OF COMMISSIONER ROBERTS

At the outset, I would like to put DOE's request for an exemption in a broader context by looking at the requirements of the National Environmental Policy Act (NEPA) in addition to the requirements of the NRC's regulations which were promulgated to implement NEPA. NEPA requires Federal agencies to determine whether their proposals for action are major and whether they will significantly affect the quality of the human environment. If an agency concludes that its action meets this standard, then NEPA requires that an environmental impact statement be prepared and circulated for comment. NEPA does not require that the conclusions of the environmental impact statement be tested in an adjudicatory hearing.[1]

This contrasts with Section 50.10 of the Commission's regulations from which DOE has requested an exemption. Under Section 50.10, site preparation activities may not commence until (1) a final environmental impact statement has been issued, (2) a hearing has been held and all environmental findings required by NRC's regulations have been made, and (3) a licensing board has found the site suitable from a radiological health and safety standpoint. Thus, in context, it becomes clear that the NRC's regulations impose more procedural hurdles that the statute (NEPA) they were designed to implement. Specifically, under Section 50.10, an applicant may not commence site preparation until the NRC's final environmental impact statement has been the subject of an adjudicatory hearing. Thus, DOE has requested an exemption not from the requirements of NEPA but from the NRC's requirement that a hearing be conducted prior to site preparation.

[1] At a public meeting on the exemption request, NRDC's representative agreed with this conclusion by stating, "I must say, I do not think the National Environmental Policy Act requires an adjudicatory hearing." Transcript, December 16, 1981, at 41.

Section 50.12(b) establishes the criteria which must be met in order to permit grant of an exemption from Section 50.10. While I will not reiterate these criteria here, I conclude that DOE has made the showings necessary to satisfy each of the four criteria. With regard to the first three criteria, my conclusions rest on the analyses of environmental impacts described in the Clinch River Final Environmental Statement issued in 1977 and in the OPE Report which analyzed the filings submitted by DOE, NRDC, and others.

With regard to the fourth criteria—public interest—I conclude that it *is* in the public interest to receive, as soon as possible, the information which will flow from operation of the Clinch River Breeder Reactor. Congress (as the elected representative of the people) has already determined that the liquid metal fast breeder reactor program generally and the Clinch River Reactor specifically are in the public interest. Given Congress's decision that it is in the public interest that the Clinch River Reactor be built and operated, the Commission's determination of public interest becomes much narrower. The Commission merely must determine whether *early* operation of the reactor, and thus early receipt of research and development knowledge, enhances the public interest.[2] In light of the fact that no unredressable environmental harm or safety harm has been alleged by any participant, I conclude that, of course, early receipt of research and development information enhances the public interest. Because nuclear reactor technology is very complicated, operating experience is gained slowly. Early operation of the breeder reactor will speed up and increase the informational benefits to be gained.

Given the narrow scope of the Commission's determination, the debate on whether grant of an exemption is in the public interest became rather confused. There was a lot of discussion of the issue of "licensability." That term is, of course, undefined. To me, "licensability" merely means that the Commission is able to license the reactor—in other words, make all the findings required by the Atomic Energy Act (AEA) and NEPA. Grant of an exemption does not affect "licensability." Simply put, there are two routes to pursuing licensing approval—one route involves an environmental hearing prior to site preparation; the other involves a hearing after site

[2] I do not read the Commission's decision of August 27, 1976, to foreclose Commission recognition of research and development benefits in its determination of what is in the public interest. Rather, that decision deals solely with the need for the staff to determine the "need for power" from the Clinch River Breeder Reactor in the environmental impact statement. United States Energy Research and Development Administration, Project Management Corporation, Tennessee Valley Authority (Clinch River Breeder Reactor Plant), CLI-76-13, 4 NRC 67, 77 (1976).

preparation has begun. Authority to commence site preparation prior to a hearing before a licensing board is based on the Commission (rather than the Staff and a licensing board) making environmental impact and public interest findings. Thus, regardless of which route is followed, every finding required by the AEA and NEPA will be made. If these findings are affirmative, then the Clinch River Breeder Reactor will be "licensable."

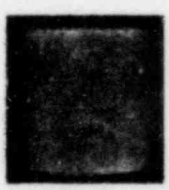
Another issue which dominated the public interest discussion was the question of the impact of grant of the exemption on NRC Staff resources. Preliminarily, it is important to note that when Congress decided that the licensing review of the Clinch River Breeder Reactor would be conducted by the NRC, Congress, in effect, allocated staff resources. The Commission was then under a duty to implement Congress's decision which it did by determining that 15 people would be given the full time responsibility for reviewing DOE's application. To date, only 12 of these slots have been filled; of these 12, only 8 are from the NRC Staff. This allocation of Staff resources would not appear to affect adversely the NRC's ability to work on safety issues. Many commentors appear to regret Congress's decision that any Staff members be assigned to the Clinch River review. Be that as it may, Congress acted.

With regard to the question of whether additional staff reviewers would be required if an exemption were granted, the Staff's best estimate is that no additional people would be needed. The Staff did acknowledge, however, the possibility of an additional 1-2 man years. This impact on Staff resources is certainly not sufficient to justify the conclusion that grant of an exemption is *not* in the public interest. Additionally, this level of staffing does not support the claim that the Staff's review has been fast-tracked. The present optimistic estimate of when the NRC's licensing process will be complete and a construction permit issued is 1990. An eight-year licensing review would hardly appear to be fast-tracked. In any event, the Commission has not directed the Staff to speed up its review process in any way.

A third issue raised in the public interest discussion was the cost of delay. DOE showed a cost of delay of $28 million. NRDC admitted that that amount could be $20 million. In my mind, a savings to the taxpayers of $20 million is significant and sufficient to justify the conclusion that grant of an exemption is in the public interest. Moreover, I believe that the cost analyses done by both DOE and NRDC were incomplete. The effects of delay on the liquid metal fast breeder reactor program was not discussed. There was no discussion of escalation cost. There was no attempt to determine what effect delay would have in terms of increased regulatory requirements and in terms of the cost of compliance with increased

requirements. In other words, I conclude that while DOE made the showing necessary to demonstrate a significant cost of delay, I believe that if the analyses had been more sophisticated, the cost of delay probably would have been larger.

In sum, I conclude that DOE made the showings required by Section 50.12(b) and I would grant the exemption requested.



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Nunzio J. Palladino**, Chairman
**Victor Gilinsky**
**Peter A. Bradford**
**John F. Ahearne**
**Thomas M. Roberts**

**In the Matter of** **Docket No. P-564-A (Antitrust)**

**PACIFIC GAS AND ELECTRIC COMPANY**
**(Stanislaus Nuclear Project, Unit 1)**

**March 17, 1982**

The Commission deems a "Notice of Prematurity and Advice of Withdrawal" filed by the applicant in this antitrust proceeding to be a request for permission to withdraw, and refers the matter to the Licensing Board for consideration and decision under the Commission's rule governing withdrawal of license applications (10 CFR 2.107(a)).

**RULES OF PRACTICE: CONSTRUCTION PERMIT APPLICATION (ANTITRUST MATTERS)**

An application for a construction permit may be submitted in three parts, one of which shall include any antitrust information required by 10 CFR 50.33a. 10 CFR 2.101(a)(5).

**RULES OF PRACTICE: CONSTRUCTION PERMIT APPLICATION (ANTITRUST MATTERS)**

The purpose of the Commission's rule providing for early filing of antitrust information is to enable utilities to obtain formal, binding resolution of antitrust issues prior to the need to begin construction. Such information must be considered part of an application; if there is no application, there can be no formal proceeding and no binding

adjudication. See Section 105(c), Atomic Energy Act of 1954, as amended, 42 USC 2135(c).

## ORDER

On September 18, 1981 Pacific Gas and Electric Company (PG&E) filed with the Commission a Notice of Prematurity and Advice of Withdrawal, seeking through this pleading to advise the Commission that it will no longer participate in this proceeding. PG&E maintains that it has filed no part of an application for a construction permit, that the antitrust information it has submitted is only "pre-application" information and that therefore there are no formal requirements governing its withdrawal.

PG&E is incorrect in its assertion that it can unilaterally withdraw from this proceeding. The antitrust information required by 10 CFR 50.33a is a part of the application for a construction permit. As stated in 10 CFR 2.101(a)(5), the application for a construction permit may be submitted in three parts, one of which "shall include any information required by §50.33a." Moreover, to regard the information submitted here as something other than the formal filing of an application would defeat the whole purpose of the rule providing for early filing. The purpose of the rule was to enable utilities to obtain formal, binding resolution of antitrust issues prior to the need to begin construction. If there is no application there can be no formal proceeding and no binding adjudication. *See* Section 105(c) of the Atomic Energy Act of 1954, as amended; 42 U.S.C. 2135(c).

Withdrawal of this application is controlled by 10 CFR 2.107(a), which provides as follows:

> The Commission may permit an applicant to withdraw an application prior to the issuance of a notice of hearing on such terms and conditions as it may prescribe, or may, on receiving a request for withdrawal of an application, deny the application or dismiss it with prejudice. Withdrawal of an application after the issuance of a notice of hearing shall be on such terms as the presiding officer may prescribe.

The Commission will therefore treat this motion as a request for permission to withdraw. Since the notice of hearing has been issued in this case, the matter lies within the jurisdiction of the Licensing Board under the rule.

In this regard, the Commission notes that PG&E has already requested the Licensing Board to suspend discovery but that this request was denied. Since that time, however, the Ninth Circuit Court of Appeals has upheld the California statutory provisions that stood as an obstacle to the project. The Appeal Board has also issued two opinions — *Puerto Rico Electric*

*Power Authority* (North Coast Nuclear Plant, Unit 1), ALAB-662, 14 NRC 1125 (1981) and *Philadelphia Electric Company* (Fulton Generating Station, Units 1 and 2), ALAB-657, 14 NRC 967 (1981) — dealing with treatment of requests to withdraw. In addition, it is unclear from the Licensing Board's decisions whether it considered the possibility of imposing terms and conditions on PG&E's withdrawal, such as requiring PG&E to compile and preserve the current status of discovery.

The Licensing Board, which is closely involved in this proceeding, is in the best position to initially evaluate the effect of these considerations on the request to withdraw.

In light of these considerations, the Commission hereby refers this matter to the Licensing Board for consideration and decision.

It is so ORDERED.

For the Commission*

SAMUEL J. CHILK
Secretary of the Commission

Dated at Washington, DC,
this 17th day of March, 1982.

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* Commissioner Ahearne was not present; had he been present, he would have approved the order.

Cite as 15 NRC 407 (1982) **CLI-82-6**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Nunzio J. Palladino,** Chairman
**Victor Gilinsky**
**John F. Ahearne**
**Thomas M. Roberts**

**In the Matter of** **Docket No. 50-289**

**METROPOLITAN EDISON COMPANY**
**(Three Mile Island Nuclear Station, Unit No. 1)**

**March 30, 1982**

The Commission, pursuant to a mandate from the Court of Appeals for the District of Columbia Circuit, issues a statement of the reasons for its determination that psychological health is not cognizable under the Atomic Energy Act.

## ATOMIC ENERGY ACT: RESPONSIBILITY OF NRC

The Commission's authority under the Atomic Energy Act to protect the public health and safety is limited to the "special hazards of radioactivity." *New Hampshire* v. *AEC*, 406 F.2d 170, 173-175 (1st Cir. 1969), *cert. denied*, 395 U.S. 962 (1969). It does not extend to protection against psychological stress, which is not a physical risk associated with radioactivity.

## ATOMIC ENERGY ACT: RESPONSIBILITY OF NRC

Even if it could be determined that the Commission has the authority under the Atomic Energy Act to consider psychological health, the legislative history makes it clear that the Commission is not required to consider such issues, and strong policy considerations argue against the Commission's doing so.

The United States Court of Appeals for the District of Columbia Circuit, in a Judgment issued January 7, 1982, in *People Against Nuclear Energy* v. *Nuclear Regulatory Commission*, No. 81-1131, directed the Commission, *inter alia*, to "prepare a statement of the reasons for its determination that psychological health is not cognizable under the Atomic Energy Act."[1]

The views of the Commission with respect to the cognizability of psychological health under the Atomic Energy Act may be summarized as follows. First, the Atomic Energy Act itself does not discuss psychological health, and the statute, its legislative history, and applicable caselaw all suggest strongly that Congress intended the Commission to exercise its regulatory authority to protect only against the physical risks associated with radioactivity.

Even if it were found that Congress did not bar the Commission from considering non-physical risks associated with NRC-licensed activities, the indicia of Congressional intent alluded to above make clear that Congress never *required* the Commission to consider psychological health effects under the Atomic Energy Act, and there are strong policy considerations which argue against the consideration of psychological health effects *per se* in NRC licensing and enforcement proceedings. The Commission's reasoning is set forth in greater detail below.

I. The Focus of the Atomic Energy Act is on the Hazards Which Civilian Nuclear Activities Pose to Physical *Health and Safety, Not to Psychological Well-being.*

A. The statute, its legislative history, and applicable caselaw all indicate that Congress intended the Commission to protect public health and safety against the physical risks associated with radioactivity.

The Atomic Energy Act does not address directly the question of whether the Commission's regulatory responsibilities extend to psychological effects associated with the operation of nuclear reactors. The relevant

[1] That Judgment came on petitioner PANE's appeal from the Commission's Memorandum and Order of December 5, 1980, in which a 2-2 division of the Commissioners on the question of whether psychological stress contentions should be accepted in the TMI-1 restart proceeding had the effect of denying those contentions. Subsequently, after the appointment and confirmation of a fifth Commissioner, a 3-2 majority stated its adherence to the position that psychological stress contentions should not be accepted in the restart proceeding. That ruling, contained in an order dated September 17, 1981, was not accompanied by an opinion.

statutory provision states only that the Commission has the duty of regulating the operation of nuclear reactors "in order to . . . protect the health and safety of the public." 42 U.S.C. 2021(d). The issue which faced the Commission was one of statutory construction: what did Congress intend the words "health and safety" to mean when it enacted the Atomic Energy Act of 1954?

As explained by Commissioner Hendrie:

> The Congress which passed the Atomic Energy Act of 1946 created the Atomic Energy Commission in order to bring a maximum of technical expertise to bear on complex and hazardous activities associated with a developing technology. When the Atomic Energy Act of 1954 authorized the development of a civilian nuclear power industry, it was understood from the first that the public might well be apprehensive about a technology associated in the minds of most with the destructive power of atomic weapons. One of the major reasons for providing for public hearings on nuclear power plants was to provide a means for educating the public about nuclear energy and the measures taken to assure its safety. The 1965 report to the AEC by its Regulatory Review Panel, for example, characterized the most significant functions of public hearings as including a demonstration that "the AEC has been diligent in protecting the public interest" and that the applicant's proposal had received a "thorough and competent review." Congress implicitly acknowledged that public fears about nuclear reactors were a reality which had to be addressed; the means chosen by Congress was to have technical issues of nuclear safety addressed and resolved by technical experts in a public licensing review process administered by the Atomic Energy Commission. Thus, it is not only that there is no suggestion in the Act, its legislative history, or more than a quarter century of Congressional oversight that the Commission's decisions in licensing proceedings were intended to encompass psychological stress associated with particular licensing actions, it is also that Congress envisioned that the Commission's expert judgments, publicly arrived at, would help serve to prevent or allay public fears.

Petitioner PANE argues that the plain meaning of "health," as defined in the dictionary, encompasses mental health, and that the Atomic Energy Act therefore obligates the Commission to evaluate the psychological effects of allowing the Three Mile Island Unit 1 reactor to resume

operation.[2] In support of this position, PANE cites judicial decisions in such areas as abortion, zoning, and tort liability.

The meaning of the term "public health and safety", as used in the Atomic Energy Act, was analyzed in detail by the First Circuit Court of Appeals in *New Hampshire* v. *Atomic Energy Commission*, 406 F.2d 170, *cert. denied*, 395 U.S. 962 (1969). In that case, the court rejected the contention of the State of New Hampshire that the Commission was required by the Atomic Energy Act to consider the effect on public health of discharges of hot water into the Connecticut River. The State had asserted that such discharges could be harmful to public health by reducing the capacity of the river to assimilate waste. Though the subsequent passage of the National Environmental Policy Act and the Federal Water Pollution Control Act amendments of 1972[3] assures that the effects of thermal and other discharges are now fully evaluated before a reactor operating license can be issued, the court's analysis of the statute and its legislative history is no less valid today as a gloss on the meaning of the statutory language.

As in the present case, the petitioners in the *New Hampshire* case argued that the analysis of the scope of the Commission's responsibilities need go no further than a judgment on the "present day plain meaning" of the terms "health" and "safety". The court rejected that proposed approach, stating: "we do not feel that we fulfill our function responsibly by simply referring to the dictionary." 406 F.2d 170, 173. The court explained:

> Here we feel a very palpable restriction in the history surrounding the problem addressed by the Congress, the subsequent Congressional confirmation of the limited approach taken by the Commission . . . and a recognition of the complexity of administrative arrangements which would attend a literal definition of public health and safety as these terms are used in the Atomic Energy Act. 406 F.2d 170, 173-174.

The court then stated its conclusion that "[t]he history of the 1954 legislation reveals that the Congress, in thinking of the public's health and safety, had in mind only the special hazards of radioactivity." 406 F.2d 170, 174. It backed up that conclusion with an exhaustive review of the applicable legislative history, and it also traced subsequent actions of

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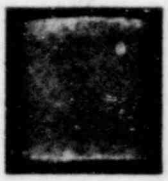
[2] At the same time, PANE asserts that it would be a *"reductio ad absurdum"* to suggest that psychological effects must be evaluated before nuclear reactors can be licensed to operate for the first time, since "[t]hat type of interpretation could conceivably prohibit reactors virtually anywhere, which is clearly not the intent of Congress." Petitioner's Brief in *PANE* v. *NRC* [hereinafter "Petitioner's Brief"], pp. 25-26.

[3] 42 U.S.C. §4321, *et seq.* (NEPA); 33 U.S.C. §1251, *et seq.* (FWPCA).



Congress and the Commission which shed light on the original congressional purpose.

First, the court observed that the Senate and House Reports on the 1954 legislation contrasted conditions in 1946, when the first Atomic Energy Act was passed, with conditions eight years later. In 1946, the Reports said, "there was little experience concerning the health hazards involved in operating atomic plants," whereas by 1954 it had become "evident that greater private participation in power development need not bring with it attendant hazards to the health and safety of the American people." 406 F.2d 170, 174, n. 4, *quoting* Senate Report No. 1699, Vol. I, Legislative History of the Atomic Energy Act of 1954, p. 751; House Report No. 2181, *id.*, p. 999, U.S. Code Congressional and Administrative News, p. 3458. The court found "[v]ery little else on the subject of health and safety . . . in the massive three volume Legislative History." It concluded:

> It seems obvious to us that these terms were beyond the purview of the 1954 deliberations and that their meaning had been deemed settled at the time of the passage of the Atomic Energy Act of 1946. 406 F.2d 170, 174, n. 4.

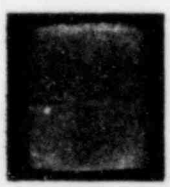
The court then reviewed the legislative history of the 1946 Act. It cited the Senate Report on the bill, which described one of the kinds of authority granted to the Commission by Section 12 of the Act in the following terms:

> Establish safety and health regulations to minimize the danger from explosion, radioactivity, and other harmful or toxic effects incident to the presence of such materials. Sen. Rep. No. 1211, U.S. Code Cong. Service, 79th Cong., 2d Sess., 1946, p. 1335.

The court observed that Section 12 of the 1946 Atomic Energy Act spoke more briefly of "danger from explosions and other hazards," and it found "no motive other than one of simplifying language" to explain the deletion of the words "from explosions and other hazards" in the 1954 legislation. 406 F.2d 170, 174 n. 4.

The court observed that the 1954 Act had created a "very special relationship, crystallized in statutory form between the Commission and the Joint Committee on Atomic Energy — a relationship that is rarely embodied in positive law." 406 F.2d 170, 174. The court found that the Joint Committee's interpretation of the Act's purposes supported the view that Congress intended "public health and safety" to include only the "special hazards of radioactivity." The court cited the Joint Committee's first study report on the Act, in which it said:

> The special problem of safety in the atomic field is the consequences of the hazards, created by potentially harmful radiations



attendant upon atomic energy operations. Joint Committee Print, A Study of Atomic Energy Commission Procedures and Organization in the Licensing of Reactor Facilities, 85th Cong., 1st Sess., p. 4 (1957), *quoted at* 406 F.2d 170, 174.

The First Circuit commented that the Commission had been consistent in confining itself to the regulation of radiation hazards, and that the Joint Committee had apparently raised no objection to that approach. The court cited the Supreme Court's affirmation of the special significance of the Joint Committee's acquiescence in an action of the Commission:

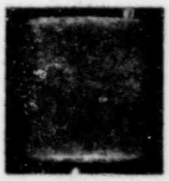
> It may often be shaky business to attribute significance to the inaction of Congress, but . . . considering especially the peculiar responsibility and place of the Joint Committee on Atomic Energy in the statutory scheme, we think it fair to read this history as a *de facto* acquiescence in and ratification of the Commission's licensing procedures by Congress. *Power Reactor Development Corp.* v. *International Union of Electrical Workers*, 367 U.S. 396, 409 (1961), *quoted at* 406 F.2d 170, 174 n. 5.

The court went on to discuss subsequent amendments to the Atomic Energy Act which illuminated the intent underlying the 1954 Act. In 1959, Congress amended the Act to allow the Commission to relinquish control over some nuclear materials and activities to the States. The statutory language spoke in terms of "protection of the public health and safety from radiation hazards." 42 U.S.C. 2021(b). In defining the authority which the States could assume, Congress was necessarily also defining the authority which the Commission was already exercising.

The court also cited Congress' action in 1965 to amend 42 U.S.C. 2018 of the Act to make clear that the Commission was not subject to control by other governmental agencies, state, local and federal. In its report, the Joint Committee on Atomic Energy described the Commission's regulatory control as "limited to considerations involving the common defense and security and the protection of the health and safety of the public with respect to the special hazards associated with the operation of nuclear facilities." S.Rep. No. 390, 89th Cong., 1st Sess., p. 4, 1965, *quoted at* 406 F.2d 170, 175.

*New Hampshire* v. *AEC*, in finding that the Commission's authority was limited to protecting against the "special hazards of radioactivity," plainly supports the Commission's action here, for psychological stress in our society is not peculiar to the generation of electricity through the splitting of atoms.

PANE's argument that the fear of radiation is so uniquely a hazard of radiation that it requires consideration by the Commission is unpersuasive. Presumably, every hazardous technology gives rise to fears peculiarly associated with it: fear of being inundated by failure of a newly con-



structed dam, for example, or of being hit by debris from a crashing airplane. That is not a ground, however, for imposing a statutory duty on the Corps of Engineers, the Federal Aviation Administration, or the Nuclear Regulatory Commission, requiring those agencies to develop expertise in the categories and subcategories of psychological stress associated with the particular technology which each regulates. The Commission's determination that the major contribution which it can make to the alleviation of psychological stress is to make sound technical decisions in its areas of expertise is a wholly reasonable reading of its obligations under the Atomic Energy Act.

PANE also contends that the *New Hampshire* court erred in its reading of the legislative history, and that it improperly narrowed the scope of the Commission's responsibility to protect "health" under the statute. In particular, PANE asserts that the court failed to give proper weight to what it terms "the only relevant pre-enactment legislative history of any significance", *i.e.*, the description of the 1946 Senate Report, quoted above, of Section 12 of the Act. Petitioner's Brief, p. 31. According to PANE, the court failed to consider the significance of the Report's statement that the Commission's duty was to "minimize the danger from explosion, radioactivity and other harmful or toxic effects." PANE emphasizes the phrase "other harmful or toxic effects", contending that it shows Congress' concern with "a full range of harmful effects." PANE asserts that even if the court was correct in holding that the Commission's authority extended only to the "special hazards of radioacitivity," the "threat of invisible and unknown radiation" unquestionably falls in that category. Petitioner's Brief, pp. 21-22.

The language on which PANE relies does not support the broad reading of the statute which it urges, but rather the contrary, as the court correctly recognized. Under the *ejusdem generis* principle of statutory construction, where a statute sets forth a list of specific items and then includes a reference to unspecified "other" items, the latter term will be construed as though it read, "other items of like kind."[4] In the present case, the context makes it apparent that Congress had in mind the physical dangers asso-

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[4] The D.C. Circuit's discussion of the *ejusdem generis* rule of statutory construction in *Association of American Railroads* v. *United States*, 195 U.S.App.D.C. 371, 603 F.2d 953 (1979), is directly applicable to the present case: "The rule of *ejusdem generis* is a common sense doctrine which teaches: 'Where general rules follow specific words in an enumeration describing the legal subject, the general words are construed to embrace on objects similar in nature to those objects enumerated by the preceding specific words.' 2A Sutherland Statutory Construction §47.17, at 103 (4th ed. 1973) (footnotes omitted); *see Weyerhauser Steamship Co.* v. *United States*, 372 U.S. 597, 600-01, 83 S.Ct. 926, 10 L.Ed.2d 1 (1963); *Cleveland* v. *United States*, 329 U.S. 14, 18, 67 S.Ct. 13, 15, 91 L.Ed. 12 (1946) ('Under the *ejusdem generis* rule of construction the general words are confined to the class and *may not be used*

(CONTINUED)

ciated with nuclear materials, specifically the risks of explosion and of exposure to radiation, and the reference to "other harmful or toxic effects" can only be interpreted in that light. Psychological distress is sufficiently dissimilar to the types of harm enumerated in the statute that it cannot be considered among the "other harmful or toxic effects" contemplated by Section 12. This is all the more true in view of the total absence of any suggestion in the legislative history or in 35 years of Commission practice and congressional oversight that the Commission was intended to take into account psychological distress alleged to result from its activities.

The fact that Congress did not specifically state whether psychological distress falls within the Commission's authority does not, contrary to PANE's contention, argue for an expansive reading of the statute. Where Congress has intended that an administrative agency should take psychological considerations into account, it has used precise language to express that intent. In the Noise Control Act, for example, the Administrator of the Environmental Protection Agency is authorized to conduct or contract for research that includes "investigation of the psychological and physiological effects of noise on humans and the effects of noise on domestic animals, wildlife, and property, and determination of acceptable levels of noise on the basis of such effects." 42 U.S.C. 4913(1)(A).[5]

In the present case, it is reasonable to suppose that Congress never spoke to the issue of whether the Commission was required to consider

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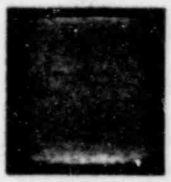
*to enlarge it*" (emphasis added); *United States* v. *Stever*, 222 U.S. 167, 174, 32 S.Ct. 51, 53, 56 L.Ed. 145 (1911) ('[u]nless there is a clear manifestation to the contrary, general words, not specific or limited, should be construed as applicable to cases or matters of like kind with those described by the particular words.'); *United States* v. *Brown*, 536 F.2d 117, 121 (6th Cir. 1976). A statutory reference to 'other' objects of a general nature . . . most frequently calls for the application of the doctrine." 603 F.2d 953, 963-64. In the present case, PANE is undeniably attempting to use the reference to "other harmful or toxic effects" to enlarge the class of effects reached by the statute to include matters which have never previously been suggested to fall within the scope of the Act.

[5] Among other statutes in which Congress specifically authorized the agency to take psychological factors into account are the following: the Fire Research and Safety Act of 1968, providing *inter alia* for research into the "biological, physiological, and psychological factors affecting human victims of fire, . . . psychological and motivational characteristics of persons who engage in arson . . ., the conditions of stress encountered by firefighters, the effects of such stress, and the alleviation and reduction of such conditions," 15 U.S.C. 278(f)(2), (f)(2)(E), and (f)(2)(G); the Occupational Safety and Health Act of 1970, "providing for research in the field of occupational safety and health, including the psychological factors involved," 29 U.S.C. 651(b)(5); 1972 amendments to the Elementary and Secondary Education Act of 1965, authorizing grants for projects designed to plan for, test, and demonstrate the effectiveness of programs for Indian children, including those to "meet the special health, social, and psychological problems of Indian children," 20 U.S.C. 887c.(b)(3); and the Rehabilitation Act Amendments of 1974, authorizing programs to "develop new and innovative methods of applying the most advanced medical technology, scientific achievement, and psychological and social knowledge to solve rehabilitation problems," 29 U.S.C. 701(5).

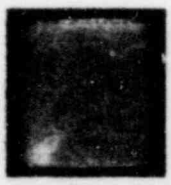


psychological distress because the issue never came up. To the best of our knowledge, this case is the first instance, in the years since the Atomic Energy Act of 1946 was passed, in which the suggestion has been made that the Commission's obligation to protect health and safety included the prevention of psychological distress. If, as PANE seems to argue, the silence of Congress on a particular issue were always to be construed as a mandate to the agency to consider that issue, the result would be to reward petitioners able to frame contentions so far-fetched that they either did not occur to the Congress or were considered too unlikely to warrant discussion.

B. Even if the Commission's authority were broad enough to permit it to consider psychological health under the Atomic Energy Act, the Commission would not be required to do so, and strong policy considerations counsel against doing so.

We have outlined in the preceding section of this Memorandum and Order our reasons for believing that Congress intended the Commission to confine its regulatory activities under the Atomic Energy Act to the physical hazards of radioactivity, rather than to psychological concerns. At the same time, we are conscious that the Commission, even more than most administrative agencies, has wide discretion to interpret the scope of its mandate and the means of fulfilling its duties. The D.C. Circuit Court of Appeals has commented, in *North Anna Environmental Coalition* v. *NRC*, that the NRC's regulatory scheme is "virtually unique in the degree to which broad responsibility is reposed in the administrative agency, free of close prescription in its charter as to how it shall proceed in achieving the statutory objectives." 533 F.2d 655, 658-59 (1976) (quoting *Siegel* v. *AEC*, 400 F.2d 778, 783 (D.C. Cir. 1968)). See also, *Vermont Yankee Nuclear Power Corp.* v. *NRDC*, 435 U.S. 519, 543 (1978). Even if we believed ourselves to possess sufficient authority to *permit* us to consider psychological health under the Atomic Energy Act — or were found by a reviewing court to have such authority — the same indicia of Congress' overriding concern with the physical hazards of radioactivity which we have outlined above demonstrate *a fortiori* that the Commission is not *required* to consider psychological health under the Act. There are, moreover, substantial policy considerations which argue against considering psychological effects under the Atomic Energy Act.

The primary objective of the Atomic Energy Act was to protect the health and safety of the public from the dangers associated with a civilian nuclear power program by establishing a technical agency with special expertise in radioactivity and its hazards. Congress provided for an expert agency and a public process for resolving questions of nuclear safety so



that safety decisions would be made competently and openly. Viewed in that light, the reduction of psychological stress is a desirable byproduct of open and competent decisions.

A technical agency, whether charged with assuring the safety of dams, airplanes, or nuclear power plants, ought properly to apply itself primarily to the areas in which it is uniquely expert, as Congress intended. A technical agency cannot and should not be expected to devote its resources to developing expertise in the categories and subcategories of psychological stress alleged to be peculiar to the particular technology which that agency regulates. Rather, the protection of the public from psychological distress, including that resulting from fear of various technologies, ought properly be the responsibility of agencies with expertise in the area of mental health.[6] The major contribution which technical agencies can make to the prevention and alleviation of psychological stress is to make sound technical decisions and to make those decisions available to the public in understandable terms. To require technical agencies with no psychological expertise to address themselves to mental health issues would be doubly undesirable: it would impair the agencies' ability to fulfill their necessary technical responsibilities, while providing no assurance that the public's psychological well-being was entrusted to capable hands.

It may be countered that a technical agency which lacks expertise in a particular area is at liberty to acquire that expertise, either by hiring knowledgeable staff or by retaining consultants. This is undeniable. What is equally undeniable, however, is that in a world of finite resources, the Commission cannot allocate funds and personnel to the evaluation of psychological stress without diverting resources from its major responsibility — that of protecting public health and safety from the radiological

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[6] The Commission took action to bring the issue to the attention of relevant groups. In November 1979, Mitchell Rogovin (Director of the special inquiry group established by the NRC to study the Three Mile Island accident) suggested that some action, perhaps by the National Institute of Mental Health, might be appropriate. The Commission forwarded this recommendation to the Governor of Pennsylvania with the explanation: "Recognizing that the responsibility for the health and welfare of those citizens is shared by the State of Pennsylvania and the Federal Government, the Commission believes that your views would be of the utmost value as we evaluate Mr. Rogovin's recommendation." (Letter from Chairman Joseph M. Hendrie, Nuclear Regulatory Commission, to Governor Richard Thornburgh, Pennsylvania, dated November 30, 1979.) After receiving a generally favorable response from Pennsylvania, the Commission sent a letter to the Department of Health and Human Services relating the background and concluding "the Nuclear Regulatory Commission believes that it would be desirable for your Department to evaluate these proposals and to consider what remedial programs may best address the problems that have been identified. We will direct our staff to provide whatever assistance may be necessary in developing and instituting such programs." (Letter from Chairman John F. Ahearne, Nuclear Regulatory Commission, to Secretary Patricia R. Harris, Department of Health and Human Services, dated April 17, 1980.) The Department of Health and Human Services acknowledged our request and identified some ongoing state and federal efforts which addressed the concerns.

hazards posed by nuclear power plants. In our view, it makes far more sense for the Commission to address itself to the health and safety issues which are the source of public anxieties than to attempt to quantify, analyze, and palliate the anxieties themselves. The Licensing Board, in its certification to the Commission, was only expressing sound common sense when it declared: "Certainly it is true that the best way to minimize any psychological stress in the communities around TMI-1 is to make the plant safe or not allow it to operate." 11 NRC 297, 308.

There are, moreover, issues which by their nature do not lend themselves to resolution in the adjudicatory process. The same reasoning which has led courts to disfavor the consideration of psychological effects under the National Environmental Policy Act is applicable to the adjudication of psychological health under the Atomic Energy Act. Judge Leventhal, writing for the D.C. Circuit in *Maryland-National Capital Park and Planning Commission* v. *United States Postal Service*, 487 F.2d 1029 (1973), observed:

> Some questions of esthetics do not seem to lend themselves to the detailed analysis required under NEPA for a §102(C) impact statement. Like psychological factors they "are not readily translatable into concrete measuring rods." 487 F.2d 1029, 1038.

It may be argued in response to Judge Leventhal's comment that the Commission does in fact make judgments on esthetic matters as part of the NEPA process, and that a body capable of judging the esthetic effects of its decisions should also be capable of judging their psychological effects. That argument would not be valid, however. Although as Judge Leventhal suggested, esthetic factors may be difficult to quantify and describe with analytical precision, ultimately any layman is capable of forming an opinion on a matter of esthetics. By contrast, sound judgments on the probable psychological effects of regulatory decisions would require far more than a layman's opinion. Thus the need for expertise is added to the problems of quantification.

Finally, we believe that whatever discretion the Commission may have in defining "health" under the Atomic Energy Act, the definition it adopts — or which may be established by reviewing courts — will be applicable to every nuclear power plant. We cannot accept the proposition, advanced by petitioner PANE, that the Atomic Energy Act requires the evaluation of psychological health in the vicinity of Three Mile Island, because of the accident there, but that it would be a *"reductio ad absurdum"* to suggest that the Act requires the Commission to examine psychological health whenever it licenses the construction or operation of a reactor. PANE goes on to explain that "[t]hat type of interpretation could conceivably prohibit reactors virtually anywhere, which is clearly not the intent of Congress." PANE Brief, pp. 25-26.

Whatever else Congress may have intended, we cannot believe that it meant that "health" under the Atomic Energy Act, should clearly encompass the psychological well-being of persons fearful of a second nuclear accident in their vicinity, while equally clearly excluding the mental health of persons who fear that their locality may experience its first nuclear accident. On the contrary, it is apparent to us that if the definition of "health" under the Act is held to include psychological health in any proceeding, the inevitable result will be the litigation of psychological health in virtually every licensing proceeding, with effects on the NRC's processes which could only be destructive. It is not merely that the analysis and litigation of psychological stress issues would require the expenditure of resources and time; safety issues also require resources and time, but those expenditures on safety issues contribute to sounder decisions and the better protection of the public. We do not believe that the public well-being, including psychological well-being, would be benefited in any meaningful way if the Commission's Licensing Boards or the Commission itself were to take on the task of weighing, in one licensing proceeding after another, the essentially unprovable claims and counter-claims of competing arrays of mental health experts.

We reiterate, therefore, our conviction that the most appropriate means of taking psychological stress into account in its decisionmaking process is to make sound safety decisions and to publicize fully and accurately the basis for those decisions. In that way, the resources of the Commission can be devoted to the agency's real task — that of protecting the public's health and safety by assuring that licensed nuclear reactors are built and operated safely — rather than diverted to assessing the degree to which members of the public fear those judgments to be incorrect.

The separate views of Commissioner Gilinsky are attached.

For the Commission,

SAMUEL J. CHILK
Secretary of the Commission

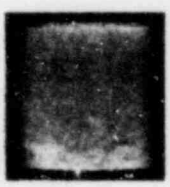
Dated at Washington, DC
this 30th day of March, 1982

## SEPARATE VIEWS OF COMMISSIONER GILINSKY

In my view, the Commission has discretion under the Atomic Energy Act to consider psychological health issues raised in connection with the licensing of nuclear power plants. In the TMI-1 restart proceeding, the Commission should have exercised this discretion to admit the psychological stress

contention to the hearing after the Commonwealth of Pennsylvania asked the Commission to consider this issue and the Licensing Board unanimously supported that request. In any other field, such issues would normally be handled by the political process at the State and local level. In light of the Atomic Energy Act's pervasive preemption of State authority regarding nuclear matters, only the Federal Government can deal with them. The Commission, as the representative of the Federal Government, should have made every effort to accommodate the concerns of the Commonwealth.

I do not think that taking up psychological issues after the most serious nuclear power reactor accident in history in any way implies taking them up in every reactor licensing case. In most cases, the public interest would not be served by airing these issues in the Commission's proceedings. These matters are intrinsically difficult to adjudicate and, in any case, largely beyond the Commission's expertise. It is by no means clear that the Commission would be able to deal with them in a satisfactory way. Nonetheless, in the particular circumstances of this case, it would have been wiser for the Commission to have heeded the Commonwealth's concern. What the Commission did, in effect, was to tell the neighbors of this plant that nowhere in the government—local, state, or federal—can the concerns at issue here be considered, short of an act of Congress.



# Atomic Safety and Licensing Appeal Boards Issuances

ATOMIC SAFETY AND LICENSING APPEAL PANEL

Alan S. Rosenthal, Chairman
Dr. John H. Buck, Vice Chairman
Dr. Lawrence R. Quarles
Dr. W. Reed Johnson
Thomas S. Moore
Christine N. Kohl
Stephen F. Eilperin
Gary J. Edles
Dr. Reginald L. Gotchy

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING APPEAL BOARD**

**Administrative Judges:**

**Alan S. Rosenthal,** Chairman
**Dr. John H. Buck**
**Dr. W. Reed Johnson**

**In the Matter of** **Docket Nos. 50-443**
**50-444**

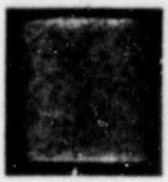
**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, *et al.***
**(Seabrook Station, Units 1 and 2)**

**March 3, 1982**

Upon remand from the Commission in this construction permit proceeding, the Appeal Board, after receiving additional evidence on the intervenor's methodology for determining the appropriate Safe Shutdown Earthquake (SSE) for the plant and on the staff's methodology for correlating vibratory ground motion with the Safe Shutdown Earthquake, reaffirms its earlier determinations on the SSE for the plant and associated maximum vibratory ground motion; ALAB-422, 6 NRC 33, 54-63 (1977), and ALAB-561, 10 NRC 410, 436-a *et seq.* (1979).

**REGULATIONS: INTERPRETATION (10 CFR PART 100, APPENDIX A)**

10 CFR Part 100, Appendix A, requires that the seismic design of a nuclear power facility take account of the maximum effective vibratory acceleration which might accompany the determined Safe Shutdown Earthquake for that facility. Appendix A is concerned solely with ground motion which might have an effect on the facility's safety-related structures and components.



**TECHNICAL ISSUES DISCUSSED:**

Seismic design criteria:

Safe Shutdown Earthquake,

measurement of earthquake size (intensity v. magnitude),

prediction of earthquake intensity/frequency,

formulation of seismic response spectrum,

maximum vibratory ground motion (acceleration).

## APPEARANCES

**Mr. William S. Jordan** and **Ms. Lynne Bernabei,** Washington, D.C., for the intervenor, New England Coalition on Nuclear Pollution.

**Messrs. Thomas G. Dignan, Jr.,** and **R. K. Gad III,** Boston, Massachusetts, for the applicants, Public Service Company of New Hampshire *et al.*

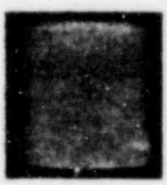
**Mr. Roy P. Lessy** for the Nuclear Regulatory Commission staff.

## DECISION ON REMAND

On September 25, 1980, by a divided vote the Commission remanded to us this construction permit proceeding involving the Seabrook nuclear facility in New Hampshire. CLI-80-33, 12 NRC 295. The instructions given us were (1) to reopen the record to receive additional evidence on certain seismic issues; and (2) in the light of that evidence, to reconsider the conclusions we reached on those issues in ALAB-422, 6 NRC 33, 54-65 (1977) and ALAB-561, 10 NRC 410, 436-a *et seq.* (1979).

In compliance with that directive, we held a further evidentiary hearing last April, in which the applicants, the intervenor New England Coalition on Nuclear Pollution and the NRC staff participated. On the basis of the disclosures at that hearing, together with the proposed findings of fact of the respective parties, we have reconsidered our prior conclusions. For the reasons stated in this opinion, we find no cause to disturb them.

### I.



A. The background of the seismic remand was summarized in ALAB-623, 12 NRC 670, 672-675 (1980), in which we denied the Coalition's motion to suspend the Seabrook construction permits *pendente lite*. For convenience, we repeat that summary here.

1. In an initial decision issued in 1976, the Licensing Board authorized the issuance of construction permits for the Seabrook facility. LBP-76-26, 3 NRC 857. The decision prompted appeals by several of the parties, including the Coalition. A principal question presented by the Coalition's appeal was addressed to the Licensing Board's application of the seismic and geologic siting criteria for nuclear power plants which are contained in Appendix A to 10 CFR Part 100.

At the root of those criteria is the "Safe Shutdown Earthquake" (SSE) concept. As recently reemphasized:[2]

> The SSE for a particular site is that earthquake "which is based upon an evaluation of the maximum earthquake potential considering the regional and local geology and seismology and specific characteristics of local subsurface material" and "which could cause the maximum vibratory ground motion at the site . . . ." 10 CFR Part 100, Appendix A, §III(c), §V(a). The nuclear power plant must be designed so that, should the SSE occur, "certain [specified safety] structures, systems, and components will remain functional". *Id.*, §VI(a) . . . .
>
> In short, the SSE is the earthquake postulated for the purpose of determining the adequacy of the seismic design of the facility. The plant has to be capable of being safely shutdown despite the effects of whatever vibratory ground motion might be experienced at the site as a result of the SSE. (One of the elements of the SSE determination is, of course, an ascertainment of the amount of such motion (*Id.*, V(a)).)

Before the Licensing Board, the applicants and the NRC staff had adduced evidence in support of their position that the Seabrook SSE had a maximum Intensity of VIII (measured on the Modified Mercalli scale) and that the vibratory ground motion (acceleration) which might be experienced at the site as a result of that earthquake would not exceed 0.25g.[3] For its part, the Coalition had asserted (1) that the SSE should at a minimum be a Modified Mercalli Intensity IX; and (2) that, even for an Intensity VIII SSE, an acceleration value of approximately 0.4g should be assigned. For these propositions the Coalition had relied *inter alia* upon,

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[1] On the strength of that authorization, the permits were issued on July 7, 1976. Their effectiveness was later twice suspended for periods of time for reasons unrelated to the matters now before us. With respect to the first suspension, see ALAB-366, 5 NRC 39, as modified in CLI-77-8, 5 NRC 503 (1977); ALAB-423, 5 NRC 115 (1977). As to the second suspension, see CLI-78-14, 7 NRC 952, 957-60 (1978); CLI-78-17, 8 NRC 179 (1978).

[2] *Dairyland Power Coop.* (La Crosse Boiling Water Reactor), ALAB-618, 12 NRC 551, 552 (1980).

[3] The acceleration associated with an earthquake is expressed in terms of a percentage of "g" (one g represents the gravitational acceleration of a free falling body).

respectively, (1) the probabilistic hypothesis advanced by one of its witnesses, Dr. Michael A. Chinnery; and (2) the testimony of another Coalition witness, Dr. Mihailo Trifunac. On the basis of its appraisal of the record, in its initial decision the Licensing Board had resolved the issue in favor of the applicants and the staff. In other words, it had found that the Seabrook facility need be designed so as to be capable of being shutdown safely in the event of a Modified Mercalli Intensity VIII earthquake producing an acceleration at the site of 0.25g. LBP-76-36, *supra*, 3 NRC at 868-71, 919-22.

Challenging this result, the Coalition complained to us of the rejection of the contrary conclusions of Dr. Chinnery and Dr. Trifunac. By a divided vote, this Board turned the challenge aside. As the majority saw it, Dr. Chinnery's probabilistic theory was both technically deficient and inconsistent with Appendix A to 10 CFR Part 100. ALAB-422, *supra*, 6 NRC at 57-60. With respect to the matter of the maximum acceleration which an Intensity VIII earthquake might occasion at the Seabrook site, the majority determined that the analytic approach of the staff's principal witness (Dr. Nathan M. Newmark) — which had led to the assignment of the 0.25g value — was preferable to that of Dr. Trifunac. *Id.* at 62-64.

Viewing the matter differently, Mr. Farrar[4] noted his dissent from this disposition of the seismic question and thus from the affirmance of the Licensing Board's authorization of the issuance of the Seabrook construction permits. 6 NRC at 106 *et seq.*[5] Instead of filing a full opinion at that time, however, he confined himself to a summary statement of his own conclusions with the notation that he would later file a supplemental opinion detailing the reasoning underlying his position.

2. On August 10, 1977, the Coalition filed a petition for Commission review of ALAB-422. On September 15, 1977, the Commission announced that it would defer its determination whether to grant review on the seismic issues to await Mr. Farrar's supplemental opinion.[6] That opinion was rendered in August 1979 and prompted a response the following month from the Appeal Board majority. ALAB-561, 10 NRC 410.

Acting on a Commission invitation, the Coalition filed a supplemental memorandum on September 26, 1979 in support of that portion of its petition for review of ALAB-422 which dealt with the seismic issues. The Commission was advised, *inter alia*, that, subsequent to his testimony

[4] By reason of his resignation in 1980 from full-time service on the Appeal Panel, Mr. Farrar no longer is a member of this Board.

[5] All other issues raised by the Coalition and the other appellants were resolved in ALAB-422 in the applicants' favor. Jurisdiction was retained, however, over one question which this Board had raised *sua sponte* — a question which did not bear upon whether the facility should be built. 6 NRC at 104-05.

[6] The remainder of ALAB-422 was affirmed in CLI-78-1, 7 NRC 1 (1978).

before the Licensing Board, Dr. Chinnery had undertaken certain seismological studies under NRC contract and had reported the results of those studies to the NRC staff in 1978 and 1979. According to the Coalition (supplemental memorandum, pp. 10-11), Dr. Chinnery's reports provided a sufficient answer to the criticism which had been leveled in ALAB-422 against his probabilistic analysis (and reiterated in the Appeal Board majority's response in ALAB-561 to Mr. Farrar's full dissent).

Following its receipt of the rejoinders of the other parties to the Coalition's supplemental memorandum, the Commission called for an oral briefing by the parties, which took place on May 29, 1980. At that briefing, the Commission heard (albeit not under oath) from Dr. Chinnery, as well as from a panel of staff members and a technical representative of the applicants.

In the wake of the briefing, the Coalition requested that the adjudicatory record be supplemented by the inclusion of the two reports Dr. Chinnery had prepared for the NRC and the stenographic transcript of the oral presentations. This request was opposed by the applicants and the NRC staff on the principal ground that the Commission's Rules of Practice precluded the granting of such relief.

In its remand order, CLI-80-33, *supra*, the Commission denied the Coalition's request for the reason that it was both granting review of ALAB-422 and ALAB-561 and calling upon this Board to reopen the record on the matters dealt with in the Chinnery reports and at the briefing.[7] With respect to the earthquake intensity question, the Commission concluded that (1) the majority of this Board had erroneously determined that Dr. Chinnery's methodology was inconsistent with Appendix A to 10 CFR Part 100; and (2) the "factual validity of Dr. Chinnery's hypothesis" required "greater exploration on the record" in light of the substantial time interval since his testimony before the Licensing Board in 1975 and the "subsequent publication of Dr. Chinnery's works and general increase in seismic knowledge". 12 NRC at 296-297. Regarding the acceleration question, the Commission perceived a need for additional evidence as to "the consistency of Appendix A and staff's methodology for correlating vibratory motion with the SSE". *Id.* at 298.

B. At the hearing on remand, Dr. Chinnery and Dr. Trifunac once again testified.[8] In addition, testimony was received from Richard J. Holt on behalf of the applicants and a panel of staff witnesses comprised of

[7] The briefing had covered both the earthquake intensity and the acceleration questions.

[8] At the Coalition's request, Dr. Trifunac was called as a Board witness because of his then status as a consultant to the Advisory Committee on Reactor Safeguards. Given that status, he preferred not to appear as a witness for a party to the proceeding. As before the Licensing Board, Dr. Chinnery testified on behalf of the Coalition.

James P. Knight, Robert E. Jackson and Dr. Leon Reiter. Following the hearing, the parties filed proposed findings of fact in accordance with an agreed schedule approved by us. The last such submission was received in August.

In Part II of this opinion, *infra*, we deal with the first of the questions identified in the Commission's remand order: the acceptability of Dr. Chinnery's methodology for determining the intensity value which should be assigned to the Seabrook SSE. Then, in Part III, we shall move on to consider the second question: whether the staff's methodology for correlating vibratory motion with the SSE is consistent with Appendix A to 10 CFR Part 100.

## II.

As was noted in ALAB-422, *supra*, 6 NRC at 57, Dr. Chinnery is not satisfied with the determination of the seismic design of nuclear facilities based upon the size of the largest recorded historical earthquake in the particular area. Rather, as he sees it, one should go beyond the reported historical earthquakes in that area and, through a form of statistical analysis, endeavor to ascertain the likelihood of occurrence of an earthquake of yet greater intensity.

In his prepared testimony furnished to the Licensing Board in 1975,[9] Dr. Chinnery discussed the ingredients of his probabilistic approach as applied to the Seabrook site. As he explained, his first step was to ascertain from a review of historical earthquake data, the number of earthquakes of Intensities III through IX which had occurred in three regions of the United States — Boston-New Hampshire, Mississippi Valley and Southeastern United States.[10] For each of those regions, he then plotted the probability per year of the occurrence of an earthquake of each intensity level between III and IX.[11] According to Dr. Chinnery, this produced essentially straight line graphs with roughly the same slopes for all three areas for earthquakes of or greater than Intensity IV. This led him to conclude that the probability of an earthquake at or above the Intensity IX level could be ascertained by a linear extrapolation of the three curves and, most particularly, that for the Boston-New Hampshire region. Using such an extrapolation, Dr. Chinnery arrived at the further conclusion that "the probability of an Intensity IX or greater event [in New England] lies somewhere

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[9] NECNP Exh. 10, admitted into evidence fol. Tr. 3101. As employed herein, "Tr." refers to the transcript of the proceedings below and "R.Tr." to the transcript of the hearing on remand which we conducted.

[10] In the case of the Boston-New Hampshire region, Dr. Chinnery found no earthquake of greater than Intensity VII. *Id.* at p. 1.

[11] *Id.* at Figure 1.

between 0 and $10^{-3}$ per year," which was coupled with the observation that "my assessment of the evidence leads to a number near the high end of this range."[12]

In his prepared testimony submitted to us in connection with our hearing on the remand,[13] Dr. Chinnery elaborated upon his theory. As part of that elaboration, he illuminated the basic philosophy underlying his probabilistic approach in a discussion entitled "Frequency — Intensity Relationship:"[14]

> The characterization of the seismicity of a province in terms of the rates of occurrence of earthquakes of different sizes is usually accomplished using frequency-magnitude or frequency-intensity relationships. In the present case we use the latter, since only intensities are quoted in the Smith catalog. In addition, we use cumulative frequency-intensity counts, i.e., we count the number of earthquakes larger than or equal to a given intensity value during a given period.
>
> The extraction of frequency-intensity data from a catalog such as Smith's must be carried out with care, since the completeness of the catalog at lower intensities is likely to be a strong function of population density, and therefore of time. We use the approach described in Chinnery and Rodgers 1973 (Exhibit 1) here.
>
> Having extracted and plotted the data for the Boston-New Hampshire seismic zone, we have three important questions to consider:
>
> (i) can the data be represented by a linear frequency-intensity relationship?
>
> (ii) if so, what is the slope of the linear relationship?
>
> (iii) is there some upper bound to the intensity of earthquakes that can be expected in this seismic zone? Let us consider each of these in turn.

In addition to those questions, the justification for the use made by Dr. Chinnery of the historical data to determine the likelihood of occurrence of an earthquake of greater size necessitates consideration of a fourth ques-

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[12] *Id.* at p. 4.

[13] That submittal took the form of Direct Testimony (denominated a "Statement") and Rebuttal Testimony, both admitted into evidence fol. R.Tr. 218. The Direct Testimony was accompanied by, *inter alia*, two papers published by Dr. Chinnery:

Exhibit 1 - Chinnery and Rodgers, *Earthquake Statistics in Southern New England*, 44 Earthquake Notes 89 (1973).

Exhibit 2 - Chinnery, *A Comparison of the Seismicity of Three Regions of the Eastern U.S.*, 69 Bull. of the Seismological Society of America 757 (1979).

They will be hereinafter identified as Chinnery Exhs. 1 and 2.

[14] Direct Testimony, at pp. 7-8.

tion as well: whether there is validity to his required assumption that that data can be linearly extrapolated to include larger seismic events.

Each of the four questions was addressed at the remand hearing. In Part A, we summarize the testimony of the parties; following that, in Part B, Dr. Chinnery's methodology will be examined against the background of that testimony.

## A. Summary of the evidence presented by the parties

### 1. Representation of seismic data by a linear frequency-intensity relationship

In his direct testimony (at p. 10), Dr. Chinnery stated that "[t]he vast majority of seismologists have accepted the linearity of frequency-*magnitude*[15] data as a working hypothesis";[16] he went on to acknowledge, however, that that hypothesis "has no clearly developed theoretical basis". With regard to the "linearity" of frequency-*intensity* relationships, he testified that there has been "much less" discussion but that, "of what scientific literature there is, the vast bulk assumes that [such] relationships are linear."[17] On cross-examination, however, he conceded that most of the scientists utilizing the linear frequency-intensity hypothesis do so for the purpose of classifying seismic regions, and not as a method of predicting maximum earthquake intensity (R.Tr. 64).

Notwithstanding these considerations, Dr. Chinnery has elected (see Chinnery Exh. 1) to "use intensities throughout" because of "the nature of the historical data".[18] And, as he sees it, there is no need to justify

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[15] Emphasis supplied. As will be later discussed (pp. 436-37, *infra*), "Magnitude" refers to the size of an earthquake as measured by an instrumental method. "Intensity", on the other hand, refers to earthquake size as subjectively measured by its observed effects. The intensity concept was first employed long before the availability of seismic instrumentation.

[16] Dr. Chinnery's employment of the term "linearity" in this context is open to misunderstanding. The relationship between earthquake frequency and magnitude is generally expressed by the equation $\text{Log } N_c = A - bM$, in which $N_c$ is the number of earthquakes of magnitude M or greater per unit time. Because, as shall be seen (p. 436, *infra*), M is a logarithmic scale, graphical representation of this equation would be a log-log curve. It is the log-log relationship that Dr. Chinnery assumes to be linear.

[17] On this score, Dr. Chinnery's employment of "linearity" is even more troublesome. The plots he used to show a frequency-intensity relationship are plots of equations in the form of $\text{Log } N_c = a - bI$. If I is a linear scale, then the plot is log linear. But if I is a logarithmic scale as assumed by Dr. Chinnery in his 1973 paper (Chinnery Exh. 1), then the plot is log-log. In either case, the equation makes the fundamental assumption that I is a uniform scale (see fn. 19, *infra*).

The nature of the plots is of more than passing academic interest. The shape of a plotted curve depends strongly on the type of graph used to make the plot. Dr. Chinnery agreed that his data points would have produced a sharply-curved line if plotted against linear axes (R.Tr. 261).

[18] This, of course, refers to the fact that, except for very recent years, seismic data were exclusively reported in terms of the effects of earthquakes, *i.e.*, intensity.

analytically his assumption that the frequency-intensity relationship is a linear one. The assigned reason was that it has a recognized empirical foundation (R.Tr. 302-03).[19]

By way of illustration, Dr. Chinnery took historical earthquake data from four areas of the United States[20] to plot Log $N_c$ per year vs. intensity curves.[21] These plots are shown in Figure 1 on the following page, which is a reproduction of a figure in his 1979 paper (see Chinnery Exh. 2, Figure 8 at p. 766). It is his thesis that these plots show that the Log $N_c$ per year vs. intensity is linear for the range Intensity IV and above.[22]

Dr. Chinnery's data used in plotting the curves were not taken from the same period of time for each region — nor for the same length of time for each curve.[23] He stated with regard to the Southeastern United States region that he wished "to get away from the worst of the aftershocks" of the large earthquake of 1886 (Charleston); accordingly, he arbitrarily started with the year 1900 (R.Tr. 183). Respecting the Mississippi Valley region, "the large earthquakes there happened in 1811, 1812 (New Madrid) so I can go back further and there my intensity file goes back to 1870" *(ibid)*. However, data for Intensities VI through IV are listed in his Table 2 as beginning in 1840. He admitted that the 1800 cut-off for the New England data was arbitrary (R.Tr. 59).

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[19] Nonetheless, Dr. Chinnery did endeavor, see Chinnery Exh. 1, pp. 93-95, to formulate a relationship between earthquake frequency and intensity by a two-step analytic process. He first noted that "it appears in general to be possible to relate the maximum epicentral Intensity I to the local magnitude M by a linear algebraic expression $M = 1 + \frac{1}{3} I$ taken from a paper by B. Gutenberg and C.F. Richter (Bull. of Seismological Society of America, Vol. 46, No. 2, 1956)". From this, Dr. Chinnery concluded that "[i]f a linear relationship exists between magnitude and intensity * * * then clearly we can write Log $N_c = c - dI$."

The only mention in the 1956 paper by Gutenberg and Richter of a possible linear relationship between magnitude and intensity is at p. 131, where they state that "[i]n Figure 5 the data for $I_o$ and M are correlated. The resulting empirical equation $M = 1 + \frac{1}{3} I_o$ differs only slightly from the corresponding equation in Paper 1." In his later book *Elementary Seismology* (1958), Richter notes at p. 140 that, in such equations, "[I]ntensity grades must be treated as true numerical quantities which they are not." (See also pp. 437-38, *infra*.)

[20] The areas used were Mississippi Valley, Southeastern United States, Southern New England and Boston-New Hampshire.

[21] As earlier noted (fn. 16, *supra*), $N_c$ represents the number of earthquakes producing an Intensity I or greater during a particular time period.

[22] Noting the fact that low intensity data are incomplete and that the higher intensity data may be too sparse to be reliable, Dr. Chinnery also presented straight line representations of the data in each region (*i.e.*, of the form Log $N_c = a - bI$). The slopes of these lines, determined for the four regions mainly by the frequency of earthquakes of Intensities IV to VII, lie in the range 0.54 to 0.60 (Chinnery Exh. 2, at p. 765).

[23] The actual time periods used by Dr. Chinnery were (Exh. 2, at pp. 760, 761, 764):

| | III | IV | V | VI or greater |
|---|---|---|---|---|
| Southeastern United States | 1930-1969 | 1900-1969 | 1900-1969 | 1900-1969 |
| Mississippi Valley | 1900-1969 | 1870-1969 | 1840-1969 | 1840-1969 |
| Southern New England | 1928-1959 | 1900-1959 | 1860-1959 | 1800-1959 |
| Boston-New Hampshire | 1928-1959 | 1900-1959 | 1860-1959 | 1800-1959 |

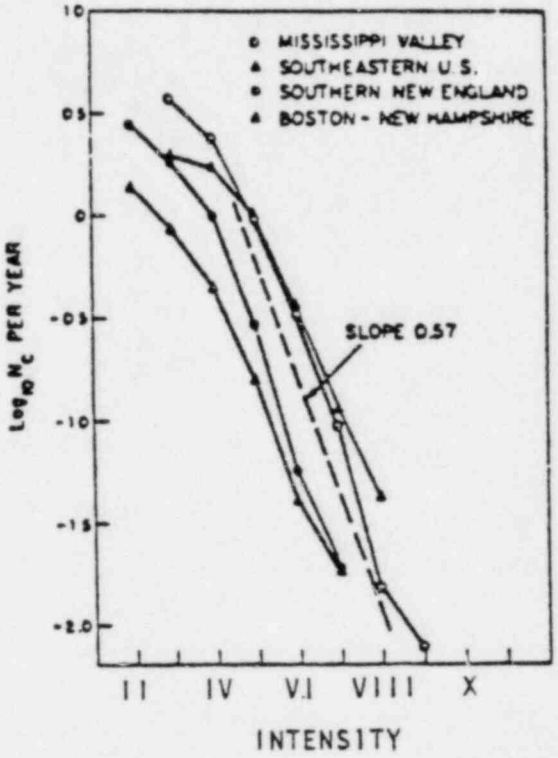



Figure 8. Comparison of the frequency-intensity data from Figures 2, 4, and 7. [Chinnery Exh. 2, Figure 8]

FIGURE 1

Dr. Chinnery also conceded that he had excluded data on Intensity III and below and had not investigated the sensitivity of the purported linearity of the $N_c$ - intensity relationship to the omission of this data. Moreover, he had used data from Smith's Earthquake Catalogue without determining the accuracy of the data or whether late work had resulted in changes in the intensity values used by Smith (R.Tr. 54-55; see also fn. 44, *infra*).

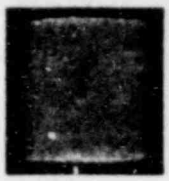
The staff and applicants' witnesses were critical of Dr. Chinnery's conclusion that a linear representation of the frequency-intensity data is the most desirable way to display this information. They noted that many other functional relationships (*e.g.*, truncated linear, bilinear and higher order) have been used to represent these data (Reiter, fol. R.Tr. 493, at p. 4; Holt, fol. R.Tr. 349, at p. 3). Dr. Reiter observed:

> Yegian (1979) has discussed these [relationships] in recent summary of probabilistic approaches to seismic hazard analysis. New forms of frequency magnitude relationships are continually being proposed. An examination of the six issues of the *Bulletin of the Seismological Society of America* for 1980 alone indicates three different generic approaches to determining the relationship between earthquake magnitude or intensity and frequency. (Bloom and Erdmann, 1980; Berrill and Davis, 1980; and Makjanic, 1980). The linear assumption is a first order or rough approximation which may be adequate for generalized arguments but clearly requires great scrutiny and possibly higher order terms in detailed descriptions such as return periods for earthquakes of high intensities.

Reiter at p. 5.

For his part, Mr. Holt stated that Dr. Chinnery's arbitrary choice of time frames for the various seismic regions eliminated years of earthquake data that, if included, would produce drastic changes in Dr. Chinnery's results (Holt, fol. R. Tr. 349, at p. 2). Specifically, had that data been included, for each of the areas selected by Dr. Chinnery the consequence would have been curves which were non-linear at the high intensity end:

> For the three cited cases, Mississippi Valley, Charleston, La Malbaie, the high intensity end of the curve does not follow a linear pattern; it does not have a "stable" slope. There are several possible explanations for this:
>
> The observation period fortuitously includes the large earthquakes and if we looked at a much longer time period their probability level would be much lower (or their return period much longer). This is the explanation Dr. Chinnery has chosen when he uses the "linearity" of the smaller events.
>
> The points may be fitted by another type curve or there are different slopes for the smaller earthquakes than for the larger



earthquakes; for the European area different slopes can be fit to different regions (Karnik, 1969) and, in some regions, two slopes fit the data much better than one.

The curve changes slope with time and/or the earthquakes are not uniformly distributed in time and therefore not predictable at any probability level from the limited time base we have.

*Id.* at p. 3.

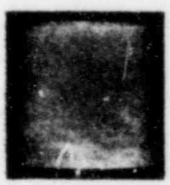
In the same vein, Dr. Reiter pointed out that "* * * you can fit many many straight lines, many many higher order curves, bilinear curves to that data set" (R.Tr. 512).

**2. Uniform slope or "b"' value**

Dr. Chinnery testified that the only study concerning the variation of the slopes of the frequency-intensity relationship from region to region was his own 1979 paper.[24] In that paper, he concluded that, in the four eastern United States areas there studied, the "frequency-intensity plots that we have considered show a remarkable uniformity. All show a pronounced linearity, and have slopes which are consistent with a value of about 0.57."[25]

In rebuttal, Dr. Reiter maintained that other studies of the linear relationship between earthquake frequency and intensity show "a wide range of b values has been reported."[26] For example, a study by Algermesian and Perkins (1976) computed b values for 71 regions in the United States and found them to range from 0.24 to 0.76.[27] Dr. Reiter asserted that even a variation of the value of b from 0.45 to 0.57 results "in a variation of about 0.8 in site intensity associated with a return period of 10,000 years * * * which utilizing the trend of the means of Trifunac and Brady (1975) * * * implies 75% increase in ground acceleration."[28]

Figure 5 contained in Mr. Holt's testimony is a plot of frequency vs. intensity for two regions in South Carolina and was taken from a paper published in 1977 by A.C. Tarr.[29] One curve on the plot shows the data for



[24] Direct Testimony, at p. 11. That paper accompanied the testimony as Exhibit 2 (see fn. 13, *supra*).

[25] In this regard, Dr. Chinnery stated that the slope of his linear projection for the Boston-New Hampshire region was determined by the slope for the data for the other eastern United States regions because the data for the Boston-New Hampshire region were very sparse (R.Tr. 48-49). On cross-examination, he acknowledged that the Intensity VII data point (derived from three events in a 160-year period) that he plotted as slightly above his graph line was in error. That data point should have been lower, reflecting a single event in that period. He indicated, however, that this error would not affect his conclusions (R.Tr. 128-9, 139).

[26] Reiter, fol. R.Tr. 493, at p. 5.

[27] *Ibid.*

[28] *Id.* at p. 6.

[29] Holt, fol. R.Tr. 349, at p. 13.

the highly seismic region in the vicinity of Charleston;[30] the other reflects the data for the rest of that state. The slope of the first curve — for the smaller, more seismically active, region — is markedly different (less steep) than the slope of the second.

### 3. Existence of an upper bound to the intensity of earthquakes that can be expected in a seismic zone

Dr. Chinnery admitted that "the question of the existence of upper bounds to maximum earthquake intensity (less than the scale maximum of XII) remains unanswered" (Chinnery Exh. 2, at p. 771). But he believes "that a rational conservative approach to the estimation of the seismic risk at a site would include the possibility of events with Intensity X or more anywhere in Eastern United States." *Ibid.* This conclusion rested on extrapolation of the frequency-intensity data to intensities higher than those historically recorded. We discuss such extrapolation in Section 4, *infra*, pp. 435-36.

On the other hand, Mr. Holt asserted that Dr. Chinnery's curves of earthquake frequency vs. intensity "do not tell us that there is or is not a regional 'upper-limit' earthquake." He maintained that "in any given region the available stress and nature of existing earthquake structures may be such that only a small or intermediate earthquake will be produced." Mr. Holt also testified that there is no geologic evidence of large earthquakes in New England — as there is in areas known to be seismically active. In particular, he pointed to the area around New Madrid, Missouri (Holt, fol. R.Tr. 349, at pp. 4-5; see also Appendix 3 to his testimony).

Dr. Reiter agreed with this assessment, adding that most seismologists believe that estimates of maximum likely earthquakes in a given area can be obtained only by the use of a combination of "instrumental and historical seismicity, local and regional tectonic history, geologic structure, stress measurements and, when possible, fault parameters such as dimension and slip rate" — none of which tools had been alluded to in Dr. Chinnery's direct testimony (Reiter, fol. R.Tr. 493, at pp. 6-7).

In his rebuttal testimony (at pp. 11-12), Dr. Chinnery expanded somewhat on his theories concerning the upper bounds to earthquake sizes. He pointed out that a recent paper by Liu and Kanamori (1980) "examined 5 mid-plate earthquakes and their results * * * ." These events had es-

[30] An area which provided many of the seismic events included in Dr. Chinnery's Southeastern United States region. See Chinnery Exh. 2 at p. 760.

timated fault dimensions ranging from 10km$^2$ to 100km$^2$, with seismic moments[31] found to be between $10^{25}$ and $10^{26}$ dyne-cm. The corresponding stress drops[32] were found to range from 100 to 1000 bars — unusually high compared to the interplate earthquakes which, according to Dr. Chinnery, have stress drops in the range of 10 to 100 bars. Dr. Chinnery concluded from this that mid-plate earthquakes may have small dimensions but, because of their stress drops, may have magnitudes in the range of 7 to 7.5 (which he equates to an epicentral Intensity of X.) He added that "in my opinion there is no sound geological basis for saying that New England is in some way an unusual mid-plate region"; *i.e.*, he thought that area to be similar to the five areas studied by Liu and Kanamori. On this basis, Dr. Chinnery reached the "professional judgment" that

> a magnitude 7 ($M_S$) earthquake may well occur rarely in the Boston-New Hampshire zone, at a depth that may be as little as 5 to 10 km. Furthermore, I feel it will be a long time before we get enough new information that we will be able to revise this estimate. As near as I can estimate a magnitude 7 earthquake at a depth of 10 km would lead to a surface intensity of at least X.

*Id.* at p. 13.

On cross-examination, however, Dr. Chinnery stated that his value of magnitude 7 to 7.5 $M_S$ for the earthquakes in the Liu and Kanamori study was obtained by his own method of estimation and had not taken into account the much lower magnitude values ($M_S$ 5.5 to 6.3) of the mid-plate earthquakes actually presented in the Liu and Kanamori paper.[33] Although he had calculated Modified Mercalli values equivalent to $M_S$ 7 to 7.5 for the purposes of his rebuttal testimony and had read other papers which gave relationships between various magnitudes and intensity values, he declined to give any estimate of the Modified Mercalli values which would correspond to earthquakes in the range of $M_S$ 5.5 to 6.3 (R.Tr. 166-170).

By way of response to Dr. Chinnery, Dr. Reiter observed that actual measurements of stress drop had been made for earthquakes in New England using techniques similar to those of Liu and Kanamori, which had

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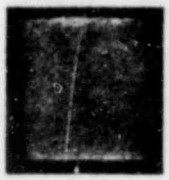
[31] Because earthquakes are caused by rupture and sliding along fault surfaces in the earth, the net effects of an earthquake can be measured in terms of the amount of slip and the area (*i.e.*, the length times depth of the fault) over which it took place. The product of the slip (u), the fault area (A) and the rigidity ($\mu$) of the surrounding rocks is taken to be the "seismic moment" ($M_o$); *i.e.*, $M_o = u\mu A$.

[32] "Stress drop" is the change (decrease) in the rock stresses on either side of the fault before and after the earthquake.

[33] R.Tr. 164. Dr. Chinnery's exact statement was: "what you were pointing out is absolutely right, that is, they have magnitude values already in that paper which I obviously didn't go [sic], I went through too fast to see."

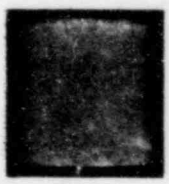


provided results of less than 50 bars (R.Tr. 556-7). And Mr. Jackson offered his observation that the rocks in New England are heavily jointed and cracked and, thus, would more likely produce small fault areas and earthquakes (R.Tr. 562-3). Although Mr. Jackson admitted his observations were made near the surface, and not at the depth of 10 km or so at which fault ruptures might occur (*id.*), he noted that geologists would generally expect to find uniformity in depth of rock structure (R.Tr. 565). In any event, Mr. Jackson believed that his observation on rock structure in New England was supported by the finding of low stress drops for earthquakes measured in the region (R.Tr. 587-8).

Regarding the possibility of an upper bound of earthquakes, Mr. Holt cited another intraplate region, England and Scotland, where, in a thousand years of data, the largest earthquake intensity measured has been Intensity VII. (R.Tr. 401). He went on to state that there was no geological evidence of large earthquakes in the New England area, such as capable faults. This is in marked contrast to the Mississippi Valley (New Madrid) region, where numerous signs of early intense earthquakes are to be found. (Holt, fol. R.Tr. 349, at pp. 4-5, Appendix 3).[34]

**4. The extrapolation of the relationship between earthquake frequency and intensity to earthquake intensities greater than any historically recorded in the area under consideration.**

On the basis of his assumptions that there is a "linear" relationship between the frequency of earthquake occurrence and intensity, and that the slope of the line representing this relationship is constant throughout the eastern United States, Dr. Chinnery asserted that the relationship can be linearly extrapolated to predict the frequency of occurrence of earthquakes larger than those historically recorded (Direct Testimony, p. 12). For New England, he expressed the opinion that the linear relationship indicated by his data could be extended on a conservative basis to at least Intensity X. *Id.* at p. 13. The single articulated basis for this opinion was that five out of 10 seismologists had suggested that the largest earthquake to be expected in the Cape Ann area of Massachusetts (which is in the Boston-New Hampshire zone as described by him) might possibly be as high as Intensity X. *Id.* at pp. 12-13. In Exhibit 2 to his Direct Testimony, Dr. Chinnery maintained that, in the higher seismic areas of Charleston (Southeastern United States) and New Madrid (Mississippi Valley), the extrapolation would be valid to Intensities IX and X, respectively. (Chinnery Exh. 2, p. 771).



[34] There is no residual evidence of past earthquakes in the Charleston, South Carolina region, due (at least in part) to the deep overburden found there (R.Tr. 406).

On this matter, as well, staff and applicant witnesses took issue with Dr. Chinnery's thesis (see *e.g.*, Reiter, fol. R.Tr. 493, at pp. 8-9; Holt, fol. R.Tr. 349, at pp. 2-3). That disagreement centered upon his limited use of the available data. Dr. Chinnery had relied on the data given in Smith's Catalogue of Earthquakes, even though he admitted that much of the catalogue data was questionable (Direct Testimony, at pp. 4, 7; Rebuttal Testimony, at p. 14). Further, he had not investigated the accuracy of the Smith data that he had employed nor had he taken into account the re-evaluation in other studies of some of the seismic events he had utilized (R.Tr. 53-55; 128-133).

With respect to the linear extrapolation of the Modified Mercalli scale beyond Intensity VIII, Dr. Reiter emphasized that:

> While Intensity VII earthquakes have occurred in many parts of the Central and Eastern U.S., Intensity VIII earthquakes have occurred in much fewer locations. Intensity IX or greater events have only occurred at four locations in eastern North America, the New Madrid Missouri Zone, Charleston South Carolina, La Malbaie, Quebec and the Grand Banks off of Newfoundland.

Reiter, fol. R.Tr. 493, at p. 8.

In the same vein, the frequency-intensity curves to which he alluded in his testimony (see pp. 431-32, *supra*) persuaded Mr. Holt that "the curve in the historical time period is not linear at the high intensity end" (Holt, fol. R.Tr. 349, at p. 3).

B. **Analysis of the evidence**

1. An evaluation of the evidence adduced respecting Dr. Chinnery's probabilistic hypothesis requires some understanding of the two recognized bases for measuring the size of an earthquake — magnitude and intensity.
   a. Defining earthquake size in terms of magnitude is a relatively recent development, the concept having originated in 1931 in Japan and then further developed for California earthquakes by Charles Richter in 1935.[35] Magnitude is determined by instrumental measurements and is understood to be

> the logarithm to base ten of the maximum seismic wave amplitude (in thousandths of a millimeter) recorded on a standard seismograph at a distance of 100 kilometers from the earthquake epicenter.[36]

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[35] Bolt, *Earthquakes - A Primer* (1978), at 104.
[36] *Ibid.*

Thus, each additional unit of magnitude as represented on the scale devised by Dr. Richter (and named after him) reflects a ten-fold increase in the amplitude of the earthquake waves.[37]

Although the original Richter Magnitude scale was essentially a local one with application to Southern California earthquakes alone, this measurement method is now employed worldwide with the aid of various types of seismographs.[38]

b. In contrast, earthquake intensity — as now reflected on the Modified Mercalli scale — is not instrumentally measured. Indeed, the intensity concept originated long before instruments had been devised for the measurement of earth movement; *i.e.*, at a time when the size of an earthquake could be assessed only in terms of its observed effects. Measurements in intensity terms thus have a markedly subjective element; this becomes clear from the generally accepted standards utilized in determining the value on the Modified Mercalli scale which should be assigned to the earthquake.[39] It is also apparent from those standards that, although the steps in the scale from I to XII represent progressively larger earth motion, no basis exists for an assumption that the increase from step to step either is uniform or follows any particular mode of variation.

2. In short, the Modified Mercalli scale uses the effects on man and man-made structures to give a word picture of the size of the earthquake causing those effects. It provides a useful means for determining the characteristics of the magnitude of seismic events for which no instrumental data are available. Nonetheless, the scale must be used with caution, for the ground motion

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[37] *Ibid.*

[38] *Ibid.*

[39] As described in Richter, *Elementary Seismology* (1958), at 136-38:

I. Not felt. Marginal and long-period effects of large earthquakes.

II. Felt by persons at rest, on upper floors, or favorably placed.

III. Felt indoors. Hanging objects swing. Vibration like passing light trucks. Duration estimated. May not be recognized as an earthquake.

IV. Hanging objects swing. Vibration like passing of heavy trucks; or sensation of a jolt like a heavy ball striking the walls. Standing motor cars rock. Windows, dishes, doors rattle. Glasses clink. Crockery clashes. In the upper range of IV wooden walls and frame creak.

(CONTINUED)

and damage associated with any given earthquake may vary greatly depending upon local conditions (*e.g.*, whether the situs of the earthquake has a rock or, instead, a soil foundation).[40]

When questioned by us respecting the basis for his assumptions that the Modified Mercalli scale is consistently uniform throughout its range, Dr.

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V. Felt outdoors; direction estimated. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Shutters, pictures move. Pendulum clocks stop, start, change rate.

VI. Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knickknacks, books, etc., off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster and masonry D cracked. Small bells ring (church, schooi). Trees, bushes shaken (visibly, or heard to rustle—CFR).

VII. Difficult to stand. Noticed by drivers of motor cars. Hanging objects quiver. Furniture broken. Damage to masonry D, including cracks. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices (also unbraced parapets and architectural ornaments—CFR). Some cracks in masonry C. Waves on ponds; water turbid with mud. Small slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged.

VIII. Steering of motor cars affected. Damage to masonry C; partial collapse. Some damage to masonry B; none to masonry A. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations if not bolted down; loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes.

IX. General panic. Masonry D destroyed; masonry C heavily damaged, sometimes with complete collapse; masonry B seriously damaged. (General damage to foundations—CFR.) Frame structures, if not bolted, shifted off foundations. Frames racked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluviated areas sand and mud ejected, earthquake fountains, sand craters.

X. Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.

XI. Rails bent greatly. Underground pipelines completely out of service.

XII. Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into the air.

Masonary A. Good workmanship, mortar, and design; reinforced, especially laterally, and bound together by using steel, concrete, etc.; designed to resist lateral forces.

Masonary B. Good workmanship and mortar; reinforced, but not designed in detail to resist lateral forces.

Masonary C. Ordinary workmanship and mortar; no extreme weaknesses like failing to tie in at corners, but neither reinforced nor designed against horizontal forces.

Masonary D. Weak materials, such as adobe; poor mortar; low standards of workmanship, weak horizontally.

[40] In his prepared testimony at p. 1 and p. 4, Mr. Holt discussed this point and, in Appendix 1 to that testimony, provided numerous illustrative examples. See also Bolt, *supra* fn. 35, at 101-102, for the observation that landslides, which are used as an indication of Intensity X earthquakes, can be caused by very slight seismic activity, depending on the terrain.

Chinnery acknowledged that "scientifically it [intensity] is very hard to use and to define." He further stated in his 1973 paper (Chinnery Exh. 1) that

> there's a plot of some data of magnitude against intensity and I'm not saying it proves very much.
>
> There is clearly a lot of scatter there nevertheless * * * . Now, that * * * diagram in my '73 paper goes up to Intensity VIII. Whether the intensity scale continues to be linear beyond that I agree is a problem.

R.Tr. 223.

Apart from his use of the intensity scale levels as if they reflected true numerical quantities, which they manifestly do not, Dr. Chinnery's approach is replete with questionable scientific methodology. We have already noted his arbitrary selection of time periods when comparing various geologic areas of the United States. See pp. 429-32, *supra*. A yet more troublesome problem stems from Dr. Chinnery's selection of the four regions to be studied for the purposes of his analysis — a choice which necessarily has a decided bearing upon the reliability of his results and their usefulness in assigning earthquake risk.

Two of those selected regions are relatively large in area: Southeastern United States (307,000 $km^2$) and Mississippi Valley (250,000 $km^2$).[41] Within those regions, there are much smaller areas of very high seismicity — Charleston and New Madrid, respectively — which have contributed a large percentage of the seismic events which have taken place in the region.[42] Yet, in plotting his frequency-intensity curves for those regions, he used data from the entire region. See p. 429, *supra*. As we have seen, however, there is uncontroverted evidence that, at least in South Carolina, the slope of the curve is significantly influenced by whether the data employed are from a region of high, or instead low, seismicity. See pp. 432-33 *supra*.

The two other selected regions are considerably smaller in overall area: Southern New England (100,000 $km^2$) and Boston-New Hampshire (27,000 $km^2$).[43] More importantly, a much greater percentage of those regions are seismically active. This is especially true of the Boston-New Hampshire region which is entirely encompassed within the Southern New England region and, as its boundaries were arbitrarily drawn by Dr. Chinnery, is very irregular in shape and appears to include the principle seismic areas in eastern Massachusetts and the southern portion of New Hampshire. It might be noted that Dr. Chinnery acknowledged that he had selected that region because it had "somewhat more seismicity than

[41] Chinnery Exh. 2, at pp. 758, 760.
[42] R.Tr. 279; Holt, fol. R.Tr. 349, Fig. 5A; Chinnery Exh. 2 at pp. 759, 761.
[43] Chinnery Exh. 2 at p. 761.

the rest of New England" (R.Tr. 278). It thus would appear that, in making that selection, he employed different criteria than that which undergirded his choice of the other three regions. In these circumstances, it is of little, if any, significance that Dr. Chinnery's frequency-intensity curves for the four regions have similar slopes.

Moreover, as earlier noted (p. 435, *supra*), in using the paper by Liu and Kanamori to support his belief that there is no limit on the intensities of mid-plate earthquakes, Dr. Chinnery disregarded the earthquake magnitudes found by the authors and instead substituted much higher values of his own. Still further, his claim that the New England area is geologically and seismologically similar to the five mid-plate areas studied by Liu and Kanamori is without foundation (R.Tr. 145). In this connection, it is noteworthy that Dr. Chinnery conceded that he had made no analysis himself of relevant seismic records nor had he calculated stress drops for any New England earthquakes (R.Tr. 171); that the only stress measurements he knew of were taken in drill holes at depths of no more than 2000 feet (R.Tr. 199); and that, because he had not personally kept up with the record of intensities of recent New England earthquakes, he did not know if they indicated small area, high stress events (R.Tr. 201-202). Nor had he examined the spectra obtained from New England earthquakes to see how they compared with earthquake spectra in other areas (R.Tr. 202-203).[44] These admissions obtain yet greater significance when taken in conjunction with the statement made by him in response to questions by the Licensing Board concerning the possibility that the New England earthquakes might not show surface faulting because their focus might be deeper than that of California earthquakes:

> No. As I said, I personally suspect that it's because they are smaller. The stresses which are built up in an area like New

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[44] In this connection, as earlier noted (fn. 25, *supra*) Dr. Chinnery now accepts the recent reevaluation which reduced the number of Intensity VII events which have occurred in the Boston-New Hampshire region from three to one (an 1817 earthquake has been downgraded from VII to VI and two Intensity VII events which took place a few days apart in December 1940 near Ossipee, New Hampshire are now treated as having been a single earthquake and its aftershock). Nevertheless, as also noted, Dr. Chinnery expressed the view that this reduction does not affect the slope of his line for this region, which had been founded on a VII data point which assumed three events of that intensity.

We think otherwise. The computation of the VII data point on the basis of a single event, instead of three events, produces a value of Log $N_c$ equal to −2.2 rather than −1.72 and that value lies well below Dr. Chinnery's proposed linear curve (see Chinnery Exh. 2, Fig. 7, at p. 765). Moreover, the treatment of the Ossipee events as a single Intensity VII earthquake (R.Tr. 139, 272) requires a reduction in the cumulative number of events included in the Intensities VI and V data points (which encompass all events of that or greater intensity). Using the corrected data, all of the points beyond Intensity V plotted on Dr. Chinnery's Boston-New Hampshire graph (Fig. 7) fall below his straight line and the apparent slope of the plotted data is no longer consistent with his linear projection.

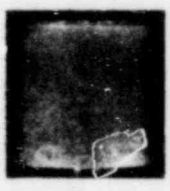
England are almost certainly much higher than the stresses which are built up in California. And it's like a very small, very intent bomb, if you like. We can contain a lot of energy within a small space in an environment like New England. This is not possible in California; earthquakes are very much larger, it's not surprising that they very nearly always penetrate the surface in California.

Tr. 4048-49.

Even were there not these infirmities in Dr. Chinnery's methodology, it still would not provide a basis for determining the SSE for the Seabrook site. As plotted by Dr. Chinnery, the magnitude of the frequency vs. intensity curve (*i.e.*, the position of the line relative to the vertical axis) is dependent upon the total number of events in the particular region providing the data base, without regard to the area of that region. As reflected by the curves found in Figure 1, *supra*, p. 430, one consequence is that the number of events of a given intensity to be expected per year in the Mississippi Valley and Southeastern United States regions would exceed (by a factor of approximately 10) those in the Boston-New Hampshire region.

Nonetheless, upon our inquiry Dr. Chinnery stated that he was not prepared to assign a factor-of-10 greater seismic risk to a hypothetical nuclear power plant site in western Alabama (within the Southeastern United States region) than he would assign to a specific site within the Boston-New Hampshire region (R.Tr. 280-285). He explained that in order to equate the *areal* seismic risk with that existing at a certain site within the area, one would have to make a subjective assessment of the areal data and be informed as to the particular characteristics of that site (R.Tr. 286-88). Accordingly, Dr. Chinnery explicitly acknowledged that his methodology could only be employed to determine the seismic risk in the *region* in which the Seabrook site is located and that his testimony therefore did not address the probability of earthquake intensity at the *site itself* (R.Tr. 288-89). In these circumstances, there is little basis for the Coalition's claim (at p. 33 of its proposed findings of fact) that the areal earthquake probability which Dr. Chinnery had computed for the Boston-New Hampshire region perforce must be applied to the Seabrook site.

In sum, we are compelled to conclude that Dr. Chinnery's methodology has not been shown to be a credible means of predicting the intensity of seismic motion at a particular site. Leaving aside the just discussed admitted limitations affecting its usefulness, we have seen that, had he employed relatively uniform criteria in the selection of regions and time periods for the purposes of his probabilistic analysis, the results would have been materially different from those which he presented and would have refuted his postulated linear frequency-intensity relationship. Once again,



his thesis that the Seabrook facility should be designed to withstand an earthquake of an intensity greater than any historically recorded earthquake in the New England region rests entirely upon his assertion of such a linear relationship.[45]

III.

We now turn to the second question before us: whether the staff's methodology for correlating vibratory ground motion (acceleration) with the safe shutdown earthquake is consistent with the requirements of Appendix A to 10 CFR Part 100. See p. 426, *supra*. By a divided vote, we had given an affirmative response to that question in ALAB-422, *supra*. In calling upon us to consider it further on the remand, the Commission did not discuss the analysis which led to that response. Rather, it simply stated that "more evidence" should be taken on the question and that, "[i]n particular, the parties should provide a discussion of the relation between the mean of the maximum ground accelerations and the maximum effective ground acceleration." CLI-80-33, *supra*, 12 NRC at 298.

In the circumstances, it may reasonably be presumed that the concern which prompted the Commission's remand on the acceleration issue had its roots in Mr. Farrar's view, in dissent from the majority conclusion in

[45] Contrary to the Coalition's claim in its proposed findings, we find nothing in the record to indicate that Dr. Chinnery's methodology has received peer acceptance. More particularly, we do not agree that Dr. Trifunac's testimony endorsed Dr. Chinnery's proposed linear projection as a means of forecasting recurrence rates of earthquakes higher than those historically recorded. See R.Tr. 750-52.

Nor can we adopt the Coalition's proposed finding that certain testimony of Mr. Holt establishes that Intensity XII should be assigned to the Seabrook SSE. In this testimony, Mr. Holt referred to an apparent correlation between earthquakes which occurred off of Cape Ann, Massachusetts in 1727 and 1755 and the existence in that area of an intrusive (pluton) with northeasterly trending incapable faults. (R.Tr. 381-92; 425-28). He also took note of the similar coincidence of an intrusive and a fault in the New Madrid area, where seismic events possibly as high as Intensity XII occurred in 1811-12 (R.Tr. 403-04). Leaving aside the fact that the Holt theory respecting the significance of intrusives is not accepted by the United States Geological Survey (R.Tr. 430, 552-553) — or, insofar as we are aware, by any other authorities —, it does not point to the conclusion which the Coalition would draw from it. This is because Mr. Holt (1) additionally alluded to a significant seismological difference between the Cape Ann and New Madrid areas (R.Tr. 405); and (2) expressed the opinion that the coincidence of an intrusive and a fault in the Cape Ann area would not occasion an earthquake greater than magnitude 6 (which represents an intensity of approximately VIII) (R.Tr. 388-89). In this connection, it should be noted that the Cape Ann earthquakes have never been thought to have exceeded Intensity VIII and that at least the 1755 one is now regarded in many quarters as of Intensity VII. See ALAB-422, *supra*, 6 NRC at 57, 62. Further, Coalition counsel did not endeavor to cross-examine Mr. Holt respecting his stated belief that, his intrusive theory notwithstanding, the maximum earthquake to be expected in the Cape Ann area is an Intensity VIII.

ALAB-422, that the staff's approach to the correlation of earthquake intensity and acceleration levels does not comport with Appendix A. See ALAB-561, *supra*, 10 NRC at 431. On that premise, to place the evidence adduced on remand in its proper context, we start with a review of what was said in ALAB-422 and ALAB-561 on the subject based upon the content of the record which had been developed before the Licensing Board.

A. As seen from those decisions, the witnesses testifying below on the intensity-acceleration correlation did not disagree respecting the arithmetic mean value of the acceleration peaks which would be associated with an Intensity VIII earthquake.[46] Employing the same basic data (much of which had been collected by Dr. Trifunac himself), the witnesses all expressed the opinion that that value was not in excess of 0.25g. ALAB-422, 6 NRC at 62.

The controversy centered instead upon whether a 0.25g mean value should be used in the design of the Seabrook facility. As summarized in ALAB-422, *id.* at 62-63:

> Dr. Trifunac pointed out that there is a wide variation in the value of the acceleration peaks included in the calculation of the mean. He noted that the standard deviation was approximately 50 percent of the mean value. He therefore suggested that the "reasonable upper bound" for the design horizontal acceleration should be the mean value plus one standard deviation, or approximately 0.4g. (NECNP Exh. 8, p. 3).
>
> The other witnesses uniformly expressed the contrary view that 0.25g was an acceptable design value for the Seabrook facility. Dr. Newmark testified without contradiction that the highest acceleration peaks are associated with the highest frequency ground waves. These high frequency waves would be fully recorded by the relatively small and compact seismographs, but yet would have no significant effect on the large massive structures of a nuclear facility (Newmark Dir. Test., fol. Tr. 2813, p. 7). Thus, included in the mean of the acceleration peaks are a number of high frequency peaks which can be discounted insofar as this facility is concerned.

Our analysis of these divergent opinions culminated in an affirmance of the Licensing Board's acceptance of the 0.25g value. Several factors prompted that result.

First we read Section VI(a) of Appendix A as requiring the employment for design purposes of the *effective* "maximum vibratory acceleration

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[46] As the term has uniformly been used in this proceeding, "mean" refers to the arithmetic mean or average of the values under consideration.

at the elevations of the foundations of the nuclear power plant." On this interpretation, we saw no regulatory bar to the exclusion from consideration of high frequency waves which would have no discernible impact upon the facility (*i.e.*, were not "effective" — which in turn would make resort to the mean of the peak accelerations sufficiently conservative. *Id.* at 63.

Second, we referred to a table supplied by Dr. Trifunac in conjunction with his testimony below, which provided data for peak accelerations as a function of intensity in the western United States.[47] That table reflected a mean horizontal peak acceleration for an Intensity VIII earthquake of approximately 0.167g with a standard deviation of slightly more than 0.08g — *i.e.*, a combined value of almost precisely 0.25g. These data thus lent support for the 0.25g design value consistent with Dr. Trifunac's view that, because it serves to compensate for the fact that the maximum peak acceleration exceeds the mean, a standard deviation should be added to the latter. *Id.* at 63-64.

In this connection, we took note of the reason assigned by Dr. Trifunac for adopting a mean value of 0.25g rather than 0.167g: that peak accelerations at hard rock sites (such as Seabrook) are considerably greater than those at alluvium sites.[48] As we saw it, however, that explanation was countered by the additional consideration that the record further disclosed that the increased peak accelerations at hard rock sites are occasioned by high frequency ground waves which do not affect heavy concrete structures. *Id.* at 64.

For his part, both in his brief dissent to ALAB-422 and in the later elaboration of his views in ALAB-561, Mr. Farrar agreed that Appendix A is concerned with the greatest "effective" vibratory acceleration which might result from the occurrence of an earthquake of the predicted intensity. 6 NRC at 113; 10 NRC at 431-32. He also acknowledged that "the evidence seemingly left no room for doubt that the extremely high frequency waves which can cause the highest accelerations are of such short duration and low energy that they will have no real consequences". 10 NRC at 432. Nonetheless, in his judgment, the utilization of the mean of the peak accelerations was forbidden by Appendix A. Pointing to the fact that the record disclosed that the peak acceleration values being averaged differ from each other by as much as a factor of ten, he expressed the view that "the average of all of them has no demonstrable

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[47] The table now appears as Table 3 in Trifunac and Brady, *On the Correlation of Seismic Intensity Scales With the Peaks of Recorded Strong Ground Motion*, 65 Bull. of the Seismological Society of America 139, 146 (1975). This article is discussed further, *infra*, p. 446.

[48] The data in his table had been derived from accelerations associated with varying geological conditions.

relationship to the maximum effective acceleration that occurred during the one earthquake where damaging accelerations were the highest". *Id.* at 434.

For this reason, Mr. Farrar rejected not only the majority's acceptance of the approach of the applicants and staff, but also that of the intervenor Coalition. (On the latter score, he opined that "taking the 'mean of the peaks plus one standard deviation' * * * suffers (although to a lesser extent) from the same defective rationale as does use of the mean itself". *Ibid*). Rather, what he thought to be required was a different kind of analysis, said to have received our approval in *Consolidated Edison Co.* (Indian Point Station, Units 1, 2 and 3), ALAB-436, 6 NRC 547, 584-85 (1977). Specifically, he would have called for an evaluation of the frequency spectrum associated with individual peak accelerations on seismograms for the purpose of obtaining "the highest *magnitude* associated with the frequencies in the damaging range. The magnitude thus determined would serve as the value representative of the particular intensity in question; in other words, it would be correlated with the intensity scale in the same manner that the 'mean of the peaks' currently is". 10 NRC at 436-h, fn. 12.

The majority's rejoinder to this thesis was that there are insufficient available base data applicable to the New England region to permit its adoption. In this connection, it noted that only one New England earthquake (the 1755 Cape Ann event) is generally acknowledged to have been possibly of intensity VIII. *Id.* at 436-g, 436-h. Further, the majority reiterated its belief that the methodology of the staff and applicant is not proscribed by Appendix A and that the addition of the error factor (standard deviation) advocated by the Coalition was unwarranted. *Id.* at 436-h.

B. Against this background, we proceed to the additional evidence adduced on the remand on the question whether the staff's methodology for correlating vibratory ground motion with the safe shutdown earthquake comports with Appendix A requirements. On this issue, as on the intensity question, the staff presented the testimony of a panel of witnesses consisting of Messrs. Knight and Jackson and Dr. Reiter. Dr. Trifunac testified as a Board witness.[49]

In essence, the staff witnesses elaborated upon the description of staff procedures which had been provided the Licensing Board several years ago (*i.e.*, there does not appear to have been a significant alteration in those procedures during the intervening period).[50] Once the safe shutdown earth-

[49] The applicants' witness on the intensity question (Mr. Holt) did not appear as a witness on the acceleration issue although some of his prepared testimony touched upon that issue.

[50] In part, these procedures are outlined in Regulatory Guide 1.60 (Revision 1, December 1973), entitled "Design Response Spectra for Seismic Design of Nuclear Power Plants."

quake for the particular reactor site has been ascertained (in this instance a seismic event of Intensity VIII), the next step is the determination of the peak acceleration which is associated with that earthquake.

For this purpose, the staff now utilizes a relationship between intensity and peak accelerations which had been suggested by Trifunac and Brady in an article published in 1975.[51] In that article, the authors had employed the largest data base then available with regard to earthquakes in the western United States to calculate the mean value of peak acceleration in each intensity class. They then drew a straight line to indicate a trend for the calculated means of the acceleration values.[52] Although not expressly stated in the article, Figure 3 and Table 1 therein[53] reflect that the trend line would indicate a peak acceleration value of 0.25g for Intensity VIII. As previously noted, however, the recorded data indicated that the *actual* mean of the peak accelerations for that intensity level was 0.167g, with a standard deviation of approximately 0.08g. See p. 444, *supra;* see also R.Tr. 645, 649. This discrepancy may explain the admonition in the article that "these average trends [should not] be used to derive the expected peak values of ground motion in terms of Modified Mercalli intensities." Rather, according to Drs. Trifunac and Brady, "if a result of this type is desired, we do recommend that [all available data on ground acceleration, velocity and displacement] be considered and that the peak values be selected on the basis of a pre-defined degree of conservatism."[54]

Having selected a peak acceleration for the SSE on the basis of the trend line of Trifunac and Brady (despite the authors' admonition not to do so), the third step in the staff methodology is the selection of a response spectrum.[55] This spectrum determines the level of response to ground motion that is to be expected over the entire range of frequencies. For Seabrook, the shape of the response spectrum used was that of the standard spectrum of Regulatory Guide 1.60, *supra* fn. 50. As described

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[51] See fn. 47, *supra*. The entire content of the article was before the Licensing Board as an appendix to his testimony (introduced into evidence as NECNP Exhibit 8 at Tr. 3101).

[52] Trifunac and Brady, *supra* fn. 47, at 147.

[53] *Id.* at 143.

[54] *Id.* at 149.

[55] A response spectrum is the result of an analytical procedure whereby a number of one-degree-of-freedom harmonic oscillators, each having the same degree of damping but with different natural frequencies, are driven by the time-dependent motion characteristic of a real or postulated seismic event. For a particular event and degree of damping there will be a time-dependent response which varies for oscillators of the different frequencies. The maximum values of the response of the oscillators in terms of acceleration, velocity and displacement, may be plotted as a function of the frequency of the oscillators being excited. Such a plot can be produced for any one of the three parameters taken individually. Because of the relationship among acceleration, velocity and displacement under harmonic motion, a tripartite plot showing the maximum responses in acceleration, velocity and displacement as a function of oscillator frequency may also be prepared (see *e.g.*, Regulatory Guide 1.60, *supra* fn. 50, Figure 1). *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-644, 13 NRC 903, 924 fn. 40 (1981).

by Dr. Reiter, that spectrum "is essentially the mean plus one sigma spectral shape derived after normalizing a series of earthquake records to the same peak acceleration or high frequency response." Reiter, fol. Tr. 493, at p. 18. The very high frequency (at least 30 cycles per second), or anchor point, of the spectrum was set by the staff to be equivalent to the peak acceleration that had been selected for the Seabrook SSE (*i.e.*, 0.25g for Intensity VIII).

In summary, as applied at Seabrook, the staff's methodology progressed from characterization of a safe shutdown earthquake for the site, through the selection of a peak acceleration for that earthquake, to the formulation of a response spectrum — the latter being a device which is intended to establish, at every frequency, the maximum level of response to ground motion representative of the SSE.

What we are called upon to decide, then, is whether this approach comports with the Appendix A requirement that the seismic design of a nuclear power facility take account of the maximum effective vibratory acceleration which might accompany the determined SSE for that facility (as seen from the background statement, pp. 442-45, *supra*, there is no present disagreement that the Appendix is concerned solely with ground motion which might have an impact on the facility's safety-related structures and components).[56]

As we see it, resolution of that issue necessitates going beyond the foreshortened statement posed to us by the Commission of "the relation between the mean of the maximum ground accelerations and the maximum effective ground acceleration" (see p. 442, *supra*). For the selection

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[56] At this juncture, it may be helpful to recite the two pertinent portions of Appendix A.

V. SEISMIC AND GEOLOGICAL DESIGN BASES

(a) *Determination Design Basis for Vibratory Ground Motion.*

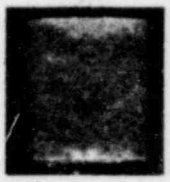
(1) Determination of Safe Shutdown Earthquake.

* * * * *

(iv) The earthquake producing the maximum vibratory acceleration at the site, as determined from paragraph (a)(1)(i) through (iii) of this section shall be designated the Safe Shutdown Earthquake for vibratory ground motion, except as noted in paragraph (a)(1)(v) of this section. The characteristics of the Safe Shutdown Earthquake shall be derived from more than one earthquake determined from paragraph (a)(1)(i) through (iii) of this section, where necessary to assure that the maximum vibratory acceleration at the site throughout the frequency range of interest is included. * * *

VI. APPLICATION TO ENGINEERING DESIGN

(a) *Vibratory ground motion-(1) Safe Shutdown Earthquake.* The vibratory ground motion produced by the Safe Shutdown Earthquake shall be defined by response spectra corrsponding to the maximum vibratory accelerations at the elevations of the foundations of the nuclear power plant structures determine [sic] pursuant to paragraph (a)(1) of Section V. * * *



of a peak acceleration is but a step along the way. The staff's ultimate representation of the SSE is the response spectrum, which perforce encompasses a measure of the motion of the SSE at *all* frequencies. The peak acceleration value is employed simply to anchor that spectrum, and should be viewed in that context. (See Jackson, fol. R.Tr. 493, at p. 10; Reiter, fol. R.Tr. 493, at p. 18). In this regard, the selection of a peak acceleration and the use of it to determine the anchor point of a standard spectrum is but one of many ways to arrive at a response spectrum characteristic of the SSE (Reiter, at p. 19; R.Tr. 635).[57]

Thus, in the last analysis, the acceptability of the staff's methodology in terms of Appendix A hinges upon whether that methodology does, in fact, produce a response spectrum at Seabrook which properly reflects the maximum vibratory acceleration, throughout the frequency range of interest, for the Intensity VIII event which has been selected for the SSE.

The staff witnesses testified that they used the Trifunac and Brady relationship between acceleration and intensity to select an anchor point acceleration because the combination of that anchor point acceleration and the Regulatory Guide 1.60 spectrum shape provides a conservative result (that is, it exceeds, by about one standard deviation, the spectrum that actually would be expected should the SSE be experienced at the site). Jackson, fol. R.Tr. 493, at pp. 14-15; R.Tr. 705-708. As a demonstration that this is so, they presented a comparison of the Seabrook response spectrum with several response spectra representative of Intensity VIII (Reiter, fol. R.Tr. 493, at pp. 15, 23-25, Figures 1, 2 & 3). The Seabrook spectra exceeded these spectra, and exceeded the mean plus one standard deviation (*i.e.*, one sigma) spectra where that was displayed. The testimony of applicants' witness Holt also demonstrated that the Seabrook spectrum exceeds the "one plus sigma" spectrum determined from a worldwide set of strong motion records for a range of epicentral Intensities, VII to XI, with a mean value IX (the Seabrook Intensity is VIII) (Holt, fol. R.Tr. 349, at pp. 6-7, Figures 9, 10, Table 1).

Finally, the Seabrook spectrum was subject to a test of its conservatism by the method favored by Dr. Trifunac.[58] He used probabilistic methods to determine Uniform Risk Spectra — spectra for which there is a constant probability that the plotted value will be exceeded in a 50 year period. To obtain probabilistic estimates of the seismicity at the Seabrook site, Dr. Trifunac used the projection of Dr. Chinnery (modified to yield events per

[57] Dr. Reiter noted that, were more data available, it would be preferable to have response spectra obtained for the SSE directly, rather than going to the intermediary step of a peak acceleration. (Reiter, fol. R.Tr. 493, at p. 19).

[58] Trifunac, fol. R.Tr. 729, at 8-9, Figs. 3 and 4.

1000 km$^2$), and a pessimistic version of that projection. For the former, Dr. Trifunac computed that there would be less than a 5% chance of the Seabrook spectrum being exceeded in 50 years, even if the maximum earthquake intensity for the region was assumed to be XII.[59] Using the pessimistic seismicity estimate, those probabilities were assessed at less than 5% and less than 30%, for assumed regional maximum Intensities of VIII and XII respectively.

From these results, Dr. Trifunac himself concluded that:

> The above probabilistic calculations suggest that the proposed SSE design spectra for Seabrook site (corresponding to 0.25g peak acceleration) may be acceptable. However, before I can finalize this conclusion, I would have to carry out additional and more detailed calculations to find whether [his model of seismicity] is indeed a "sufficiently pessimistic" representation of possible seismicity during the next 50 years.[60]

On the basis of all of the foregoing evidence, it is reasonable to conclude that the methodology employed by the staff at Seabrook, which included using the appropriate mean peak acceleration of Trifunac and Brady as the anchor point for a Regulatory Guide 1.60 spectrum, provides an upper level, or maximum, characterization of the range of ground motion to be expected in the event of an Intensity VIII event. This being so, we are satisfied that the methodology does not offend Appendix A.

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For the foregoing reasons, we reaffirm our determination in ALAB-422, *supra*, that the Seabrook safe shutdown earthquake is of Intensity VIII with an associated maximum vibratory ground motion of 0.25g.

It is so ORDERED.

FOR THE APPEAL BOARD

C. Jean Shoemaker
Secretary to the Appeal Board

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[59] Dr. Trifunac agreed that an earthquake which resulted in motions which exceeded the design response spectrum at some frequency range would not necessarily lead to an accident. R.Tr. 760. See also Reiter, fol. R.Tr. 493, at pp. 24-25.

[60] Trifunac, fol. R.Tr. 729, at p. 10. Our review of Dr. Trifunac's method indicates that it already contains certain conservatisms (*i.e.*, is pessimistic). For example, Figure 1 of his current testimony indicates a mean value of peak acceleration for an Intensity VIII event of about 0.3g. Table 1 of the Holt testimony (see p. 448, *supra*) gives the mean value of 13 earthquakes in the Intensity range VII to XI as about 0.14g, and the mean plus one sigma value about 0.2g. See also, p. 446, *supra*.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING APPEAL PANEL**

**Administrative Judges:**

**Alan S. Rosenthal**, Chairman
**Dr. John H. Buck**
**Thomas S. Moore**

**In the Matter of** **Docket Nos. STN 50-488**
**STN 50-489**
**STN 50-490**

**DUKE POWER COMPANY**
**(Perkins Nuclear Station,**
**Units 1, 2 and 3)**

**March 24, 1982**

In response to a motion filed by the applicant with both the Licensing and Appeal Boards for (1) leave to withdraw without prejudice its application for construction permits and (2) termination as moot of the still ongoing proceeding on that application, the Appeal Board defers to the Licensing Board to pass upon the motion in the first instance, and vacates on the ground of mootness three partial initial decisions in this construction permit proceeding (LBP-78-25, 8 NRC 87 (1978); LBP-78-34, 8 NRC 470 (1978); LBP-80-9, 11 NRC 310 (1980)).

**RULES OF PRACTICE: MOTIONS (WITHDRAWAL OF LICENSE APPLICATION)**

Where a motion for leave to withdraw a license application has been filed with both an appeal and a licensing board, it is for the licensing board, if portions of the proceeding remain before it, to pass upon the motion in the first instance.

**APPEARANCES**

**Mr. Albert V. Carr, Jr.**, Charlotte, North Carolina, for the applicant, Duke Power Company.

**Mr. William G. Pfefferkorn,** Winston-Salem, North Carolina, for the intervenors, Mary Apperson Davis and Yadkin River Committee.

**Mr. Sherwin E. Turk** for the Nuclear Regulatory Commission staff.

## MEMORANDUM AND ORDER

On March 2, 1982, the Duke Power Company filed identical motions with the Licensing Board and this Board seeking (1) leave to withdraw without prejudice its application for permits to construct the Perkins nuclear facility; and (2) a termination as moot of the still ongoing proceeding on that application. The motion recites that Duke's Board of Directors voted on February 23, 1982 to withdraw the application.

The sought relief is not opposed by the NRC staff. For their part, however, intervenors Mary Apperson Davis and Yadkin River Committee insist that the termination of the proceeding should be *with* prejudice. Additionally, they maintain that, irrespective of the basis of the termination, the applicant should "be required to pay all of the costs in this matter including the reasonable attorney's fees and costs of the Intervenors".[1]

As the staff correctly notes, it is for the Licensing Board, before whom portions of this proceeding remain, to pass upon the motion in the first instance. In doing so, it will have to address the claims made by the intervenors in their response. With regard to the question whether the termination of the proceeding should be with prejudice, the Board is to apply the guidance provided by us in *Philadelphia Electric Co.* (Fulton Generating Station, Units 1 and 2), ALAB-657, 14 NRC 967 (1981), and *Puerto Rico Electric Power Authority* (North Coast Nuclear Plant, Unit 1), ALAB-662, 14 NRC 1125 (1981).[2]

Our own required action at this juncture is confined to three previously rendered partial initial decisions which have not achieved finality: LBP-78-25, 8 NRC 87 (1978); LBP-78-34, 8 NRC 470 (1978); and LBP-80-9, 11 NRC 310 (1980). Each of those decisions is hereby *vacated* on the ground of mootness. See *Boston Edison Co.* (Pilgrim Nuclear Power

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[1] Response to Motion to Withdraw, dated March 11, 1982, at p. 1.

[2] In *North Coast*, we explicitly left open the question whether "conditioning withdrawal of an application upon payment of the opposing parties' expenses might be within the Commission's powers and otherwise appropriate where the expenses incurred were substantial and intervenors developed information which cast doubt upon the merits of the application". 14 NRC 1135, fn. 11. We likewise do not intimate any opinion on the question here, believing that it should be first considered by the Board below.

Station, Unit 1), ALAB-656, 14 NRC 965, 966 (1981), and cases there cited.[3]

It is so ORDERED.

FOR THE APPEAL BOARD

C. Jean Shoemaker
Secretary to the Appeal Board

[3] Although stripping the partial initial decisions of any precedential effect, this action does not similarly serve to vitiate the testimony and other evidence contained in the record on the issue of the environmental effects associated with the release of radioactive radon gas (radon-222) to the atmosphere as a result of the mining and milling of uranium for reactor fuel. We need stress the point because that record provided a portion of the basis for our decision in *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-640, 13 NRC 487 (1981). It may also be employed in connection with any future decisions in *Peach Bottom* on the radon issue. See, in this connection, ALAB-654, 14 NRC 632, 634-35 (1981).

With regard to the now-vacated partial initial decision which dealt with the radon issue (LBP-78-25, *supra*), suffice it to say that none of the conclusions later reached by us in ALAB-640 depended for its vitality upon any determination of the Licensing Board in that decision. Rather, as is clearly reflected therein, ALAB-640 represents the fruits of our own independent analysis of the content of the *Perkins* record on radon releases taken in conjunction with additional evidence which was adduced in *Peach Bottom*.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING APPEAL BOARD**

**Administrative Judges:**

**Alan S. Rosenthal,** Chairman
**Dr. John H. Buck**
**Christine N. Kohl**

**In the Matter of** **Docket Nos. 50-369 OL**
**50-370 OL**

**DUKE POWER COMPANY**
**(William B. McGuire Nuclear Station, Units 1 and 2)**

**March 30, 1982**

Acting on an intervenor's appeal from two decisions of the Licensing Board (LBP-79-13, 9 NRC 489 (1979); LBP-81-13, 13 NRC 652)), which in combination authorized the issuance of operating licenses for the facility, the Appeal Board affirms those decisions to the extent consistent with its opinion. The Appeal Board makes additional findings to those of the Licensing Board and concludes that the facility's hydrogen mitigation and control system can be operated without endangering the public health and safety during the interim period in which the applicant and the Commission continue to explore the adequacy of the system in place and possible long-term alternatives.

**OPERATING LICENSING PROCEDURES: RESPONSIBILITY OF LICENSING BOARDS AND NRC STAFF**

A Licensing Board's role in an operating license proceeding is limited to resolving matters that are raised either by the parties or by the Board *sua sponte*. All other matters that must be considered prior to the issuance of the requested operating license are the responsibility of the Director of Nuclear Reactor Regulation alone. 10 CFR 2.760a; *Consolidated Edison Co.* (Indian Point, Units 1, 2 & 3), ALAB-319, 3 NRC 188, 190 (1976).

**RULES OF PRACTICE: CHALLENGE TO COMMISSION REGULATIONS**

Neither the standards set in the Commission's regulations pertaining to hydrogen control (10 CFR 50.44) nor the assumptions upon which they are based are subject to challenge in an adjudication unless the Commission specifically authorizes it. 10 CFR 2.758.

**LICENSING BOARDS: RESPONSIBILITIES**

In the NRC adjudicatory system, no less than in any other, the directives of superior tribunals must be given effect whether or not the subordinate tribunal agrees with them. *Cf. South Carolina Electric and Gas Co.* (Virgil C. Summer Nuclear Station, Unit 1), ALAB-663, 14 NRC 1140, 1150 (1981).

**RULES OF PRACTICE: REOPENING OF AN EVIDENTIARY RECORD**

It is well-settled that, in order to obtain a reopening of an evidentiary record, a party must establish, *inter alia*, the existence of newly discovered evidence having a material bearing upon the proper result in the proceeding. *Kansas Gas and Electric Co.* (Wolf Creek Generating Station, Unit 1), ALAB-462, 7 NRC 320, 338 (1978), and cases cited.

**APPEAL BOARDS: SCOPE OF REVIEW**

An Appeal Board, like other appellate tribunals, has no obligation to rule on every discrete point adjudicated below, so long as it is able to render a decision on other grounds that effectively dispose of the appeal. See, *e.g., Asphalt Roofing Manufacturers Association* v. *ICC*, 567 F.2d 994, 1002 (D.C. Cir. 1977). See also *Consumers Power Co.* (Big Rock Point Nuclear Plant), ALAB-636, 13 NRC 312, 329 fn. 32 (1981); *Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit No. 1), ALAB-625, 13 NRC 13, 14 (1981).

**LICENSING BOARDS: RESOLUTION OF ISSUES**

A licensing board has an ironclad obligation to explain its reasons for finding that a witness' background is inadequate to meet the qualifications of an expert in particular technical areas. See *e.g., Public Service Electric*

*and Gas Co.* (Hope Creek Generating Station, Units 1 and 2), ALAB-429, 6 NRC 229, 237 (1977); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-422, 6 NRC 33, 41 (1977), *affirmed*, CLI-78-1, 7 NRC 1 (1978), *affirmed sub nom. New England Coalition on Nuclear Power* v. *NRC*, 582 F.2d 87 (1st Cir. 1978).

**LICENSING BOARDS: RESOLUTION OF ISSUES**

Where the Licensing Board has not explained its reasons, the Appeal Board may nonetheless avoid a remand if the path the Licensing Board followed in ruling on a matter is sufficiently discernible on the record. See *Bowman Transportation, Inc.* v. *Arkansas-Best Freight System, Inc.*, 419 U.S. 281, 286 (1974).

**EVIDENCE: EXPERT WITNESSES (QUALIFICATION)**

In the absence of a Commission rule expressly stating the standard for judging whether a prospective witness qualifies as an expert, the standard incorporated in Federal Rule of Evidence 702 may be applied; that rule allows a witness qualified by "knowledge, skill, experience, training, or education" to testify "[i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue."

**EVIDENCE: HEARSAY (STANDARD FOR ADMISSIBILITY)**

Hearsay evidence is generally admissible in NRC proceedings. *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-355, 4 NRC 397, 411-12 (1976). Thus, the question of whether evidence falls within an exception to the hearsay rule is beside the point in such proceedings. Instead, the admissibility of evidence in NRC adjudication is governed by 10 CFR 2.743(c), which provides that "[o]nly relevant, material and reliable evidence which is not unduly repetitious will be admitted."

**EVIDENCE: SPONSORSHIP BY EXPERT**

Documents consisting of technical analyses, conclusions and opinions on various aspects of the matter of hydrogen generation and control in nuclear power reactors are the type of evidence that calls for sponsorship by an expert who can be examined on the reliability of the factual assertions and soundness of the scientific opinions found in the documents. *Cf. Wisconsin*

*Electric Power Co.* (Point Beach Nuclear Plant, Unit 2), ALAB-78, 5 AEC 319, 332-33 (1972) (citing *Dolcin* v. *FTC*, 219 F.2d 742, 748 (D.C. Cir. 1954), *certiorari denied*, 348 U.S. 981 (1955)).

**EVIDENCE: REPORTS OF ADVISORY COMMITTEE ON REACTOR SAFEGUARDS (ADMISSIBILITY)**

Reports of the Advisory Committee on Reactor Safeguards (ACRS) cannot be admitted into evidence for the truth of the matter stated therein because ACRS members are generally not subject to examination as witnesses. *Arkansas Power and Light Co.* (Arkansas Nuclear One Unit 2), ALAB-94, 6 AEC 25, 32 (1973).

**RULES OF PRACTICE: SUBPOENAS**

A subpoena request must establish the "general relevance of the testimony . . . sought" to the issues involved. 10 CFR 2.720(a).

**RULES OF PRACTICE: APPELLATE REVIEW**

An appeal in a licensing proceeding can be decided only on the basis of the Licensing Board record — not on the basis of unsubstantiated references to developments purportedly occurring after the record was closed. If changed circumstances or new evidence exists, a party may seek to reopen the record. *Cf. ICC* v. *Jersey City*, 322 U.S. 503, 514 (1944). Exceptions to a licensing board's decision, taken without an offer of record support, will be stricken. 10 CFR 2.762(a), (e).

**RULES OF PRACTICE: EXCEPTIONS**

Claims of error that are without substance or are inadequately briefed will not be considered on appeal. See *Public Service Electric and Gas Co.* (Salem Nuclear Generating Station, Unit 1), ALAB-650, 14 NRC 43, 49-50 (1981).

**TECHNICAL ISSUES DISCUSSED:**

Hydrogen generation from a LOCA;
hydrogen combustion;
hydrogen control;

emergency hydrogen control systems;
ice condenser containments;
containment pressure limits;
computer codes: MARCH, CLASIX.

## APPEARANCES

**Mr. J. Michael McGarry, III,** Washington, D.C. (with whom **Messrs. Malcolm H. Philips, Jr.,** Washington, D.C., and **William L. Porter** and **Albert V. Carr, Jr.,** Charlotte, North Carolina, were on the brief), for Duke Power Company, *applicant.*

**Mr. Jesse L. Riley,** Charlotte, North Carolina (with whom **Mr. Shelley Blum** and **Ms. Debby Allen,** Charlotte, North Carolina, were on the brief) for Carolina Environmental Study Group, *intervenor.*

**Mr. Joseph F. Scinto** (with whom **Mr. Edward J. Ketchen, Jr.,** was on the brief) for the *Nuclear Regulatory Commission staff.*

## DECISION

Before us is the appeal of the intervenor Carolina Environmental Study Group (CESG) from two decisions of the Licensing Board. In combination, these decisions authorized the Director of Nuclear Reactor Regulation (NRR) to issue full-term, full-power operating licenses for the facility.

In the first of these decisions, the Licensing Board determined all matters in controversy in favor of the applicant. LBP-79-13, 9 NRC 489 (1979). It accordingly authorized the issuance of operating licenses for the facility once the NRR Director made all of the other findings requisite to such issuance.[1] For reasons not pertinent to this appeal, however, the Licensing Board stayed the decision's effectiveness pending further order.[2] Consequently, in a June 21, 1979 unpublished order, the Appeal Panel Chairman deferred the commencement of the time for the filing of exceptions until the issuance of the subsequent Board order.

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[1] Under the Commission's regime for operating license proceedings, a Licensing Board's role is limited to resolving matters that are raised either by the parties or by the Board *sua sponte*. All other matters that must be considered prior to the issuance of the requested operating license are the responsibility of the Director alone. 10 CFR 2.760a; *Consolidated Edison Co.* (Indian Point, Units 1, 2 & 3), ALAB-319, 3 NRC 188, 190 (1976).

[2] Specifically, the Board retained jurisdiction pending receipt of a Supplemental Safety Evaluation Report addressing certain unresolved generic safety issues. 9 NRC at 545, 546-47, 547-48.

On June 9, 1980, while the decision's effectiveness remained suspended, CESG moved to reopen the evidentiary record. Alluding in its motion (at p. 1) to the loss-of-coolant accident (LOCA)[3] that had occurred at Unit 2 of the Three Mile Island facility (TMI-2) in March 1979, CESG expressed concern that a "TMI-2 type of accident involving hydrogen release and rapid combustion" at McGuire could adversely affect the public health and safety by causing rupture of the reactor containment building and release of radioactivity to the atmosphere. As later revised on August 15, 1980, the motion was granted and an evidentiary hearing was held on certain specific contentions raised by CESG.

On May 26, 1981, the Board issued a supplemental initial decision. LBP-81-13, 13 NRC 652. Noting that a principal cause of the TMI-2 accident was premature operator interference with the emergency core cooling system (see p. 460, *infra*), the Board found that subsequent changes in plant and equipment, upgraded operator training and operating procedures, and other improvements undertaken by this applicant since the TMI-2 accident rendered the likelihood of this type of occurrence at the McGuire facility "so remote" as to be "not credible." *Id.* at 661-67. The Licensing Board also found that, even if a TMI-2 type accident were to take place at McGuire, there was reasonable assurance that the ECCS would be initiated in time to prevent the generation of hydrogen in excess of the design basis of the facility. *Id.* at 667, 674. On the strength of these and other findings, the Board lifted its earlier stay of the April 1979 decision.[4] *Id.* at 674-75.

CESG has taken a total of some 28 exceptions to both decisions. Addressing its exceptions in the main to the May 1981 supplemental decision,[5] CESG's complaint essentially is that the Licensing Board's consideration of the problem of hydrogen generation and control was insufficient. It disputes the conclusion that the McGuire hydrogen mitigation system could successfully prevent a hydrogen explosion in the event of a LOCA. Similarly, CESG disputes whether the containment could withstand such an explosion and thus avoid the release of large amounts of

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[3] A loss-of-coolant accident involves depletion (by any abnormal occurrence) of the volume of water ordinarily available to cool the reactor core. Some loss can be tolerated as long as enough coolant remains to prevent excessive overheating of the fuel in the reactor. Every power reactor incorporates an Emergency Core Cooling System (ECCS), which is designed to replenish the coolant automatically, should a LOCA occur.

[4] We denied CESG's motion for a stay of the effectiveness of these decisions. ALAB-647, 14 NRC 27 (1981). For its part, acting under a then-amendment to 10 CFR 2.764 (46 *Fed. Reg.* 28627 (May 28, 1981)), the Commission determined *sua sponte* to allow a full-power license to issue for Unit 1 (judgment was reserved with regard to Unit 2), subject to later confirmation that applicant's igniter hydrogen mitigation system is adequate for the long-term. CLI-81-15, 14 NRC 1 (1981). The Unit 1 license was issued on July 8, 1981.

[5] CESG's Exceptions to Initial Decision (June 8, 1981), Exceptions 1-17; Appeal Tr. 14-42 ["App. Tr."].

dangerous radioactivity to the surrounding environment. The applicant and NRC staff support the Licensing Board's decision.

We consider below the arguments made by CESG before us. To the extent the Licensing Board's 1979 initial and 1981 supplemental decisions are consistent with this opinion, we affirm. We also make some additional findings on the record.

## I. Background

As noted, this appeal centers on the Licensing Board's treatment of the question of hydrogen generation and control associated with a LOCA. We start therefore with a description of the accident at TMI-2 and a discussion of hydrogen evolution from a LOCA, its distribution within a reactor containment, and its combustion.

### A. The Accident at TMI-2: Hydrogen Generation[6]

The TMI-2 accident involved a pressurized water reactor designed by Babcock and Wilcox. A reactor of that type is housed within a containment structure and composed of a large steel vessel containing a core of nuclear fuel (in the form of uranium pellets in zircaloy[7] tubes) submerged in water. Simply stated, the water, under intense pressure, is heated by fission of the fuel during reactor operation and is circulated by pumps and connecting pipes from the reactor vessel through another vessel (the steam generator) and back to the reactor vessel in a continuous flow process.[8] This circuit is referred to as the primary flow path (or primary side). The primary water flows through a large number of long, narrow tubes in the steam generator. The outside surface of these tubes is in contact with another, wholly independent, water system referred to as the secondary water system (or secondary side). The primary water flowing through the tubes in the steam generator heats the secondary water to produce steam. The steam proceeds from the steam generator to the turbine-generator where its energy is converted to electricity. Upon passing through the turbine-generator, the steam is led to a condenser where it turns to water. The water is then returned by feedwater pumps to the steam generator to begin another cycle of secondary water/steam flow.

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[6] For a fuller description of the TMI-2 accident sequence, see "Investigation into the March 28, 1979 Three Mile Island Accident by Office of Inspection and Enforcement," Appendix I-A, NUREG-0600 (August 1979).

[7] Zircaloy is an alloy of zirconium, tin, iron and other materials.

[8] The TMI-2 reactor has two steam generators running in parallel.

The TMI-2 accident started when the feedwater pumps, which deliver water to the secondary side of the steam generators, "tripped," or ceased to operate. 13 NRC at 661. TMI-2 was designed so that if such an event occurred, the flow of feedwater was supposed to continue through a back-up system. Without describing the entire sequence of the accident, it suffices for our purposes to note that neither the feedwater nor the back-up water supply reached the steam generators. This caused the water in the primary system to heat up rapidly with an accompanying increase in pressure in that system. The pilot operated relief valve (PORV) then opened to relieve the excess pressure.[9] When the pressure decreased, the PORV should have returned to its normally closed position. But at TMI-2 this did not happen, and the stuck-open valve became, in essence, a form of LOCA because it enabled the escape of coolant from the primary system.

Although there are emergency systems designed to remedy such abnormalities, and although these systems functioned properly, their operation was overridden by operator action in several instances. Tr. 4065. See also *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), CLI-80-16, 11 NRC 674, 675, 676 (1980) [*"TMI-1 Restart"*]. The consequence was that the water level in the primary side (the water in contact with the fuel rods) fell below the top of the core. Once the core became uncovered, the residual heat from fission product decay[10] continued to raise the temperature of the fuel rods and converted some of the water in the reactor vessel to steam. The ensuing contact between the water/steam mixture and the excessively heated zircaloy cladding of the fuel rods resulted in the oxidation of the zircaloy, which in turn released a substantial quantity of hydrogen.[11] The hydrogen escaped the reactor vessel to the space within the containment structure through valves that were open at various times during the accident. Some of the hydrogen apparently accumulated there and combined with sufficient oxygen in the air to produce rapid burning, causing pressure rises in the containment.[12]

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[9] This valve is located at the top of a pressurizer vessel which is directly connected to the primary system piping. The valve is specifically designed to open automatically to relieve pressure on the primary side whenever the pressure reaches a certain preset limit.

[10] Full power operation had automatically terminated earlier in the accident.

[11] For a more detailed discussion of the hydrogen evolution phenomenon, see "The Behavior of Hydrogen During Accidents In Light Water Reactors," NUREG/CR-1561 (August 1980).

[12] 10 CFR 50.44 sets the Commission standards for combustible gas control systems in light water reactors. 43 *Fed. Reg.* 50162 (October 27, 1978). Under these standards, gas control systems must accommodate the amount of hydrogen that would result from the reaction between steam and five percent of the metal cladding around the fuel rods. 10 CFR 50.44(d)(2). There is evidence that the TMI-2 accident, however, resulted in a much greater metal-steam reaction. The Commission is therefore reevaluating the 10 CFR 50.44 standards

(CONTINUED)

## B. Hydrogen Distribution and Control

The TMI-2 containment was designed to withstand pressures significantly higher than that produced by the hydrogen burn.[13] In the case of some reactors, however, the containment *design* pressure is less than the peak pressure that was experienced at TMI-2. The McGuire reactors (which, unlike the TMI-2 reactor, utilize an ice condenser containment) fall into that category.[14]

An ice condenser is designed to limit the peak pressure in the containment structure during the "normal" design basis LOCA (*i.e.*, one in which the safety systems function properly to keep the core covered with water). In such a LOCA, it is assumed that a large amount of high-temperature steam generated by the rapid boiling of the hot primary water will escape into the containment through a large pipe break. See 10 CFR Part 50, Appendix A. The addition of this steam will increase the pressure within the containment. The ice condenser located within the containment will prevent, however, a significant increase in that pressure by converting much of the steam back to water. This occurs by the circulation of the steam over large volumes of ice located in that condenser. By reason of this process, an ice condenser plant is expected to experience lower peak pressures in the event of a design basis LOCA than other facilities without ice condensers. Consequently, the walls of a containment with an ice condenser are much thinner than those of other containments.

As we have seen, if the safety systems do not function properly, or are interfered with to the extent that the core becomes uncovered (as at TMI-2), large quantities of hydrogen may be generated. In such an event, the way in which the hydrogen is distributed throughout the total volume of the containment becomes important.

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and their underlying assumptions and has embarked on a long-term rulemaking to explore this area. 45 *Fed. Reg.* 65466 (October 2, 1980). For the interim, the Commission recently adopted some partial amendments to 10 CFR 50.44, requiring inerting, hydrogen recombining, and venting in certain types of reactors. 46 *Fed. Reg.* 58484 (December 2, 1981). It has also proposed requiring reactors with ice condenser containments (see pp. 461-62, *infra*) to install hydrogen control systems that can accommodate hydrogen from a 75 percent metal-steam reaction. 46 *Fed. Reg.* 62281 (December 23, 1981).

[13] The TMI-2 containment design pressure was 60 pounds per square inch gauge (psig), whereas the peak pressure reached during the hydrogen burn from the accident was about 28 psig. Tr. 3369, 3372-73.

At the hearing below, pressure was denoted in terms of either psig or psia (pounds per square inch absolute). A pressure denoted in psia can be converted to psig by subtracting the atmospheric pressure (nominally 14.7 psi). For the sake of uniformity, we express all pressures in this decision in psig.

[14] The containment design pressure for McGuire is 15 psig. Final Safety Analysis Report, at p. 3, 8-8. But see pp. 469-70, *infra*, where we discuss evidence that the McGuire containment can, in fact, withstand substantially greater pressures.

In the ice condenser design such as that for the McGuire plant, the containment consists of three major segments — the lower one, which contains the reactor vessel, the primary and secondary coolant piping, associated pumps, and the steam generators; the middle one, which contains the ice condenser system; and the upper one, which is relatively free of equipment. Staff Exh. B, "Safety Evaluation Report," NUREG-0422 (March 1978), p. 6-4. Because of its source (the steam zircaloy reaction), the hydrogen produced in the design basis LOCA will be emitted from the hypothesized pipe break into the lower containment segment. At this point, the hydrogen will become mixed with steam and air and then will be distributed initially by the turbulence that naturally takes place during ejection from the pipe. This hydrogen mixture will move upward through the ice condenser by natural convection and forced flow induced by large fans located at various points in the containment space. As the hydrogen mixture passes through the ice condenser, the steam condenses and the resultant condensate falls to the bottom. The hydrogen and air flow out of the ice condenser at the top and into the upper containment segment. See Lewis Panel, fol. Tr. 3144, at pp. 9-10.

Although the flow path of the hydrogen-steam-air mix is as we have just described, the hydrogen concentration at the various points along this flow path may not always be uniform. The concern is that large volumes of hydrogen might accumulate at some location. If this hydrogen were to mix with sufficient air and ignite, it might be susceptible to rapid combustion (detonation), producing pressures such as were observed at TMI-2. See fn. 13, *supra*.[15]

## II. Hydrogen Generation and Control at McGuire

### A. Scope of Contentions

1. In granting CESG's August 15, 1980 revised motion to reopen, the Licensing Board admitted four contentions for litigation.[16] The Board ultimately determined, however, that only the following first two of those contentions required its consideration:

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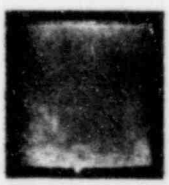
[15] The speed of combustion will depend largely on the concentrations of the hydrogen and oxygen ignited in the volume. See pp. 467-68 & fn. 27, *infra*. It can range from that experienced in the operation of a household gas stove to an explosion.

[16] After the record had been reopened at its behest, CESG endeavored to inject two more contentions into the proceeding. Contention 5 stated that an environmental impact statement on the consequences of a Class 9 accident at McGuire was required, and contention 6 urged that the emergency response plan for McGuire be revised to include the city of Charlotte, North Carolina. In an unpublished memorandum and order issued February 13, 1981, the Licensing Board denied the admission of both.



*Contention 1:* The licensee has not demonstrated that, in the event of a loss-of-coolant accident at McGuire:

1. substantial quantities of hydrogen (in excess of the design basis of 10 CFR § 50.44) will not be generated; and
2. that, in the event of such generation, the hydrogen will not combust; and
3. that, in the event of such generation and combustion, the containment has the ability to withstand pressure below or above the containment design pressure, thereby preventing releases of off-site radiation in excess of [10 CFR] Part 100 guideline values.

*Contention 2:* Neither licensee nor NRC staff has demonstrated that a McGuire ice containment will not breach as the result of the rapid combustion of quantities of hydrogen which a dry containment would withstand.

In the Board's view, contentions 1 and 2 called upon it to decide at the threshold whether the occurrence of a "TMI-2 type" accident at McGuire was "credible". The Board rested this conclusion upon a Commission ruling in the proceeding concerned with the restart of Unit 1 of the TMI facility. 13 NRC at 657-60. See *TMI-1 Restart, supra,* 11 NRC at 675-76.

Contentions 3 and 4 explicitly assumed a containment rupture as a result of a hydrogen explosion and its consequences.[17] The Licensing Board initially deferred receipt of evidence on them to abide the event of its findings on contentions 1 and 2, which, as we have seen, dealt with the containment rupture question. Tr. 3481-83. The Board ultimately rejected those contentions (1 and 2) on the merits after the hearing and found that generation of excessive amounts of hydrogen, breach of containment, and offsite doses of radiation in excess of 10 CFR Part 100 values[18] were not credible events. Acordingly, it ruled that "the premise for CESG Contentions 3 and 4 has not been established and there is no need to make specific findings with respect to those contentions." 13 NRC at 674.

2. CESG argues on appeal that the Licensing Board erred in requiring it to establish a credible accident scenario resulting in the generation of

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[17] These contentions read as follows:

*Contention 3:* Neither licensee nor NRC staff has demonstrated that the emergency planning radius of 10 miles is sufficient for protecting the public from the radioactive releases of a low pressure, ice condenser containment ruptured by a hydrogen explosion.

*Contention 4:* Licensee and NRC planning do not provide for crisis relocation which would be required as a result of containment breach and radioactive particle release.

[18] 10 CFR Part 100 prescribes reactor siting criteria in terms of offsite doses of radiation assumed to result from a containment leak.

amounts of hydrogen exceeding those that the McGuire facility is designed to handle. CESG's Brief — Appeal of Initial and Supplemental Decisions (July 8, 1981), p. 24["Br."]; App. Tr. 8. In our view, however, the Board correctly relied on the Commission's guidance in the *TMI-1 Restart* proceeding and thus concluded that contentions 1 and 2 should be considered solely in the context of a credible accident.

Commission regulations set standards for hydrogen control that each facility must meet before being licensed. These standards are based on certain assumptions concerning the rate and amount of hydrogen production from a metal-water (steam) reaction during a LOCA. See 10 CFR 50.44 and fn. 12, *supra*. Neither the standards nor the assumptions upon which they are based are subject to challenge in an adjudication unless the Commission specifically authorizes it. 10 CFR 2.758. CESG's contentions 1 and 2 implicitly sought such a waiver.[19] Because a contention in the *TMI-1 Restart* proceeding raised the same issue, the Licensing Board relied on the guidance of the Commission itself in that matter. 13 NRC at 657-60. The Commission had refused to waive the application of the 10 CFR 50.44 standards to TMI-1 but found that,

> quite apart from 10 CFR 50.44, hydrogen gas control could properly be litigated in this proceeding under 10 CFR Part 100. Under Part 100, hydrogen control measures beyond those required by 10 CFR 50.44 would be required *if it is determined that there is a credible loss-of-coolant accident scenario* entailing hydrogen generation, hydrogen combustion, containment breach or leaking, and offsite radiation doses in excess of Part 100 guideline values.

*TMI-1 Restart, supra*, 11 NRC at 675 (emphasis added).[20]

The Licensing Board quite properly relied on *TMI-1 Restart*. Although the latter ruling was in response to particular questions concerning TMI-1, the Commission was patently aware that matters relating to hydrogen control raised issues "common to all light water power reactors." *Ibid*. See generally "Further Commission Guidance for Power Reactor Operating Licenses; Statement of Policy," 45 *Fed. Reg.* 41738, 41740 (June 20, 1980), *as modified*, 45 *Fed. Reg.* 85236, 85238 (December 24, 1980). The Commission thus having expressed its intent not to waive the design basis assumptions of 10 CFR 50.44 but to consider hydrogen control measures only in the context of a "credible LOCA," it was incumbent upon the Licensing Board — as it is now upon this Appeal Board — to act in

[19] CESG does not dispute that the McGuire facility satisfies the hydrogen control requirements set forth in 10 CFR 50.44.

[20] The Commission also noted that it planned "a broad rulemaking proceeding that will address the general question of possible safety features to deal with degraded core conditions," including "measures to deal with hydrogen generation following a loss-of-coolant accident." 11 NRC at 675.

accordance with that intent. Despite CESG's insistence that "fairness and reasonableness" require otherwise (App. Tr. 8), in this adjudicatory system, no less than in any other, the directives of superior tribunals must be given effect whether or not the subordinate tribunal agrees with them. *Cf. South Carolina Electric and Gas Co.* (Virgil C. Summer Nuclear Station, Unit 1), ALAB-663, 14 NRC 1140, 1150 (1981).[21]

Similarly, we reject CESG's argument that the Licensing Board erred in using a "TMI-2 type" accident as the point of reference for the consideration of contentions 1 and 2.[22] While the contentions themselves may not have been so cast, the motion to reopen that undergirded them rested squarely upon the TMI-2 accident.[23] Indeed, this was necessarily so: it is well-settled that, in order to obtain a reopening of an evidentiary record, a party must establish, *inter alia*, the existence of newly discovered evidence having a material bearing upon the proper result in the proceeding. *Kansas Gas and Electric Co.* (Wolf Creek Generating Station, Unit No. 1), ALAB-462, 7 NRC 320, 338 (1978), and cases cited. In this instance, the TMI-2 accident was the only development subsequent to the closing of the record in 1978 on all contested issues which might have such a bearing upon the hydrogen control matter. CESG therefore had to provide the foundation for any reopening of the record to consider that matter, and its motion necessarily shaped the scope of the reopened proceeding.

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[21] CESG, of course, will have the opportunity to seek Commission review of our decision and can thus attempt to persuade the Commission itself of the merits of its position. See 10 CFR 2.786.

[22] Although the Licensing Board did not indicate explicitly what it thought a "TMI-2 type" accident is, it apparently did not mean to confine that term to accident sequences identical in all significant respects to those of the TMI-2 accident. To illustrate, the Board admitted evidence proffered by applicant in connection with contentions 1 and 2 that related to a LOCA *not* involving operator interference with the functioning of the ECCS. This postulated accident sequence, characterized as S2D, assumed a small LOCA (in the one-half to two inch diameter range) with the break occurring anywhere in the primary coolant system and a simultaneous failure of ECCS operation. Applicant Exh. 5A, at p. 2-2; Tr. 3374. Compare the sequence of events at TMI-2, as described by the Licensing Board. 13 NRC at 661. See also pp. 459-61, *supra*.

[23] The initial motion (filed on June 9, 1980) was introduced with this statement:

> The events at Three Mile Island 2, commencing March 28, 1979, have demonstrated that, at the time of licensing TMI-2 to operate there were still lessons to be learned. [Footnote omitted.] The McGuire construction permit and operating license proceedings were held before this date. There is, further, the reasonable likelihood that there are additional lessons to be learned in the case of a TMI-2 type of accident involving hydrogen release and rapid combustion in a pressure suppression station such as McGuire.

Both it and the revised motion filed on August 15, 1980 were replete with references to the TMI-2 accident.

In short, under established Commission practice and as the result of the successful motion to reopen, the Licensing Board was compelled to resolve simply whether the TMI-2 accident itself (*i.e.*, the intervening event leading to the reopening) required an alteration in the Board's previous, favorable findings on the safety of McGuire operation. That being so, there was no occasion for the Board to entertain CESG's postulation of a wide range of other types of LOCAs (such as those initiated by the complete loss of offsite and onsite power), having no reasonable relationship to what transpired at TMI-2.[24]

**B. The Hydrogen Mitigation System**

Because of its conclusion that a TMI-2 accident was not credible, the Licensing Board found no occasion to determine whether the occurrence of such an accident might cause a containment breach. Nonetheless, the Board received considerable evidence on the latter question, which it summarized in the supplemental initial decision. 13 NRC at 667-73. As it has turned out, this was a fortunate development.

In authorizing the issuance of an operating license for Unit 1 in the wake of the supplemental initial decision (see fn. 4, *supra*), the Commission noted that the applicant had agreed to install and use an igniter hydrogen mitigation system. It stated, without elaboration, its belief that such "installation and use of an appropriate hydrogen mitigation system is required for adequate protection of the public health and safety." CLI-81-15, 14 NRC 1, 2 (1981). Given that expressed opinion, the matter of the efficacy of the applicant's proposed mitigation system assumes present significance whether or not a TMI-2 type accident is credible. We therefore need not pass on the Licensing Board's judgment that a TMI-2 type accident at McGuire is "not credible." See 13 NRC at 667. Instead, we have undertaken an independent examination of the evidence on hydrogen generation and control to ascertain whether there is reasonable assurance that the hydrogen mitigation system at McGuire will prevent the buildup of unacceptable containment pressures, even if a TMI-2 type accident were to occur.[25]

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[24] CESG, of course, had every opportunity to raise such issues (through the filing of acceptable and timely contentions) before the commencement of the initial health and safety hearings that took place several years ago.

[25] The concurring opinion strongly implies that our determination not to pass on the Licensing Board's "TMI-2 credibility" ruling was inappropriately influenced by the Commission's immediate effectiveness decision. Dr. Buck and Ms. Kohl disagree.

Initially, we reject any suggestion that this decision is "prejudiced" or grounded on anything other than the evidence of record adduced before the Licensing Board and arguments made on appeal before this Board. Further, the Commission's immediate effectiveness order does not provide "*of itself*, [the] justification for not reaching" the TMI-2 credibility issue. See p.

(CONTINUED)

1. The hydrogen mitigation system consists of igniter assemblies (essentially electric power "glow plugs" similar to those used to assist initial ignition in diesel engines) strategically placed in various parts of the containment,[26] air return fans, hydrogen skimmer fans, and containment sprays. Its purpose is to prevent the accumulation of such amounts of hydrogen as might, when combined with the oxygen found in the air in the containment, produce an explosion which would, in turn, bring about high pressure peaks.[27] It accomplishes this objective by causing the hydrogen to burn at low concentrations before it reaches explosive levels. The air return fans, skimmer fans, and containment sprays serve to insure a sufficient

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484, *infra* (emphasis added). The order, of course, played some role in our determination. To intimate otherwise would be intellectually dishonest. On the other hand, to have ignored it entirely — an option eschewed even by the concurrence — would have been both ill-advised and myopic. Thus, we simply took the Commission's order into account with other factors present here — *i.e.*, (1) the fortuitous circumstance of a well-developed record on hydrogen generation and control, and (2) our ability to make an ultimate finding on the adequacy of the hydrogen mitigation system at McGuire without deciding the credibility issue (see p. 472, *infra*). As a consequence, we found no occasion to grapple with what the concurrence acknowledges is not an easy task — defining "credible" and then determining if a TMI-2 type accident at McGuire could be so characterized. See p. 485 fn. 8, *infra*. (Indeed, even in the absence of the Commission's order, we could, and perhaps would, have pursued the same course.)

Moreover, our chosen path is one commonly open to and followed by this and other intermediate appellate tribunals. See, *e.g.*, *Asphalt Roofing Manufacturers Association* v. *ICC*, 567 F.2d 994, 1002 (D.C. Cir. 1977), where the court of appeals refused to decide whether the ICC's determination of revenue need in a "general revenue" rail rate proceeding was judicially reviewable but chose instead to review the underlying agency record, finding a rational basis for the ICC's order. See also *Consumers Power Co.* (Big Rock Point Nuclear Plant), ALAB-636, 13 NRC 312, 329 fn. 32 (1981); *Houston Light and Power Co.* (Allens Creek Nuclear Generating Station, Unit No. 1), ALAB-625, 13 NRC 13, 15 (1981). We have no obligation to rule on every discrete point adjudicated below, so long as we are able to render a decision on other grounds that effectively dispose of the appeal.

Finally, two aspects of the concurrence are noteworthy. First, despite the exhortation of an "obligation" to pass on the Licensing Board's ruling and on what is characterized (wrongly, in our view) as a "principal" question on appeal (pp. 482, 481, *infra*), the concurring opinion curiously neither offers a definition of "credible" nor expresses a view on whether a TMI-2 type accident is "credible" at McGuire. Second, if carried to its logical conclusion, the concurrence would find no need for or value in exploring the adequacy of the hydrogen mitigation system, unless it were first determined that a TMI-2 type accident is in fact "credible." Yet, as noted above, our concurring colleague does not offer his views on the credibility of a TMI-2 event at McGuire or make any effort to disassociate himself from the discussion of the mitigation system's adequacy. In fact, he "fully subscribe[s]" to it. See p. 482, *infra*.

[26] Forty-six of the igniters are located in the lower compartment, eight in the upper plenum of the ice condenser and eight in the upper containment region. Rasin, fol. Tr. 3488, at p. 1.

[27] With sufficient oxygen present the lower limit of flammability is about four percent hydrogen. Between six and ten percent concentration, hydrogen will burn in a propagating manner. The lower limit for detonation is about 18 percent hydrogen. Lewis Panel, fol. Tr. 3144, at pp. 1-12.

mixture of oxygen and hydrogen to enable the latter to burn upon contact with the igniters. Canup, fol. Tr. 3488, at pp. 2-3.[28]

To verify its effectiveness, the applicant performed an analysis of this system.[29] For purposes of the analysis, it assumed a small break at some point in the primary cooling system (in the one-half to two-inch diameter range), coupled with a failure of the ECCS at the inception — an accident sequence identified at S2D. Applicant Exh. 5A, at p. 2-2; Tr. 3374. See also fn. 22, *supra*. It also assumed that the accident progresses long enough to generate a quantity of hydrogen from approximately a 75 percent zirconium/steam reaction. Tr. 3203-04.[30] The peak containment pressure from that accident was computed to be less than 16 psig. Lewis Panel, fol. Tr. 3144, at p. 2-3.[31]

The staff also evaluated various accident sequences in which hydrogen is generated and burned — not only the S2D sequence but, as well, pipe breaks up to five inches in diameter accompanied by an ECCS failure either at the outset of the accident or at some subsequent point. Staff Exh. K, fol. Tr. 4353, at pp. 19, 26-27.[32] In addition, it conducted analyses of variations of the S2D sequence, including an accident which assumed the meltdown of all the ice in the condenser before all the hydrogen is burned. In the "majority" of the sequences considered, the result was a three psi increase in pressure in the containment. Even in the instance of the S2D sequence with ice meltdown, the calculations showed that the peak pressure would rise only to about 35 psig. Staff Exh. K, fol. Tr. 4353, at pp. 26-27. See fns. 13 & 14, *supra*.

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[28] Although designed primarily to remove excess heat from the containment atmosphere (thereby reducing the pressure), the containment spray augments mixing by promoting turbulence. Tr. 3329; Lewis Panel, fol. Tr. 3144, at p. 4.

[29] The applicant used hydrogen releases derived from the MARCH code and calculated the various containment pressures with the CLASIX code. Applicant Exh. 5A, at pp. 2-2 - 2-9; Applicant Exh. 5B, at pp. 2-10 - 2-14; Staff Exh. K, fol. Tr. 4353, at pp. 20-27. A brief description of these codes is contained in Appendix A to this decision.

[30] A 75 percent zirconium/steam reaction was used so as to simulate a TMI-2 type accident in which there is an uncovering of the core but not a substantial core melt. At about a 75 percent reaction, other factors would come into play that would limit hydrogen generation. Tr. 3203-04. Moreover, the Commission has stated that "[e]vents with metal-water reactions in excess of 75% are judged to be associated with core-melt accidents which could pose a threat to containment greater than the combustion of hydrogen." 46 *Fed. Reg.* at 62282, *supra*.

[31] The applicant's base case hypothesized operability of the mitigation systems (*e.g.*, the igniters, containment air return fans, and containment sprays). The applicant also performed sensitivity studies in which the operability of these systems and other parameters were varied. Only a few cases with extreme variations of the parameters (inoperative air return fans or very high hydrogen concentrations) led to peak pressures in excess of the containment functional capability. But, on this score, the applicant's witnesses testified that, even if nothing but the igniters were operational, if one accounted for heat losses to the steel walls of containment, the containment would not be overpressurized. Tr. 3191-97, 3357-61.

[32] The staff based its evaluation model on the Sequoyah containment, which is similar to the McGuire containment in that both are ice condenser designs of about the same size. Staff Exh. K, fol. Tr. 4353, at p. 26.

On cross-examination of staff witness Meyer, CESG elicited that a staff analysis (by the Brookhaven National Laboratory) of an assumed S2D sequence in which the ECCS started at about one and one-half hours after the LOCA commenced had produced a calculated pressure peak in the upper containment of about 47 psig. Tr. 4425-27. The witness explained, however, that, because of certain conservative assumptions factored into the analysis, that pressure level was unlikely to be reached in an actual accident situation. For one thing, the MARCH code for this sequence assumes that, in addition to delayed operation of the ECCS, the sprays in the upper containment would not function; with the sprays operating, the peak pressure would be lower.[33] Further, the analysis presumed a burning of the hydrogen in the upper compartment at 10 percent concentration until the hydrogen was entirely consumed. According to the witness, "a more probable burn * * * is from eight to four percent or eight to zero percent;" *i.e.*, there would not be as great a temperature rise (and attendant pressure increase in the containment) stemming from the hydrogen ignition. Tr. 4430.

Both the applicant and the staff also conducted studies of the containment structural capability. The applicant had performed two separate analyses to determine the maximum static pressure load the McGuire containment could withstand without losing its leakage resistance. Although the design basis pressure is 15 psig (see fn. 14, *supra*), one study computed that McGuire can in fact withstand a pressure of 67.5 psig (Priory, fol. Tr. 3654, at pp. 1-2), and the other, 68 psig (Orr, fol. Tr. 3654, at pp. 1-2). The staff — through its consultant, the Ames Laboratory of Iowa State University — calculated the mean value to be 84 psig with a standard deviation of 12 psig. Because "the containment shell is approaching tension yield across the complete cross section accompanied by large deformations at the 84 psig value," however, the staff considers the mean pressure minus *three* standard deviations (*i.e.*, 48 psig) to be "the appropriate lower bound pressure capacity * * * [for] leak tightness * * * [to] be assured." Staff Exh. K, fol. Tr. 4353, at p. 28. See also *id.* at 30,

[33] This is because the sprays would absorb some of the heat from the hydrogen burn, lowering the temperature within the containment and the corresponding pressure. Canup, fol. Tr. 3488, at p. 3. Witness Meyer noted one factor, however, that "would have some cancelling effect to that particular conservatism in MARCH" — that is, MARCH tends to equalize rapidly the pressures between compartments. Tr. 4430.

31; Tr. 4893-94, 4903-04, 4940-42.[34] The probability of containment failure at 48 psig was computed to be $4 \times 10^{-5}$ occurrence. Tr. 4894.

In short, both the applicant's analyses of the S2D sequence and the staff's study of that sequence and reasonable variations showed peak pulses below either the 67.5 - 68 psig containment capacity arrived at by the applicant, or the particularly conservative 48 psig calculated by the staff's consultant. Further, the probability of containment rupture at even the latter value is very remote.[35]

2. In its brief, CESG questions, however, the validity of the results of the applicant and staff analyses respecting the efficacy of the hydrogen mitigation system. Br., pp. 11-12. It does so on the basis of the testimony of Dr. Marshall Berman of the Sandia National Laboratories, who appeared as a staff witness.

As earlier noted (fn. 26, *supra*), eight of the igniters are located in the upper plenum of the ice condenser. Dr. Berman expressed the concern that, *inter alia*, pockets of hydrogen in detonable quantities might accumulate in that region and, if ignited, produce an explosion of sufficient force ultimately to damage the containment wall. For this reason, he thought it desirable not to place igniters in the ice condenser. Tr. 4082-84, 4103.

Dr. Berman's concern had a two-pronged foundation. The first was the "anomalous" results of two experiments conducted at the Lawrence Livermore National Laboratory that suggested the "inerting" (failure to burn) in the lower compartment of hydrogen found in a mixture with a steam concentration as low as 23 percent. Tr. 4091.[36] Dr. Berman described this phenomenon as "fogging." *Ibid.* See also CESG Exh. 40A, at pp. 72-107. The second prong of the concern rested upon experiments performed by Dr. John Lee of McGill University in Montreal. The experiments suggested to Dr. Berman that obstacles in the path of the upward flow of the hydrogen/steam mixture through the ice condenser might cause turbulence, which in turn might enhance the possibility of hydrogen accumulation and detonation. Tr. 4083-84, 4095-97.

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[34] The staff consultants used the actual strength of the steel plate in the McGuire containment rather than the value specified in the ASME code. If the code value for material strength had been used in these calculations, the containment pressure capacity would be 39 psig. Staff Exh. K, fol. Tr. 4353, at p. 31.

[35] Even the S2D variation that predicts a peak pressure of 47 psig is within these highly conservative calculations for containment strength. See Tr. 4427-30. As we have seen, in order for the containment pressure to reach that level in the LOCA sequence analyzed, a number of improbable events would have to occur: an initial ECCS failure; a more or less contemporaneous failure of the containment sprays; and a hydrogen burn from 10 percent to zero.

[36] Dr. Berman's use of "anomalous" likely had reference to the fact that numerous other experiments performed at Livermore had produced quite different results: that hydrogen will ignite even where the steam concentration mixture is at 30-40 percent. Staff Exh. K, fol. Tr. 4353, at pp. 15-16.

For its part, the applicant adduced the testimony of, *inter alia*, Dr. Bernard Lewis and Bela Karlovitz, each of whom has extensive experience (in the case of Dr. Lewis, more than 50 years) in the area of hydrogen combustion.[37] Both witnesses expressed the firm opinion that the igniters should be left in the upper plenum of the ice condenser. Indeed, Dr. Lewis stated that, in his view, this was "imperative." Tr. 3152-54.

According to Dr. Lewis (with the concurrence of Mr. Karlovitz), there is a gradual reduction in water vapor content as the hydrogen/water (steam)/air mixture moves through the ice condenser, "with the final concentration" of water (steam) in the upper being "zero". What is in the plenum, therefore, is a mixture of hydrogen and air. When the hydrogen reaches an 8.5 percent concentration, it will ignite. Thus, Dr. Lewis concluded, "you can never build up a high concentration of hydrogen" in the upper plenum. Tr. 3154. See also Tr. 5050-54, 5081, 5084-85, 5089-90.[38]

Both Dr. Lewis and Mr. Karlovitz also testified that the conditions in Dr. Lee's experiments did not simulate the geometry of the McGuire containment. Although there are obstacles in the upper plenum of the ice condenser, the percentage of blockage that caused the turbulence and detonation in the Lee experiments was materially higher. Tr. 5050, 5057-58, 5060-61, 5081-83.[39] Dr. Lewis further emphasized his judgment

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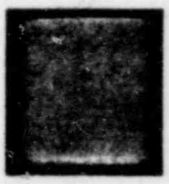
[37] The professional qualifications of these witnesses appear in connection with their prepared testimony, fol. Tr. 3144. At oral argument, CESG's representative characterized Dr. Lewis as the "dean" of "the whole area [of] hydrogen combustion." App. Tr. 39. Dr. Berman similarly acknowledged that Dr. Lewis is a "renowned combustion expert." Tr. 4036-37.

[38] CESG contends that the MARCH and CLASIX codes used in the applicant's analyses (see fn. 29, *supra*, and Appendix A) are inadequate, primarily because they assume incorrectly (in CESG's view) uniform mixing and distribution of hydrogen and air throughout the containment. Br., pp. 37-38. We do not believe that CESG's concerns are well-founded.

The MARCH code may well have its limitations. See CESG Exh. 40A, at pp. 36, 54. While the CLASIX code has been described as "under development," it has been found to predict adequately the containment transient (*id.* at 36; Staff Exh. K, fol. Tr. 4353, at pp. 25, 26). Expert witnesses testified *without regard to either code*, however, that turbulence resulting from a break in the primary coolant system would cause "rapid and complete" mixing of the hydrogen, steam, and air in the lower containment. Air return fans would also accelerate mixing in this region. Turbulence and the flow through exit paths in the so-called "dead-ended" chambers assure "that the hydrogen concentrations in these volumes do not vary significantly from that of the remainder of the lower containment." In the upper regions, the ice condenser removes steam from the mixture as it flows upward, where it is again mixed by turbulence from air return fans and water sprays. Lewis Panel, fol. Tr. 3144, at pp. 9-10. Thus, applicant's analyses based on the assertedly inadequate codes reasonably reflect the actual conditions throughout the containment, insofar as the uniform mixing and distribution of hydrogen and air are concerned.

[39] Dr. Lewis and Mr. Karlovitz have physically observed the McGuire ice condenser containment (Tr. 5085-86); Dr. Berman is generally familiar with, but has not visited, McGuire (Tr. 4215); and the extent of Dr. Lee's knowledge of the plant is unclear (Tr. 4212-13).



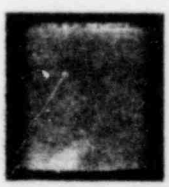
that, in any event, "it is not possible to get a flammable mixture under the conditions laid down by Dr. Berman," and that consequently there was "no relevance in discussing blockage in the ice condenser." Tr. 5061. See also Tr. 5059.

CESG has thus provided no substantial cause for discrediting the expert testimony and conclusions of Dr. Lewis and Mr. Karlovitz. On the other hand, the Commission has explicitly acknowledged the concerns about steam inerting in the lower compartment voiced by Dr. Berman in this proceeding and has just recently instituted a rulemaking to explore the matter of hydrogen control in ice condenser containments. 46 *Fed. Reg.* 62281, 62282 (December 23, 1981). In that connection, the Commission has concluded that "interim approval of deliberate ignition systems for ice condenser plants" is warranted, but has also noted its requirement in individual licensing proceedings "that studies of alternative hydrogen management systems be performed prior to the long-term approval of any particular method." *Id.* at 62282. See fn. 12, *supra*. Thus, at the time the Commission authorized the issuance of applicant's full power, full term operating license, it imposed license conditions requiring Duke Power, in the interim, to continue its hydrogen research program and, for the long term, to install an "adequate" hydrogen control system. 14 NRC at 2.[40]

In these circumstances, we find reasonable assurance that the hydrogen mitigation and control system at McGuire can be operated without endangering the health and safety of the public, during the period in which applicant and the Commission continue to explore the adequacy of the system in place and possible long-term alternatives.

### C. Other Contentions

CESG argues that the Licensing Board erred in not receiving evidence and making findings on its contentions 3 and 4, which challenged the adequacy of emergency planning for McGuire in the event of a hydrogen explosion and containment breach. See fn. 17, *supra*. As noted *supra*, p. 463, the Board found no need to rule on this matter because "the premise for CESG Contentions 3 and 4 [*i.e.*, a hydrogen explosion and containment breach] has not been established." 13 NRC at 674. CESG asserts, however, that without consideration of the consequences of such an



[40] Originally, the Commission was to confirm the adequacy of the McGuire hydrogen control system by January 31, 1982. Licensing Amendment No. 13, however, pushed that date back and now requires confirmation of the system's adequacy prior to startup following the first refueling outage. See Board Notification No. 82-13, "License Amendment on Adequacy of Hydrogen Control Systems" (February 11, 1982).

event, the Board could not make a fair or accurate determination of the risk posed by the McGuire facility. Br., pp. 10-11, 29-30.

We agree that a containment rupture caused by a hydrogen explosion — if established — might well provide a foundation for the consideration of emergency planning issues. But as the record and our preceding discussion at pp. 467-472 shows, the hydrogen mitigation system at McGuire provides adequate assurance that such an explosion and breach are not likely to occur at the facility. CESG has thus failed to provide the necessary predicate required by its own contentions 3 and 4. The Board therefore had no reasonable cause to pursue those issues, and, in the circumstances, we cannot find that it erred in deferring and ultimately foreclosing consideration of CESG contentions 3 and 4.

Relying on arguments it made before the Licensing Board (Br., p. 30), CESG also appeals the denial of its contentions 5 and 6. These contentions as well concerned accident consequences and plant response. See fn. 16, *supra*. For the reasons set forth in the Board's thorough and well-reasoned unpublished memorandum and order of February 13, 1981, we expressly affirm the refusal to admit contentions 5 and 6.

### D. The Licensing Board's Evidentiary Rulings

Although the record does not substantiate CESG's insistence that the McGuire hydrogen mitigation system is inadequate to prevent a containment rupture in the event of a TMI-2 type accident, there remain its claims that certain evidence it attempted to introduce was improperly excluded.

1. a. CESG offered into evidence the written testimony of its representative, Jesse L. Riley, and a number of documents on which that testimony was based.[41] Its avowed purpose was to establish that (i) hydrogen could be generated in substantially greater amounts during a LOCA than considered by the applicant, and (ii) it could accumulate and mix with air in the containment structure in such a way as to detonate, causing rupture of the containment and radiation release.[42]

After an extensive *voir dire*, the Licensing Board found that Mr. Riley did not qualify as an expert on either "strength of the containment structure" or "hydrogen burning or detonation." Tr. 3967. See also 13 NRC at 664. Accordingly, the Board refused to admit the proffered

[41] These documents were identified as CESG's Exhibits 42 through 60. Tr. 3781-3824.
[42] Testimony of Jesse L. Riley Regarding Hydrogen Generation, Combustion, and Containment Response, fol. Tr. 3780, at p. 1.

written testimony and also struck from the record earlier oral testimony given by Mr. Riley. Tr. 3967, 3969.[43]

By Mr. Riley's own admission, he is not a structural engineer. App. Tr. 39. See also Br., p. 8. CESG stresses, however, that he is a "physical organic chemist" who not only has conducted unspecified "studies on explosive, combustible mixtures" but has "read the TMI-2 investigative reports and has the background through academic and practical training" and through "years of reading AEC and NRC documents, to understand and evaluate them." CSEG also maintains that Mr. Riley has the "early engineering background to understand containment information." This background, according to CESG, qualified Mr. Riley as an expert under Rule 702 of the Federal Rules of Evidence. Br., pp. 26-27.[44]

b. Regrettably, the Licensing Board did not fulfill its ironclad obligation to explicate its reasons for finding that Mr. Riley's background was inadequate to meet the qualifications of an expert in areas of "hydrogen burning or detonation" or "strength of the containment structure."[45] See, *e.g., Public Service Electric and Gas Co.* (Hope Creek Generating Station, Units 1 and 2), ALAB-429, 6 NRC 229, 237 (1977); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-422, 6 NRC 33, 41 (1977), *affirmed*, CLI-78-1, 7 NRC 1 (1978), *affirmed sub nom. New England Coalition on Nuclear Pollution* v. *NRC*, 582 F.2d 87 (1st Cir. 1978). Nonetheless, the path it followed in ruling on the matter is sufficiently discernible on the record before us to obviate a remand for further elucidation. See *Bowman Transportation, Inc.* v. *Arkansas-Best Freight System, Inc.*, 419 U.S. 281, 286 (1974).

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[43] The Board acknowledged that certain portions of Mr. Riley's testimony were within his sphere of competence (chemistry). In that regard, it stated (Tr. 3967):

> We have read through those statements and our concern is lessened by the fact that most of that information is already in the record, and it's the intention of this Board to look at those other aspects that might not be in the record and satisfy ourselves that any significant aspects of that are introduced in the cross-examination of witnesses to come. If that is not satisfied in that manner, then the Board will take actions to correct that situation.

[44] Rule 702 provides: "If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise."

In urging affirmance of the rejection of Mr. Riley's testimony, the applicant and the staff do not challenge the applicability of Rule 702 to NRC adjudicatory proceedings.

[45] The Board's stated explanation at the hearing was merely its reference to the "lack of qualifications of the witness to render those opinions as an expert." Tr. 3969. Its supplemental initial decision incorporated by reference the *voir dire* examination of Mr. Riley as well as the oral arguments of counsel for and against the admission of Mr. Riley's testimony. 13 NRC at 664 (citing Tr. 3875-3967).

The Commission Rules of Practice do not expressly state the standard for judging whether a prospective witness qualifies as an expert.[46] In that circumstance, we find the standard incorporated in Federal Rule 702 to be a suitable test for determining the propriety of the Licensing Board's rejection of Mr. Riley's claim of expert status. As noted above (fn. 44, *supra*), that rule allows a witness qualified as an expert by "knowledge, skill, experience, training, or education" to testify "[i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue." The accompanying Advisory Committee notes state that "[w]hether the situation is a proper one for the use of expert testimony is to be determined on the basis of assisting the trier." Notes of Advisory Committee on Proposed Rules, 28 U.S.C.A., Federal Rules of Evidence, fol. Rule 702.

Mr. Riley is a chemist by profession, with a Master's degree in that subject.[47] As noted earlier, he does not lay claim to being a structural engineer as well. Nor does he profess to have had extensive training in, or professional involvement with, the theories of combustion, flame propagation, and explosives. Tr. 3903-04. Rather, as presented in CESG's brief to us, his claimed expertise on the subjects at issue rests mainly on his asserted ability to "understand and evaluate" matters of a technical nature due to his background of "academic and practical training" and "years of reading AEC and NRC documents." Br., pp. 26-27. From all that was presented to the Licensing Board, then, it cannot be said that Mr. Riley possesses any special "knowledge, skill, experience, training, or education" germane to the matters which his proposed testimony addressed.[48] In these circumstances, we are constrained to conclude that the Licensing Board did not abuse its discretion in declining to allow Mr. Riley to present opinion evidence on containment strength and hydrogen generation and control. *N.V. Maatschappij Voor Industriele Waarden* v. *A.O. Smith Corp.*, 590 F.2d 415, 418 (2d Cir. 1978).

2. Following the Board's rejection of Mr. Riley's proffered testimony, CESG moved the admission of 19 documents (CESG Exhibits 40, 42-56, 58-60) into evidence. Tr. 4636. Although those documents had undergirded

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[46] 10 CFR 2.733, however, authorizes a party's use of "a qualified individual who has scientific or technical training or experience to participate on behalf of that party in the examination and cross-examination of expert witnesses." The rules thus clearly contemplate the use of experts as both witnesses and interrogators.

[47] Riley Testimony, *supra*, attachment (Professional Qualifications).

[48] We understand CESG also to imply that Mr. Riley — because of his general background, experience, and familiarity with AEC and NRC documents — could have somehow materially aided the Licensing Board in understanding the issues at hand. On that score, it is enough to note that all three members of that Board (including the Chairman) hold doctorates in one or another scientific discipline.

that testimony (Tr. 3782), CESG maintained that they "can stand on their own" (Tr. 4644). The Licensing Board admitted Exhibits 40, 59 and 60 but denied the motion as to the others on the ground that "they were offered in support of Mr. Riley's testimony, which has not been received in evidence," and that therefore there was no "need for burdening the record with these documents." Tr. 4654.[49]

CESG also moved the admission into evidence of two documents identified as CESG's Exhibits 61 and 62. Tr. 4523-24, 4878-81. The Board admitted Exhibit 61 (Tr. 4525-26) but refused to accept Exhibit 62 for the reason that it represented a document, the reliability of which was in doubt because it had not been vouched for by an expert (Tr. 5020-21). Essentially for that same reason, the Board modified its earlier ruling regarding CESG's Exhibit 59 to provide that it, together with staff's Exhibit M,[50] would not be taken for the truth of the matter assserted therein. Tr. 4663.

Attacking both the exclusion of most of its tendered exhibits and the limitation placed by the Licensing Board on the use of Exhibit 59 and staff's Exhibit M, CESG asserts that an administrative agency cannot constitutionally impose a higher standard for the admission of evidence than that obtaining in a federal court. Br., p. 18. It then insists that the excluded documents were "government agency or consultant reports" and, as such, admissible under Rule 803(8) of the Federal Rules of Evidence, which codifies the "official records" exception to the hearsay rule. *Id.* at pp. 19-20.[51]

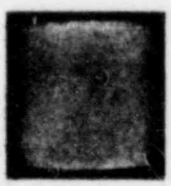
We need not decide whether the exception to the hearsay rule embodied in Federal Rule 803(8) pertains to the documents excluded by the Licens-

[49] The rejected documents are listed in Appendix B to this decision.

[50] Staff sought to place its Exhibit M into the record only "as a document that was referred to in this proceeding" and not to serve as competent evidence itself. Tr. 4657. Objecting to this limitation, CESG moved to introduce the exhibit into the record for "all purposes." *Ibid.*

[51] Rule 803(8) reads in its entirety as follows:

> Public records and reports. Records, reports, statements, or data compilations, in any form, of public offices or agencies, setting forth (A) the activities of the office or agency, or (B) matters observed pursuant to duty imposed by law as to which matters there was a duty to report, excluding, however, in criminal cases matters observed by police officers and other law enforcement personnel, or (C) in civil actions and proceedings and against the Government in criminal cases, factual findings resulting from an investigation made pursuant to authority granted by law, unless the sources of information or other circumstances indicate lack of trustworthiness.



ing Board.[52] Hearsay evidence is generally admissible in our administrative proceedings. *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-355, 4 NRC 397, 411-12 (1976). Thus, whether certain evidence falls within an exception to the hearsay rule is beside the point. Instead, the admissibility of evidence in NRC adjudications is governed by 10 CFR 2.743(c), which provides that "[o]nly relevant, material, and reliable evidence which is not unduly repetitious will be admitted."

Although the Licensing Board again failed to explicate fully its reasons for excluding each of the documents in question (see p. 474, *supra*), the gist of its determination appears to be that the documents are either unreliable for lack of an expert sponsor, irrelevant, or repetitious. We have reviewed the evidence in question and, in general, we agree with the Board's rulings.

Many of the tendered documents recite and analyze the events at TMI-2. See, *e.g.*, CESG Exhs. 42-45, 48-50, 54-56. The record, however, already contained adequate, undisputed testimony relating to those aspects of the TMI-2 accident most relevant to the discrete issues in this reopened proceeding. See 13 NRC at 661 and portions of the record cited therein. CESG fails to show what relevant, nonrepetitive information these exhibits would have contributed to the proceeding. Similarly, the added value of Exhibits 52, 53, and 58 is not apparent.

The other excluded exhibits (CESG Exhibits 46, 47, 51, 59, 62, and Staff Exhibit M) consist of technical analyses, conclusions and opinions on various aspects of the matter of hydrogen generation and control in nuclear power reactors. This manifestly is the type of evidence that calls for sponsorship by an expert who can be examined on the reliability of the factual assertions and soundness of the scientific opinions found in the documents. *Cf. Wisconsin Electric Power Co.* (Point Beach Nuclear Plant, Unit 2), ALAB-78, 5 AEC 319, 332-33 (1972) (citing *Dolcin* v. *FTC*, 219 F.2d 742, 748 (D.C. Cir. 1954), *certiorari denied*, 348 U.S. 981 (1955)).[53]

CESG nonetheless points out that, as to three of the exhibits (59, 62 and M), it had unsuccessfully sought to subpoena sponsoring witnesses. Tr. 4874-79. The Licensing Board denied these subpoena requests on the ground that CESG had not established "exceptional circumstances" requir-

[52] We do note, however, that several of the documents in question are not even "public records" (*e.g.*, CESG Exhs. 45, 48, 49, 54, 55, 56) and that it is questionable whether consultants' reports fall within the ambit of investigative and evaluative reports in Rule 803(8)(C). See Notes of Advisory Committee on Proposed Rules, 28 U.S.C.A., Federal Rules of Evidence, fol. Rule 803.

[53] These documents are not unlike the reports of the Advisory Committee on Reactor Safeguards. These cannot be admitted into evidence for the truth of the matter stated therein because ACRS members are generally not subject to examination as witnesses. *Arkansas Power and Light Co.* (Arkansas Nuclear One Unit 2), ALAB-94, 6 AEC 25, 32 (1973).

ing the witnesses' presence, pursuant to 10 CFR 2.720(h)(2)(i). Tr. 5020. See also Tr. 4985-5020.[54] We need not decide, however, whether the Board erred in this determination. Although the matter is by no means free from doubt, on its appeal CESG has not demonstrated the existence of prejudicial error in the Board's denial of the subpoenas.

Exhibit M is a technical report addressing the "anomalous" Livermore test results respecting the combustion of hydrogen/steam mixtures. As we have seen, those test results were fully explored at the hearing. See pp. 470-472, *supra*. Exhibit 59 is a technical report prepared by the Brookhaven Laboratory which analyzed various matters relating to hydrogen generation and control at the Sequoyah facility. That report and its significance was likewise the subject of considerable testimony, including cross-examination by CESG's counsel. See, *e.g.*, Tr. 4069-70, 4075-76, 4088-94, 4358, 4398-4401, 4423-31, 4462-64. See also admitted CESG Exhs. 40 and 40A. Exhibit 62 is Chapter 8 of a draft consultant report entitled "Reactor Safety Study, Methodology Applications Program, Sequoyah #1 PWR Power Plant," NUREG/CR-1659 (February 1981). That chapter analyzed, *inter alia*, the probability and consequences of hydrogen burning and detonation for several different "hypothesized core meltdown accidents in the Sequoyah PWR." It, too, was the subject of some direct and cross-examination during the testimony of a staff witness. See, *e.g.*, Tr. 4451-64.[55]

Thus, all three exhibits were explored in testimony at the hearing. CESG has offered no cogent explanation as to how the formal admission of these exhibits, with or without the sponsorship of subpoenaed staff witnesses, would have materially contributed to the development of the record or might have altered the outcome of this case. We find no error warranting reversal.[56]

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[54] 10 CFR 2.720(h)(2)(i) provides that the testimony of NRC personnel, other than those already made available by the Executive Director for Operations, may not be required at a hearing unless there is "a showing of exceptional circumstances, such as a case in which a particular named NRC employee has direct personal knowledge of a material fact not known to the [already available] witnesses."

[55] Exhibit 62 was part of the same report that contained Exhibit 61, a one-page table summarizing dominant accident sequences for Sequoyah. The Board admitted the latter (Tr. 4525-26) and cited it in its opinion (13 NRC at 668). The testimony concerning the two exhibits is intertwined (see Tr. 4451-64, 4880), making it difficult to understand the Board's admission of one and exclusion of the other. We note, however, that although Exhibit 62 analyzed the S2D sequence on Sequoyah, the bulk of the chapter dealt with "accident processes" well beyond the scope of hydrogen generation and control during a TMI-2 type accident and thus was beyond the scope of this proceeding.

[56] In any event, we reiterate that the Commission is fully aware of the debate concerning the adequacy of a hydrogen control system like that at McGuire. Applicant is obliged, pursuant to Commission-imposed license conditions, to continue its research in this area and to establish the long-term adequacy of any hydrogen control system. See p. 472, *supra*.

3. CESG also objects to the Licensing Board's denial of a subpoena for Louis Charles Barbe. Br., pp. 28-29. Mr. Barbe's testimony, offered in support of contentions 1 and 2, assertedly was to concern "the human factors involved in reactor operation."[57] The particular focus of the proposed direct examination of this witness was plant and operator response to a control room fire and other such hazards.[58] The Board noted the absence of any control room fire issues in this proceeding and denied the subpoena for lack of relevance. Tr. 3480-81.

We agree with the Board's ruling. To the extent that Mr. Barbe's testimony was to relate to control room fire issues, the subpoena request fails to establish the "general relevance of the testimony * * * sought"[59] to the TMI-2 issues of hydrogen generation and control. Other matters raised in the proposed direct examination ostensibly touched on hydrogen generation and mitigation systems but were not linked to the TMI-2 type LOCA that was contemplated in contentions 1 and 2 and that defined the scope of this proceeding. Moreover, Mr. Barbe's resume does not suggest any background in LOCA-initiated hydrogen generation and control at nuclear power facilities.[60] In these circumstances, we agree with the Board that the general relevance of the proffered testimony of Mr. Barbe is not apparent and thus find no reversible error.

4. On the last day of the hearing, there was extensive testimony concerning the polyurethane foam used in the insulation of the ice condenser. Tr. 5104-73. The apparent concern was that, in the event of a hydrogen burn following a TMI-2 type accident, (1) the polyurethane would decompose from heat (pyrolysis); and (2) the gases from the decomposition would burn, increasing the pressure within the containment. Applicant's witness, however, expressed the opinion that the "additional energy increment" from burning of the polyurethane gases would be "insignificant" and that containment pressure essentially would not be increased. Tr. 5119.

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[57] CESG application for subpoena (February 26, 1981), at p. 2. See also Tr. 3446-47.

[58] CESG application for subpoena, *supra*, attachment (Barbe Direct Examination).

[59] 10 CFR 2.720(a).

[60] CESG application for subpoena, *supra*, attachment (Barbe Resume). CESG argues on appeal that Mr. Barbe's testimony could have provided the "'background with respect to operation of nuclear power reactor facilities'" lacking in the five psychologists who testified for CESG on operator training. Br., p. 28 (citing 13 NRC at 664). But at no point has CESG explained from what experience Mr. Barbe's familiarity with reactor facilities derives. In fact, his resume reflects no background in nuclear engineering, despite CESG's assertion that Mr. Barbe is a "former Westinghouse nuclear division engineer." CESG application for subpoena, *supra*, attachment (Listing of Proposed Witnesses). Rather, Mr. Barbe was Manager of Accident Prevention for Westinghouse Electric Corp. and has held numerous other positions in the safety, fire protection, and industrial hygiene fields.

At the close of the hearing, the staff requested and was granted additional time to review the record on this subject and to file further testimony, if necessary (with the right given the other parties to respond). Finding the record "sufficiently full" on this score and having no "substantial information to add," the staff filed an affidavit on a detailed point of ice condenser construction to provide "a more accurate depiction of the plant as constructed." March 27, 1981 letter from Staff Counsel and accompanying Affidavit of Noonan, et al. On that same day, CESG filed an affidavit of Mr. Riley with his observations of the ice condenser during a tour of the McGuire facility and his views on the additional contributions to the plant's containment pressure from polyurethane decomposition and burning. The applicant later filed a response to staff's affidavit. See 13 NRC at 673

The Licensing Board admitted the staff's and applicant's affidavits but found CESG's "not in response" to the staff affidavit. *Ibid.* In its brief, CESG asserts that Mr. Riley's affidavit "is obviously relevant and should have been accepted into the record," but fails to explain the respect in which its admission might have affected the outcome. Br., p. 24. CESG has thus not established prejudicial error.

### III. Other Exceptions

As noted at the outset, CESG also filed exceptions to the Licensing Board's April 1979 initial decision. There the Board ruled against a number of contentions raised by CESG relating to, *inter alia*, the need for the McGuire plant to meet the anticipated power demands on applicant's system, the availability of other alternatives to meet that demand, and the cost-benefit balance of the plant.

CESG cites 11 instances in which the Licensing Board assertedly erred in its disposition of those contentions (Exceptions 18-28). Its brief, however, offers no *record* support for its claims. Rather, CESG attempts to support those claims by unsubstantiated references to developments purportedly occurring after the record closed. Br., pp. 38-42. For example, arguing against the need for the plant, CESG alleges that the actual growth in peak demand for electric power is less than previously predicted. *Id.* at pp. 38-39. And, in urging that the NEPA cost-benefit balance should now be struck against the plant, CESG directs attention to the increase in plant capital costs since the time of the earlier estimates. *Id.* at pp. 39-42.

The appeal at hand must be decided on the basis of the Licensing Board record before us. If CESG believed there was sufficient cause to reopen the record on NEPA issues, it was free to seek such relief (as it successfully did in connection with the hydrogen issue). *Cf. ICC* v. *Jersey*

*City*, 322 U.S. 503, 514 (1944). In the circumstances, we strike Exceptions 18-28 for want of any offered record support. See 10 CFR 2.762(a), (e).

We have examined the remainder of CESG's claims of error and find them either without substance or inadequately briefed. See *Public Service Electric and Gas Co.* (Salem Nuclear Generating Station, Unit 1), ALAB-650, 14 NRC 43, 49-50 (1981).

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To the extent they are consistent with this opinion, the Licensing Board's April 18, 1979 initial decision and May 26, 1981 supplemental initial decision are affirmed.

We also find reasonable assurance that the hydrogen mitigation and control system at McGuire can be operated without endangering the health and safety of the public, during the interim period in which applicant and the Commission continue to explore the adequacy of the system in place and possible long-term alternatives.

It is so ORDERED.

FOR THE APPEAL BOARD

C. Jean Shoemaker
Secretary to the Appeal Board

**Mr. Rosenthal, concurring:**

The Licensing Board concluded that there was no occasion to decide whether the evidence established that the applicant's hydrogen mitigation system would avert a containment breach in the event of an accident of the TMI-2 variety. The foundation of that conclusion was two-pronged: (1) the Commission's explicit ruling in the *TMI-1 Restart* proceeding that hydrogen control measures need be considered only in the context of a "credible" loss-of-coolant accident;[1] and (2) the Board's finding that the occurrence of a TMI-2 type accident at McGuire was "not credible".

As the majority opinion points out, and as seems beyond serious doubt, the *TMI-1 Restart* guidance was correctly taken by the Licensing Board to apply here. In the circumstances, it is not surprising that a principal question raised by the CESG appeal was whether that Board's finding on the "credible" issue was in error.

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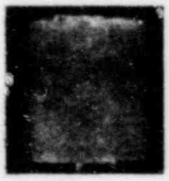
[1] *Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), CLI-80-16, 11 NRC 674, 675 (1980).*

Nonetheless, the majority opinion sidesteps that question. Its basis for doing so is the Commission's June 29, 1981 order addressed to whether the supplemental initial decision (authorizing the issuance of full-power, full-term operating licenses for the two McGuire units) should be allowed to become immediately effective. CLI-81-15, 14 NRC 1. In the course of paving the way for the issuance of such a license for Unit 1 alone, the Commission took note of the fact that the applicant had agreed to install and use an igniter hydrogen mitigation system. It added, without explanation, that it "believe[d] that in this case installation and use of an appropriate hydrogen mitigation system is required for adequate protection of the public health and safety". *Id.* at 2.

I can certainly agree with my colleagues that this pronouncement provided sufficient cause for our independent examination of the adduced evidence on the efficacy of the McGuire hydrogen control mitigation system and the making of findings *ab initio* on that matter. Similarly, I fully subscribe to the analysis of that evidence contained in the majority opinion and each of the determinations which flowed therefrom. I must, however, record my disagreement with the refusal of my colleagues also to pass judgment upon CESG's challenge to the ground of the decision below. More specifically, I believe that, in the absence of an explicit contrary directive from the Commission, our obligation to consider and determine those issues which the CESG appeal properly put before us could not be erased by the June 29 order *per se*. I now turn to the underpinnings of this conclusion.

1. The "immediate effectiveness" review which culminated in the June 29 order was conducted under the authority of 10 CFR 2.764, as it had been then-recently amended. 46 *Fed. Reg.* 28627 (May 28, 1981). In relevant part, Section 2.764(f)(2) provides that, in the instance of a licensing board initial decision authorizing the issuance of a full-power operating license, the Commission will determine on its own initiative whether to stay the effectiveness of that decision.[2] The Section goes on to set forth the criteria which will be employed in making that determination. Although those criteria do not wholly correspond with the standards which govern decisions on *motions* for a stay of an initial decision filed under 10 CFR 2.788(e), there is at least a partial overlap. For example, one of the factors that the Commission is to take into account in its Section 2.764(f)(2) review is "the likelihood that [an important substantive issue] has been resolved incorrectly below"; in ruling upon a Section 2.788(e)



[2] Until that determination is made, the initial decision is automatically stayed.

stay motion, it must be determined, *inter alia*, whether "the moving party has made a strong showing that it is likely to prevail on the merits".[3]

In a two-tier appellate review system such as that prevailing in this agency, it is not customary for the superior tribunal to take a look itself at the merits of a trial-level decision in advance of any scrutiny of that decision by the intermediate appellate body. And, where (as here) there is a prescribed departure from the usual procedure in this regard, a question naturally arises respecting the implications of the determinations of the highest authority in terms of the later appraisal of the same aspects of the trial-level decision by its subordinate. The Commission was not insensitive to this consideration and dealt with it directly. Section 2.764(f)(2)(vi) states explicitly that "[i]n operating license cases, the Commission's review under this section is without prejudice to Appeal Board * * * decisions * * *". Consistent with this declaration, the June 29 order emphasizes that "[t]his effectiveness decision is without prejudice to * * * the normal appellate review of the Licensing Board's decision by the Appeal Board * * *". 14 NRC at 2.[4]

2. Patently, had the Commission's June 29 order not alluded to the need for an "appropriate" hydrogen mitigation system at McGuire, we would have been duty-bound to decide the principal issue presented by the appeal: the validity of the Licensing Board's finding that the occurrence of a TMI-2 type accident at McGuire was "not credible" within the meaning of the May 1980 *TMI-1 Restart* order. For, once again, there appears to be general agreement that that Board had not misread the scope and effect of the latter order; *i.e.*, its teachings applied to McGuire and required an evaluation of the adequacy of the applicant's hydrogen mitigation system in this proceeding only if a TMI-2 type accident at that facility was found "credible".

Thus, my colleagues have allowed the June 29 order to have a substantial — indeed dispositive — impact upon what issues presented by the CESG appeal we would decide. As earlier noted, I have no quarrel with the election to employ that order as a springboard for a full evaluation of the McGuire hydrogen mitigation system. Given the Commission's articulated belief that an "appropriate" system of that stripe was required, it made good practical sense to pursue that course (so long as there was a

[3] The provisions of, and interaction between, Sections 2.764(f)(2) and 2.788(e) were discussed more fully in our decision denying CESG's motion for a stay of the supplemental initial decision, rendered two days after the Commission's June 29 order. ALAB-647, 14 NRC 27, 29-30.

[4] Section 2.764(f)(2)(v) does provide, *inter alia*, for the furnishing of specific instructions to the Appeal Board in connection with the latter's review. No such instructions were issued in the June 29 order.

sufficient record foundation for the evaluation).[5] But I do not understand how it can be suggested that we honor the Commission's admonition that its order was without "prejudice" to Appeal Board review when we use that order as providing, of itself, justification for not reaching an issue which was both crucial to the outcome of the case below and the focal point of the appeal.[6]

In this connection, what would my colleagues have done had there been no (or an insufficient) evidentiary record on the efficacy of McGuire's hydrogen mitigation system? Would they still have declined to pass on the "credible" issue on the strength of the June 29 order? If so, our only recourse would have been to vacate the supplemental initial decision and remand the cause to the Licensing Board with instructions to take further evidence on the hydrogen mitigation system and to render a new decision turning upon the adequacy of the system. In such circumstances, there most assuredly would have been no room for any claim that the June 29 order had not "prejudiced" the outcome of the appellate review. It would have not merely prejudiced, but wholly determined that outcome.[7]

3. My misgivings regarding the effect which my colleagues have given to the Commission's June 29 order in scoping our appellate review are reinforced by that order itself. As previously noted, the order does not illume the precise basis upon which the Commission collegially concluded that public health and safety considerations dictated the installation and use of an "appropriate" hydrogen mitigation system. To be sure, in separate additional opinions, individual Commissioners laid bare their quite divergent views on some aspects of the hydrogen generation problem. 14 NRC at 4-13. But the opinion for the Commission as a whole contains no explicit or implicit indication that the *TMI-1 Restart* guidance was being overturned.

By this observation, I intend no criticism of the Commission. Apart from the fact that it is not my role to assess the wisdom or completeness of the decisions of superior tribunals, I can readily understand why, in the

[5] Whether what was said in the June 29 order imposed a *legal* obligation upon us to examine the sufficiency of the hydrogen mitigation system (assuming the Licensing Board had correctly decided the "credible" issue) is another matter.

[6] Notwithstanding my colleagues' disclaimer in their footnote rejoinder on this matter, I remain persuaded that such is the reality of what has occurred here. Otherwise, I would have cast this opinion quite differently.

[7] The Commission obviously was aware that the Licensing Board had made no findings on the efficacy of the McGuire hydrogen mitigation system. Yet, despite its stated belief that such a system was required, it neither ordered a remand to the Licensing Board nor directed us to make the requisite findings (if possible on this record). While I reiterate that it was proper for us to adopt the latter course on our own, the Commission's silence in that respect cautions against giving the statement in question the adjudicatory significance attributed to it by my colleagues.

totality of circumstances, the Commission might have found it neither necessary nor feasible to dwell at length upon any of the conclusions summarily set forth in the June 29 order. That order, after all, was not the product of a detailed review of the Licensing Board decision and underlying record, following full briefing and possible oral argument. Rather, it issued but a month after the supplemental decision (in recognition of the time limitation which the Commission imposed upon itself in Section 2.764(f)(2)(iv)) and had a clearly defined and limited purpose: that of determining merely whether the public interest would be best served by allowing the supplemental initial decision to become effective before appellate review had taken place. My point is simply that the absence of any hint that the Commission was rescinding the *TMI-1 Restart* guidance supplies a particularly compelling reason why we should have proceeded to decide the raised issue as to whether the guidance was correctly applied on the record of this case — rather than simply discard the issue as having been impliedly declared moot by the Commission.[8]

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It may be that, in this particular instance, no operative significance will attach to my colleagues' resort to the June 29 order in determining what tendered appellate issues should be considered by us. But even if this be so, the question of the propriety of that action retains future importance. It is a virtual certainty that the Commission will be called upon with increasing frequency to conduct "immediate effectiveness" reviews of licensing board initial decisions in operating license proceedings. And it is reasonable to suppose that, as in this case, the order issued in connection with at least some of those reviews will contain conclusions which might appear "without it being so stated by the Commission) to have a bearing upon the necessity that an appeal board reach a specific issue presented to it on a Section 2.762(a) appeal. Thus, it can be expected that the situation which has confronted and divided us here will recur — very possibly in a context where the appeal board's treatment of it will have a discernible effect upon the outcome of the appeal.

It is essentially for this reason that, notwithstanding my full endorsement of the outcome of our deliberations in the present case, I have felt constrained to ventilate the foregoing concerns. As I see it, there is ample warrant for further Commission guidance respecting the use to be made by

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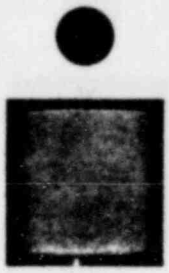
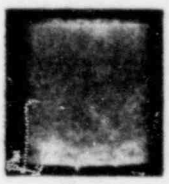
[8] I do not wish to be understood as believing that a decision on that issue necessarily would have been easy. The term "credible" is not defined in the *TMI-1 Restart* order and, to my knowledge, it has not elsewhere acquired a settled meaning for NRC regulatory purposes. Nor for those purposes is the standard dictionary definition particularly illuminating.



the appeal boards of a statement contained in a Section 2.764(f)(2) order which is not accompanied by explicit instructions as to the effect that is to be given that statement in the course of the normal appellate review. I am hopeful that that guidance will be forthcoming.

Dr. Buck and Ms. Kohl have authorized me to state that, although in disagreement with my views on the propriety of not reaching the "credible" issue here, they share the belief that it would be helpful if the Commission clarified its intent respecting the effect which appeal boards are to accord Section 2.764(f)(2) orders.



## APPENDIX A

### The MARCH and CLASIX Computer Codes

The MARCH code computes, among other things, the rate of hydrogen generation that results from uncovering and overheating of the core.[1] The MARCH code, developed and used by Battelle, Columbus Laboratory in this proceeding, modeled the upper and lower containment compartments with the ice condenser as a junction, not a separate segment. Staff Exh. K, fol. Tr. 4353, at p. 26. The code included models for ice bed heat removal, structural heat sinks, return air fans and containment sprays. *Ibid.*[2]

The CLASIX code, developed by Westinghouse/Offshore Power Systems, is a multi-volume containment code[3] "which calculates the containment pressure and temperature response in the separate compartments." *Id.* at pp. 20-21. See also Applicant Exh. 5B, at pp. 2-15 - 2-20. The CLASIX code also models the containment air return fans, spray and flow paths through the ice condenser doors, and can track the distribution of the important components in the containment atmosphere (oxygen, nitrogen, hydrogen and steam). Staff Exh. K, fol. Tr. 4353, at p. 21. See also Applicant Exh. 5B, at p. 2-16, Figures 1 and 2, fol. p. 2-20.

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[1] As explained by the staff, the rate of hydrogen production is usually steam limited: "The rate of hydrogen release from the primary system depends on the rate of steam release and the mass fraction of hydrogen in the total steam volume." Staff Exh. K, fol. Tr. 4353, at p. 18.

[2] The sprays are assumed, due to code restraints, to remove heat only after all the ice is melted. *Id.* at p. 26.

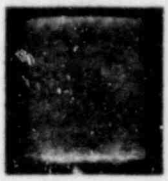
[3] The model for McGuire utilized six volumes which were interconnected by appropriate flow paths. Applicant Exh. 5B, at p. 2-15. This permits representation of several of the major subcompartment volumes, *e.g.*, the upper containment volume, the ice condenser, and the lower containment volume, which is divided into several subvolumes.

## APPENDIX B

### Documents Excluded by the Licensing Board

| Exhibit Number | Title of Document | Insitutional Author | Summary Description |
|---|---|---|---|
| 42 | "Analysis of the TMI Accident and Alternative Sequences," NUREG/CR-1219 pp. V-Vi, 1-1 - 1-4, 2-1 - 2-8 | Battelle, Columbus Laboratory | Portions of MARCH computer code analyses of variations in system operation in a TMI-accident scenario. Portions consist of the Abstract and Summary sections and a factual recitation of the TMI accident. |
| 43 | *Id.*, pp. 5-1, 5-18, figs. 5-3, 5-4, 5-5 | | Portions consisting of MARCH analyses of alternative scenarios. |
| 44 | *Id.*, pp. 8-1 to 8-8 | | Portions consisting of MARCH analyses of hydrogen burning in TMI Accident. |
| 45 | "Testimony of A. D. Miller Regarding Hydrogen Production at TMI" | NSAC | Proposed applicant testimony by a Nuclear Safety Analysis Center (NSAC) member of events leading to, and amount of hydrogen generated during, the TMI accident. Contains portions |

| Exhibit Number | Title of Document | Institutional Author | Summary Description |
|---|---|---|---|
| | | | of "NSAC-1" study (11 pages, & figures). |
| 46 | "Hydrogen Problems in Sequoyah Containment" | R&D Associates | Report to NRC on ice condenser plant containment response to hydrogen production, burning and mitigation by igniters (7 pages & appendices). |
| 47 | Memorandum | NRC | NRC technical memorandum commenting on Commission Paper SECY-80-107, "Proposed Interim Hydrogen Control Requirements for Small Containments" (7 pages & figures). |
| 48 | NSAC-1 "Analysis of Three Mile Island Unit-2 Accident." Figures TH9, TH10, TH11 | NSAC | Portions of a Study (NSAC-1) of the TMI-2 accident, consisting of 3 diagrams related to the TMI-2 ECCS. |
| 49 | *Id.*, Appendix PDS, pp. 12-14 | NSAC | Portions of an appendix describing the |



| Exhibit Number | Title of Document | Institutional Author | Summary Description |
|---|---|---|---|
| | | | TMI-2 plant computer. |
| 50 | Memorandum | NRC | NRC memorandum analyzing and evaluating selected TMI-2 containment related issues (7 pages). |
| 51 | "Sequoyah Containment Analysis" | R&D Associates | Critique of Ames analysis of Sequoyah Containment (22 pages). |
| 52 | Memorandum | NRC | NRC memorandum with attached McGuire draft SER Supplement (4 pages). |
| 53 | Transcript of 248th ACRS Meeting, Dec. 5, 1980, pp. 339-405 | NRC | Portion of transcript discussing North Anna 2 Residual Heat Removal System. |
| 54 | NSAC-1, *supra*, Appendix ERV, pp. 1-5. | NSAC | Portion of NSAC-1 appendix discussing the TMI-2 Electromatic Relief Valve. |
| 55 | *Id.*, Appendix PDS, pp. 1-6 | " | Appendix to NSAC-1 discussing plant |

| Exhibit Number | Title of Document | Institutional Author | Summary Description |
|---|---|---|---|
| | | | data sources for TMI-2 accident. |
| 56 | *Id.*, Figures OTSG-1 and OTSG-2, and Appendix RCPCS-1 | NSAC | Diagrams relating to TMI-2 steam generator system. |
| 58 | "NRC Staff Answers to CESG interrogatories and Requests for Documents" | NRC | NRC Staff answers to various questions posed by CESG. |
| 59 | "Some Very Preliminary Results of Short-Term Analysis (3-week study) of Hydrogen Combustion during Degraded Core Accidents in the Sequoyah Nuclear Plant in the Presence of Glow Plugs" | Brookhaven National Laboratory | Evaluation of consequences of $H_2$ burning in a wide range of degraded core accidents in a PWR ice condenser plant with ignition sources installed (10 pages, 139 figures). |
| 62 | "Reactor Safety Study Methodology Applications Program: Sequoyah #1," Chapter 8, NUREG/CR-1659. | Sandia National Laboratories | Accident Process Analysis for Sequoyah (13 pages plus figures & tables). |

| Exhibit Number | Tite of Document | Insitutional Author | Summary Description |
|---|---|---|---|
| Staff M | "Some Hydrogen Control Considerations for Ice Condenser Nuclear Plants" | R&D Associates (for Lawrence Livermore National Laboratory). | Analysis and interpretation of igniter tests (26 pages including computations). |

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING APPEAL BOARD**

**Administrative Judges:**

**Alan S. Rosenthal**, Chairman
**Thomas S. Moore**
**Christine N. Kohl**

**In the Matter of** **Docket No. 50-255 SP**

**CONSUMERS POWER COMPANY**
**(Palisades Nuclear Power Facility)**

**March 31, 1982**

The Appeal Board reverses a Licensing Board's order, LBP-81-26, 14 NRC 247 (1981), denying the request of a labor union representing the plant's control room operators for a hearing on an NRC enforcement order restricting, *inter alia*, overtime work by the operators, and remands the case to the Licensing Board for further proceedings.

**RULES OF PRACTICE: INTERVENTION (DISCRETIONARY)**

The Commission has broad discretion to provide hearings or permit intervention in cases where the avenues of public participation are not available as a matter of right. *Public Service Company of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), CLI-80-10, 11 NRC 438, 442 (1980). The Commission has generally empowered its adjudicatory boards with the same discretion to allow intervention in licensing and enforcement cases.

**RULES OF PRACTICE: INTERVENTION PETITIONS**

For purposes of ruling on an appeal from the denial of a hearing petition, all material allegations of the intervenor's petition generally must be accepted as true.

## APPEARANCES

**Mr. Theodore Sachs** and **Ms. Laura J. Campbell,** Detroit, Michigan, for the appellants, Utility Workers Union of America, AFL-CIO, and the Michigan State Utility Workers Council.

**Mr. Judd L. Bacon,** Jackson, Michigan, for the licensee, Consumers Power Company.

**Mr. Stephen G. Burns** for the Nuclear Regulatory Commission staff.

## DECISION

**Opinion of the Board by Mr. Moore** (in which Mr. Rosenthal and Ms. Kohl join):

The union serving as collective bargaining agent for the licensed operators at the Palisades Nuclear Power Facility[1] appeals the denial of its hearing petition challenging a "confirmatory order" issued by the NRC's Director of the Office of Inspection and Enforcement. The order restricts overtime for the licensed operators at that Consumers Power Company's plant to a degree greater than the agency's generally applicable limitations on such work. The union asserts that the ordered restriction lacks any factual basis and is unsupported by any reasonable safety considerations; rather, the overtime proscription was adopted by the Director after the licensee proposed it as part of a "make peace" offering following a period of stepped up enforcement actions against the company.[2] The Licensing Board held that the union lacked standing to challenge the order and that the Commission's referral of the hearing petition precluded the Board from granting discretionary intervention to the union. LBP-81-26, 14 NRC 247, 250-259 (1981). The Board also expressed the view that discretionary intervention for the union would, in any event, be inappropriate. *Id.* at 259-262.

We reverse. We do not believe that the Commission's referral order barred the grant of discretionary intervention or, in the circumstances presented, that such intervention should have been withheld. In permitting the union to intervene, we heed the Commission's counsel in *Portland General Electric Company* (Pebble Springs Nuclear Plant, Units 1 and 2),

[1] Appellants are the Utility Workers Union of America, AFL-CIO, and the Michigan State Utility Workers Council (collectively "union").
[2] See Reply of Utility Workers Union in Support of Hearing May 28, 1981, at 2.

CLI-76-27, 4 NRC 610, 616 (1976), 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." We eschew the opportunity to resolve the standing question, however, because we hold considerable doubt that, as presented, this issue is likely to arise again in Commission proceedings.[3]

I.

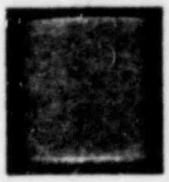
On March 9, 1981 the Director of I&E issued an "Order Confirming Licensee Actions to Upgrade Facility Performance"[4] which, as the title implies, reflects the licensee's prior consent to be bound by the terms of the order. Sections II, III and IV of the order describe its history.

Section II relates that, over the past several years, the NRC has cited the Palisades facility for numerous infractions of agency regulations. Inspections during the period September 1979 to September 1980 disclosed 41 items of noncompliance. The same period produced two enforcement actions. One, pending at the time of the order, involved a proposed civil penalty of $450,000 for a continuing violation of containment integrity. The second entailed a penalty of $16,000 for employee errors in misaligning valves for safety-related equipment. As a consequence of licensee's conduct, the NRC graded the facility's performance for reactor operations

[3] Although standing questions occasionally surface in NRC adjudications outside the context of construction permit, operating license or license amendment proceedings, such instances are infrequent. Here, the standing issue arises in an enforcement action. Moreover, the question of the union's standing takes a form that makes it most unlikely to recur. In order to meet the "injury in fact" component of the familiar two-pronged standing test applicable to Commission proceedings (see *Pebble Springs, supra*, 4 NRC at 613-614), the union, as representative of its members, alleges that the confirmatory order caused a garden variety pocketbook injury to the employment opportunities of the Palisades' operators.

But it is the union's "zone of interest" argument that sets this case apart from the standing questions common to Commission proceedings. Rather than assert an interest within the penumbra of the statutes ordinarily administered by the Commission, the union alleges an interest arguably within the zone of interest of the federal labor statutes. In a federal court such an asserted interest seemingly would present no barrier to meeting the zone test. See *Arnold Tours, Inc.* v. *Camp*, 400 U.S. 45 (1970) *per curiam* (plaintiff travel agents found within zone of interest of one statute — the Bank Service Corporation Act — when, as revealed by underlying opinions (408 F.2d 1147 (1st Cir. 1969), *vacated*, 397 U.S. 315 (1970), *on remand*, 428 F.2d 359 (1st Cir. 1970), *reversed*, 400 U.S. 45, *supra*), they had alleged that actions by a national bank pursuant to a ruling of the Comptroller of the Currency violated National Bank Act's "incidental powers" restrictions). See also *Association of Data Processing Service Organizations* v. *Camp*, 397 U.S. 150 (1970). In the setting of an NRC administrative proceeding, however, it raises questions not readily amenable to resolution. Because we doubt the standing question presented by the union petition is likely to recur, we see no present necessity to decide the matter when our opinion would provide little practical guidance for future cases.

[4] 46 *Fed. Reg.* 17688 (March 19, 1981).



and radiation protection "below average" among Region III licensees for the 1979-80 period.

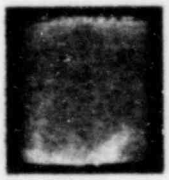
Section III of the order recites the licensee's most recent infraction of agency rules: the January 6, 1981 failure of an electrical repairman to follow required procedures. This error caused a one-hour isolation of the 125 volt station batteries in violation of the technical specifications in Consumers' operating license and resulted in an "immediate action letter" to the licensee prescribing short term corrective actions.

The brief operating history recounted in the second and third sections of the order led the Director in section IV to conclude "that major changes in the licensee's management controls are necessary to assure that the licensee can operate the Palisades facility without undue risk to the health and safety of the public."[5] To meet the agency's concerns, Consumers proposed a program to upgrade performance and assure safe operation at Palisades. Thereafter the licensee made certain additional commitments and, in section V of the challenged order, the Director confirmed all of these undertakings along with the earlier prescriptions contained in the agency's immediate action letter. As relevant here, paragraph B of that section states:

> Extended overtime on the part of licensed operators shall be avoided by restricting the overtime for licensed operators as follows:
>
> (1) No more than 4 overtime hours in any 24-hour period;
>
> (2) No more than 24 overtime hours in any 7-day period;
>
> (3) No more than 64 overtime hours in any 28-day period.
>
> The Director of Region III may relax or terminate any of the preceding conditions in writing for good cause.[6]

The final section of the Director's order contains the routine language of a notice of hearing; *i.e.*, any person having an interest affected by the order may request a hearing in accordance with the Commission's regulations. It concludes, however, with the statement that "[i]f a hearing is held, the issue to be considered at such hearing shall be: Whether, on the basis of the matters set forth in Sections II and III of this Order, this Order should be sustained."[7]

In response to the Director's order, the union filed with the Commission a timely petition seeking a hearing to challenge the validity of the confirmatory order's overtime restriction. In its petition, the union states that it is the exclusive bargaining agent for the licensed operators at the Palisades facility. It asserts that the order's overtime limitation on Pali-



[5] *Id.*
[6] *Id.* at 17689.
[7] *Id.* at 17690.

sades operators is more restrictive than the Commission's otherwise applicable standards established as interim criteria for shift staffing.[8] The petition therefore states (Pet. at 3) that the "employment opportunities" of its members are "adversely affected." The union seeks to have the overtime restriction set aside, alleging (*id.* at 2) that the restraint was proposed, not by the Commission, but by the licensee without notice or consultation with the union, and that "no reason was demonstrated or existed or was pertinent . . . to occasion greater restriction on overtime than is otherwise required by the Commission's general standards, or is permitted to the licensee under its collective bargaining obligations to the Union under the National Labor Relations Act."

The NRC staff opposed the union's hearing petition. It claimed that (i) the union is not entitled to a hearing because it lacks standing and (ii) a discretionary hearing would neither be a wise use of agency resources nor concern the health and safety mandate of the NRC.[9] Rather than rule on the union petition, the Commission referred the matter to the Board below stating that:

> The Commission hereby refers the March 31, 1981 request for a hearing to an Atomic Safety and Licensing Board to be appointed by the Atomic Safety and Licensing Board Panel Chairman to decide whether the Union should be granted a hearing. If the Licensing Board determines that a hearing is required, it should conduct the hearing.[10]

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[8] The interim shift staffing criteria are contained in a letter dated July 31, 1980 addressed to all licensees and applicants for licenses from the Director, Division of Licensing, Office of Nuclear Reactor Regulation. They provide that:

(1) An individual shall not be permitted to work more than 12 hours straight (not including shift turnover time).

(2) An individual shall not be permitted to work more than 24 hours in any 48 hour period.

(3) An individual shall not work more than 72 hours in any 7 day period.

(4) An individual shall not work more than 14 consecutive days without having two consecutive days off.

[9] The licensee filed no opposition to the union petition. Rather, it informed the Commission that if the petition were granted the company wished to participate as a party in the subsequent hearing. Before us, however, Consumers filed a brief because it interpreted our order establishing a briefing schedule as a direction to file one. The licensee now argues that the union lacks standing to challenge the Director's order but that the Commission erected no bar to the Licensing Board's grant of discretionary intervention. On the question of whether the union should be allowed to intervene, the licensee takes the carefully crafted position that it is a close question which, on balance, disfavors union intervention.

[10] Commission order, May 29, 1981 (unpublished).

II.

The Licensing Board held that the Commission's order referring the hearing petition divested the Board of all discretion to allow the union to intervene. It reasoned that the phrase "should be granted" in the referral order must be read in context with the word "required" in the following sentence so as to limit the Board's authority. This interpretation was appropriate, it said, because "[t]he use of discretionary hearings is rare in general, and unheard of in the context of an NRC enforcement action." 14 NRC at 259. Therefore, the Board concluded that "it is inconceivable to suggest that the Commission, without any clear directive so stating, wanted the Board to consider whether a discretionary hearing should be held . . . ." *Id.*

We cannot accept the Licensing Board's reading of the Commission's referral order or its reasoning in support of that interpretation. Nothing in the pertinent language of the order demonstrates that the Commission intended to restrict the Board's authority exclusively to determining whether the union has standing and thus is entitled to intervene as a matter of right. In our view, the Commission's order says two things: (1) a licensing board is to decide whether the union should be granted a hearing; and (2) if so, the same board should proceed with the hearing.[11] Accordingly, we find no limitation on the authority of the Licensing Board to grant discretionary intervention to the union.[12]

In addition, we reject the Licensing Board's suggestion that the past dispensation of discretionary intervention to parties in Commission proceedings prejudices the future grant of such intervention. In *Pebble Springs, supra,* the Commission held that the agency could best fulfill its regulatory responsibilities in licensing proceedings by permitting broader public participation than is mandated by section 189a of the Atomic Energy Act of

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[11] The operative language of the Commission's order states that a board was "to decide whether the Union should be granted a hearing. If the Licensing Board determines that a hearing is required, it should conduct the hearing." We reject the Licensing Board's view that the phrase "should be granted" ineluctably must be read in context with the word "required" in the following sentence. Indeed, to read the referral order in this fashion condones a redundancy. To place all emphasis on the word "required" and read it as a proscription on the Board's authority, in effect, renders superfluous the clause "to decide whether the union should be granted a hearing" in the previous sentence of the order. We think the more reasonable reading is to give equal meaning to all the Commission's words thereby placing all parts of the order on the same footing without any duplication or unwarranted emphasis.

[12] Moreover, at the time it referred the union's petition to the Licensing Board, the Commission had before it the staff's opposition which argued, *inter alia,* that a hearing should not be ordered as a matter of discretion. See NRC Staff's Response to Utility Workers Union of America's Request for a Hearing, April 20, 1981, at 6-10. In this circumstance, we believe that if the Commission intended to remove the Licensing Board's discretion to allow the union to intervene, it would have done so unmistakably.

1954.[13] It then provided guidelines for the exercise of board discretion in ruling on intervention requests. 4 NRC at 616. Subsequently, in *Public Service Company of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), CLI-80-10, 11 NRC 438 (1980), the Commission was confronted with a hearing petition challenging a confirmatory enforcement order. It paraphrased its *Pebble Springs* holding and again stated that "the Commission has broad discretion to provide hearings or permit interventions in cases where these avenues of public participation would not be available as a matter of right." *Id.* at 442. Although the Commission ultimately denied discretionary intervention in *Marble Hill*, it nevertheless fully examined the question and extinguished any notion that consideration of discretionary intervention in enforcement actions was inappropriate. Thus, contrary to the view expressed by the Licensing Board, we think the Commission's *Marble Hill* and *Pebble Springs* decisions teach that hearing boards are empowered to allow intervention in appropriate licensing and enforcement cases in the absence of a specific and clear withdrawal of authority. Here, as we see it, the Commission's order does not clearly rescind that authority.[14]

## III.

Having found no limitation on the Licensing Board's authority to grant discretionary intervention, we now must decide whether the union petition presents circumstances warranting such a grant. In its *Pebble Springs* decision, the Commission suggested that hearing boards balance the following six factors drawn from the Rules of Practice[15] to determine whether a petitioner should be granted discretionary intervention in an agency proceeding:

(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.

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[13] 42 U.S.C. §2239(a).

[14] We find singularly unpersuasive the staff's argument (Br. at 25) that the "brevity and routine nature" of the referral order, in conjunction with the general agency policy encouraging licensee consent to enforcement orders, evidences the Commission's intent to divest the Licensing Board of authority to permit discretionary intervention. As discussed above, if any inference properly may be drawn from the brevity and routine nature of the referral order, it is a conclusion opposite to that proffered by the staff. See also note 12, *supra*.

[15] See 10 CFR §2.714(a) and (d).

(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 petitioner's interest will be represented by existing parties.

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

4 NRC at 616.

Although the Licensing Board labeled its interpretation of the Commission's referral order "dispositive" of the intervention question, it nevertheless proceeded to express the view that the Commission's discretionary intervention criteria militated against union participation. 14 NRC at 259-262. We disagree. In the circumstances, denial of the union's hearing request was an abuse of discretion. A proper application and balancing of the criteria for guiding the exercise of discretion favors union intervention.

We shall address each of the six factors *seriatim*. Before doing so, however, two additional points deserve emphasis. First, for the purpose of resolving this appeal from the denial of a hearing petition, we accept as true all material allegations of the union petition.[16] We do this because the propriety of the Licensing Board's ruling must be measured against the record made by the litigants. Here, of course, the record consists primarily of the Director's order and the union's petition. Second, to apply properly each of the Commission's factors, a clear understanding of the allegations comprising the union challenge to the Director's overtime limitation is crucial. Admittedly, the petition is more conclusory and abbreviated than good pleading would suggest. But its gist is plain. It alleges that the overtime proscription placed on the Palisades operators by the confirmatory order is a greater restriction than the agency's otherwise applicable overtime standard[17] and that this greater restriction[18] is not supported by the

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[16] *Virginia Electric and Power Company* (North Anna Power Station, Units 1 and 2), ALAB-342, 4 NRC 98, 105 (1976). See *Florida Power & Light Company* (St. Lucie Nuclear Power Station, Unit No. 2), ALAB-420, 6 NRC 8, 13 (1977). *Cf. Gladstone, Realtors* v. *Bellwood*, 441 U.S. 91, 109 (1979); *Warth* v. *Seldin*, 422 U.S. 490, 501 (1975).

[17] See note 8, *supra*.

[18] Although the union petition does not quantify the greater overtime limitation placed on the Palisades operators by the confirmatory order, the Licensing Board correctly calculated the maximum difference in permissible overtime under the confirmatory order and the July 31, 1980 criteria (see note 8, *supra*) as 64 hours in any 28-day period. 14 NRC at 263. In

(CONTINUED)

events set forth in the order or by any other reasonable safety justification. Coupled with this assertion is the union's proffered explanation why the Director's overtime restriction lacks a proper foundation: the operator overtime limitation was proposed, not by the agency, but by the licensee (without notice or consultation with the union) in order to divert the Commission from further enforcement actions against Consumers' Palisades facility.[19]

Turning to the first factor for gauging the proper exercise of discretion in ruling on intervention requests — the extent the petitioner's participation would assist in developing the record — the Licensing Board found that the union could provide no assistance. *Id.* at 260. The Board stated (*id.*):

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addition, we note that the overtime restrictions in the July 31, 1980 criteria, unlike the restrictions in the confirmatory order applicable only to Palisades operators, apply to the whole group of plant personnel performing safety-related functions. See Attachment to Reply of Utility Workers Union, May 28, 1981.

The July 31, 1980 overtime criteria were superseded by a new Commission policy announced in NUREG-0737, "Clarification of TMI Action Plan Requirements," at 3-6 (November 1980). Even though the NUREG-0737 policy was published several months before the union filed its request for a hearing, the union petition fails to mention the new policy. In any event, this overtime policy applies to those plant personnel performing safety-related functions and provides:

(1) An individual should not be permitted to work more than 12 hours straight (not including shift turnover time).
(2) There should be a break of at least 12 hours (which can include shift turnover time) between all work periods.
(3) An individual should not work more than 72 hours in any 7-day period.
(4) An individual should not be required to work more than 14 consecutive days without having 2 consecutive days off.

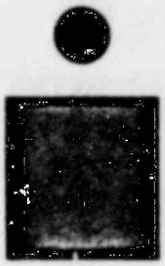
NUREG-0737 at p. 3-7.

On February 18, 1982 the Commission further liberalized its policy on nuclear power plant staff working hours. 47 *Fed. Reg.* 7352 (February 18, 1982). The new policy applies to those plant staff performing safety-related functions and provides that:

a. An individual should not be permitted to work more than 16 hours straight (excluding shift turnover time).
b. An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any seven day period (all excluding shift turnover time).
c. A break of at least eight hours should be allowed between work periods (including shift turnover time).
d. The use of overtime should be considered on an individual basis and not for the entire staff on a shift.

47 *Fed. Reg.* at 7353.

[19] See Union Pet. at 1-2; Reply of Utility Workers Union, May 28, 1981, at 2. Stripped of the union's diplomatic phrasing, it alleges that there is no factual or safety basis for the greater overtime restriction because the Director unwittingly approved the licensee's unfair-labor-practice scheme to limit operator overtime when he accepted Consumers' package of remedies designed to deflect further enforcement actions. Or, stated otherwise, had the Director independently analyzed the greater operator overtime restrictions instead of merely rubber-stamping them as part of a larger package, he would have found no basis or necessity for the limitation.



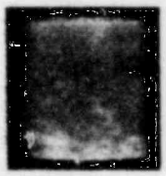
> the Union has not alleged that Palisades has been made any less safe as a result of the restricting of overtime hours. Thus, any "contribution" the Union would make to the record would be to non-safety related issues. To the extent that the Union's "rights" are not related to safety, it is true — and irrelevant — that such rights would not be represented by the NRC because such considerations would be outside the NRC's mandate for protecting the health and safety of the public.

The principal difficulty with the Licensing Board's reasoning is that it overlooks the focus of the record that would be developed in a hearing. It also ignores the very foundation of the union's challenge to the Director's order. As mandated by the Director, the sole litigable issue in any hearing would be whether, on the basis of the operating history recited in sections II and III of the order, the order should be sustained. 46 *Fed. Reg.* at 17690. Hence, the only record to be developed necessarily must be keyed to the events recited in the order and to a consideration of whether they support the order's various provisions. This dovetails precisely with the essence of the union's allegation that the facts set forth in the Director's order show neither the need for the restriction nor any causal relationship between overtime and the recited licensee deficiencies. Rather than focus on the single litigable issue and its relationship to the union's challenge, the Licensing Board mistakenly perceived the safety significance of the union's allegations.[20] In our view, the representative of the licensed operators at Palisades is ideally suited to present evidence and otherwise assist in developing the record on the question of whether operator overtime was a causative factor in the events recited in the Director's order. Consequently, this factor weighs in favor of union intervention.

The Licensing Board apparently weighed the second factor against union intervention as well. Its entire consideration of the nature and extent of the petitioner's property, financial or other interest in the proceeding consisted of a single sentence: "Conceding that the Union's interest is economic . . . this interest is not arguably within the 'zone of interests' protected by the Atomic Energy Act." 14 NRC at 260.

The union seeks to protect its members from the potential financial loss resulting from the Director's limitation on the number of overtime hours

[20] In reaching its conclusion, the Board fell prey to the staff's sophistic argument that, because the petition did not allege the overtime restriction made the facility less safe, any possible union contribution to the record would be to nonsafety-related issues falling outside the health and safety mandate of the NRC. Although we thought it obvious, a challenge for lack of basis to a putative safety decision of the agency — in this case the Director's overtime limitation on the Palisades operators — is as much within the health and safety mandate of the NRC as a claim that a particular agency decision renders a facility less safe.



the licensed operators at Palisades may work. This interest is concededly economic. As such, the union's interest is squarely within one of the types of interest (*i.e.*, financial) that the Commission's second factor lists as deserving favorable consideration when determining the question of discretionary intervention. See p. 13, *supra*. Furthermore, the operator's pocketbook injury may well prove to be considerable. See note 18, *supra*. Accordingly, the Licensing Board should have weighed this factor positively for union participation. Instead, the Board considered it negatively because it erroneously concluded that, in order to fall within the bounds of the second factor, the union's asserted interest must fall within the zone of interest of the Atomic Energy Act. But the zone of interest inquiry is relevant only to the question of standing and whether a petitioner is entitled to intervene as a matter of right. See note 3, *supra*.[21] Discretionary intervention, on the other hand, is generally intended to allow participation by those petitioners "who do not meet the tests for intervention as a matter of right." *Pebble Springs, supra*, 4 NRC at 616.

The third factor — the possible effect of any order on petitioner's interest — was also incorrectly weighed by the Board against union intervention. Unlike the normal licensing proceeding where some speculation may be involved in ascertaining the possible effect of future orders on a petitioner's interest, application of the third factor to a confirmatory enforcement order lacks such guesswork. As we have seen, the union seeks to protect the paychecks of its members from what it claims is the Director's baseless limitation on the amount of overtime operators may work. Allegations of such an immediate and substantial injury to the Palisades operators, directly attributable to the Director's overtime restriction, weigh in favor of union intervention. But, in applying this factor, the Licensing Board miscast the union's interests and its challenge to the confirmatory order. It viewed the union challenge as a labor dispute between Consumers and its employees with the Director as a bystander

[21] As is evident from the result in *Virginia Electric and Power Company* (North Anna Power Station, Units 1 and 2), ALAB-363, 4 NRC 631 (1976), *following deferral*, ALAB-342, 4 NRC 98 (1976), discretionary intervention is not precluded because a petitioner asserts an economic interest outside the zone of interest of the Atomic Energy Act.

No contrary inference should be drawn, as the staff suggests (Br. at 27-28), from our decision in *Detroit Edison Company* (Enrico Fermi Atomic Power Plant, Unit No. 2), ALAB-470, 7 NRC 473, 475 (1978). Our textual remarks accompanying note 2 of ALAB-470 regarding the zone of interest test and the lower Board's treatment of it were intended to be confined to the question of petitioner's standing. They were not aimed at the issue of discretionary intervention — a subject we addressed exclusively in note 2 of that opinion. Therefore, ALAB-470 should not be read as an endorsement of the notion espoused by the Licensing Board in *Fermi*, LBP-78-11, 7 NRC 381, 388 (1978), that economic interests outside the zone of interest of the Atomic Energy Act weigh against discretionary intervention when considering the Commission's second factor.

who should not referee the dispute. 14 NRC at 260. Insofar as the NRC is concerned, however, any labor dispute between the union and licensee is secondary to the union's challenge to the Director's overtime restriction. The Director issued the order and it is the Director who will enforce it. Similarly, only the Director can modify the overtime restriction. Thus, far from being a bystander, the Director is the central player in the union challenge to the overtime restriction.

Balanced against the first three factors on the intervention scale are three others — the availability of other means to protect the petitioner's interest, the extent the petitioner's interest will be represented by existing parties and the extent the petitioner's participation will inappropriately broaden or delay the proceeding. Because it believed another forum was available to hear any union grievance against Consumers, the Licensing Board found the fourth factor disfavored union intervention. *Id.* at 261. The Board then judged the fifth factor irrelevant and concluded that the sixth factor weighed against intervention because union participation would inappropriately broaden the proceeding by leading to a hearing that otherwise would not be held. *Id.* at 262. We disagree with the Board's analysis of these three factors as well.

In considering the forth factor and concluding that the National Labor Relations Board was the appropriate tribunal to hear the union complaint, the Board perpetuated its mistaken view that the union grievance is against the licensee and that this agency is, in effect, only a bystander. As we previously suggested, the Director's order, not the licensee's action, is the central object of the union challenge. More importantly, only the NRC is suited to adjudge a challenge to the factual support and safety significance of the overtime restriction. No other agency may go behind the Director's order or has the appropriate expertise to review any alleged safety significance of the overtime restriction. Thus, unless and until the Director's order is modified by the NRC, the union cannot obtain complete relief. In the circumstances, we do not think this factor should be credited against union intervention.

Similarly, the fifth factor does not tip the balance against union participation. Although the Board indicated this factor was irrelevant,[22] we think it is significant that both existing parties to the challenged order — the licensee and the NRC staff — allegedly oppose the interests of the Palisades operators. According to the union's petition, it was the licensee

[22] The Licensing Board concluded that the fifth factor was irrelevant because the "interest of the intervenor is not within the 'zone of interests' protected by the Atomic Energy Act." 14 NRC at 262. As we earlier stated (see pp. 502-503, *supra*), whether a petitioner's asserted interest falls within the zone of interest of the Atomic Energy Act is not germane to determining the appropriateness of discretionary intervention.

that proposed (without prior consultation with the union) the overtime restriction that the Director subsequently adopted. The union's interest, therefore, will not be represented by the existing parties.

Finally, with regard to the sixth factor, the Board noted that union intervention will lead to a hearing that otherwise would not be held since no other petitions challenging the confirmatory order were filed. But, contrary to the Licensing Board's view, we are not persuaded that this fact by itself renders a hearing on the union petition inappropriate. In previous operating license proceedings, we have suggested that "[i]f the petitioner is unequipped to offer anything of importance bearing upon plant operation, it is hard to see what public interest conceivably might be furthered by nonetheless commencing a [discretionary] hearing at his or her behest." *Tennessee Valley Authority* (Watts Bar Nuclear Plant, Units 1 and 2), ALAB-413, 5 NRC 1418, 1422 (1977). The same standard should apply to a petition challenging a confirmatory enforcement order. Here the union meets that test. It seeks to demonstrate that there is neither a safety justification nor a causal relationship between operator overtime and the events relied upon by the Director to support the overtime restriction. Clearly such a union presentation bears directly upon the safe operation of the Palisades plant, even though the union challenge does not conform to the more traditional type of claim that an agency decision falls short of assuring safe operation of a plant. A different result is not warranted because the union asserts that an agency decision goes too far without an adequate factual foundation or safety justification.

Moreover, the particular circumstances of this case suggest an additional reason for permitting the union to challenge the Director's overtime restriction. The Director's order, on its face, does not appear to demonstrate any causal connection between operator overtime and the events recited in sections II and III of the order that purport to support the overtime restriction. Further, the Director's overtime restriction is applicable only to the Palisades licensed operators. It does not apply to any other plant personnel responsible for performing safety-related functions. Yet the single event recited in section III as partial support for the confirmatory order seemingly relates to an electrical repairman, not a licensed operator. This apparent inconsistency, coupled with the Commission's generally applicable overtime policy that applies to all plant personnel performing safety-related functions (see note 18, *supra*), raises sufficient questions as to the scope of the Director's order so as to warrant further inquiry. Permitting the union to intervene should resolve the unexplained aspects of the Director's order.

Accordingly, we think that a proper balancing of the Commission's six factors for guiding the exercise of discretion on intervention requests favors union participation.

The Licensing Board's order of July 31, 1981 is *reversed* and the case is *remanded* for further proceedings consistent with this opinion.

It is so ORDERED.

FOR THE APPEAL BOARD

C. Jean Shoemaker
Secretary to the Appeal Board

**Concurring opinion of Mr. Rosenthal:**

For the asserted purpose of furthering the safety of plant operation, the Director of the Office of Inspection and Enforcement has imposed a limitation upon licensed operator overtime at the Palisades facility which is more stringent than the generally applicable one. At bottom, the question here is whether the affected individuals (through their duly recognized collective bargaining agent) should be given the opportunity to be heard on the warrant for the Director's action; *i.e.*, on whether, *inter alia*, there is, in fact, a safety justification for that action. For me, the mere statement of the question suggests its answer. Surely, there must be some adjudicatory forum available in which these operators can challenge as arbitrary an order of an NRC official, issued in purported fulfillment of the responsibilities vested in him by the Atomic Energy Act, which assertedly cuts against their pecuniary interests both immediately and substantially.[1] And what outside forum might possibly be better equipped than one within this Commission itself to pass an informed judgment upon the existence of a relationship between the Director's imposed overtime limitation and the safe operation of this nuclear facility?

In the particular circumstances at hand, I have no quarrel with resting our reversal of the order below on discretionary intervention principles without coming to grips with the seemingly more difficult question of standing to intervene as a matter of right. For the end result is the same irrespective of how the union's ticket of admission might read: the operators will have the chance to demonstrate the validity of their claim that (stated broadly) the requisite link between the prescribed overtime

[1] Even though formally addressed to the licensee, the focus of the order is, of course, upon the employment activities of the operators and it is they who likely will bear its brunt.

limitation and reactor safety is missing.[2] Whether they will succeed in that endeavor remains, of course, to be seen.

I accordingly join fully in the opinion for the Board. In doing so, however, I am constrained to record my doubt that, had we been compelled to reach it, the standing issue could have been decided against the union simply on the basis that only an economic interest is involved. To be sure, it is now settled that threatened economic injury (*e.g.*, the possibility of increased utility bills) does not confer standing under the Atomic Energy Act to intervene in a construction permit or operating license proceeding concerned with other than antitrust issues. *Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 614 (1976); *Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-582, 11 NRC 239, 242 (1980). But this is a quite different type of proceeding and there is at least room for question whether it likewise is controlled by the teachings of those cases.[3]

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[2] I do not understand the union to assert that, even if such a link does exist, the Director nonetheless lacked the power to impose the limitation in the execution of his statutory duty to protect the public health and safety. See Sections 103b. and 161i. of the Atomic Energy Act of 1954, as amended, 42 USC 2133(b) and 2201(i).

[3] Among other things, in sharp contrast to the order which the union seeks an opportunity to attack, the grant of a construction permit or operating license application does not serve affirmatively to impose restrictions upon otherwise lawful activities of any person and the economic impact upon members of the public (*e.g.*, ratepayers) of such licensing action is both incidental and indirect. Although a decision on its operative significance can be left for another day, the very existence of this manifest distinction commends caution in the mechanical transfer of standing principles from one type of proceeding to another.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING APPEAL BOARD**

**Administrative Judges:**

**Alan S. Rosenthal,** Chairman
**Dr. John H. Buck**
**Christine N. Kohl**

**In the Matter of** **Docket No. 50-466 CP**

**HOUSTON LIGHTING AND POWER COMPANY**
**(Allens Creek Nuclear Generating Station, Unit 1)**

**March 31, 1982**

The Appeal Board affirms the Licensing Board's denial of an untimely intervention petition (January 12, 1982 memorandum and order (unpublished)), on two independent grounds: (1) the Licensing Board's decision was free of material error and (2) the sole issue the petition raises, that of the applicant's financial qualifications, is not cognizable in this construction permit proceeding under 10 CFR 2.104(b)(1) (*as amended by* 47 *Fed. Reg.* 13750, 13753 (March 31, 1982)).

**RULES OF PRACTICE: UNTIMELY INTERVENTION PETITIONS**

A licensing board must consider the five factors set forth in 10 CFR 2.714(a) in deciding whether to accept a late petition to intervene.

**COMMISSION PROCEEDINGS: CASE OR CONTROVERSY (APPLICABILITY OF CONSTITUTIONAL PROVISION)**

The constitutional requirement for a "case or controversy" under Article III does not apply to NRC licensing proceedings. *Edlow International Co.*, CLI-76-6, 3 NRC 563, 569-70 (1976).

It is the ability to contribute sound evidence — rather than asserted legal skills — that is of significance in considering a late-filed petition to intervene under 10 CFR 2.714(a).

## APPEARANCES

**Mr. Robert Alexander,** Houston, Texas, petitioner *pro se.*

**Messrs. Jack R. Newman** and **David B. Raskin,** Washington, D.C., and **J. Gregory Copeland** and **Scott E. Rozzell,** Houston, Texas, for the applicant, Houston Lighting and Power Company.

**Mr. Richard L. Black** for the Nuclear Regulatory Commission staff.

## DECISION

Two years ago, we upheld the Licensing Board's denial of an untimely petition for leave to intervene filed by Robert Alexander in this construction permit proceeding. ALAB-582, 11 NRC 239 (1980). Now before us is Mr. Alexander's appeal under 10 CFR 2.714a from the rejection below of a second, and perforce even more tardy, intervention petition filed by him last November 30.[1] This new petition focuses upon a single issue: the financial qualifications of the applicant to build the proposed Allens Creek facility. As in the instance of the earlier petition, its rejection was founded upon an appraisal of the petitioner's showing on the five specific factors which, by virtue of 10 CFR 2.714(a), are to be considered by a licensing board in deciding whether to accept a late petition.[2]

The briefing of this appeal was completed on March 5. Less than a week thereafter, on March 11, the Commission amended 10 CFR

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[1] January 12, 1982 memorandum and order (unpublished). Because of an inadvertent delay in its service upon Mr. Alexander, the appeal permissibly was filed on February 18.

[2] Those factors are:

(i) Good cause, if any, for failure to file on time.
(ii) The availability of other means whereby the petitioner's interest will be protected.
(iii) The extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record.
(iv) The extent to which the petitioner's interest will be represented by existing parties.
(v) The extent to which the petitioner's participation will broaden the issues or delay the proceeding.

2.104(b)(1) to provide that, in a construction permit proceeding, the notice of hearing will state:

> That, if the proceeding is a contested proceeding, the presiding officer will consider the following issues:
>
> • • • • •
>
> (iii) Whether the applicant is financially qualified to design and construct the proposed facility, *except that this subject shall not be an issue if the applicant is an electric utility seeking a license to construct a production or utilization facility of the type described in §50.21(b) or §50.22;* • • •

47 *Fed. Reg.* 13750, 13753 (March 31, 1982) (emphasis supplied).[3] That amendment took immediate effect upon its publication in the Federal Register and, according to the accompanying Statement of Considerations, is to be "applied to ongoing licensing proceedings now pending and to issues or contentions therein • • •". *Id.* at 13750, 13753.

Allens Creek indisputably is a proposed utilization facility of the type described in 10 CFR 50.22. Thus, the amendment to 10 CFR 2.104(b)(1) would appear to foreclose consideration by the Board below of any issue which may have been or might be raised with regard to the applicant's financial qualifications to build that facility.

This being so, the Licensing Board's determination that Mr. Alexander's petition should be turned aside on lateness grounds seemingly has now been stripped of all practical significance. Notwithstanding that consideration, we have elected to pass upon the merits of the ruling below, viewed (as it must be) in the light of the litigability of financial qualifications issues at the time it was made.[4] Because the licensing boards are all too frequently called upon to decide whether to grant an untimely petition, some further guidance on the subject may be of assistance to them.

For the reasons which follow, we conclude that the Licensing Board did not abuse its discretion in determining that the tardiness of Mr. Alexander's petition dictated its disallowance. Hence, the outcome of the appeal is necessarily the same with or without regard to the Commission's recent total removal of the financial qualifications issue from this proceeding. Accordingly, on two independent bases, Mr. Alexander's challenge to the result below must fail.

1. It is not necessary to revisit here the long and tortuous path traversed by this proceeding since its inception several years ago. For present purposes, it suffices to note (as the Licensing Board stressed) that

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[3] A corresponding amendment was made to Section VI(c)(1)(iii) of Appendix A to 10 CFR Part 2. 47 *Fed. Reg.* at 13754.

[4] "[T]he constitutional requirement for a 'case or controversy' under Article III does not apply to NRC licensing proceedings". *Edlow International Co.*, CLI-76-6, 3 NRC 563, 569-70 (1976).

the present petition — seeking to raise a question respecting the applicant's financial qualifications — surfaced after 84 days of evidentiary hearings and on the virtual eve of the closing of the record (December 9).[5] In that circumstance, the petitioner's burden on the Section 2.714(a) factors is a heavy . When recently confronted in another proceeding with an intervention petition filed two weeks after the date for the commencement of the evidentiary hearing had been set, we had this to say:

> [Prior to the date of the filing of the untimely petition], the applicants and the staff had every right to assume that both the issues to be litigated and the participants had been established with finality. Simple fairness to them — to say nothing of the public interest requirement that NRC licensing proceedings be conducted in an orderly fashion — demanded that the [Licensing] Board be very chary in allowing one who had slept on its rights to inject itself and new claims into the case as last minute trial preparations were underway.

*South Carolina Electric and Gas Co.* (Virgil C. Summer Nuclear Station, Unit 1), ALAB-642, 13 NRC 881, 886 (1981), *petition for review pending sub nom. Fairfield United Action* v. *NRC*, No. 81-2042 (D.C. Cir.). That observation has yet greater force where not merely trial preparation but also the hearing itself has already taken place by the time the belated petition is received.

2. It is in this context that we examine Mr. Alexander's petition. It asserts (at p. 1) that the applicant "has not demonstrated pursuant to 10 CFR 50.33(f) that it possesses or has reasonable assurance of obtaining the funds necessary to cover the costs of constructing and then operating [the Allens Creek facility] in a safe manner * * *". In support of this contention, Mr. Alexander points out (*id.* at pp. 1-2) that the applicant's bond rating has been downgraded by Standard and Poors from AA to A, and asserts that this will increase the cost of applicant's long-term financing for the project. As Mr. Alexander sees it (*id.* at p. 2), this development requires a reassessment of the applicant's "financing plans".

With respect to the five Section 2.714(a) factors (see fn. 2, *supra*), the

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[5] On January 28, 1982, the Licensing Board entered an order which, on motion of one of the existing intervenors, reopened the record for the taking of further evidence on the issue of the applicant's *technical* qualifications. That evidence will be received at a hearing now scheduled to commence on April 12.

Both the applicant and the NRC staff maintain that, in addition to making a sufficient showing on the Section 2.714(a) factors, Mr. Alexander was obliged to satisfy the established criteria for reopening a record. See, *e.g.*, *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-598, 11 NRC 876, 879 (1980); *Kansas Gas & Electric Co.* (Wolf Creek Generating Station, Unit 1), ALAB-462, 7 NRC 320, 338 (1978). The Licensing Board explicitly declined to decide "whether this late-filed petition should be considered as a motion to reopen the record". January 12, 1982 memorandum and order, fn. 2, at p. 3. We likewise find it unnecessary to pass upon that question.

petition maintains (at pp. 2-3) that: (1) Mr. Alexander first learned of Standard and Poors' action from an article appearing in the *Houston Post* on November 26, 1981; (2) he knows of no other means for the protection of his interest; (3) he "is an articulate school teacher fairly knowledgeable with the mechanics of corporate financing and with the dynamics of securities" and plans to offer the testimony of at least one "brokerage house expert" on the implications of the downgrading of the applicant's bond rating; and (4) no existing party to the proceeding has so far "anticipated or addressed" the downgrading. With respect to the final factor, Mr. Alexander concedes (*id.* at p. 3) that his participation might "slightly" broaden the issues and delay the proceeding. He insists, however, that any delay would be relatively small and justified in the interest of developing a sound record.[6] We consider these arguments *seriatim*.

a. The extent to which applicant's current Standard and Poors' bond rating might be taken as bearing materially upon its financial qualifications to build the Allens Creek facility is problematic. See *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1, 17-23 (1978).[7] Be that as it may, as the Licensing Board observed,[8] the reduction of that rating from AA to A cannot be regarded as having first brought the financial qualifications question to the fore. To the contrary, that question long ago had been raised by several of the present intervenors[9] and then explored in some depth during the evidentiary hearings already concluded.[10] Beyond that, both the applicant and the staff call attention to the fact that, in November *1980 (i.e.*, a full year before the Standard and Poors' action and the filing of Mr. Alexander's petition), the other principal rating service (Moody's) had likewise downgraded the applicant's bond rating from AA to A.[11] Mr. Alexander provided no satisfactory explanation to the Board below why that event had not triggered his intervention endeavor.[12]

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[6] In his brief on the appeal (at pp. 3-4), he urges that, given the supervening reopening of the record on the technical qualifications matter, the delay factor need not be considered by us at all.

[7] In addition to its discussion of the ingredients of the financial qualifications inquiry then contemplated by NRC regulations, the *Seabrook* decision provided part of the impetus for the Commission's determination to consider eliminating that inquiry from licensing proceedings. See 7 NRC at 17-18; 47 *Fed. Reg.* at 13750.

[8] January 12, 1982 memorandum and order, at p. 3.

[9] See Licensing Board March 10, 1980 memorandum and order (unpublished), at pp. 40, 47, 68-69.

[10] See Tr. 16713-16890.

[11] The significance of Moody's newly assigned A bond rating to the applicant's financial qualifications was addressed at the hearing. See, *e.g.*, Dean, fol. Tr. 16723, at pp. 5-7; Tr. 16724-31; 16794-95.

[12] Two months after Moody's revised the applicant's bond rating, Mr. Alexander made a limited appearance statement before the Licensing Board (Tr. 2319-26). See 10 CFR 2.715. That statement contained no reference to financial qualifications.

In the totality of these circumstances, we must agree with the Licensing Board that the petition fell far short of establishing good cause for Mr. Alexander's failure to have asserted his financial qualifications contention at a much earlier date (as had other petitioners concerned with that matter). There was simply nothing put before that Board which might have lent credence to the insistence in the petition (at p. 2) that the applicant's revised Standard and Poors' bond rating was, of itself, a sufficiently pivotal development to entitle Mr. Alexander to enter the proceeding as its termination point drew nigh.

b. The papers before us do not illume whether (and, if so, what) other means might remain available to Mr. Alexander for the protection of his asserted interest in insuring that the applicant possesses the requisite financial qualifications. Because, all things considered, it does not appear to be a crucial factor here, we shall not speculate on the point but, rather, assume that no such alternative means exist.[13]

c. The Licensing Board properly concluded that Mr. Alexander did not demonstrate a likely ability to make a significant contribution to the development of a sound evidentiary record on the financial qualifications issue. No inference of such ability is warranted, let alone compelled, by the unvarnished assertion that "he is an articulate school teacher fairly knowledgeable with the mechanics of corporate financing and with the dynamics of securities". See pp. 511-512, *supra*. *Cf.* ALAB-582, *supra*, 11 NRC at 241, 244.[14] Nor was his statement of a present purpose to adduce the testimony of an unidentified (and very possibly as yet unobtained) "brokerage house expert" enough to carry the day on that factor. *Summer*, ALAB-642, *supra*, 13 NRC at 893-94.

d. As in the case of the second factor, it is both difficult and unnecessary to make a confident assessment on the fourth factor — that of the representation of Mr. Alexander's interests by existing parties. Manifestly, however, that factor does not weigh heavily in his favor. It may be, as he maintains on the appeal (Br. pp. 2-3), that he had not affirmatively intended to rely upon one or more of the parties to represent his interests. But, given his chosen course of inaction over a protracted period, he can fairly be held to have assumed the risk that none of the participants would

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[13] In discussing this factor, the Licensing Board touched upon the matter of the representation of Mr. Alexander's interest by existing parties. January 12, 1982 memorandum and order, at p. 4. That matter is, however, relevant only with respect to the fourth factor. Insofar as the second factor is concerned, the sole inquiry is into the availability of other fora in which the petitioner himself can undertake the protection of his interests.

[14] Mr. Alexander informs us on appeal (Br. p. 3) that "he is also an articulate law student well-versed in evidentiary matters". But it is the ability to contribute *sound evidence* — rather than asserted legal skills — that is of significance in considering a late-filed petition to intervene.

protect his interests "to the extent he desires" (Br. p. 3). As should have been readily apparent to him, only his own timely intervention could have insured Mr. Alexander that the financial qualifications issue would be litigated to his satisfaction. *Cf. Duke Power Co.* (Cherokee Nuclear Station, Units 1, 2 and 3), ALAB-440, 6 NRC 642, 644-45 (1977).

e. Finally, we cannot adopt Mr. Alexander's suggestion that the question of delay has been effectively mooted by the recent reopening of the record to take a limited amount of additional evidence next month on the technical qualifications issue (see fn. 6, *supra*). We have been provided no basis for judging how much time might be necessary for pre-trial preparation (including possible discovery) in connection with a relitigation of the financial qualifications issue.[15] The potential for delay attendant upon a grant of the petition at hand thus cannot be discounted.

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In sum, two weighty factors (the first and third enumerated in 10 CFR 2.714(a)) militate strongly against allowing this extremely late intervention attempt, and a third equally significant factor (that of delay) at the very least points in the same direction. And Mr. Alexander's lack of diligence in protecting his own interest precludes giving the other two factors controlling effect. This being so, the Licensing Board manifestly acted within the bounds of its discretion in denying the petition.

Accordingly, we *affirm* the result below on the independent grounds that (1) the Licensing Board's assessment of the untimeliness of Mr. Alexander's petition was free of material error; and (2) the sole issue raised by the petition is no longer cognizable in this proceeding.

It is so ordered.

FOR THE APPEAL BOARD

C. Jean Shoemaker
Secretary to the Appeal Board

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[15] Once again, this analysis does not take account of the recent Commission removal of that issue from licensing proceedings but, rather, is based upon the situation obtaining when the Licensing Board ruled on the petition in January. See p. 510, *supra*.

# Atomic Safety and Licensing Boards Issuances

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Louis J. Carter,** Chairman
**Dr. Oscar H. Paris**
**Frederick J. Shon**

**In the Matter of** **Docket Nos. 50-247-SP**
**50-286-SP**

**CONSOLIDATED EDISON COMPANY OF NEW YORK**
**(Indian Point, Unit No. 2)**

**POWER AUTHORITY OF THE STATE OF NEW YORK**
**(Indian Point, Unit No. 3)** **March 1, 1982**

The Licensing Board grants intervention petitioner's motion to permit petitioner's representatives to observe the emergency planning exercise scheduled for the Indian Point facility.

## JURISDICTION OF LICENSING BOARD: SPECIAL PROCEEDING

Where the granting of petitioner's motion would likely result in refinement and focusing of contentions relating to emergency planning, the authority of the Licensing Board to entertain the motion was established by the provisions of 10 CFR 2.718(e) which describes the powers of presiding officers generally, or by the Commission memorandum and order that constituted the Board and directed it to investigate, *inter alia*, questions related to emergency planning.

## RULES OF PRACTICE: TIMING OF DISCOVERY

Given the Licensing Board's mandate from the Commission to investigate emergency planning issues related to the Indian Point facility

and the fact that the emergency planning exercises that were the subject of petitioner's motion were scheduled to take place within two (2) days, the Licensing Board was not required to adhere strictly to the provisions of the Rules of Practice governing the timing of discovery when to do so would frustrate the announced purpose of the hearing and where no party would be seriously disadvantaged by expediting the action. Accordingly, the Licensing Board would entertain petitioner's motion though petitioner had not yet been admitted as a party, no contentions had yet been admitted in the proceeding, and the 30-day period for response to the motion had not elapsed.

## RULES OF PRACTICE: DISCOVERY, PROTECTIVE ORDER

Although licensees did not allege facts sufficient to support the grant to them of a protective order, the Board would not permit an "unbridled inspection" of licensees' plant, and would impose conditions upon petitioner's observation of the emergency planning exercises sufficient to keep the operation free of anything that might constitute interference.

### MEMORANDUM AND ORDER
### (Granting UCS/NYPIRG Motion for Discovery and Staff Motion for Approval of Stipulation)

The Union of Concerned Scientists and New York Public Interest Research Group (UCS/NYPIRG) in a motion dated February 9, 1982, requested this Board to order the Licensees, the State of New York, and the Counties of Westchester, Rockland, Putnam, and Orange to permit representatives of organizations which have filed petitions to intervene in this proceeding to observe the emergency planning exercise scheduled for the Indian Point facility on March 3, 1982. In a telephone conversation on February 23, the NRC Staff advised us that a meeting to discuss a stipulation[1] would be held in New York on February 24 and that the Staff would be filing its response to UCS/NYPIRG's motion on February 25. Attached to Staff's response, which was filed after close of business on February 25, were unsigned stipulations (1) between the Staff, the Federal Emergency Management Agency (FEMA), and the petitioners, and (2) between Westchester County and petitioners. By telephone message on February 26, Rockland County advised that it would join the stipulation of

[1] The parties to the Stipulation were UCS/NYPIRG, Westchester County, and FEMA, but not the Licensees.

Westchester County. Finally, along with Staff's filing on January 25, we received Licensees' answer, dated February 24, opposing the UCS/NYPIRG motion.

We shall approve, in a later order, the aforesaid stipulations upon receiving signed copies, provided the signed copies do not differ in substance from the copies we now have. We grant herein a part of UCS/NYPIRG's motion as it applies to entry upon the property and facilities under the control of the Licensees. We turn now to a consideration of the Licensees' objections to the motion.

## THE OBJECTION THAT THE REQUESTED RELIEF IS BEYOND THE BOARD'S JURISDICTION

Licensees argue that this Board lacks jurisdiction to entertain UCS/NYPIRG's motion on two grounds:

1. ". . . [A]n Atomic Safety and Licensing Board possesses only the jurisdiction delegated to it by the Commission."
2. We lack jurisdiction with respect to the emergency planning exercise because it "is simply one of hundreds of required functions performed by the licensees in the course of their normal operations, under the jurisdiction of the Commission and Staff." Pp. 5-6.

Licensees cite *Northeast Nuclear Energy Co.* (Montague Nuclear Power Station, Units 1 and 2), 1 NRC 436 (1975), in which a Board held that it lacked the authority to order the staff and applicant to hold discussions pursuant to 10 CFR §2.102 near the site or, alternatively, to provide intervenor with verbatim transcripts of such meetings. That Board held that its supervisory authority over staff actions derived from Sections 2.104 and 2.718 and that it lacked authority to direct the staff in the conduct of its business under Section 2.102.

To begin with, we do not view the emergency preparedness exercise which is to be conducted in the vicinity of the Indian Point plants on March 3, 1982, and which will involve not only the Licensees and the NRC Staff, but also the Federal Emergency Preparedness Agency, the State of New York, the Counties of Westchester, Rockland, and apparently Putnam and Orange, plus various townships, municipalities, and other public institutions and organizations, to be the same as the routine discussions carried out between staff and applicants under Section 2.102.[2] Indeed, the success or failure of the emergency preparedness program will depend, to no small degree, on how well the general public is informed and

[2] Section 2.102 is clearly directed to how the Staff carries out administrative duties in reviewing applications. Nothing such as that is here involved.

responds. The matter can hardly be construed to be a matter merely between the Licensees and the Staff or FEMA.

We believe that our authority to entertain the UCS/NYPIRG motion is clearly established by 10 CFR §2.718(e) which describes our powers generally. But even were that not so, the Commission said, in its Memorandum and Order dated September 18, 1981, that this Board would not be bound by the provisions of 10 CFR Part 2 with regard to the admission and formulation of contentions which were directed toward the issues raised by the Commission's questions on pages 9 and 10 of its Memorandum and Order dated January 8, 1981. Revised fn.4, p. 2. Since questions 3 and 4 on page 10 relate to emergency planning, and since granting the UCS/NYPIRG motion will likely result in refinement and focusing of contentions relating to emergency planning, we believe that we are also acting under the explicit authority given this Board by the Commission. Further, it would certainly seem sensible that since the Board has the power to cause the deposition of a control room employee to be taken, it likewise has the power to permit the silent observation of that employee's action during a planned exercise.

## THE OBJECTION THAT THE MOTION IS PREMATURE

Licensees object to the motion as premature on three grounds:

1. UCS/NYPIRG is not yet admitted as a party.
2. No contentions have been admitted to serve as a basis for discovery.
3. 10 CFR §2.741 directs that a party first seek discovery of this sort from another party. Only after a 30-day opportunity to respond has elapsed can the party seeking discovery apply to the Board for relief.

As to the last point, were this a casually-paced proceeding we would be inclined to demand strict adherence to such procedural niceties. But the exigencies of the present case do not permit that. Clearly a 30-day response period is impossible. The time set for the proposed drill is only a few days off and one must strike while the iron is hot. To allow procedural delicacy to frustrate the announced purpose of this hearing would be foolish, the more so where, as here, no party is seriously disadvantaged by expediting the action.

As to the specific objection that contentions have not yet been admitted, it seems to the Board that the purpose of permitting discovery only after admitting contentions is to assure there will be no time and effort wasted in irrelevant discovery. Here, unlike in other cases, many of the issues have been fixed in advance by the Commission itself. Questions 3 and 4 at page

10 of the Commission's Order of January 8, 1981, directly concern emergency planning. The discovery here sought is thus clearly relevant to a matter before this Board. And it is clear that UCS, at least, whose petition triggered the Commission's concerns in this case, is likely to be granted full party status.

In addition to explicitly delineating emergency planning in its questions on page 10, the Commission provided further indication of the importance it attached to this subject. It said:

> The Commission is concerned with both the total risk to the persons and property posed by the Indian Point plants and the risk to individuals living in the vicinity of the Indian Point site, *including that resulting from the difficulty of evacuation in an emergency*. (Emphasis added.)

and

> *The Commission is also interested in the current state of emergency planning in the vicinity of the Indian Point site and in future improvements in that planning* as well as in resolving the specific contentions in the UCS Petition to the effect that some of our regulations are not met in one or both units. (Emphasis added.) P. 8.

Given the clear mandate we have with respect to investigating emergency planning, the idea that discovery of the type sought could be lost effort in the case at bar is clearly untenable.

## THE OBJECTION THAT UCS/NYPIRG SEEKS DISCOVERY AGAINST NON-PARTIES

Licensees object that UCS/NYPIRG seeks discovery against non-parties, citing *Santa Fe v. Potashnik*, 83 F.R.D. 299 (E.D. La. 1979) and *Humphries v. Pennsylvania Railroad Co.*, 14 F.R.D. 177 (N.D. Ohio 1953). The short answer here is that we shall not grant UCS/NYPIRG's motion with respect to Putnam and Orange Counties. However, unlike the facts in the cited cases, it is clear that Licensees are already admitted parties. Further, the three agencies of the State are petitioners as interested States in this case. If those entities were to adopt such a hair-splitting defense against cooperation with this investigation as to refuse to allow observation on the ground that they were not, strictly speaking, parties, we would be ill-disposed in our discretion to permit their further participation. We shall expect these State agencies to cooperate to the same degree as the Licensees. We do not intend to usurp any jurisdiction of the State in this matter; we mean only to control the proceeding presently before us.

## THE OBJECTION THAT THERE IS NO PROPER BASIS FOR THE REQUEST

Licensee alleges that the purpose of 10 CFR §2.741 would be distorted were we to permit this discovery, citing *Belcher v. Bassett Furniture*, 588 F. 904 (4th Cir. 1978). The cited portion disapproves an "unbridled inspection" of the defendants' plants. Here, of course, no such broad permission is at issue. UCS/NYPIRG simply wishes to observe a specific limited operation, one which will occur only rarely, has obvious relevance to the case, and will simultaneously be observed by members of the Staff and FEMA.

It is also clear that, contrary to Licensees' assertion at page 17 of their motion, denial of the motion would prejudice UCS/NYPIRG's case. The opportunity to watch an actual drill in progress might not arise again in the course of this chronologically limited inquiry.[3]

We acknowledge, as Licensees note, that the principal purpose of UCS/NYPIRG's attendance upon the scene may be to "disparage" what they see. Indeed, the heart of the adversary system is the gathering of deliberately tendentious views. We would expect their perspective to be that of the jaundiced eye, but we do not see that as an argument against permitting observation, nor should we put blinders on that eye, however jaundiced.

We do, however, strongly sympathize with the Licensees' desire to keep this critical operation free of anything that might constitute interference.[4] We shall therefore impose upon UCS/NYPIRG's observers at positions 1, 2, and 3 (page 4 of UCS/NYPIRG Motion), the following conditions:

1. The observers may watch and listen only from a position that does not interfere with the personnel needed for the test. (Where visual and auditory observation can be accomplished from outside the actual control room, that can be required by Licensees, FEMA, or Staff.)
2. The observers will not ask questions, make any loud remarks, record other than by taking notes, nor take any photographs while the test is in progress.

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[3] The Board has only until September of 1982 to complete its part of the investigation.

[4] Licensees make general references to a "burden" on them (Licensees' Answer at page 17) and to alleged circumvention of procedural safeguards (at page 18). Licensees, however, do not aver or allege facts sufficient to support the grant to them of a protective order under Section 2.740(c). That rule would permit protection "from annoyance, embarrassment, oppression, or undue burden or expense." Absent such allegation there appears to be no support for an interference call.

3. The observers are not, of course, exempted from the customarily required security searches and practices normally attendant on entering these areas.

Needless to say, Licensees' apprehension lest every petitioner and his/her lawyer be allowed to attend is also reasonable. Two observers means *only* two individuals.

## RULING

We therefore rule as follows on the UCS/NYPIRG Motion at pages 4-5 with regard to the presence of observers at the numbered positions:

Positions 1-3. UCS/NYPIRG may station two observers at each of the three locations, positioning them where they can see and hear, but cannot interfere with, the operation. In particular:

1. At the option of the Licensees, the observers may be required to stay behind some line or barrier in a manner which permits visual and auditory observation of the general area.
2. The observers shall not ask questions, make any loud remarks, record other than by taking notes, nor take photographs while the test is in progress.
3. The observers are not exempt from the customarily required security searches and procedures normally attendant upon entry into the area.

Position 4. We expect the State of New York to be as cooperative in this matter as the Licensees by allowing observers under conditions similar to those set forth for the Licensees. We may take the State's cooperation into consideration when ruling on the participation of the several State agencies who have petitioned to enter this case.

Position 5. We do not know what agency is in charge of the named Center, nor have UCS/NYPIRG seen fit to enlighten us. Under the circumstances we cannot rule unless Position 5 is under the aegis of the State; if it is under State supervision, then the ruling given with respect to Position 4 shall apply to Position 5.

Positions 6 and 7. We understand that the unsigned stipulations mentioned above have been arrived at with the two counties involved.

Positions 8 and 9. We would appreciate cooperation from Putnam and Orange Counties along the lines set forth for the Licensees.

Positions 10-15. We understand that the unsigned stipulation, mentioned above, will permit the desired observation.

Page 5, items 1-5. We understand that the unsigned stipulation, mentioned above, will provide for UCS/NYPIRG representation as desired.

## ORDER

Upon consideration of the foregoing and of the entire record in this matter, it is this first day of March 1982.

ORDERED

1. That Consolidated Edison Company of New York and the Power Authority of the State of New York shall permit two representatives appointed by UCS/NYPIRG to observe the emergency planning exercises at each of the sites under Licensees' control, subject to the conditions we have outlined herein.

2. Observers shall comply with the conditions which we have imposed herein.

3. The State of New York should afford the same opportunity to UCS/NYPIRG observers at the sites it controls.

4. The motion for approval of stipulations will be granted when signed copies of the stipulations are filed, provided that the signed copies do not differ substantially from the unsigned copies.

ATOMIC SAFETY AND
LICENSING BOARD

Oscar H. Paris
ADMINISTRATIVE JUDGE

Frederick J. Shon
ADMINISTRATIVE JUDGE

Louis J. Carter, Chairman
ADMINISTRATIVE JUDGE

Bethesda, Maryland
March 1, 1982

Cite as 15 NRC 523 (1982) LBP-82-12B

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Louis J. Carter,** Chairman
**Dr. Oscar H. Paris**
**Frederick J. Shon**

**In the Matter of** **Docket Nos. 50-247-SP**
**50-286-SP**

**CONSOLIDATED EDISON COMPANY OF NEW YORK**
**(Indian Point, Unit No. 2)**

**POWER AUTHORITY OF THE STATE OF NEW YORK**
**(Indian Point, Unit No. 3)**

**March 2, 1982**

The Licensing Board denies licensees' request for a stay and for certification to the Commission of the Board's order permitting intervention petitioner's representatives to observe emergency planning exercises at licensees' plant, but grants licensees' request for referral of the order to the Commission under the discretionary interlocutory appeal provisions of the Rules of Practice.

## RULES OF PRACTICE: DISCOVERY

Where it was unmistakably clear that the adequacy of emergency planning for the Indian Point facility was an issue to be fully investigated in the proceeding, and where, in the opinion of the Board, the observations of potential intervenors as to emergency planning exercises scheduled for the next day would be useful to the Board in its deliberations, the Board would deny licensees' request for stay and certification to the Commission of its order permitting such observations, since to grant the request would render the issue moot.

## RULES OF PRACTICE: DISCRETIONARY INTERLOCUTORY APPEALS

Where the emergency planning exercises that were the subject of the Board's order permitting observation by representatives of intervention petitioner were scheduled to take place the next day, the Board would grant licensees' request for referral of the order to the Commission pursuant to the discretionary interlocutory appeals provisions of the Rules of Practice (10 CFR 2.730(f)) because of the need for a prompt decision.

### MEMORANDUM AND ORDER
### (Denying in Part and Granting in Part Licensees' Application for a Stay, Certification, and Referral)

This Board issued a Memorandum and Order on March 1, 1982, granting in part a motion by the joint petitioners, Union of Concerned Scientists and New York Public Interest Research Group (UCS/NYPIRG) to require the Licensees to allow representatives from the organizations which have filed petitions to intervene in this proceeding to observe the emergency planning exercises which are scheduled to take place at Indian Point on March 3, 1982.[1] On March 1, 1982, the Licensees filed "Licensees' Application for Certification and Referral to the Commission and for a Stay of the Board's Ruling on the UCS/NYPIRG Motion for Discovery and to Permit Entry upon Land in Control of the Licensees and Interested States" (Licensees' Application).

A conference call was held on the afternoon of March 1, 1981, between the members of the Board and the lawyers representing the Licensees, the NRC Staff, and UCS/NYPIRG. During the conference argument on Licensees' Application was presented by all participating parties. No request was made by any party for an opportunity to make any further filing.

The Licensees allege irreparable damage if UCS/NYPIRG observers are present in the control room during the emergency procedures exercise. No firm evidence of damage was adduced, however, other than a concern

[1] UCS/NYPIRG also requested that the Board order that it be allowed to place observers at the state and county operated facilities that will be involved in the exercise. By stipulation between UCS/NYPIRG, the Counties of Westchester and Rockland, the Federal Emergency Management Agency, and the NRC Staff, the petitioners will be allowed to place observers at the County facilities. No response to UCS/NYPIRG's motion has been received from the State of New York; therefore the Board has asked the State to also allow observers at its facilities.

for the effect of what Licensees perceive to be overcrowding the control room. The control room is alleged to have about 600 square feet of floor space in which observers will be standing during the exercise. In addition to the 7 persons who will be present operating the reactor (Unit 3), there will be present 9 drill participants, 5 observers for the Licensee, 3 for the NRC Staff, the 2 UCS/NYPIRG observers, and 2 Licensees' representatives (one litigator and one security person) assigned to accompany the UCS/NYPIRG observers. Licensees could provide no information as to the number of persons that had been accommodated in the control room during previous exercises. It was pointed out, however, that the impending exercise will be the first to involve off-site activities.

Concern was expressed by the Licensees about the fact that UCS/NYPIRG's attorney had not identified the individuals it wished to send as observers to the site. UCS/NYPIRG's attorney identified them as Mr. Robert Pollard and Mr. Steven Sholley, both of UCS.

Nothing submitted in Licensees' Application or in the oral argument during the conference call persuades this Board that there is any serious cause for concern because UCS/NYPIRG observers will be present in the control room during the emergency planning exercise. Licensee's argument that UCS/NYPIRG has not yet been admitted as a party or that contentions relating to emergency planning have not yet been accepted is not persuasive. UCS was responsible for the original petition which prompted, in part, the Commission's initiating this proceeding; it is virtually assured that UCS/NYPIRG is one of the petitioners that will become full party to the proceeding. Finally, it is unmistakably clear that the adequacy of the emergency planning for the Indian Point facility is an issue which must be fully investigated in this proceeding. It is the opinion of this Board that the observations of the potential intervenors, in addition to those of the Licensees and the NRC Staff, will be of value to the Board in its deliberations.

We are denying the requests for certification and a stay because to grant them would moot the question and deny this proceeding any possible benefit of UCS/NYPIRG's observations of the exercise. We are referring the matter to the Commission because the Licensees are bringing the matter directly to the Commission's attention, and time is short.

## ORDER

Upon consideration of the foregoing and the entire record in this matter, it is this 2nd day of March, 1982,

ORDERED

1. That the application for a stay of our Order dated March 1, 1982,

granting the motion of UCS/NYPIRG to place observers at the Indian Point site, is *denied*.

2. That Licensees' application for certification of our March 1, 1982, order to the Commission, pursuant to 10 CFR §2.718(i) and §2.788, is *denied*.

3. That Licensees' request for referral of our Order dated March 1, 1982, to the Commission pursuant to 10 CFR §2.730(f) is *granted*.

ATOMIC SAFETY AND
LICENSING BOARD

Oscar H. Paris
ADMINISTRATIVE JUDGE

Frederick J. Shon
ADMINISTRATIVE JUDGE

Louis J. Carter, Chairman
ADMINISTRATIVE JUDGE

Bethesda, Maryland
March 2, 1982

Cite as 15 NRC 527 (1982) LBP-82-13

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Peter B. Bloch**, Chairman
**Dr. Jerry R. Kline**
**Mr. Frederick J. Shon**

**In the Matter of** **Docket Nos. 50-440-OL**
**50-441-OL**

**CLEVELAND ELECTRIC ILLUMINATING COMPANY, *et al.***
**(Perry Nuclear Power Plant, Units 1 & 2)**

**March 2, 1982**

The Licensing Board denies intervenor's request for a stay of proceedings, treating the request as a motion for continuance.

## RULES OF PRACTICE: EXTENSIONS OF TIME

While an allegation of serious construction deficiencies might properly be the subject of a discovery request, it does not provide a basis for continuing the proceeding.

## LICENSING DECISIONS: SCOPE

It is the responsibility of the Licensing Board to adjudicate contentions raised by the parties and important safety and environmental issues raised by the Board *sua sponte*, pursuant to Commission regulations. The Board will not decide whether construction complies with all legal requirements unless that issue is raised by an admitted contention or incorporated within a *sua sponte* issue.

## MEMORANDUM AND ORDER
## (Concerning Motion for a Continuance)

On February 24, 1982, Sunflower Alliance, Inc., et al. (Sunflower) requested a stay of these proceedings. Because there is no need to issue a stay to ourselves in order to stop these proceedings, we interpret the motion for a stay as a motion for a continuance.

We find this motion to be entirely without merit. Sunflower is alleging serious construction deficiencies, including the presence in "the bioshield" of large concrete voids. The allegation might properly be the subject of a discovery request. However, it does not provide a basis for continuing the proceeding. *See*, LBP-82-10, *Wisconsin Electric Power Company* (Point Beach Nuclear Plant, Units 1 and 2), 15 NRC 341, 345-46 (1982).

Sunflower already has an admitted contention concerning construction deficiencies and it has moved to have that contention enlarged. It has raised this argument in the context of that motion. Reply Brief of February 26, 1982, at 2.

Sunflower's concern is not yet ripe. There is adequate opportunity under existing rules of procedure for it to raise quality assurance issues in a timely fashion. An operating license will not be granted until such issues have been appropriately resolved.

We are troubled by an aspect of the Sunflower filing. On page 2, Sunflower states that,

> This Board may not license Applicant until this Board is satisfied that the construction complies with all legal requirements . . . . This Board is sworn to certify that the construction at Perry is acceptable.

This statement is incorrect in detail and in generality. Our responsibility is to uphold the laws and regulations of the Commission and to decide our cases fairly. We certainly are not sworn to certify that construction is either acceptable or unacceptable. In addition, our responsibility is to adjudicate contentions raised by the parties plus important safety and environmental issues which we raise *sua sponte*, pursuant to Commission regulations. We will not decide whether "construction complies with all legal requirements" unless that issue is raised by an admitted contention or incorporated within a *sua sponte* issue. At the present time, only a limited quality assurance contention has been admitted. Should we grant the motion to enlarge the contention, our obligation will come closer to that which Sunflower describes but there may still not be a precise congruity.

*See* the opening statement at the Special Prehearing Conference, Tr. 1 ff., for a further discussion of our obligations.

ORDERED:

That the Motion to Stay Proceedings filed by Sunflower Alliance, Inc., et al., on February 24, 1982, is denied.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

Peter B. Bloch, Chairman
ADMINISTRATIVE JUDGE

Bethesda, Maryland

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Andrew C. Goodhope,** Chairman
**Dr. Linda W. Little**
**Dr. Forrest J. Remick**

**In the Matter of** **Docket Nos. 70-1308 & 72-1 SP.**

**GENERAL ELECTRIC COMPANY**
**(GE Morris Operation Spent Fuel Storage Facility)**

**March 2, 1982**

The Licensing Board grants Applicant's motion for summary disposition of all remaining contentions.

## RULES OF PRACTICE: SUMMARY DISPOSITION

In order to grant a motion for summary disposition, the record before the Board must demonstrate clearly that there is no possibility that a litigable issue of fact exists. Any doubt as to whether the parties should have been permitted or required to proceed further would have required a denial of the motion.

## DECISION AND ORDER
## (Granting Motion For Summary Disposition)

This is a license renewal proceeding in which the Applicant, General Electric Company (GE), seeks a 20-year extension of its existing license to store spent (irradiated) fuel at its Morris, Illinois facility. After the Board granted petitions to intervene and contentions were formulated, extensive discovery was held by all parties. At the conclusion of this discovery, the Applicant filed a motion for summary disposition of all contentions of the

only remaining intervenor in this matter, State of Illinois (Intervenor).[1] With its motion Applicant filed 74 statements of material fact about which it contends there are not genuine issues to be heard by the Board.[2]

In its response Intervenor opposed summary disposition of any of the contentions.[3] Intervenor in its statement moved to strike a substantial number of Applicant's statements of material fact on the grounds that some are not properly supported as required by 10 CFR §2.749, or that some are not completely supported by proper evidence, or that some are premature, or that one, 34, is not a fact but a conclusion of law. The only further support which Intervenor proffers in support of its motion to strike is in its response in opposition to the motion. Each of the contentions will be treated hereafter seriatim. This will include a discussion of Applicant's Staff's and Intervenor's positions on each contention.

The Intervenor also made no response to a number of Applicant's statements of material fact. The only statement of material fact asserted by Intervenor is "Morris could be abandoned because of an accident at Dresden" (Minor affidavit). This statement is treated hereafter in the Board's ruling on Contention 4.

The NRC Staff in its answer in support of Applicant's motion[4] supports the Applicant's motion and recommends that the Board dismiss all contentions since there are no genuine issues of material fact to be heard. The Applicant, in addition on October 2, 1981, filed a reply to Intervenor's Statement and Response.

10 CFR §2.749 specifically provides that statements of material facts required to be served by the moving party will be deemed to be admitted unless controverted by the statement required to be served by the opposing party. Intervenor's responses set out only one statement of material fact and briefly move to strike most of the Applicant's statement of material facts as not supported or as premature and make no response to an additional number. Whether this approach complies with the rule is at least questionable, however, the Board has reviewed Applicant's statement of material facts and finds that they are properly and fully supported by substantial and competent evidence and also finds that the Intervenor's claims to the contrary are without merit. A discussion of the pertinent

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[1] General Electric Company's Motion for Summary Disposition and Memorandum in Support Thereof (Applicant's Motion) dated August 28, 1981.

[2] Statement of Material Facts as to Which There is no Genuine Issue to be Heard (Applicant's Statement).

[3] Response to General Electric's Statement of Material Facts (Intervenor's Statement) and Illinois' Response in Opposition to Applicant's Motion for Summary Disposition (Intervenor's Response), dated September 22, 1981.

[4] NRC Staff Answer in Support Total of Applicant's Motion for Summary Disposition (Staff Answer) dated September 22, 1981.

statement of material facts and Intervenor's contrary arguments are contained in the Board's rulings on each contention. The Board adopts Applicant's statement of material facts as its own. This statement of material facts, as edited, appears at the end of this decision as Appendix A.

The Board is issuing this Order pursuant to its authority granted in 10 CFR §2.749. We have kept in mind that in order to grant a motion for summary disposition, the record before us must demonstrate clearly that there is no possibility that there exists a litigable issue of fact. Had we had any doubt or felt that parties should be permitted or required to proceed further than the evidentiary showing before us, we would have denied the motion for summary disposition. This is true in our ruling adopting Applicant's statements of material facts and rulings on the contentions.

## RULINGS ON CONTENTIONS

**Contention 1** alleges:

The consolidated Safety Analysis Report (CSAR) does not adequately describe the following:

(a) The consequences of simultaneous accidental radioactive releases from the Dresden Nuclear Power Station and the Morris Spent Fuel Storage Facility;

(b) The risks and consequences of the release of radioactive elements in excess of Part 20 regulations as a result of any of the following accidental occurrences at the Morris facility: (i) the consequences of an accident caused by a tornado impelled missile; (ii) a loss of coolant accident, alone and in conjunction with an accident which has caused a rift in the building structure; (iii) earthquake related accidents; (iv) sabotage related accidents not analyzed in NEDM-20682.[5]

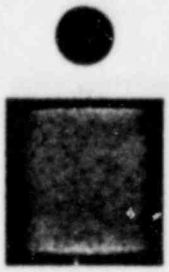
Applicant's contended material facts 8-12, previously adopted by the Board, are applicable to Contention 1(a). These contended material facts are properly supported by reference to applicable regulations, filings in this proceeding, depositions and an affidavit.[6]

The Intervenor relies primarily on an accompanying affidavit[7] to establish genuine issues of material facts. This affidavit addresses the population

[5] Contention 1(b), as originally admitted, contained further subparts (v) through (ix). These subparts were dismissed (Prehearing Conference Order Dismissing Certain Contentions and Setting Dates for Filing Motions for Summary Disposition dated August 21, 1981).

[6] Affidavit of Eugene E. Voiland (Voiland) at §§2, 3. The Voiland Affidavit is Appendix B to Applicant's Motion.

[7] Affidavit of Gregory C. Minor Concerning Issues Related to Morris Spent Fuel Storage (Minor) attached to Intervenor's Response as Exhibit A.



density surrounding the site, pointing out that accidents at either the Dresden or Morris site have the potential to impact a very large population and warrant special precautions. The affidavit also indicates that "It is conceivable that a Dresden accident could release radioactive material that would contaminate the Morris operation site (only 0.7 miles away) and limit access of personnel to perform necessary maintenance and repair. Further, such an accident at Dresden could result from an initiating event such as a tornado, earthquake, blackout, or sabotage, which would impact the Morris Operation, perhaps even causing accidents and releases there as well. The CSAR has only considered such influences and interactions within the limited range of DBA releases."

In response to Applicant's interrogatories[8] questioning the bases for Contention 1(a), Intervenor points to the MHB Report.[9]

The Staff indicates that Contention 1(a) raises no genuine issue of material fact. The Staff believes that the material facts alleged by the Applicant are correct.[10] Further, the Staff supports Applicant's motion that summary disposition on this contention should be granted.

This contention alleges that the CSAR[11] is deficient because it does not "adequately describe" the accidents specified in subparts (a) and (b) of the Contention. The regulations in 10 CFR Part 72, "Licensing Requirements for the Storage of Spent Fuel In An Independent Spent Fuel Storage Installation" do not require that the Applicant's CSAR consider particular accidents. 10 CFR §72.15(a) provides that each application for a license under Part 72 shall include a Safety Analysis Report (SAR) describing the proposed Independent Spent Fuel Storage Installation (ISFSI) for the storage of spent fuel, including how the ISFSI will be operated. According to 10 CFR §72.15(a)(13), the SAR shall include:

> "An analysis of the potential dose or dose commitment to an individual outside the controlled area from accidents or natural phenomena events that result in the release of radioactive material

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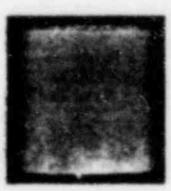
[8] General Electric Interrogatories Propounded to the Intervenor State of Illinois dated July 15, 1980.

[9] Technical Review of Risk Due to Expansion of the Morris Operation Spent Nuclear Fuel Storage by MHB Technical Associates dated February 1979 (MHB Report). This report does not relate to the licensing action consideration in this current proceeding. It relates to a suspended licensing action concerning previous plans by the Applicant to expand the storage capacity of the Morris Operation. The MHB Report states at page 1-i that the report "is a study assessing the extent to which the risk to the health and safety of the public is impacted by expansion of MO (Morris Operation)".

[10] Affidavit of A. Thomas Clark (Clark) at p. 2 annexed to NRC Staff Answer.

[11] Consolidated Safety Analysis Report for Morris Operation (CSAR), NEDO-21326C, January 1979. Where applicable, Attachment G to Applicant's amended application for license renewal under 10 CFR Part 72, dated January 12, 1981, and supplements contained information superseding that in the CSAR (Attachment G).



to the environment or direct radiation from the ISFSI. The calculations of individual dose or dose commitment shall be performed for direct exposure, inhalation, and ingestion occurring as a result of the postulated design basis event."

10 CFR §72.72(e), "Proximity of Sites," states that:

"An ISFSI located near other nuclear facilities shall be designed and operated to ensure that the cumulative effects of their combined operations will not constitute an unreasonable risk to the health and safety of the public."

The Dresden Nuclear Power Station (DNPS) is located about one-half mile north northeast of the Morris Operation.[12] Section 3.3.1 of the CSAR, "Nearby Nuclear Facilities," considers the combined radiological impacts from the Morris Operation and the DNPS and concludes that such impacts are within the requirements of 10 CFR §72.67.[13]

The CSAR considers various postulated accidents and estimates of the quantity of radioactive materials released and projected, including the most severe postulated accidents at DNPS and Morris.[14]

The Staff considered the combined operation of DNPS and Morris in the SER, §3.7, "Proximity of Sites" and §7.8 "Interaction of the Dresden Reactors with the Morris Operation." The estimated doses from the Morris Operation, under normal conditions,[15] do not make a significant contribution to the 25 mrem whole body dose limit set forth in 40 CFR Part 190 by the Environmental Protection Agency (EPA) for any member of the public.[16]

An accidental release of radioactivity from DNPS would not cause an additional release of radioactivity from the Morris Operation. If there were simultaneous accidents at Dresden and the Morris Operation, the maxi-

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[12] Safety Evaluation Report (SER), NUREG-0709, July 1981, §7.8; Clark at 4.

[13] Clark at 4; 10 CFR §72.67 provides that:

"Criteria for radioactive materials in effluents and direct radiation from an ISFSI.

(a) During normal operations and anticipated occurrences, the annual dose equivalent to any real individual who is located beyond the controlled area shall not exceed 25 mrem to the whole body, 75 mrem to the thyroid and 25 mrem to any other organ as a result of exposure to: (1) planned discharges of radioactive materials, radon and its daughters excepted, to the general environment, (2) direct radiation from ISFSI operations and (3) any other radiation from uranium fuel cycle operations within the region.

(b) Operational restrictions shall be established to meet as low as is reasonably achievable objectives for radioactive materials in effluents and direct radiation levels associated with ISFSI operations.

(c) Operational limits shall be established for radioactive materials in effluents and direct radiation levels associated with ISFSI operations to meet the limits given in paragraph (a) of this section."

[14] CSAR §8.1.2, "Accident Description/Discussion."

[15] Estimated by the Staff to be approximately 0.00001 of the yearly dose limits for light water reactors under the ALARA concept of 10 CFR Part 50, Appendix I (SER §3.7).

[16] Clark at 5.

mum dose to any individual's thyroid would be 100.003 to 150.003 rem. The 0.003 rem contribution from the Morris Operation would be insignificant in comparison with the DNPS contribution and the dose received by an individual located on the DNPS exclusion area boundary would still be within the guidance limits of 300 rem to the thyroid.[17]

The Staff found that the Morris Operation makes an insignificant contribution to the dose to any individual member of the public from combined operation of both facilities and cumulative effects of combined operation of the DNPS and the Morris Operation under normal or accident conditions would not constitute an unreasonable risk to the health and safety of the public. Thus, the Staff found that the Morris Operation meets the requirements of 10 CFR §72.72(e).[18]

The Board finds that the Intervenor has failed to set forth specific genuine issues of material fact regarding the inadequacies of the CSAR relative to the accident analysis requirements of 10 CFR Part 72. Therefore, relative to Contention 1(a), the Board concludes that there is no genuine issue of material fact which is triable.

Applicant's statement alleges fifteen material facts (13-27) as being applicable to Contention 1(b)(i) through 1(b)(iii).

In Intervenor's statement, it moved to strike Applicant's material fact numbers 13-18 and 21-27 as not being properly supported as required by 10 CFR §2.749. Intervenor moved to strike material fact number 20 as not being completely supported by proper evidence as required by 10 CFR §2.749. As indicated earlier, Intervenor provides no further analysis or justification for its allegation that the material facts are not properly or completely supported. Intervenor made no response to material fact number 19. The Minor Affidavit provides no further insight into the Intervenor's position, other than as indicated above under the discussion of Contention 1(a), and establishes no genuine issue of material fact relative to Contention 1(b)(i)-(iii).

The Staff believes that Contention 1(b)(i)-(iii) raises no genuine issue of material fact and that the statement of material facts presented by the Applicant is correct.[19] The Staff supports Applicant's position that summary disposition of Contention 1(b)(i)-(iii) should be granted.

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[17] SER §7.8; Clark at 5-6, 10 CFR §100.11(a)(1).

[18] Clark at 7, SER §3.7.

[19] Clark at p. 2. With respect to Applicant's material fact number 17 Dr. Clark in his affidavit does explain that assuming a tornado missile penetrated the fuel basin structure, entered the basin water and ruptured all fuel rods in six boiling water reactor fuel bundles or four pressurized water reactor bundles, the whole body dose for a person at the site boundary would be less than 0.32% (rather than 0.12%) of the design basis accident dose limit specified

(CONTINUED)

Contention 1(b) refers to 10 CFR Part 20. However, as the Commission noted in the Supplementary Information accompanying the promulgation of 10 CFR Part 72,[20] 10 CFR Part 20 is limited to radiation protection concerns associated with normal operation and the means used to control access to areas of potential radiation exposure. When considering unexpected, accidental releases, the numerical guidance contained in 10 CFR §72.68 is utilized for spent fuel storage installations.[21]

With respect to Contention 1(b)(i), 10 CFR Part 72 requires protection from natural phenomena, *with the exception of tornado missiles.* In the Supplementary Information accompanying promulgation of Part 72, the Commission stated:

> "Tornado missile protection at reactors is of concern because rupture of recently discharged fuel at a reactor could cause the potential release of volatile short-lived radionuclides, particularly $^{131}I$. Since the quantity of $^{131}I$ present in aged fuel at an ISFSI is reduced a factor of $10^9$ due to radioactive decay in the first year after discharge, the potential risk from the rupture of aged fuel is orders of magnitude lower for an $^{131}I$ release. The radionuclides which could potentially be released as a result of a tornado missile event are long-lived $^{85}Kr$ and $^{129}I$. However an accident evaluation using conservative assumptions in NUREG-0575 [Final Generic Environmental Impact Statement on Handling and Storage of Spent Light Water Reactor Fuel, August, 1979]. §4.2.3.2 demonstrates that the consequences from the release of the nuclides attributable to a tornado missile would not be significant. Hence, a requirement for protections from tornado missiles does not appear to be justified."[22]

Nonetheless, both Applicant and Staff considered the effects of postulated tornado missile (e.g., planks, pipes, utility pole, automobile) accidents. The

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in 10 CFR §72.68(b). Although Dr. Clark agrees with the reasonableness of the statement in material fact number 23, he has not performed a confirmatory calculation. His analyses use the more conservative criteria of assuming that the water boils, not accounting for evaporative cooling, which he considers to be physically more realistic.

[20] 45 Fed. Reg. 74693, at 74696, November 11, 1980.

[21] 10 CFR §72.68 states that:

Controlled area of an ISFSI.

(a) For each ISFSI site, a controlled area shall be established.

(b) Any individual located on or beyond the nearest boundary of the controlled area shall not receive a dose greater than 5 rem to whole body or any organ from any design basis accident. The mimimum distance from the spent fuel handling and storage facilities to the nearest boundary of the controlled area shall be at least 100 meters.

(c) The controlled area may be traversed by a highway, railroad or waterway, so long as appropriate and effective arrangements are made to control traffic and to protect the public health and safety.

[22] 45 Fed. Reg. 74693, at 74698, November 12, 1980.

releases and exposures from a postulated tornado missile accident would be very small percentages of the dose guidance given in 10 CFR §72.68(b) and are acceptable.[23]

With respect to Contention 1(b)(ii), both the Applicant and Staff have considered the risks and consequences from a release of radioactivity as a result of a loss-of-coolant accident. The CSAR concludes that the probability of excessively high radiation dose rates resulting from loss of fuel basin cooling is quite small and that undetected leakage from the fuel storage basins would not uncover the fuel. The Staff concluded that there can be no sudden loss of large quantities of water from the storage basins at the Morris Operation and any water losses which would occur would be small and nearby water sources are available to replenish any water losses which do occur.[24]

The Morris Operation has been designed and constructed to insure that structures, systems and components important to safety can withstand the maximum potential natural phenomena, including earthquakes and tornadoes, to which the Morris Operation may be exposed. Thus, the Morris Operation meets the requirements of 10 CFR Part 72. Moreover, although §4.1.4 of "the MHB Report," which is cited as the basis for Contention 1(b)(iii), described a "tornado causing reduced water level," very little water would be lost by that mechanism. No mechanism has been identified whereby a rift in the building structure could cause a release of radioactivity in excess of the limits of 10 CFR §76.68.[25]

With regard to Contention 1(b)(iii), both the Applicant and the Staff have considered the ability of the Morris Operation to withstand earthquakes. The Applicant's CSAR gives consideration to the geology and seismology of the Morris Site. Moreover, the Staff concluded in the SER that because the Morris Operation has been designed and constructed to safely withstand the maximum credible earthquakes, no releases of radioactivity would be expected as a result of an earthquake.[26]

As indicated earlier Applicant's material facts 13-27 are adopted. For the reasons stated above, the Board concludes that there are no triable, genuine issues of material fact relative to Contention 1(b)(i)-(iii).

Contention 1(b)(iv) will be combined for discussion purposes with Contention 2.

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[23] CSAR §8.8.3; SER §7.6; Clark at 9.
[24] CSAR §§8.2 and 8.3; SER §7.3; Clark at 10.
[25] SER §3.4; Clark at 10, 11 citing National Oceanic and Atmospheric Administration Report, "The Tornado, an Engineering-Oriented Perspective", NOAA Technical Memorandum ERL NSSL-82, §1.D, December 1977.
[26] CSAR §3.7.4, Appendix B, SER at §7.4; Clark at 12.

**Contentions 1(b)(iv) and 2**

Contention 1(b)(iv) is stated above.[27] Contention 2 alleges:[28]

> The Physical Security Plan does not meet the requirements of 10 CFR Part 73. Further, the CSAR does not provide an adequate assessment of credible risks of sabotage related events inasmuch that the advances in the technology of explosives, which could make sabotage a more probable event, have not been adequately addressed.

Applicant's statement alleges five material facts (28-32) as being applicable to Contentions 1(b)(iv) and 2. In Intervenor's statement, it moved to strike Applicant's material facts 28-31 as not being supported as required by 10 CFR §2.749. Intervenor provided no response to material fact 32.

Intervenor's response and accompanying affidavit provides little help in refuting Applicant's statement of material facts. It is alleged by the Intervenor that the Morris Operation is a relatively accessible facility . . ., site workers have much greater accessibility to the fuel pool . . ., it is conceivable that external projectiles or missiles could penetrate the thin siding . . ., a saboteur bent on destruction . . . would find the Morris Operation fuel pool an easier target than a reactor core . . . and . . . the result of such an attack on Morris could be very devastating."[29] Completely lacking is a refutation of Applicant's material facts, any specific indication of where the CSAR is inadequate, and any mention of the alleged advances in the technology of explosives that are referred to in Contention 2.

There is no requirement in 10 CFR Part 72 that an SAR include a sabotage analysis, or assess credible risks of sabotage related events, or address advances in the technology of explosives. Rather, the Staff has sponsored a series of studies whose purpose is to estimate sabotage consequences and thereby provide a basis for the level of physical protection measures to be required at various kinds of nuclear facilities. The studies indicate that the consequences of sabotage of spent fuel at a facility such as Morris would be low. However, the technical parameters leading to the consequences estimate are dependent on the sabotage scenario assumed and are subject to some uncertainties. studies sponsored by the NRC have

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[27] NEDM-20682 refers to Applicant's Sabotage Analysis for Fuel Storage at Morris, November, 1974.

[28] The first sentence of Contention 2 was dismissed by the Board as indicated earlier in this Order.

[29] Intervenor's Response at 8; Minor at 4-5.

not confirmed the existence of "any advances in the technology of explosives which could make sabotage a more probable event."[30]

Although there is no requirement that the CSAR include a sabotage analysis or address advances in the technology of explosives, the CSAR must include a description of detailed security measures for physical protection including design features and physical security plans.[31] The physical protection program for the Morris Operation is described in several Applicant documents.[32] The Staff has reviewed these documents, which are considered to be proprietary under the provisions of 10 CFR §2.790, and has determined that the provisions of Subpart H of 10 CFR Part 72 have been met.[33]

As indicated earlier, Applicant's contended material facts 28-32 are adopted. The Intervenor has established no genuine issue of material fact relative to Contentions 1(b)(iv) and 2. The Board concludes that there are no triable genuine issues of material fact relating to contentions 1(b)(iv) and 2.

**Contention 3** alleges:

The CSAR underestimates or does not state fully the projected effects on the health of personnel, and their families from occupational exposure to radiation inasmuch as:

(a) The CSAR does not state total whole body exposure to occupational personnel for the proposed licensed life of the Morris facility;

(b) The CSAR does not project expected genetic effects on personnel or to the general population caused by such whole body occupation exposures;

(c) The CSAR includes only irradiated fuel and contaminated basin water as radiation sources. Other tanks and pipes should be included as sources of occupational exposures;

(d) The CSAR does not account for additional radiation exposure to occupational personnel from all anticipated activities at the facility (i.e., fuel disassembly, dry storage or compaction all of which are projected for the near future at Morris);

(e) The CSAR does not address the absence of effective radiation monitoring of the air within the facility resulting from:

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[30] Affidavit of Carl B. Sawyer Regarding Contention 1(b)(iv) and 2 (Sawyer) at 3-5.
[31] 10 CFR §72.15(15) and Subpart H (Physical Protection) of Part 72.
[32] Physical Security Plans (NEDS-14507-c), September, 1978; Safeguards Contingency Plan (NEDS-14567-C2), October, 1979; Security Personnel Training and Qualification Plan (NEDS-4507-C3), August, 1979; SER §11.
[33] SER §11; Affidavit of Russel R. Rentschler Regarding Contentions 1(b)(iv) and 2 (Rentschler) at 2.

(i) No devices to measure radioactive materials in the air;
(ii) No routine procedure to measure Kr 85.

Applicant's contended material facts 33-41 are applicable to Contention 3(a-e). These material facts are supported by reference to applicable regulations, the CSAR, Applicant's Operating Experience Report (Op. Exp. Rpt.) and a deposition, as well as by NRC Staff affidavits.[34] Intervenor abandoned that part of the contention referring to "families"[35] The surviving portion of the contention is directed toward the treatment of occupational exposure in the CSAR.

Intervenor has moved to strike material facts 33, 35, 37, 38, 40, and 41, asserting that these facts are not properly supported as required by 10 CFR §2.749 and to strike 34 on the ground that it is not a fact but a conclusion of law. Intervenor had no response to 36 and 39.

We deal first with subpart (d) of Contention 3. Intervenor concedes that "If indeed the activities alleged under this contention cannot legally be done under the proposed renewal then summary disposition is appropriate."[36] Further, Intervenor had no response to Applicant's material fact 36, which deals with 3(d). As stated by Applicant[37] and Staff,[38] none of the activities described in 3(d) (e.g., fuel disassembly, dry storage, or compaction) would be permitted under the current license or the proposed license renewal. Each of these activities falls within one or more of the categories requiring a license amendment outside the constraints of this proceeding (10 CFR §72.35(c)). Consequently, the Board concludes that there is no genuine issue of material fact relative to Contention 3(d).

Contention 3(a) and 3(b) deal with whole body exposure and genetic effects. Applicant's material facts 33 and 34 state that radiation exposure to personnel at the Morris Operation is well within the regulatory limits established in 10 CFR Part 20.[39] They note further that there is no requirement in 10 CFR Part 20 to project cumulative employee exposure for the term of the license and that Part 20 does not address genetic effects.

Supporting Applicant's material facts are the affidavits of Clark and Branagan, the EIA at §5.5, and the SER at §6.3. The Voiland deposition

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[34] Operating Experience — Irradiated Fuel Storage at Morris Operation (NEDO-20969 B2/B3, §4), January, 1979; Deposition of Eugene E. Voiland taken September 4, 1980 (Voiland Deposition); Clark; and Affidavit of Edward F. Branagan, Jr. (Branagan) on Contention 3(b).

[35] Illinois' Answer to General Electric's interrogatory No. 14.

[36] Illinois' Response at p. 10.

[37] Applicant's motion at 20; Voiland deposition at 37 *et seq.*; GE response to board question No. 1.

[38] Staff Answer at 19; Clark at 15-16.

[39] Op. Exp. Rpt., Ch. 4.

is also cited by Applicant in support of these facts. The Staff provided the information sought by Intervenor, i.e., that if receipt of 385 additional tonnes of spent fuel were permitted an estimated 0.02 cancer deaths may occur in the exposed population and about 0.035 genetic disorders may occur in all future generations of the exposed population, these impacts being insignificant in comparison with the natural incidence of cancer and genetic disorders.[40] As pointed out by the Staff, such estimates are not required of applicants or licensees.

Contention 3(c) asserts that the CSAR is deficient in stating that only irradiated fuel and contaminated water are included as radiation sources. Applicant asserts in material fact 35 that, on the contrary, the CSAR and other documentation supporting the license renewal deal with total occupational radiation exposure regardless of its source.[41] The Staff concurs with Applicant.[42] Intervenor's opposition to Applicant, quoted in full, is as follows:

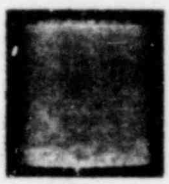
> "Again General Electric only states conclusions with only one passing reference to a sworn statement (Voiland Deposition p. 30). Because General Electric's motion is unsupported it must be denied as to Contention 3(c)."

Intervenor offers no facts or even any specified basis in support of this contention. The Board's review of the relevant documents leads us to conclude that Applicant's material fact 35 is correct and there are no triable genuine issues of material fact relative to Contention 3(c).

Applicant's statement proffers 5 material facts (37-41) as applicable to Contention 3(e). Intervenor moved to strike material facts 37, 38, 40, and 41 as not being properly supported as required by 10 CFR §2.749; no response was given to material fact 39. Applicant's material facts 37, 38, and 40 are documented by the CSAR.[43] Material fact 41 is also documented.[44]

As pointed out by Applicant, contrary to Intervenor's assertion, the CSAR describes three independent capabilities to monitor the presence of airborne radioactive materials at the Morris facility. Further the CSAR[45] indicates that the Morris facility continuously measures and records the ventilation exhaust air flow rates. Applicant agrees that the Morris facility does not routinely measure Kr-85 because Kr-85 releases are well within applicable limits[46] and, because of the conditions prevailing in a spent fuel

[40] Branagan affidavit.
[41] CSAR Ch. 7; Op. Ex. Rpt. Ch. 4.
[42] Clark at pp. 2, 14, 15.
[43] CSAR §§7.3.3 and 7.4 *et seq.*
[44] Op. Exp. Rpt., Chapters 4 and 5.
[45] CSAR, Table 5-2.
[46] CSAR §7.3.3.



storage pool, are expected to remain so.[47] The Staff supports Applicant's position that summary disposition of Contentions 3(e)(i) and 3(e)(ii) should be granted. Staff cited as supporting documents the SER §6.4 and the Clark affidavit at 2, 16, and 17. As indicated by the Staff, continuous monitoring of krypton-85 was required at the Morris facility when it was to have been operated as the Midwest Fuel Recovery Plant.[48] Such monitoring is not required under current or requested license conditions. Further, should the continuous air monitoring systems indicate an increase in overall activity levels, a dual sampling system is available for direct measurement of krypton-85.[49] Intervenor offers as opposition to summary disposition of these contentions some vague references to Applicant's documents and a direction to see Minor affidavit at paragraph 7. This five-sentence paragraph is bereft of references. Indeed, there is not even any quantification, but just general statements, i.e., that there is a "large" inventory of radioactive krypton gas in the pool, which could be released "at any time" and appear "anywhere in the vicinity of the pool" or in downstream air. Our review of documents offered by the Applicant and the Staff convinces us that there is no genuine issue of material fact relevant to Contentions 3(e)(i) and 3(e)(ii).

**Contention 4**

Contention 4 alleges:

(a) There is insufficient determination of ultimate decontamination and decommissioning costs. Costs have not been adjusted for inflation for the projected time of decontamination. CSAR pp. A7-13, A7-14. Without an accurate cost assessment GE cannot make a valid commitment to meet decommissioning costs;

(b) There is insufficient assurance that the applicant will be financially capable to meet decontamination and decommissioning costs. Other than a general statement regarding GE's present relative solvency there is no verifiable financial statement to show GE can meet future costs as is required by 10 CFR §70.22(a). A bond or other assurance of financial capability should be required to provide a guarantee that decontamination and decommissioning costs will be fully covered;[50]

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[47] NUREG-0575, Final Generic Environmental Impact Statement on Handling and Storage of Spent Light Water Power Reactor Fuel, Vol. 1, §4.2.2.2., pp. 4-15 (August 1979).

[48] Clark at 17.

[49] Clark, at 17, 18.

[50] The regulations in 10 CFR Part 72 establish the requirements, procedures, and criteria for the issuance of licenses to possess spent fuel and other radioactive materials associated with spent fuel storage in an ISFSI. Contention 4(b) was admitted prior to the date that the final Part 72 was promulgated. Section 72.18 defines the decommissioning plan requirements of 10 CFR Part 72. Section 72.14(e) defines the contents of an application including general and financial information (45 Fed. Reg. 74693).

(c) There is no contingency plan to provide decommissioning of the Morris facility should an emergency, accident or other unforeseen event necessitate immediate and/or permanent abandonment of the Morris site;

(d) There is no consideration of possible perpetual care and maintenance due to incomplete decontamination or decommissioning including:

(i) inability to dispose of LAW vault material;

(ii) residual contamination of waste vaults or other stationary parts of the facility;

(iii) ground water contamination which would require maintenance to prevent leaching offsite;

(iv) unavailability of offsite low-level disposal facilities for the dismantled facility and wastes.

(e) The CSAR does not provide necessary financial arrangements to provide reasonable assurance that decontamination and decommissioning will be carried out as required by 10 CFR §72.14(e)(3) and 72.18 in that the applicant's projected costs do not take into account the costs of complete removal of all radioactive materials nor of complete restoration of the facility to unrestricted use.[51]

Applicant's statement alleges fourteen material facts (42-55) as being applicable to Contention 4. Intervenor moved to strike material facts 42-45 and 47-48 as not being supported by proper evidence, and material facts 50-54 as not being completely supported by proper evidence as required by 10 CFR §2.749. Intervenor provided no response to material facts 46 and 55. The Intervenor disputes material fact 49 and proffers as a material fact, "Morris could be abandoned because of an accident at Dresden." The Intervenor references the Minor affidavit in support of this material fact. However, paragraphs 8 and 9 of the Minor affidavit appear to refer to Contention 4 but provide no support for the Intervenor's proffered material fact.[52] Thus, the Intervenor's one proposed material fact is not supported and is rejected.

Intervenor's response proffers no other specific material fact as being at issue relative to Contention 4. The Minor affidavit[53] includes several broad statements about decommissioning costs which do not state specific ma-

[51] Contention 4(e), previously designated State Additional Contention 1, was added to this proceeding by the Board's Order Ruling on Additional Contentions dated March 16, 1981.

[52] Minor, par. 8 at 5-6.

[53] Minor, par. 9 at 6.

terial facts. With respect to Contention 4(d) the Minor affidavit[54] indicates that the disposal of residual radioactive material:

> . . . may prove difficult in terms of the radioactive contamination from basin water leaks in the past and possibly the future . . . . Some of the radioactive material resulting from the leak initiated by the cask-drop accident is described by G.E. as being in the cracks and crevices of the soil structure beneath the pool or in the perched water in the vicinity of the pool . . . . G.E. has not discussed how these and future leaked' radioactive contamination will be disposed of during decommissioning.

None of these statements are supported by reference to any documents or supporting material which are part of this proceeding, or otherwise.

Applicant's decommissioning plan is described[55] in the CSAR. The plan provides a general outline of decontamination practices and procedures and residual radioactive material removal. It concludes that the decommissioning costs, estimated at $6,033,000 in 1978 dollars, are small compared to the total assets of the Applicant. Therefore, it is unlikely that Applicant would be unable to meet the associated financial commitment to decommission the facility.

The Staff believes that Contention 4 raises no genuine issue of material fact. The applicable section of 10 CFR §72.18 "Decommissioning plan, including financing" states:

(a) Each application under this part shall include a proposed decommissioning plan that contains sufficient information on proposed practices and procedures for the decontamination of the site and facilities and for disposal of residual radioactive materials after all spent fuel has been removed, in order to provide reasonable assurance that the decontamination and decommissioning of the ISFSI at the end of its useful life will provide adequate protection to the health and safety of the public. This plan shall identify and discuss those design features of the ISFSI that facilitate its decontamination and decommissioning at the end of its useful life.

(b) The decommissioning plan shall include the financial arrangements made by the applicant to provide reasonable assurance that the planned decontamination and decommissioning of the ISFSI will be carried out.

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[54] Paragraph 5 of the Minor affidavit suggests that an accident at Dresden might contaminate the Morris Operation site and limit access of personnel to perform necessary maintenance and repair. No reference to abandonment of Morris because of an accident at Dresden can be found.

[55] Appendix A.7, "Decommissioning Plan".

Based on these criteria, the Staff believes that the information provided by the Applicant and the Staff's analyses show that none of the subparts of Contention 4 either correctly state an inadequacy in the Decommissioning Plan or have any basis in fact.

**Contention 4(a): Inflation**

The Staff compared the Applicant's decommissioning methods and costs with those contained in the document prepared for the NRC by the Battelle Pacific Northwest Laboratory, "Technology, Safety and Costs of Decommissioning a Reference Nuclear Fuel Reprocessing Plant" (NUREG-0278), which includes a section on the decommissioning costs of spent fuel storage operations. NUREG-0278, referred to in the MHB Report, indicates a total cost of $58,000,000 to dismantle the reference reprocessing plant; however, total decommissioning of the fuel receipt and storage area is $2,500,000. Adjusted for 15% inflation, the 1978 cost would be $3,800,000, which is less than Applicant's 1978 estimate of $6,000,000. Further, the Staff indicates that projected costs due to inflation are meaningless since the Applicant's assets can be expected to increase at roughly the same rate as costs.[56]

The Staff concluded that there is reasonable assurance that the Applicant's estimate of the costs of decommissioning is conservative, and that the Applicant meets the applicable requirements of 10 CFR §72.18(b).

**Contention 4(b): Financial Assurance**

Applicant is a diversified manufacturer of high technology electrical and related equipment. For the nine months ending September 30, 1980, Applicant's consolidated gross sales were $18.0 billion. Since 1973, Applicant's cash-on-hand balance has increased from $296.8 million to $1,287.4 million on September 30, 1980. Marketable securities increased from $25.3 million to $610.4 million and current accounts receivable increased from $2.2 billion to $4.5 billion.

The Staff concludes that such current resources along with Applicant's commitment that it will have available the resources deemed necessary to satisfy its obligation to decommissioning the Morris facility provide reasonable assurance that decommissioning and decontamination of the Morris facility will be carried out in accordance with the requirements of 10 CFR §72.18(b).[57]

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[56] SER §8.5; Affidavit of A. Thomas Clark and Francis P. Cardile on Contentions 4(a), 4(d)(ii) and 4(e) (Clark and Cardile) at 2-4.

[57] SER §8.5; Affidavit of Jim C. Petersen on Contention 4(b).

**Contention 4(c): Emergency Abandonment**

This contention alleges the lack of a contingency plan for decommissioning the Morris Operation following an accident. Based on the Staff's review and evaluation of the types of accidents which could occur at the Morris Operation and of the information presented in the Applicant's CSAR as to decommissioning, the present decommissioning plan and emergency plan are deemed adequate under any credible circumstance.[58]

Although it is conceivable that, for a short period of time, the Morris Operation could be evacuated in the event of the most severe accident conditions at the DNPS, there is no foreseen circumstance that could cause immediate and permanent abandonment of the Morris site.[59]

**Contention 4(d): Perpetual Care**

This contention indicates that the decommissioning plan is inadequate because there is no consideration of possible perpetual care and maintenance due to incomplete decontamination.

The Applicant indicates that the vaults and contaminated pipes, pumps, filters, storage hardware, etc., can be cut up, packaged, and disposed of as low-activity waste. Further, contaminated structures can be decontaminated by sand blasting, acid etching or detergent scrubbing. The Applicant indicated that all licensed radioactive material can be removed from the site.[60]

The Staff indicates that the Applicant will be able to dispose of the LAW vault material and has described the methods to be used to decontaminate and decommission the vault in the CSAR.[61] The Staff has determined that these methods are within the state-of-the-art for radiochemical process operations. The Intervenor's MHB Report, which is cited as the basis for this contention, also describes means of disposing of the vault material, and states that the cost and effort to dispose of the vault itself are large but not insolvable.[62]

The Applicant has committed to decommissioning the Morris Operation in accordance with then applicable federal laws and regulations. At present, the release of sites for unrestricted use implies a level of decontamination in which the remaining radioactivity no longer poses a threat to the health and safety of the public. Removal of those forms of

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[58] SER 7, §8.5; CSAR, Appendix A.7; Clark at 18.
[59] SER §7.8; Clark at 18.
[60] Voiland at 4.
[61] CSAR, §A.7.3.3.1.
[62] Clark at 19; MHB Report Section 6.1.

waste has been demonstrated at various Department of Energy locations. The Staff concludes that there will be no need for perpetual care of the Morris Operation after decommissioning due to residual contamination.[63]

The CSAR discusses the leak collection, monitoring and pump-out provisions for the basins, LAW vault, and cladding vault. No leakage has been detected from the LAW tank or the cladding vault. These systems maximize the likelihood that any leaking radioactive materials will be returned to the system, and minimize the likelihood of contaminating the groundwater.[64]

The Morris Operation has an independent water sampling program. Water samples are taken from 8 to 10 site monitoring wells and analyzed. Results from those water samples have indicated no discharge of radioactive material to the groundwater on-site. After decommissioning the site, monitoring wells would be used to assure the removal of all radioactive material which could constitute a threat to the public health and safety, and thus assuring that perpetual maintenance will not be required.[65] Low-level waste disposal sites are available at the present and they are expected to be available in the future. The Low-Level Radioactive Waste Policy Act states that each state is responsible for providing for disposal of low-level waste within its borders. The Department of Nuclear Safety of the State of Illinois has published a notice of proposed rulemaking in the *Illinois Register* to establish criteria for a low-level waste site in Illinois, noting that it is desirable that the facility be operational by 1986.[66]

**Contention 4(e): Complete Removal**

The Applicant has stated its objective is "to decontaminate the site to a point where continued USNRC licensing is no longer required." The release of sites for unrestricted use does not imply the complete removal of all radioactivity. The Staff has concluded there is reasonable assurance that the Morris Operation will be decommissioned in a manner to provide adequate protection of the health and safety of the public in accordance with 10 CFR §72.18(b).[67]

Contention 4 alleges that the decommissioning plan proposed in the CSAR is inadequate for a number of reasons. The Staff SER concludes that the application for license renewal meets the standards and requirement of the Commission's regulations. The Applicant has established

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[63] Clark and Cardile at 2, 4-6.
[64] CSAR, §5.5.15, 5.6.1.2 and 5.6.2.2; Affidavit of Lewis G. Hulman and A. Thomas Clark on Contention 4(d)(iii) (Hulman and Clark) at 2-3.
[65] Hulman and Clark at 3.
[66] Affidavit of Kitty S. Dragonette on Contention 4(d)(iv) at 2.
[67] CSAR, Appendix A, §A.7.2.2; SER §8.5; Clark and Cardile at 2-4.

material facts as to which there is no genuine issue. The Intervenor has failed to establish a material fact at issue. Therefore, the Board concludes that relative to Contention 4 there is no triable genuine issue of material fact.

**Contention 5** alleges:

> The Emergency Plan in the CSAR is inadequate in that:
> (a) The plan does not specify which emergency procedures will be utilized to unload the spent fuel pool and to transport and/or store irradiated fuel in the event that an emergency should necessitate transfer of the spent fuel from the Morris spent fuel pool.
> (b) The CSAR should be supplemented to explain GE's plans for emergency transportation of irradiated fuel.
> (c) There is no reference to tests or other means by which it can be determined that the existing emergency plans are adequate. Adequate test programs of both communications systems and procedures should be documented prior to licensing.

Applicant's statement of material facts 56, 57, and 58 relate to contentions 5a, 5b, and 5c, respectively. Intervenor moved to strike 57 and 58 on the grounds that they were not properly supported by evidence as required by 10 CFR §2.749 and 56 on the grounds that it was not completely supported by proper evidence as required by the same regulation. In sum, Intervenor's major thrust in opposing Applicant's motion is that Applicant has not supported its conclusions with evidence and has not met its burden. The only other support for Intervenor's continued grip on this contention is the Minor affidavit at paragraph 10. We note parenthetically that the Minor affidavit is not numbered or outlined or any other way keyed to specific contentions. The Minor affidavit states that in the event the pools at the Morris facility are filled to the point that fuel movement is not possible and that the basin or liner is damaged such that fuel must be removed to facilitate repairs, then there should be a contingency plan for removing, loading, and shipping the fuel to some other place.

Applicant's material fact 56 indicates that the CSAR, chapters 1 and 5, and the Voiland affidavit at paragraph 5 document the procedures for loading fuel from storage into shipping casks and transporting it to a licensed receiver as well as recent experience in utilizing these procedures for a transfer from Morris Operation to the LaCrosse Boiling Water Reactor. Applicant's material fact 57 indicates that procedures for response to radiological transportation emergencies are outlined in Applicant's Transportation Emergency Plan[68]; however, this is directed towards Applicant's assistance in the case of nuclear material being shipped *to*

[68] NEDO-24785, September 1980.

rather than *from* the Morris Operation. Material fact 58 indicates that Applicant does, in fact, have a program of testing and drills in compliance with applicable regulations.[69] As conceded by Intervenor in its opposition, "If the evidentiary support cited by General Electric does indeed establish that it is in compliance with all applicable regulations, summary disposition is appropriate."

The Staff supports Applicant's position that summary disposition of all of Contention 5 should be granted[70] and agrees that Applicant is in compliance with applicable regulations, in that Applicant's CSAR, Section 9.5, Emergency Plans, and the "Radiological Emergency Plans for Morris Operation" address the provisions of Section IV of Appendix E to 10 CFR Part 50 and that these emergency plans satisfy the requirements of 10 CFR §72.19. Further, the plan contains testing provisions which include frequent tests of the communications system. The conduct of tests and drills is assured by Staff inspection procedures.[71]

Our review of the documents supporting Applicant's and Staff's position, as well as our consideration of the Minor affidavit at paragraph 10, convinces us that the Morris Operation is in compliance with applicable regulations dealing with emergency plans and procedures, including testing and drilling of these plans and procedures. The information proffered by Intervenor as the basis for its continued hold on this contention offers us no facts which are genuine, material, or triable.

**Contention 7** states:[72]

> The Nuclear Regulatory Commission has an obligation under the National Environmental Policy Act (NEPA) 42 U.S.C. 4332 (1969) to issue an environmental impact statement which will account for environmental impact of normal operation of the Morris facility.

Applicant's statement of material facts 59-61 are applicable to Contention 7. The Staff affidavit[73] supports Applicant's position that summary disposition of Contention 7 should be granted. Intervenor has moved to strike material facts 59-61 on the ground that they are premature, citing the Board's order of June 5, 1980, p. 19 which deferred a ruling on whether or not an Environmental Impact Statement (EIS) was required until evidence relating to potential environmental impacts was shown on

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[69] NEDE-21894, June 1975 as supplemented.

[70] Affidavit of Clark and Fisher Regarding Contention 5. (Clark and Fisher)

[71] SER §4.9, 8.4; Clark and Fisher at 4 and 5; Section 8.1 of the "Radiological Emergency Plan."

[72] Contention 6 was dismissed from the proceeding by agreement in the Board's Prehearing Conference Order dated August 21, 1981.

[73] Affidavit of Keith R. Price (Price) annexed to NRC Staff Answer.

the record. Subsequent to that time, there was opportunity for discovery on that contention, as well as time for the Staff to determine whether or not it considered necessary the preparation of an EIS. The Staff's determination was that a negative declaration under 10 CFR §51.5b was appropriate and consequently issued its Environmental Impact Appraisal (EIA),[74] now part of the record in this proceeding. Support for the Staff's EIA was provided by the affidavit of Price, a consultant who participated in its preparation. As set forth in the EIA, the Staff has concluded that the proposed licensing action will not significantly affect the quality of the human environment and that there will be no significant environmental impact from the proposed action. The Staff supports Applicant's position that summary disposition of Contention 7 should be granted.

The documents proffered by Intervenor as basis for this contention, where they relate to environmental issues at all, support Applicant's and Staff's position rather than Intervenor's position.

Applicant has cited[75] a recent appeal board decision which fits the instant proceeding as well or better than the proceeding in which it was rendered:

> "Indeed, the whole purpose in considering primary or secondary impacts of an action is to determine if they have a cause-and-effect relationship with any environmental *changes*. (Footnote omitted.) Where, as here, there is no change in the environmental status quo that purpose need not be served." (Emphasis in original.)

*Consumers Power Company* (Big Rock Point Nuclear Plant) ALAB-636, 13 NRC 312 (1981).

The Applicant proposes only to continue, without change, the activities it has carried on for nearly 10 years, which activities were licensed subsequent to NEPA and after environmental review under that law. Intervenor has not brought forth, even after ample opportunity for discovery, evidence (or even allegations) of any specific impact which would require issuance of an EIS.

Consequently, we conclude that there are no triable genuine issues of material fact relative to Contention 7.

**Contention 8**

Contention 8 alleges:

> The CSAR does not provide for the safe control of the facility under off-normal or accident conditions as required by 10 CFR

[74] NUREG-0695, June 1980.
[75] Applicant's Motion at 38-39.

§72.72(j) in that, it does not provide for adequate access to and from the control room during and after release of radiation in excess of 10 CFR Part 20 within the facility.

Applicant's statement alleges three material facts (62-64) as being applicable to Contention 8. Intervenor moved to strike material facts 62-63 as not being properly supported as required by 10 CFR §2.749 and moved to strike material fact 64 as not being completely supported by proper evidence.

Intervenor's response proffers no specific material fact as being at issue and the accompanying affidavit[76] does not address Contention 8 at all. As discussed under Contention 1(b), the terminology in 10 CFR Part 20 is limited to radiation protection concerns associated with normal operations and the means to control access to areas of potential radiation exposure. The guidance in 10 CFR §72.68. "Controlled Area of an ISFSI." covers releases of radiation from an ISFSI resulting from accident conditions.

Contrary to the assertion in Contention 8, 10 CFR §72.72(j) does not require that a SAR "provide for access to and from the control room during and after release of radiation in excess of 10 CFR Part 20 within the facility." Rather, 10 CFR §72.72(j) provides that the control room or control room areas should be designed to provide safe control of the ISFSI under off-normal or accident conditions.[77]

> *"Control Room or Control Areas.* A control room or control areas shall be designed to permit occupancy and actions to be taken to monitor the ISFSI safely under normal conditions, and to provide safe control of the ISFSI under off-normal or accident conditions."

The Commission, in the Supplementary Information accompanying the promulgation of 10 CFR Part 72, recognized that:

> "The safety of an ISFSI (Independent Spent Fuel Storage Installation) is achieved by static means, primarily its configuration. Its safety is not dependent on dynamic reactions to the manipulation of controls like a reactor."[78]

The Applicant's criteria for accessibility of equipment during emergencies and control room access are stated in its CSAR.[79] The Staff considered the extent of the impact of any credible accident which could occur at the Morris Operation and determined that no emergency would inhibit access to any structure, system or component because the severity of radiological impact caused by any credible accident is low.[80]

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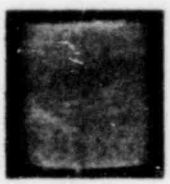
[76] Intervenor's Response at 14; Minor affidavit.
[77] 10 CFR §72.72(j) states:
[78] 45 Fed. Reg. 74693, at 74698, November 12, 1980.
[79] CSAR §4.2, Sec. 4.3.1.
[80] SER §3.9.



The control room at the Morris Operation can be entered by any of three doors. Access to the main building is possible from two principal entrances and from any of three other doors accessible by an exterior staircase. Once inside the building there are a number of ways to get from any of the building entry doors to any of the control room doors. Even so, occupation of the control room is not necessary for the safe operation of the facility. At the current heat generation of the fuel, coolant pumps and ventilation fans could be turned off and it would take over six months for the water to evaporate down to the top of the fuel. The water temperature during that time would not exceed 120°F.[81]

Contention 8 addresses the effect of control room access during and after release of indication within the facility. However, even if it was necessary to evacuate the Morris Operation for external reasons, such as under the most severe accident conditions at the Dresden reactors, occupation of the control room at the Morris Operation would not be necessary.[82]

The Board concludes that there is no triable genuine issue of material fact relative to Contention 8.

**Contention 9** states:

Applicant's operator training and certificat on program is inadequate to insure safety as required by 10 CFR Part 72, Subpart I in that Applicant's program fails to:

(a) Establish any minimum academic requirement; and
(b) Establish any criteria or numerical standards for passage or failure of testing and verification requirements.

Applicant's statement of material facts 55-66 are applicable to Contention 9. Material fact 65 states that Applicant has submitted to the NRC its plan for operator training and certification at Morris Operation consistent with 10 CFR §72.92, supporting this statement with reference to the Voiland affidavit at paragraph 7, the SER at §8.3.2, and Appendix E to the Motion for Summary Disposition. The Staff supports Applicant's Motion for Summary Disposition.[83] Intervenor nevertheless moves to strike this material fact as not being completely supported by proper evidence as required by 10 CFR §2.749. Material fact 66 states that Morris Operation personnel and supervisors are trained, tested, certified and regularly retrained and recertified, supporting this statement with the Voiland affidavit, paragraph 7. Intervenor had no response to this material fact.

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[81] Voiland at 6-7.
[82] SER §§3.12, 7.8; Clark at 21.
[83] Staff Answer at p. 34, Clark at 2.

In this proceeding the Applicant submitted under oath its Operator Training and Certification program, page F-4 (Attachment F to General Electric's Application for a license under 10 CFR Part 72). This document indicates that passing grades must be attained on both written and walk-through examinations.

Intervenor disclaims any attack on the regulations in its response to Contention 9.[84] However, the Board finds it difficult to interpret its opposition as being anything other than an attack on the adequacy of the regulations. We observe that Applicant has complied with the regulations as they are stated; Staff agrees; and Intervenor, by its own admission, states that "(t)here may be no facts in dispute" on this issue. However, Intervenor urges that "as a matter of law and logic summary disposition cannot be granted in favor of General Electric." The Board cannot find any genuine issue as to any material fact relevant to Contention 9 which is triable.

**Contention 10** alleges:

> Applicant's Technical Specifications do not comply with 10 CFR §§72.16 and 72.33 in that nothing therein precludes applicant from receiving, handling and storing damaged spent fuel and nowhere has Applicant identified, analyzed or evaluated such receipt, handling or storage of damaged spent fuel in accordance with any section of 10 CFR Part 72.

Applicant's statements of material facts 69, 70, and 71 are pertinent to this contention. Intervenor made no response to 69 or 71 and 70 is objected to as not properly supported.

Intervenor's response proffers no material statement of fact in issue and only states that the Voiland affidavit says that Morris has the capability of storing *most* damaged spent fuel without any adverse impact and that since "most" is not defined or limited in any way, Applicant has not met its burden and summary disposition must be denied.[85]

As the Staff points out, nothing in 10 CFR §72.16 or §72.33 prohibits the receipt of "damaged" spent fuel at the Morris Operation. However, the Applicant has proposed Technical Specification 4.8.1, which requires an analysis of the coolant from the first cask flush to determine if the contamination is within the limits of 10 CFR §71.35(a)(4). Technical Specification 4.8.1 also provides that if these limits are exceeded, the fuel in the cask shall be assumed to have failed, and action shall be taken in accordance with established procedures. Section 7.3.2 of the CSAR pro-

[84] Intervenor's response at 14.

[85] Intervenor's Response at 15-16.

vides that if damaged fuel should be discovered special handling procedures will be followed and that defective fuel would be canned or otherwise contained.[86]

The Board finds that the applicant's statements of material facts are correct and are supported by the Voiland affidavit and that damaged spent fuel can be safely stored at Morris in accordance with Part 72 without adverse impact.

The Board concludes that there is no triable genuine issue of material fact relative to Contention 10.

**Board Question No. 1**

This Board question sought information as to what activities would or could be performed at the Morris site under a license extension as requested. This question and its three subparts have been fully answered by the Applicant and the Staff. There remains no issue before the Board.

**Conclusion**

It is concluded that there are no genuine issues of material facts to be heard and decided. The Applicant's motion for summary disposition is granted. The record before this Board is closed and the matter is referred to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission for appropriate action.

IT IS SO ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

Andrew C. Goodhope, Chairman
ADMINISTRATIVE JUDGE

Dr. Linda W. Little
ADMINISTRATIVE JUDGE

Dr. Forrest J. Remick
ADMINISTRATIVE JUDGE

Dated at Bethesda, Maryland,
this 2nd day of March, 1982.

[86]Clark at 23-24.

Cite as 15 NRC 555 (1982) LBP-82-15

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Peter B. Bloch,** Chairman
**Dr. Jerry R. Kline**
**Mr. Frederick J. Shon**

**In the Matter of** **Docket Nos. 50-440-OL**
**50-441-OL**

**CLEVELAND ELECTRIC**
**ILLUMINATING COMPANY, *et al.***
**(Perry Nuclear Power Plant,**
**Units 1 & 2)**

**March 3, 1982**

The Licensing Board rules on intervenor's request to admit additional contentions and to expand the scope of previously admitted contentions.

**RULES OF PRACTICE: ADMISSIBILITY OF LATE-FILED CONTENTIONS**

Intervenor's allegation that it learned of an issue through a recently published newspaper article does not constitute a showing of good cause for the late-filing of a contention where intervenor has not shown that the newspaper article reflects any new research or previously unavailable insights; has not established any nexus between the issue and the Perry facility; and has not demonstrated any competence to assist the Board in resolving the issue.

**RULES OF PRACTICE: ADMISSIBILITY OF CONTENTION**

A contention presenting a generic issue is not admissible when intervenor fails to demonstrate any specific nexus between the issue and the facility that is the subject of the proceeding.

## ADMISSIBILITY OF CONTENTION: HYDROGEN GENERATION

Because recent Commission statements contained in a proposed rule and a proposed policy statement, though tentative, suggest that the requirements for the control of accident-generated hydrogen might be made more stringent in the future, the Licensing Board may consider admissible a contention raising issues related to hydrogen generation, even though a contrary rule, or no rule might ultimately be enacted. To wait for the final rule would risk delay in the issuance of a license.

## RULES OF PRACTICE: AMENDMENT OF CONTENTION

Intervenor's motion to enlarge a previously admitted contention was not ripe for decision where the contention, as admitted, was sufficiently broad to permit discovery of all relevant information, and intervenor would have the opportunity later to present any new material obtained through discovery either in a response to a motion for summary disposition or as the basis for a new contention.

### MEMORANDUM AND ORDER
### (Concerning Late-Filed Contentions: Quality Assurance, Hydrogen Explosion, and Need for Increased Safety of Control System Equipment)

On December 18, 1981, and on January 8, 1982 Sunflower Alliance, Inc., *et al.* (Sunflower) requested that new issues be admitted to the proceeding. In one motion, it filed an additional contention regarding the fact that "control systems" at Perry are not safety grade. In another motion, it requested to expand the scope of the quality assurance contention which we had admitted in this proceeding. *See* LBP-81-24, 14 NRC 175, 210-212 (1981). In still another motion it requested permission to resubmit a contention, previously rejected by the Board, concerning whether Perry is safe from a possible hydrogen-explosion accident. *See Id.* at 207-209. These motions have been responded to by Cleveland Electric Illuminating Company, *et al.* (applicant) and by the Commission's staff (staff). Then, as required by Order of this Board, Sunflower has replied.

We have decided that the scope of the quality assurance contention need not be expanded because the scope of discovery under the admitted quality assurance contention appears to be broad enough to permit investigation of serious quality assurance deficiencies with safety or environmental implications. Should there be a motion for summary disposition, Sunflower will have an opportunity to demonstrate that there are additional

genuine issues of fact that it has discovered and that should be admitted to a hearing. *See Consumers Power Company (Big Rock Point Plant)*, LBF-82-8, 15 NRC 299, 329, 331-332 (1982). In the absence of such a motion, it may file for the expansion of its contention based on the new information discovered by it.

We also have decided to admit the hydrogen explosion contention. On the other hand, the control systems contention shall not be admitted as an issue in this proceeding.

## I. CONTROL SYSTEMS CONTENTION

Sunflower contends:

> That the applicant undertake to assure that the Perry Nuclear Power Plant's control systems be upgraded, perhaps by making them redundant, so that no single failure in the system will cripple the control system.

It relies on a failure which occurred at the Rancho Seco Nuclear Power Plant in Clay Station, California. That incident was triggered when a dropped electric light bulb damaged the direct current electrical system servicing the control panel for the reactor. Intervenor alleges as a ground for late filing that it was not aware of the issue in March of 1981. In the absence of any representation to the contrary, we infer that Sunflower first learned of this issue through a newspaper article in the New York Times on December 6, 1981, as suggested to us by staff.

We find that Sunflower has not shown good cause for late filing and that it has not demonstrated its ability to contribute to the resolution of this issue. Hence, it fails to meet the criteria for late filing. It also has failed to show that this contention has a "nexus" to the Perry facility. For that independent reason, Commission precedent also requires that we reject this contention.

We agree with applicant that a general newspaper article, not reflecting any new research or previously unavailable insights, cannot provide an acceptable excuse for late filing. *Houston Lighting and Power Company (Allens Creek Nuclear Generating Station (Unit 1)*, January 12, 1982 (unpublished) at 3-4. To rule otherwise would all but nullify the late-filing restriction because even matters broadly known could be brought to an intervenor's attention through a newspaper article about a matter that was already quite stale. *See* our previous order, LBP-82-11, 15 NRC 348, 351-352 (1982).

The material contained in the cited article was not only stale, but notoriously so. One of the most celebrated documents in this field, the Kemeny Commission Report (*Report of the President's Commission on the Accident at Three Mile Island; The Need for Change: The Legacy of*

*TMI*, October 1979) had this to say as part of its "Overview" or summary chapter, on pages 19 and 20:

> In the licensing process, applications are only *required* to analyze "single-failure" accidents. They are not required to analyze what happens when two systems fail independently of each other, such as the event that took place at TMI. There is a sharp delineation between those components in systems that are "safety-related" and those that are not. Strict reviews and requirements apply to the former; the latter are exempt from most requirements — even though they can have an effect on the safety of the plant. Instead, there should be a system of priorities as to how significant various components and systems are for the overall safety of the plant.

[Emphasis in original.] this issue also has been addressed in NUREG-0585, at 3-1 through 3-3 and A-14. The issue also is considered to be an unresolved safety issue, by action of the Commission on December 24, 1980. NUREG-0705 at A-9 to A-11. It was summarized in the Commission's 1980 Annual Report to Congress.

Under the circumstances, Sunflower would have to demonstrate very great competence to assist the Board in resolving this issue, and it would have to show in what way the Perry plant is deficient with respect to the safety of its control system. Sunflower has done neither. It shows only a superficial understanding of the issue, based on a newspaper article, and an ignorance of the entire previous history. It shows no nexus between its contention and the specifics of the Perry reactor.

We are required to reject this contention on the independent ground that it is a generic issue which has not been specifically related to the Perry reactor. *Gulf States Utilities Company (River Bend Station, Units 1 and 2)*, ALAB-444 (1977) 760 at 771 ff. In that case, the State of Louisiana attempted to litigate issues included in a document entitled "Technical Safety Activities Report" and in another document, the regulatory guides, issued by the Commission to assist applicants in determining the information staff will require from them and the standards staff will apply in reviewing the application. *Id.* at 767. The State submitted the table of contents of the Technical Safety Activities Report, with 88 items circled. It also submitted the numbers and titles of 14 regulatory guides said to be "substantially relevant." *Id.* at 771.

In *Gulf States* the Licensing Board required a "nexus" to the proceeding; that is, allegations establishing with respect to each contention, a relationship to the River Bend application. Ibid. The Appeal Board affirmed, saying:

> it seems clear to us that, in order to introduce a new issue into a proceeding, a party—and likewise an interested state—must do more than present what amounts to a check list of items contained

in the TSAR or in regulatory guides. The very nature of the TSAR and regulatory guides supports this conclusion.

*Id.* at 772. The Appeal Board then discussed the nature of these documents and the reasons why generic issues considered in these documents need not necessarily raise issues litigable in a particular proceeding. Ibid. The Appeal Board then stated:

> To establish the requisite nexus between the permit or license application and a TSAR item (or Task Action Plan), it must generally appear both (1) that the undertaken or contemplated project has safety significance insofar as the reactor under review is concerned; and (2) that the fashion in which the application deals with the matter in question is unsatisfactory, that because of the failure to consider a particular item there has been an insufficient assessment of a specified type of risk for the reactor, *or* that the short-term solution offered in application to a problem under staff study is inadequate.

*Id.* at 773.

We do not consider the nexus requirement to be a mere technicality. It makes good sense in the overall context of Commission decisionmaking. Generally, applicant and staff are aware of unresolved safety issues and a portion of the SER addresses them. We even have an obligation to consider *sua sponte* whether the staff has adequately addressed these issues. *Northern States Power Company (Monticello Nuclear Generating Plant, Unit 1)*, ALAB-620, 12 NRC 574 (1980). In addition, staff is doing research on these questions. In that context, litigation in a particular case is merely redundant, unless intervenor examines the relevant plant-specific documents and identifies a specific problem or set of problems which have not been addressed. Given the extensive attention given to these documents by applicant and staff, this is no easy task for a volunteer, intervenor group. However, these safety proceedings are designed to consider serious safety issues and the difficulty arises from the nature of the issues intervenor wishes to litigate and not from any desire on the part of the Commission to erect artificial barriers to full participation. On the contrary, if Sunflower manages to raise serious issues (as it appears to have done in other motions decided in this memorandum) it will receive a receptive audience in this Licensing Board.

We consider that the *Gulf States* rule is applicable here *a fortiori*. By referring to specific Commission documents rather than to a newspaper article, the State of Louisiana gave greater specificity to its allegations than Sunflower has done here. Nevertheless, the State was found not to have alleged the requisite nexus to the proceeding. It follows that Sunflower also has not alleged the requisite nexus.

If Sunflower should receive genuine new information in the future bearing on the nexus of this contention to this proceeding, it may of course attempt to file this contention again.

## II. HYDROGEN CONTROL CONTENTION

Sunflower's contention 7, as originally submitted was:

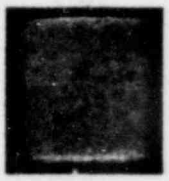
> Petitioners allege that there is insufficient documentation of the ability of the containment structures of said facilities to safely inhibit a hydrogen explosion of the magnitude and type which occurred at Three Mile Island Unit 2 near Harrisburg, Pennsylvania and of which the Commission is aware.

Initially, we excluded this contention pursuant to *Metropolitan Edison Company (Three Mile Island Nuclear Station, Unit No. 1)*, CLI-80-16, 11 NRC 674 (1980).

In its filing, Sunflower has attempted to meet the criteria for litigating hydrogen issues set forth in the Three Mile Island case. It does this by asserting the existence of a pipe break in the reactor coolant pressure boundary, a failure of the ECCS to maintain coolant due to several possible categories of deficiency (including operator error), the generation of hydrogen through a Zircaloy/water reaction, the attainment of a flammable or combustible concentration of hydrogen, an explosion and breach of containment. Motion to Resubmit Contention 7 at 3. It also adds that a similar scenario could commence with an anticipated transient without scram (ATWS). As cause for late filing, Sunflower asserts the promulgation of the final rule on "Interim Requirements Related to Hydrogen Control" (46 Fed. Reg. 58484, December 2, 1981). It states that the rule did not cover Mark III containments, such as is to be employed at Perry.

As applicant and staff have indicated, Sunflower apparently is not aware of the issuance on December 18, 1981, of a *Proposed* Rule, "Interim Requirements Related to Hydrogen Control." In the Supplementary Information included in that Proposed Rule, relating to hydrogen control for Mark III BWRs, the Commission stated:

> [I]t has become clear that additional protection is required to provide assurance that large amounts of hydrogen can be safely accommodated by these plants. The particular type of hydrogen control system to be selected is left to the discretion of the applicant or licensee; however, it must be found acceptable by the NRC based upon suitable programs of experiment and analysis. . . . Whatever systems are finally proposed and approved for the long term, large amounts of hydrogen must be safely accommodated, and operation of the system, either intentionally, must not further aggravate the course of an accident or endanger the



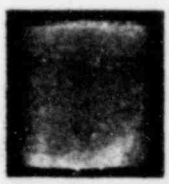
> plant during normal operations. The amount of hydrogen to be assumed in the design of the hydrogen control system is that amount generated by assuming that 75% of the fuel cladding surrounding the active fuel region reacts with water. . . .
>
> . . .
>
> Based on the state of technology as of August 1981, the Commission believes that control methods that do not involve burning provide protection for a wider spectrum of accidents than do those that involve burning. 46 *Fed. Reg.* 246, 62281, 62282.

Also relevant to the Commission's current policies concerning the control of hydrogen is the Proposed Policy Statement related to Safety Goals for Nuclear Power Plants (February 11, 1982). In that proposed statement, the Commission proposes a guideline that the likelihood of a large-scale core melt accident should be less than one in 10,000 per year of reactor operation. It also states that it "recognizes the importance of mitigating the consequences of a core-melt accident", in part through assuring the integrity of the containment. Memorandum at 13.

We find these recent Commission utterances, proposed and tentative though they may be, to be inconsistent with the TMI decision on which we relied. The Commission now appears to be of the view that the assumptions of §50.44 are unrealistic and that some additional steps may need to be taken. While we could adopt a wait-and-see attitude on this important matter, we believe it to be more prudent to proceed on the assumption that by the commencement of operation of Perry, the requirements of 10 CFR §50.44 will be more stringent. Thus, under the general powers of the presiding officer, we choose to consider this contention admissible, though it might ultimately come to pass that a contrary rule (or no rule) will be enacted. 10 CFR §2.718. To wait to see would be to risk needing to delay the issuance of a license for lack of forethought.

In any event, the apparent change in Commission attitudes provides us with more favorable leanings toward the hydrogen contention. In this instance, Sunflower has not only suggested specific scenarios which might meet the Commission's previous objections, it also has provided increased specificity for its contention and, especially in the following passage, has demonstrated its competence to pursue this issue:

> It is questionable whether the hydrogen gas control system at Perry will be operated in a timely and effective manner. First, all components of this system (analyzers, mixers, recombiners, and purge capability) are activated manually by the operator (FSAR, Section 6.2.5). Relying on manual operation during the stressful emergency situation following a LOCA would likely increase the possibility of operator error. The operation of the hydrogen ana-



lyzers, the first step in the hydrogen control sequence, may be delayed for 15 minutes to one hour after the LOCA (FSAR, Section 6.2.5.2.1). This delay seems inappropriate, especially in light of the standard of 10 CFR §50.44(d)(1): "A time period of 2 minutes shall be used as the interval after the postulated LOCA over which the metal-water reaction occurs."

Secondly, the effectiveness of hydrogen recombiners is questioned in Regulatory Guide 1.7 (p. 1.7-4): "Hydrogen recombiners can process the containment atmosphere at a limited rate of 100-150 scfm per recombiner. Therefore, an inordinately large number of recombiners would be required to control the hydrogen concentration that is postulated to be generated in the first 2 minutes of the LOCA." Perry uses 2 recombiners per unit; each recombiner is sized for a 100 scfm flow rate (FSAR, Section 6.2.5.2.3).

This intervenor considers containment purging as a hydrogen control measure to be unacceptable, as this results in radioactive releases to the environment.

Motion to Resubmit Contention 7 at 4.

In this cited passage, Sunflower adds specificity to its hydrogen contention. Applicant argues that Sunflower has, nevertheless, failed to show a basis for its contention because: (1) operators need not respond in two minutes, as the amount of hydrogen generated in that time period would be far below flammability limits, which would not be reached (pursuant to regulatory guidelines on the amount of hydrogen generated) in a Mark II containment even after 10 hours; and (2) Regulatory Guide 1.7's statement about the number of recombiners that would be needed is not applicable to large containments, such as the Mark III at Perry. On the second point, we find that Sunflower has a basis for its doubts about recombiners, based in part on the Regulatory Guide's concern about small containments, in part on the absence of authority concerning the safety of recombiners in large containments, and in part on the finding in the Proposed Rule on "Interim Requirements Related to Hydrogen Control" that control methods involving burning are not as effective "for a wide spectrum of accidents" as are other methods.

Furthermore, a portion of this passage establishes a nexus to this proceeding by its citation to the FSAR and its assertion that Perry uses two recombiners per unit. It demonstrates the seriousness of Sunflower's concern with this issue and its ability to contribute to its resolution.

Whether or not a party has shown good cause for late filing relates in part to the safety or environmental importance of the issue it has raised. In this case, there is no doubt as to the importance of the issue nor the direct concern of the Commission with this area of safety. In addition, the

regulatory environment in which this contention is brought has shifted substantially, adding another reason in support of late filing.

Another factor that is balanced in determining whether there is good cause for late filing is whether the intervenor's delay in filing will contribute to an overall delay in the decision of the case. Such delays, resulting from late filings, are unduly costly to applicants and are not favored. Indeed, if the late filing of a contention is part of a pattern of delay, such a pattern also might be considered in deciding whether there is good cause for late filing. However, Sunflower has been cooperative in its approach to this proceeding. It raised this particular contention at an early date but found it necessary to amend its filing to meet rather stringent criteria that the Commission has applied to hydrogen contentions. Since it is still early in the history of the case, we do not anticipate that delay in filing this contention will cause any delay in the decision of the case. *Compare Houston Lighting and Power Company (Allens Creek Nuclear Generating Station, Unit 1)*, January 12, 1982 (unpublished) at 3-4, 5-6.

Under the circumstances, we find that, on balance, the criteria for late filing have been met (10 CFR §2.714(a)(1)) and we admit this contention in the following form:

> Issue #8: Applicant has not demonstrated that the manual operation of two recombiners in each of the Perry units is adequate to assure that large amounts of hydrogen can be safely accommodated without a rupture of the containment and a release of substantial quantities of radioactivity into the environment.

We have intentionally excluded from this contention any reference to the mechanism by which hydrogen can be generated. Sunflower has suggested several mechanisms, any one of which would do. Hence, we think they have met the Commission's former criteria for admission of this contention. It seems to us that little purpose would be served by litigating the likelihood that any one of the suggested scenarios (each one of which includes a mechanism by which the reactor would experience a failure of the core cooling system) could occur. There is little doubt that any one scenario, except perhaps for the occurrence of human error, would be highly unlikely to occur. However, we could embark on an endless search for multiple, unlikely events unless we assay that tortuous path in advance and refuse to enter.

## III. MOTION TO ENLARGE THE QUALITY ASSURANCE CONTENTION

The quality assurance issue admitted in this proceeding is:

> Issue #3: Applicant has an inadequate quality assurance program that has caused or is continuing to cause unsafe construction.

This issue was further limited by us in our September 9, 1981 Memorandum and Order, 14 NRC 682, 686-87, in which we stated that:

> [T]he admission of this issue was intended to be limited to the quality assurance implications arising from the stop work order issued to [applicant] . . . and the steps taken by it to remedy the alleged deficiencies leading up to the stop work order.

Now, Sunflower approaches us with a motion that its admitted contention should be enlarged. However, we do not consider its motion to be ripe It is already permitted to engage in discovery relevant to its contention or to applicant's defense. 10 CFR §2.740(b)(1). In that context, relevance may be broadly interpreted in the interest of full disclosure and it is doubtful that serious discovery requests, related to the safety or environmental consequences of quality deficiencies would be irrelevant to the admitted contention. Even old deficiencies may be related to the damage that may have been caused by the quality assurance problems leading to the stop work order. More recent deficiencies may be related to the effectiveness of the steps taken to remedy the previous deficiencies.

There will be time for Sunflower to add to its contention, if necessary. Upon a motion for summary disposition, it may offer genuine issues of fact relevant to its contention and not falling strictly within it. If these genuine issues of fact have an important safety significance they may be admitted as newly discovered material. *Consumers Power Company (Big Rock Point Plant)*, LBP-82-8, 15 NRC 299, 329, 331-332 (1982). In addition, new material uncovered during discovery may at that time form the basis for a new contention.

At the present time, Sunflower's motion contains many alleged quality assurance deficiencies. Some, but not all have apparent safety significance and might form the basis for enlarging this contention at some subsequent time. However, we consider it preferable to defer ruling on the enlargement of the contention until we can be more fully informed of the available evidence.

We note that this contention and Contention #1, relating to emergency planning, may raise extensive evidentiary questions. Should the discovery process become cumbersome, the Board is prepared to preside over discussions among the parties designed to make the process work fairly and efficiently.

## ORDER

For all the foregoing reasons and based on consideration of the entire record in this matter, it is this 3rd day of March, 1982,

ORDERED

(1) Sunflower Alliance Inc., *et al. s* (Sunflower) December 18, 1981, Motion for Leave to file an additional contention concerning the safety of control systems is denied.

(2) Sunflower's January 8, 1982, motion to expand its quality assurance contention is denied as not ripe for decision.

(3) Sunflower's motion to resubmit its Contention 7 is granted in part. The newly admitted issue is:

> Issue #8: Applicant has not demonstrated that the manual operation of two recombiners in each of the Perry units is adequate to assure that large amounts of hydrogen can be safely accommodated without a rupture of the containment and a release of substantial quantities of radioactivity into the environment.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

Peter B. Bloch, Chairman
ADMINISTRATIVE JUDGE

Jerry R. Kline,
ADMINISTRATIVE JUDGE

Frederick J. Shon
ADMINISTRATIVE JUDGE

Bethesda, Maryland

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**James L. Kelley**, Chairman
**Dr. A. Dixon Callihan**
**Dr. Richard F. Foster**

**In the Matter of** **Docket No. 50-413-OL and 50-414-OL**
**ASLBP Docket No. 81-463-01-OL**

**DUKE POWER COMPANY, *et al.***
**(Catawba Nuclear Station,**
**Units 1 and 2)**

**March 5, 1982**

The Licensing Board rules on pending petitions for intervention and contentions filed in support of those petitions.

## RULES OF PRACTICE: CONTENTION; REQUIREMENT OF SPECIFICITY

The requirement of the Commission's Rules of Practice that the basis for each contention be set forth with reasonable specificity facilitates Board determinations whether contentions are litigable, and helps assure that other parties are sufficiently put on notice that they will know at least generally what they will have to defend against. These purposes do not imply that a high standard of specificity for contentions is required at so early a stage of the proceeding as the initial prehearing conference. The principal function of contentions at this juncture is to place some reasonable limits on discovery, and this may be accomplished with contentions more broad and general than the revised contentions that can be developed after discovery and that will, after the final prehearing conference, structure the hearing.

**RULES OF PRACTICE: CONTENTION; REQUIREMENT OF SPECIFICITY**

Where, at the time of the first prehearing conference, key documents such as the Commission Staff's Safety Evaluation Report, its Environmental Impact Statement, most of the off-site emergency plans and portions of the Applicant's Final Safety Analysis Report had not yet been written, the argument that intervenors must plead all contentions with reasonable specificity prior to the conference, and that further contentions based on information disclosed in subsequently available documents must be subjected to the restrictive standards for admissibility of late-filed contentions, was unreasonable and not required by the Commission's Rules of Practice as written or by prior decisions.

**RULES OF PRACTICE: CONTENTION; EMERGENCY PLANNING**

The Commission's regulations plainly contemplate that the adequacy of off-site emergency plans for counties and municipalities near the facility that is the subject of the proceeding can be contested in their specific details by intervenors. 10 CFR 50.47(a).

**RULES OF PRACTICE: ADMISSIBILITY OF CONTENTION**

Where the documents likely to provide the necessary specifics for the formulation of contentions were not yet available, the Board would not disallow proposed contentions for lack of specificity but would admit such contentions conditionally, subject to the requirement that intervenors advancing such contentions review the relevant documents promptly after they become available and, within 30 days thereafter, submit revised contentions meeting the specificity requirements of the Rules of Practice, or else abandon the contentions.

**RULES OF PRACTICE: ADMISSIBILITY OF CONTENTION**

The adequacy of any revised contentions based upon documents filed subsequent to the initial prehearing conference would be judged by the general principles applicable to contentions, including specificity. However, since the "lateness" of such contentions would be entirely beyond the control of the sponsoring intervenor, the additional criteria normally applied to late contentions under the Rules of Practice would not be applied.

**RULES OF PRACTICE: ADMISSIBILITY OF CONTENTION; SECURITY PLAN**

Because intervenor could not reasonably be required to advance specific contentions about a security plan it had never seen, and because it had expressed a formal interest in the plan, the Board could order Applicants to grant intervenor access to the plan as necessary to a proper decision in the proceeding. The Board would, however, condition such disclosure order on intervenor's having obtained the services of a qualified security plan expert, and would impose other limitations on access to the plan. Accordingly, the Board would allow intervenor 10 days in which to consider whether it wished to pursue the matter further.

## MEMORANDUM AND ORDER
## (Reflecting Decisions Made Following Prehearing Conference)

On January 12 and 13, 1982, the Board conducted a prehearing conference in York, South Carolina, pursuant to 10 CFR 2.751a. The primary purpose of the conference was to consider pending petitions for intervention and contentions filed in support of those petitions.

**Admission of Parties.** Petitions to intervene had been filed by four organizations and by the State of South Carolina. Three of the petitioning organizations appeared and participated in the conference: Carolina Environmental Study Group ("CESG"), represented by its President, Mr. Jesse L. Riley; Palmetto Alliance ("Palmetto"), represented by counsel, Mr. Robert Guild; and Charlotte-Mecklenburg Environmental Coalition ("CMEC"), represented by its Chairman, Mr. Henry A. Presler. The standing of these organizations is described in their petitions and is not disputed by the Applicants[1] or the Regulatory Staff. In its response to the CMEC petition, the Staff had raised a question about Mr. Presler's authority to represent that organization. At the conference, Mr. Presler served copies of authorizing affidavits from representatives of constituent organizations of CMEC, thus laying the Staff's question to rest.

A petition for intervention is to be granted if it establishes standing and pleads at least one litigable contention with reasonable specificity. 10 CFR 2.714; *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station), 8 AEC 13, 20 (1974). As discussed hereafter, each of the three organizations appearing at the conference put forward one or more contentions which we

[1] Duke Power Co. is the lead Applicant in this proceeding. It also acts as agent for the other owners of the facility, North Carolina Municipal Power Agency Number 1, North Carolina Electric Membership Corporation, and Saluda River Electric Cooperative, Inc.

find admissible, or at least conditionally admissible. Accordingly, the Board orders CESG, Palmetto and CMEC admitted as parties to this proceeding. In addition, the petition of the State of South Carolina to intervene as an interested State pursuant to 10 CFR 2.715(c) is granted. The State was represented at the hearing by Mr. Richard P. Wilson, an Assistant Attorney General. However, the State did not participate actively, nor did it file any separate contentions.

The fourth petitioning organization, Safe Energy Alliance of Charlotte, North Carolina, did not file contentions in support of its initial petition and, although served with notice, did not appear at the prehearing conference. Mr. Presler of CMEC filed an affidavit from an officer of Safe Energy Alliance stating that CMEC would represent the interests of the Alliance in the proceeding. As stated on the record, in these circumstances the Board considers the separate Safe Energy Alliance petition as having been withdrawn. Tr. 3-4. Alternatively, that petition is denied for want of prosecution.

**Specificity of Contentions and Available Information.** The three petitioning organizations filed a total of fifty-two contentions.[2] The Applicants and the Staff separately oppose admission of forty-seven of these contentions. Because the Applicants and the Staff largely disagree about the handful of contentions they would admit, all but two of the Intervenors' fifty-two proposed contentions are opposed by the Applicants, the Staff, or (in most cases) by both. We are admitting half of the Intervenors' proposed contentions, in whole or in part. However, only one of these contentions is being admitted unconditionally. Twenty-five contentions are being admitted subject to certain specified conditions.

By far the most frequent basis for objection by both the Applicants and the Staff is an alleged lack of specificity in the contention. In some cases, we find this objection to be well taken. But in others where we also find a lack of specificity, we nevertheless reject that objection at this stage of the proceeding because of the limited information presently available to the

[2] CMEC filed 4 contentions, Palmetto 29, and CESG 19. Palmetto also filed an additional 19 contentions identical to CESG's 19. CESG labeled 3 other paragraphs as "contentions" (numbered 4, 7 and 14) which we view as legal argument and procedural requests. CESG's paragraphs 7 and 14 are pertinent here; they request that the prehearing conference (which we take to mean this conference held pursuant to 10 CFR 2.751a) not be held until 90 days after the Staff's environmental impact statement and safety evaluation report are available. They argue that it is "essential to permit CESG . . . to take into consideration Staff's views in regard to environmental . . . matters" in framing contentions. While we find substantial merit in this argument, we believe that the 90-day guideline in 2.751a and the Commission's "Statement of Policy on Conduct of Licensing Proceedings" (46 Fed. Reg. 28533) indicate the need to get the proceeding started earlier, as we are doing here. However, by granting conditional admission to contentions that now may be unduly vague only because certain documents are presently unavailable, we are being responsive to the very real problem CESG raises. CESG's paragraph 4 speaks to certain legal issues we find it unnecessary to reach.

Intervenors. Because of the importance in these rulings of the concept of specificity in contentions, a few words about that subject are in order before we turn to the individual contentions before us.

Section 714(b) of the Commission's Rules of Practice (10 CFR 2.714(b)) requires that "the bases for each contention [be] set forth with reasonable specificity." It is not enough, for example, merely to allege that aspects of an applicant's plans will not comply with Commission regulations. A contention must include a reasonably specific articulation of its rationale — e.g., why the applicant's plans fall short of certain safety requirements, or will have a particular detrimental effect on the environment. This specificity requirement serves several purposes. It facilitates board determinations whether contentions are litigable. For example, a contention is to be excluded if it is, in substance, an impermissible attack on a Commission rule, or if it is not within the scope of the proceeding. See *Philadelphia Electric Co., supra* at 20.

Another purpose of specificity in contentions is "to help assure that other parties are sufficiently *put on notice* so that they will know *at least generally* what they will have to defend against." *Philadelphia Electric Co., supra* at 20 (emphasis added). However, this language does not imply a high standard of specificity at this early stage of the proceeding. As discussed below (at 575) the purpose of revising and refining contentions at the final prehearing conference is to make the issues for hearing more specific in the light of completed discovery. Reflecting this aspect of the process, most preparation for hearing takes place after the final prehearing conference.

The specificity requirement is a perfectly reasonable one, so long as the factual information necessary for specificity is available to an intervenor. Unfortunately, because of the way the hearing process is structured that is often not the case, particularly in the early stages of the proceeding. Under the rules, a petitioner for intervention in an operating license case like this one must file at least some contentions before the first prehearing conference, which the rules contemplate will take place a few months after the application is noticed for hearing. At that time, the applicant's final safety analysis report ("FSAR") (or at least most of it) and environmental report ("ER") are available to petitioners for intervention. However, a number of other potentially important documents usually are not then available, most notably the Staff's Safety Evaluation Report ("SER") and draft environmental impact statement and the report of the Advisory Committee on Reactor Safeguards. In addition, certain of the applicant's documents, such as emergency plans, may not be available.

That is the situation here. Of the key documents just mentioned, only the Applicants' FSAR (most of it) and Environmental Report are now available for public inspection. The Staff's SER and impact statement,

most of the off-site emergency plans and portions of the FSAR have not yet been written. In addition, the Applicants' security plan, while in existence, is being withheld pursuant to Commission regulations. 10 CFR 73.21.

The Applicants and the Staff nevertheless argue that the Intervenors should be required to plead *all* of their contentions with reasonable specificity by the first prehearing conference, even contentions in areas like emergency planning, where the documents necessary for informed pleading are not yet available. The Applicants contend that:

> [W]hen Palmetto Alliance seeks to put in issue a matter which arguably is not covered in Applicants' filings, it is incumbent on it to specify precisely the nature of its allegation and provide in detail the bases for it . . . . The Commission's procedures contemplate, and require, adequate contentions to be framed on the basis of information available to petitioners at the time the notice of hearing is published. Absence of documents which are not available until the NRC Staff completes its review of an application is not good cause for failing to provide adequate specification of, or basis for, a contention, or for reserving the right to raise a contention at a later time.[3]

The Staff, in substance, concurs.[4] The Applicants and the Staff concede, as they must, that an intervenor may file a contention later, pursuant to 10 CFR 2.714(b), based on information disclosed in a document first becoming available at a later date. But there's a catch.[5] In their view, such "late" contentions would have to surmount all of the hurdles applicable to contentions filed late for other (and usually less justifiable) reasons.[6]

The Board believes that the Applicants' and Staff's stated position on this question is (1) not required by the rules as written or by prior decisions, (2) unreasonable, and (3) probably in conflict with governing statutes. As to the first point, the rules as written do not explicitly require that *all* contentions be filed before the first prehearing conference, subject

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[3] Applicants' Response to Palmetto Contentions, pp. 8-9.

[4] Staff Response to Contentions, p. 8, note 14. See also Tr. 110-114, 215, 231, 322-323

[5] For a similar catch, see Heller, *Catch 22*, p. 47 (Dell ed.).

[6] Section 2.714(a) erects five separate hurdles to "nontimely" contentions, only one of which (good cause) would presumably be surmounted by a showing of new information. In the main, these criteria are inappropriate for application to a contention that is "late" for reasons wholly beyond the intervenor's control. For example, the last criterion concerns the extent to which the contention will "broaden the issues or delay the proceeding." An issue based on new information will almost necessarily broaden the issues and it may well delay the proceeding. But the responsibility for those effects must be borne by the applicant or the Staff for producing a "late" informational document.

only to a highly restricted right to file a "late" contention later.[7] And the cases cited by the Applicants and Staff have held only that some (by inference, at least one) contentions should be pled by that time. See *Wisconsin Electric Power Co.* (Koshkonong Nuclear Plant), 8 AEC 928; *Northern States Power Co.* (Prairie Island Plant), 6 AEC 188, *aff'd, BPI* v. *AEC*, 502 F.2d 424 (C.A.D.C. 1974). Those cases emphasized the "wealth" of information available at the early stages of the proceeding in the applicant's FSAR and environmental report, the assumption being that at least some contentions could be gleaned from these typically voluminous documents. But none of those cases focused on the situation that concerns us here — i.e., forcing an intervenor to plead specific contentions in an area, such as emergency planning, where the relevant information simply is not yet available. Apparently in recognition of the unfairness in such a squeeze play, it has not been uncommon for licensing boards to admit vague contentions conditionally, subject to later specification, or to defer rulings on some contentions until the necessary documentation is available. See, e.g., *Commonwealth Edison Co.* (Byron Nuclear Power Station), LBP-80-30, 12 NRC 683 (1980); *Commonwealth Edison Co.* (Quad Cities Station), LBP-81-53, 14 NRC 912 (1981). The Appeal Board's very recent decision in *Tennessee Valley Authority* (Browns Ferry Nuclear Plant), ALAB-664, confirms that licensing boards have discretion to defer rulings where a document (such as a draft environmental impact statement) is needed in order to assess a contention.

The unreasonableness of the Applicants' and Staff's position has been suggested by the preceding discussion and is perhaps best illustrated by an example from this case. The off-site emergency plans for counties and municipalities near the facility are being prepared, but are not yet complete. Tr. 110-112. The regulations plainly contemplate that the adequacy of such plans, in their specific details, can be contested by intervenors. 10 CFR 50.47(a). At this juncture, possibly in reaction to the Applicants' and Staff's position that it must plead all of its contentions now, and not having any idea what those plans will contain, Palmetto tenders two broadly-worded emergency planning contentions, to which the Applicants and Staff then object as lacking in "specificity." Placing the cart squarely before the horse, the Applicants argue that Palmetto should be required to express its "concerns" now, that it "should know if they have a concern" before the emergency plans are even prepared. Tr. 112.

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[7] A literal reading of the last sentence of 10 CFR 2.714(b) arguably leads to that conclusion. As we demonstrate, however, other compelling considerations require a different conclusion. We should, in addition, read section 2.714(b) in the light of our duty under 10 CFR 2.718 "to conduct a fair . . . hearing."

There are several practical reasons to reject this argument. In the first place, it is very difficult to express concrete concerns about emergency planning in the abstract, without reference to specific emergency plans. It is probably a waste of time for all concerned, including this Board, for intervenors to develop "concerns" that emergency planners, working independently, may be fully addressing. The sensible approach is for a potential intervenor first to study proposed emergency plans, and then to decide whether he finds flaws in them which he may wish to contest.

Moreover, forcing intervenors to shoot in the dark may encourage fabrication of artificial, frivolous and perhaps even spurious contentions, because by necessity they are based on little more than imagination.[8] From its quite different perspective, the applicant may have no incentive to facilitate the early completion of all emergency plans. This is so because, under the Applicant's and Staff's theory we are rejecting, if emergency planning or any other aspect of a nuclear power plant application is simply delayed until after the first prehearing conference, defects may be effectively insulated from scrutiny in the hearing process. Such a result seems inconsistent with the hearing requirements of the Atomic Energy Act, 42 U.S.C. 2239.

Indeed, we think that the Applicants' and Staff's position on the specificity question is, as they would have us apply it here, of very questionable legality not only under the Atomic Energy Act (as to safety issues), but also the National Environmental Policy Act (NEPA) (as to environmental issues). Section 189(a) of the Atomic Energy Act provides for a hearing upon the request of an interested person in certain kinds of licensings, including operating license proceedings. To be sure, the courts have held that this right is not absolute, that it may be conditioned, for example, upon the filing of contentions prior to discovery. *BPI* v. *AEC*, 502 F.2d 424 (C.A.D.C. 1974). However, the *BPI* decision did not discuss and apparently assumed that information requisite to formulation of contentions was available in that case. Where, as in this case, much of the necessary information is not yet available, a court might well hold that section 189(a) requires an equivalent opportunity to frame a contention promptly following the availability of the information. If that were not allowed, the exercise of the right to a hearing would be impermissibly hindered, or virtually foreclosed, by an unreasonable procedural requirement.

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[8] For example, in the *Diablo Canyon* case, the intervenors eventually gained access to the facility's security plan on the basis of a prior contention that the facility was "vulnerable to sabotage not only from land, but from sea." *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant), 5 NRC 1398, 1400 (1977). We suspect that the Diablo intervenors had no prior knowledge about the security plan and that this contention was made up out of whole cloth.

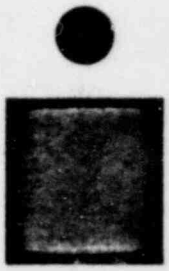
NEPA requires that environmental questions be open for consideration "to the fullest extent possible" throughout the agency review process, including the hearing process. NEPA, Section 102. In the landmark *Calvert Cliffs* decision, the court invalidated several provisions of the AEC's original implementing rules, viewing the agency's "crabbed interpretation of NEPA" as "a mockery of the Act." *Calvert Cliffs Coordinating Committee* v. *AEC*, 449 F. 2d 1109 (C.A.D.C. 1971). Among the nullified rules was one which barred licensing boards from considering environmental questions unless they were raised by a party. The court viewed the rule as an unnecessary and therefore illegal restriction on the "fullest possible" consideration of the environment. Similarly in the present context it could be forcefully argued that a "rule" requiring the pleading of all NEPA contentions before the Staff's impact statement is even written is an unnecessary and therefore impermissible restriction on agency consideration of the environment, yet another "crabbed interpretation of NEPA."[9]

In light of the foregoing considerations, the Board rejects the argument that we should disallow a proposed contention for lack of specificity if a document likely to provide the necessary specifics is not yet available. In this case, such documents include the Staff's Safety Evaluation Report and draft environmental impact statement, portions of the Applicants' FSAR yet to be supplied, and the off-site emergency plans for the counties and municipalities near the plant.[10] As discussed contention-by-contention hereafter, contentions that may be addressed in one of those documents will, if they are otherwise acceptable, be admitted conditionally despite a present lack of specificity. The intervenor advancing such a contention will be required to review the relevant document promptly after it becomes available, and to then either abandon or revise the contention to meet the specificity requirements of 10 CFR 2.714(b). Revised contentions are to be filed within 30 days following receipt of the relevant document.[11] The adequacy of any revised contentions will be judged by the general principles applicable to contentions, including specificity. However, the additional

[9] The Applicants' and Staff's position here is more questionable legally than the rule struck down by the *Calvert Cliffs'* court. That position undercuts the right of an adversary party to raise litigable issues about the Staff's impact statement, the traditional and most commonly-used means of testing a statement. *Calvert Cliffs* imposed on licensing boards a NEPA requirement to raise environmental issues *sua sponte*, a much less significant way of testing an impact statement than through adversary contentions.

[10] The security plan for the facility stands on a somewhat different footing and is treated separately at pp. 589-590, below.

[11] We are admitting a few somewhat vague contentions on the condition that they will be revised and made more specific following discovery. Discovery on these contentions is to be completed within 90 days of this Memorandum and Order, and revised contentions are to be submitted withing 30 days thereafter.



criteria normally applied to late contentions under 10 CFR 2.714(a)(1)(i)-(v) will not be applied to contentions revised pursuant to this paragraph; their "lateness" is entirely beyond the control of the sponsoring intervenor.

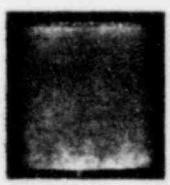
What we have just said applies only to contentions for which little or no information has been supplied by the Applicants in their FSAR or Environmental Report. If substantial relevant information has been supplied and referenced in the Applicants' opposition pleading, the contention will be judged for specificity now and rejected if found unduly vague. However, should a document containing new information or analysis on the subject become available later, the Intervenor may within 30 days file a revised contention based upon it. Again, the criteria of 10 CFR 2.714(a)(1)(i)-(v) will not be applied to such a contention. Debatable questions about whether information or analysis is "new" will generally be resolved in the Intervenor's favor.

**Specificity Through Discovery.** An additional consideration affects the level of specificity required at this initial stage of the proceeding. Our admission of contentions will be followed by an extended period of discovery, during which the intervenors can learn additional factual details about their areas of concern. The principal functional purpose of contentions at this juncture is to place some reasonable limits on discovery. Boards have recognized that those discovery limits can, without prejudice to the hearing process, be more broad and general than the revised contentions that can be developed after discovery and which will ultimately structure the hearing. See, e.g., *Southern California Edison Co.* (San Onofre Nuclear Generating Station), LBP-82-3, 15 NRC 61, 71-73 (1982). The rule prescribing a final prehearing conference after the close of discovery (10 CFR 2.752) explicitly contemplates amending the "pleadings" and clarification of the "issues." For these reasons, we now apply less stringent standards of specificity than we will apply at the final prehearing conference.

**Contentions Admitted.**

**CMEC Contentions** 1-4 are admitted, subject to the following conditions:

(1) Should these contentions go to hearing, the focus will be on the Staff's impact statement, not the Applicants' Environmental Report, because the substantive NEPA obligation is discharged through the impact statement. Accordingly, CMEC shall review the Staff's draft environmental impact statement promptly after it becomes available and revise these contentions, as appropriate, in the light of that statement.



(2) CMEC Contention 1 is revised to read as amended on page 2 of the "NRC Staff Response to Reworded Contention 1," dated February 22, 1982. Mr. Presler's proposed revised version of CMEC Contention 1, dated February 1, 1982, is withdrawn. CMEC Contention 3 is revised to read as agreed to by the parties and as set forth in the CMEC "Further Proposal" pleading dated February 22, 1982. The Staff's objection to the reference in Contention 3 to Contention 2 is overruled.

(3) The Commission's *Black Fox* decision generally authorizes litigation of contentions about the long-term health effects of radiation, the thrust of Contention 4. See *Public Service Co. of Oklahoma* (Black Fox Station), 12 NRC 264 (1980). In view of the Applicants' stipulation to this contention, we are not inclined to reject it at this juncture in spite of its lack of specificity. However, this contention shall be made more specific or withdrawn after the Staff's draft impact statement is available.

**Palmetto Contention** 27 is admitted unconditionally.

The following Palmetto contentions are admitted conditionally, in whole or in part, subject to the specified conditions:

**Palmetto 1:** This contention about long-term health effects is similar to CMEC Contention 4. It is somewhat more specific in referencing the work of particular researchers, but it still falls short in that regard. It might, for example, specify the respects in which the BEIR III report and the Commission's food chain analyses are allegedly deficient. It is admitted conditionally, subject to further specification following availability of the draft environmental impact statement.

The Applicants specifically object to the part of this contention which focuses on health effects from the uranium fuel cycle, viewing it as an attack on the values established by rule in Table S-3. This argument is answered by footnote 1 to Table S-3, which states in pertinent part:

> Table S-3 does not include health effects from the effluents described in the Table . . . . These issues may be the subject of litigation in the individual licensing proceedings.

**Palmetto 2:** This Contention faults the Applicants and the Staff for failing to assess the impacts of accidents beyond the design basis of the facility. This contention is premature. Pursuant to the Commission's *Statement of Interim Policy*, 45 Fed. Reg. 40101, the Staff will be assessing the impacts of such accidents in its environmental impact statement. The Staff's draft impact statement should explicitly address the concerns being raised in this contention or explain why they need not be addressed.

The Staff's "special circumstances" argument at pp. 10-11 of its response seems to assume that consideration of the effects of serious accidents need only be included in an impact statement for a facility that meets that test. While that was once the rule under certain Commission adjudicatory decisions (see *Public Service Co. of Oklahoma* (Black Fox

Station), 11 NRC 433 (1980)), those decisions have now been superseded by the *Statement of Interim Policy* under which *all* final impact statements issued after June 9, 1980 are to include such consideration.[12] The special circumstances test applies only to plants under construction where particular design changes might be warranted. We make no judgment here about whether such changes are warranted for Catawba because we are ruling on a contention that does not call for design changes, only "assessment of impacts." As it does on other contested issues in an operating license proceeding, the Licensing Board will rule in the first instance on whether the impact statement's consideration of accidents pursuant to the *Policy Statement* is adequate.

The *Policy Statement* calls for discussion of severe accidents in applicants' environmental reports filed after July 1, 1980. Since the report for Catawba was filed prior to that date, no such discussion is necessary. Accordingly, this contention is admitted, subject to striking "The Applicants" from the first sentence and to the condition that it will be revised and made more specific in light of the draft impact statement; otherwise, it shall be withdrawn.

**Palmetto 3 and 4:** These contentions question the adequacy of emergency plans for the facility in various respects. As drafted, they are extremely vague. However, they are vague because the emergency plans for the counties and municipalities near the plant have not yet been prepared. In these circumstances, about all an intervenor can do is express very general concerns. The most he should be required to do at this point is express an interest in the subject. These contentions are admitted, subject to their revision for specificity promptly following the availability of the pertinent plans. Revised contentions in this area need not be restricted to the subjects referred to in these contentions.

**Palmetto 6, 7 and 18:** These contentions, as drafted, are at best only marginally acceptable from the standpoint of specificity. However, they are being admitted conditionally because they concern the actual safety of construction and operation of the Catawba plant, issues that are at the core of responsibilities as an operating license board. There were indications at the conference that some further specification of these contentions could be made now. Tr. 118, 176-177. These contentions can be explored in discovery and we expect the intervenors to make them more specific, or to withdraw them, following discovery.

**Palmetto 8:** This contention questions the qualifications of reactor operators and shift supervisors for Catawba because of an alleged lack of

[12] The Commission's words are that the Staff should "initiate treatments of accident considerations . . . in its ongoing NEPA reviews, i.e., for any proceeding at a licensing stage where [an FES] has not yet been issued. *Id.* at 40103.

relevant operating experience. This contention is sufficiently specific and would be allowable but for our concern whether it may constitute an impermissible attack on a Commission rule. The information about qualifications contained in Section 13.1 of the FSAR does not speak directly to the allegation in this contention that the operators and supervisors for Catawba lack sufficient "hands on" experience with large PWR's. The Applicants' pleading argues (at p. 17) that there is a pending rulemaking on this subject which precludes this contention, and refers to SECY-81-84. No rulemaking has been initiated as a result of that Staff proposal; the matter is presently under study. Therefore, that proposal does not bar this contention. However, we desire the parties' views on whether the present rules in 10 CFR Part 55, particularly sections 55.11 and 55.24, bar this contention.

In addition, certain requirements relating to operator qualifications have been imposed as part of the Three Mile Island Action Plan in NUREG-0737, Clarification Item I.A.2.1. Pursuant to the Commission's *Guidance Statement* of December 16, 1980, the sufficiency of TMI requirements may be contested by intervenors in licensing cases, suggesting that the present contention is allowable. However, certain of these TMI requirements were subsequently proposed in rule form, including certain experience requirements for senior reactor operators. 10 CFR 50.34(f)(1)(ii). See *Licensing Requirements for Pending Operating License Applications*, Proposed Rule, 46 Fed. Reg. 26491. We desire the views of the parties on whether these rather convoluted developments have the effect of barring litigation of Palmetto's Contention 8. These views should be served by March 26, 1982. In the meantime, this contention is admitted conditionally, subject to reconsideration in light of the parties' further views.

**Palmetto 10:** This contention seeks consideration of the economic costs of severe (so-called "Class 9") accidents. As noted above with respect to Contention 2, consideration of such accidents will be included in the Staff's draft impact statement including, in the words of the Interim Policy Statement, "socioeconomic impacts that might be associated with emergency measures during or following an accident." This contention is admitted, subject to its being revised or withdrawn following availability of the draft impact statement.

**Palmetto 14, 15, 16, 17 and 38 (CESG 11):** These five contentions all relate in one way or another to the expansion of the spent fuel storage pool at Catawba since the construction permit was issued and to the consequent possibility that the Applicants may later store spent fuel from other Duke facilities (such as McGuire and Oconee) at Catawba. These contentions raise questions about the safety and environmental acceptability of transportation of spent fuel to Catawba and its storage there, under both normal and accident conditions.

We can rule out certain aspects of these spent fuel contentions at this point. We are disallowing Contention 14 because, as we read it, it seeks to avoid application of the Table S-4 values about transportation impacts solely on the ground that the spent fuel would be destined for the Catawba storage pool, instead of the hypothetical reprocessing plant referred to in the Table S-4 rule (10 CFR 51.20(g)(1)). The contention does not postulate why the impacts of transporting to these different types of destinations would be different. We think they would be substantially the same and therefore that the Table S-4 values would apply.

Palmetto 17 would require consideration of the Applicants' provisions for caretaking of the spent fuel following the expiration of any Catawba operating license. This proceeding concerns the operation of the Catawba Station. This contention lies beyond its scope and is rejected. Moreover, the issue is generic within the nuclear power industry and is currently subject to Commission rulemaking. The Appeal Board has accordingly ruled that litigation of this topic would constitute a collateral attack on the rulemaking. *Public Service Electric and Gas Co.* (Salem Nuclear Generating Station), 14 NRC 43, 68-69 (1981).

The first two sentences of Palmetto 38 (CESG 11) are in the nature of legal argument about the expansion of the fuel pool. The last sentence seeks to raise a safety issue (albeit an unclear issue) about the consequences of enlarging the pool. We are rejecting Contention 38 as a separate issue. However, the substance of the matters sought to be raised in the last sentence may be raised under the broader spent fuel contentions we are conditionally admitting, as explained hereafter.

From what we know now about the Applicants' plans for the Catawba spent fuel pool, we tentatively believe that consideration of the safety and environmental aspects of transporting and storing fuel there from other Duke facilities would be appropriate in this proceeding. However, we need additional information and the views of the parties on certain issues before we can make final rulings on contentions in this area. These questions are prompted by the following considerations.

Applicants state in their application (at pp. 11-12):

> Applicants further request such additional source, special nuclear and by-product material licenses as may be necessary or appropriate . . . for authority to store irradiated fuel from other facilities . . . . Duke has no present plans to utilize this storage alternative but, rather, considers it prudent planning to have this storage as one of the alternatives available.

The application apparently does not request explicit authority to transport (as distinguished from authority to store) spent fuel from other Duke facilities to Catawba.

The jurisdiction of a licensing board is normally established by the notice of opportunity for hearing and the subsequent notice of establishment of the board. See *Pacific Gas and Electric Co.* (Diablo Canyon Plant), 3 NRC 73, 74, note 1 (1976). Here, those notices refer only to the operating licenses for Catawba. There is no explicit reference to materials licenses for storage and transportation of fuel from other Duke facilities.

Duke's plans for handling of spent fuel, including the "Cascade Plan," were the subject of extended discussion in *Duke Power Co.* (Amendment to Materials License), 12 NRC 459, 469-72 (1980), *rev'd*, 14 NRC 307 (1981). There, environmental analysis was carried out for only a small part of the larger plan, and an "assessment" was deemed sufficient. However, if we are being asked to authorize comparatively more extensive shipment and storage of fuel, inclusion of this subject in the environmental impact statement for the operating licenses may be necessary.

In light of the foregoing considerations and information available to them, the Applicants and the Staff are to address the following questions; the Intervenors are free to comment on such of these question as they choose:

1. Applicants only to answer. What are Duke's plans with reference to storing fuel from other Duke facilities at Catawba. Be more specific than in the quoted sentence from the application. Describe the "Cascade Plan"; what is its present status?

2. What licensing authority is Duke presently seeking to transport or store fuel from other facilities to or at Catawba? What additional authority does it intend to seek? Does Duke intend to secure now, in connection with the operating licenses for Catawba, all of the authority it needs to transport and store spent fuel at Catawba from other facilities to the capacity of the Catawba storage pool?

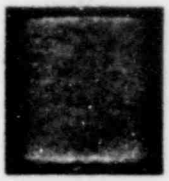
3. Does this Board presently have jurisdiction over applications to store or transport spent fuel from other facilities? If not, could it and/or should it be given such jurisdiction?

4. Does the Applicants' environmental report include an adequate discussion of any plans to store or transport spent fuel from other facilities at Catawba?

5. Staff only to answer. Does the Staff intend to include in its draft impact statement discussion of transportation of spent fuel from other facilities to Catawba and its storage there? If so, why? If not, why not?

Responses and any comments on these questions shall be mailed by March 26, 1982.

Palmetto 15 concerns the environmental costs of both the transportation of spent fuel to Catawba from other Duke nuclear plants and its storage in the used-fuel pool. This contention is admitted conditionally, provided the words "Away From Reactor (AFR)" are stricken from the first paragraph



and "as an AFR" are stricken from the third paragraph. The Applicants' request that "may" be substituted for "intend to," also in the third paragraph, is denied. This is an Intervenor's contention and it is free to allege any intention it thinks it can prove.

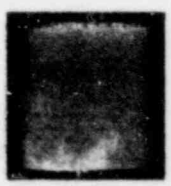
Palmetto 16 is similar to 15, except that it refers to the public health and safety aspects of used fuel storage and transportation at Catawba. This contention is also conditionally admitted.

Contentions 15 and 16 are being admitted conditionally at this juncture. The Board will consider revision of these contentions in light of the information we receive in response to our questions.

**Palmetto 21:** This generally worded contention charges the Applicants with failure to develop certain procedures required by NUREG-0737 in response to the Three Mile Island accident. The Applicants respond that they have submitted certain analyses to the Commission Staff and that the Staff is currently evaluating certain "emergency procedures." However, the section of the FSAR referenced by the Applicants (Section 1.9) says only that they are "in the process of developing new procedures." It does not say what those procedures are. In these circumstances, the Intervenors cannot be faulted for filing a non-specific contention. This contention is admitted conditionally. The Applicants are directed to supply to Palmetto a copy of their proposed procedures for complying with these TMI requirements, now or as soon as they are available. Palmetto is thereafter required to provide a revised and acceptably specific contention or to withdraw this contention.

**Palmetto 22:** This contention concerns two matters. The first is an alleged absence of sufficient instrumentation to detect inadequate core cooling. This part of the contention is denied. Section 1.9 (pp. 10-11) of the FSAR contains a description of such instrumentation and Palmetto does not specify any deficiencies in this description or even refer to it. The final sentence of the contention addresses the interaction of human factors and efficiency of operation. This part is admitted conditionally pending availability to Palmetto of the review of the control room design by the Applicants (Section 1.9-(3) of the FSAR). Thereafter the contention will be withdrawn or be stated in more detail.

**Palmetto 24:** This contention about the ability of the small owners of the facility to produce the funds necessary to operate it safely is admitted, subject to deletion of the next to the last sentence beginning with the phrase "An accident with . . . ." As pointed out by the Staff, Commission regulations on financial qualifications do not require applicants to demonstrate capability to absorb the costs of severe accidents. The Staff's argument that the contention is not sufficiently specific is not well taken. The Applicants' attempt to equate this contention with CESG's Contention



22 fails; the latter contention (which we are rejecting) does not refer to the possible financial vulnerabilities of small owners.

**Palmetto 25:** This contention about costs of decommissioning is similar to the prior contention; it is admitted subject to deletion of the last paragraph, and subject to further specification following discovery.

**Palmetto 26:** It is unclear to the Board whether or to what extent the South Carolina Department of Health and Environmental Control will be responsible for monitoring the operational effects of Catawba, either as a matter of Commission safety regulations or as a factor in the environmental cost/benefit analysis. Various aspects of monitoring activities are discussed in detail in Chapter 6 of the Environmental Report, including a brief description of a pre-operational monitoring program by the South Carolina Department of Health and Environmental Control. Because this contention is not tied in with this discussion and is objectionable on specificity grounds, it is disallowed, with one possible exception. The contention also refers to the State agency's "responsibilities in the event of an emergency." Because the off-site emergency plans are not yet available, we do not know what role the agency may plan in an emergency. Accordingly, this limited aspect of the contention is admitted conditionally, until those plans are available and pending its revision or withdrawal.

**CESG Contentions** 8, 9, 13 and 16 and 17[13] are admitted, in whole or in part, subject to the following conditions:

**CESG 8 (Palmetto 35):** The first sentence of this emergency planning contention is premature because the ten mile plume exposure pathway emergency planning zone has not yet been drawn by State and local officials. This portion of this contention is admitted, subject to the Intervenor's reviewing the State and local plans when they are available as to the appropriateness of that EPZ boundary. The second sentence alleges that a "radius of 30 miles should be the basis for emergency planning." We read this to mean that the plume exposure pathway EPZ prescribed in the rule as "about ten miles" should be expanded to 30 miles in the circumstances of this case. This is an impermissible attack on the Commission's rule (10 CFR 50.47(c)(2)). Should the Intervenors wish to pursue this matter, the proper course would be to file appropriate papers seeking a waiver of the ten-mile feature of the rule, pursuant to 10 CFR 2.758.

**CESG 9:** The first sentence of this contention is similar to Palmetto Contention 2; both seek consideration of serious accidents in the Staff's environmental impact statement. This contention is admitted conditionally, subject to its being revised or withdrawn in light of the draft environmen-

[13] These same contentions are also advanced by Palmetto as their contentions numbered 35, 36, 40, 42 and 43. These Palmetto contentions are also admitted, subject, of course, to the same conditions.

tal impact statement's discussion of serious accidents. We do not, by this conditional admission, necessarily endorse the need to consider the entire spectrum of PWR accidents; the scope of the Staff's obligation is basically contained in the Commission's Policy Statement. The second sentence of this contention is rejected. The abilities of local officials to cope with the consequences of serious accidents would be more appropriately explored in the emergency planning context. New contentions concerning the functions and capabilities of local officials can be submitted promptly after the local area plans become available.

**CESG 13:** This contention alleging irregularities in welding practices is similar to Palmetto Contentions 6, 7 and 18. It is admitted conditionally, subject to further specification, or withdrawal, following discovery. The conference transcript indicates that further specificity could be provided. Tr. 348-350.

**CESG 16:** This contention is similar to parts of Palmetto Contention 22. It is quite vague as drafted. However, it is being admitted conditionally, subject to further specification or withdrawal after the Applicants have supplied to CESG a copy of the control room design review promised in Section 1.9-1(3) of the FSAR.

**CESG 17:** This contention lacks specificity in that it fails to state how an infestation of the Asiatic clam *Corbicula* might affect the performance of the cooling tower system and why such an effect should be of health and safety concern or impact the environment. The potential for *Corbicula* infestation was brought out in the FES (p. 2-36) at the construction permit stage. However, the Applicants do not refer in their pleading to any discussion of *Corbicula* in their FSAR or ER. In these circumstances, we admit this contention conditionally, subject to clarification of the issue and much greater specificity following discovery.

**Palmetto Contentions Rejected.**

**Palmetto 5:** This diffuse contention expresses a generalized concern about serious accidents at Catawba. It questions the use of the Reactor Safety Study in accident analyses, and contends that serious accidents (presumably at reactors generally) are "plainly credible" after Three Mile Island. This proposed contention falls short of specificity requirements, whatever standard one applies. There is no nexus of any kind, direct or indirect, between the very generalized concerns being expressed and the specific licensing actions we are considering. The possibility of accidents at a particular reactor can only be meaningfully analyzed with reference to specific scenarios and the design of that particular facility. Were Palmetto to postulate a specific serious and credible accident scenario at Catawba, we might accept a contention based upon it. *Cf. Public Service Co. of*

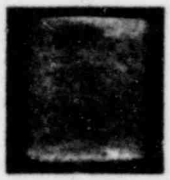
*Oklahoma* (Black Fox Station), 11 NRC 433 (1980). In the absence of such a credible scenario, this contention must be rejected.

**Palmetto 9 and 31 (CESG 2):** These contentions address an explosive hydrogen-oxygen reaction produced within the reactor containment following a loss-of-coolant accident. As held in *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), ALAB-655, 14 NRC 799, these contentions are denied because the issue is being addressed in the rulemaking process. As recently as December 23, 1981 (46 Fed. Reg. 62281), the Commission published a proposed rule for comment. It is recognized, however, that hydrogen issues may be litigated in individual licensing proceedings provided the challenger postulates a credible scenario for a loss-of-coolant accident producing hydrogen. Absent such a scenario and in view of the pending rulemaking, these contentions are rejected.

**Palmetto 11:** This contention seeks to inject increased costs of construction into the environmental cost/benefit analysis at the operating license stage. The second sentence makes it clear that it is an attempt to reopen the cost/benefit analysis conducted at the construction permit stage. While construction costs can be significant at the construction permit stage when it comes to choosing among alternatives, they are usually irrelevant at the operating license stage. In the first place, costs of construction of all power plants have risen sharply in the past several years. The costs of the benefits associated with building a plant have also risen. No claim is made that the costs of construction of Catawba have risen any faster than those of other nuclear plants, or of other goods and services in the economy. More fundamentally, the attempt to inject increased costs into the cost/benefit equation at the operating license stage simply comes too late. Even assuming that the costs of construction of Catawba have gone up an inordinate amount, the fact remains that those funds have already been spent or are committed at this late stage of construction. Thus there is no practical point in considering such "sunk" costs now. *Cf. Public Service Co. of New Hampshire* (Seabrook Station), 5 NRC 503, 530-536 (1977).

**Palmetto 12:** This contention states that capital-intensive forms of energy (presumably including nuclear power plants) place added burdens on a tight capital market and increase interest rates in the economy as a whole. This may or may not be true. However, exploration of this broad economic thesis is far beyond the relatively narrow scope of this proceeding. The argument would be more appropriately put to an economic committee of the Congress.

**Palmetto 13:** This contention about the effect of Catawba on the area labor market is also beyond the scope of this operating licensing proceeding. We are concerned with whether the Catawba nuclear power plants meet the safety rules of the NRC and whether their benefits will outweigh the environmental costs of operation. We are not concerned, at least at this



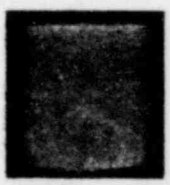
juncture, with the number of jobs Catawba creates, either as a construction project or as an operating facility, and, by comparison, how many jobs investments in conservation might have created had Catawba not been built.

**Palmetto 19 and 45 (CESG 19):** These contentions address the Catawba Emergency Core Cooling System. 10 CFR Part 50, Appendix K. Palmetto 19 first alleges that the expected performance of the system has not been correctly predicted and in support cites what are described as published criticisms of the methodology embodied in the analysis put forth in the Commission's Reactor Safety Study (WASH-1400). Additionally, Palmetto 19 together with Palmetto 45 and CESG 19 allude in an unclear manner to a part of the reactor and allege that part is so poorly supported as to, in the limit of complete support failure, result in blockage of ports provided for entrance of emergency cooling water for the reactor core. The contention is so unclearly stated, even in the oral presentation (Tr. 179 ff, 362), as to preclude identification of the item of equipment under discussion. Therefore, both as a challenge to Commission regulations for emergency core cooling and as a collection of unclear statements lacking specifics on equipment, these contentions are rejected.

**Palmetto 20:** This contention postulates that occupational radiation exposures will not be as-low-as-reasonably-achievable (ALARA) because certain equipment (specifically the steam generator, the reactor vessel and neutron shield bolting) will require extensive repairs and because the FSAR does not adequately consider occupational exposure from various other occurrences that are not specifically described.

This contention is disallowed because it fails to provide any reasonably specific basis for the assertion that ALARA requirements of 10 CFR 20.1 will not be met. The Applicants have set forth in Section 12.1 of the FSAR their program for "(e)nsuring that occupational radiation exposures are as low as reasonably achievable (ALARA)." The contention, however, does not question this program or any part of it. Speculation that large collective doses of radiation might be received by repairmen at some future time because of the premature failure of equipment is not grounds for a showing that ALARA principles were ignored.

The Commission has under development, but has not yet published, a proposed rule concerned specifically with occupational ALARA. Should Palmetto Alliance wish to pursue the subject matter of this contention, participation in the making of the proposed occupational ALARA rule would be an appropriate avenue.



**Palmetto 28:** This contention seeks to raise "ATWS" (Anticipated Transients Without Scram) issues into this individual licensing proceeding. The thrust of the allegation is that the Applicants have failed to demonstrate that the risk from an ATWS event is such that there is a

reasonable assurance that the Catawba plant can be operated prior to the completion of the Commission's pending rulemaking on that subject. The Applicants in this case do not have the burden of making any such demonstration. The Commission has made these determinations, as stated in its recently initiated rulemaking:

> The Commission believes that the likelihood of severe consequences arising from an ATWS event during the two to four year period required to implement a rule is acceptably small . . . . On the basis of these considerations, the Commission believes that there is reasonable assurance of safety for continued operation until implementation of a rule is complete. 46 Fed. Reg. 57521.

It is clear from the quoted language that the Commission wishes to confine these generic issues to the generic rulemaking context. The Catawba facility will, of course, be subject to the outcome of the ATWS rulemaking.

**Palmetto 29:** Alluding to problems that have cropped up at other nuclear power stations. Palmetto Alliance asserts that the Applicants should go back to the drawing board and try to ferret out as yet unrecognized interactions of systems, particularly the control systems and plant dynamics, that could have impacts on health and safety of the general public. Palmetto Alliance makes no attempt to establish a nexus between the undefined systems interaction problems encountered at other reactors and Catawba, to identify the specific systems of concern, or to postulate the kind of impact that might endanger the safety and health of the general public. Consequently, this contention is much too vague to be admitted and is disallowed.

**CESG Contentions Rejected.**

**CESG 1 (Palmetto 30):** This contention seeks to inject the question of "need-for-power" into the proceeding. Such a contention is barred by a new rule, which provides in pertinent part that —

> Presiding officers shall not admit contentions proffered by any party concerning need for power or alternative energy sources for the proposed plant in operating license hearings. 10 CFR 51.53(c).

The supplementary information statements accompanying the proposed and final rules explicitly recognize that an exception to the rule may be sought upon a showing of special circumstances pursuant to 10 CFR 2.758. 46 *Fed. Reg.* 51776; 47 *Fed. Reg.* 12940.[14]

[14] Our rulings on CESG Contentions 1, 5 and 12 are deferred and are to be effective upon the effectiveness of the new rule. That will occur 30 days following its publication in the *Federal Register* pursuant to 5 U.S.C. 553(d).

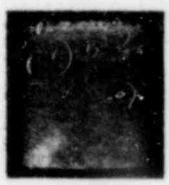
**CESG 3 (Palmetto 32):** This contention addresses the alleged inadequacy of the risk analysis by the Staff of operation and decommissioning of the Catawba station, and of the transport and storage of radionuclides produced there. The contention introduces a concept of "totality of risks" which purports to be a single number as a measure of a projected life-of-the-station effect on the public. Tr. 314-316. The contention does not include sufficient description of that concept to establish the feasibility of its determination. Even so, this is basically a generic issue. Whereas the contention is claimed to be site specific, completely absent are delineations of those characteristics of this site which bear upon the analyses and cause them, in some special manner, to entail investigation to a depth beyond that usually required by existing regulations. Accordingly the Board rejects this contention for lack of specificity.

**CESG 5 (Palmetto 33):** This contention alleges that the construction permit cost/benefit analysis has become defective and that the power to be produced by Catawba will be more expensive than a number of alternatives. This contention is also barred by the Commission's new rule (quoted in the discussion of CESG 1), which bars consideration of non-nuclear alternatives at the operating license stage.

**CESG 6 (Palmetto 34):** This contention represents yet another attempt to inject costs for Catawba and a resulting unfavorable cost/benefit ratio into this operating license proceeding. It also attempts to bring in need-for-power by claiming that earnings from Catawba will be "undeserved" because the facility is "unneeded." These issues are not relevant to the narrow focus of the cost/benefit analysis at the operating license stage.

**CESG 10 (Palmetto 37):** This contention calls for an "adequate crisis relocation plan" as a part of emergency planning. The phrase is not defined in the contention but it was made clear by CESG at the prehearing conference that "crisis relocation" means an area to which people could be moved permanently in the event of a nuclear disaster. Tr. 341. The Commission's emergency planning rules do not require establishment of such a permanent facility. Accordingly, this contention is an impermissible attack on the rules.

**CESG 12 (Palmetto 39):** This contention alleges that since the construction permit the Applicants have embarked upon a variety of programs designed to decrease load growth. The implication is that these actions have reduced need for power. As noted in discussion of CESG 1, however, the Commission's new rule bars consideration of need for power from operating license proceedings.



**CESG 15 (Palmetto 41):** This contention seeks to litigate the possible effects of an electromagnetic pulse (EMP) on Catawba. It is disallowed. An electromagnetic pulse of the type described by petitioners is generally postulated to result from the detonation of a nuclear weapon at high

altitude as an act of war. Petitioners do not contend otherwise or suggest how an EMP affecting the Catawba plant could be produced by other than a hostile act. Consequently we view this contention as an impermissible challenge to Commission regulation 10 CFR 50.13 and concur with the action taken on a similar contention by the Licensing Board for the Perry facility. *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant), 14 NRC 842. See *Siegel* v. *AEC*, 400 F.2d, 778 (C.A.D.C. 1968).

**CESG 18 (Palmetto 44):** This contention is disallowed for lack of the requisite specificity. There is no claim that components of the Catawba reactors do not meet reference temperature requirements. Section 5.3.1.5 of the FSAR and Tables 5.3.1-4 and -5 show how the Catawba pressure vessels will comply with the fracture toughness requirements of 10 CFR Part 50, Appendix G. The contention makes no reference to this showing. Moreover, no link is established between temperature and "reactor embrittlement." Finally, even assuming there is a problem at the Oconee Unit, the contention does not link Oconee with Catawba. In sum, this contention does not contain a sufficiently clear statement to put the Applicant and Staff on notice of the crux of the Intervenor's concern.

**CESG 20 (Palmetto 46):** Petitioners are concerned that the drinking water of communities downstream from Lake Wylie will become contaminated by radioactive materials accidentally released from Catawba. The release of concern is postulated to result from "an accident such as happened at Oconee," or from "— any one of a variety of as yet unencountered operational errors." The Oconee reactor is of a substantially different design than Catawba and the unsupported assertion that a similar accident could occur at Catawba is, at best, very tenuous. We note that the FSAR includes detailed discussions of the proposed Catawba liquid radwaste system, including analyses of possible accidents and their effects. See Sections 3.5, 5.2, 11.2 and 15.7. This contention should, at the least, reflect an awareness of these discussions. The vagueness of this contention provides no basis for arguments about the source or nature of the radioactive materials, how they might reach Lake Wylie, or on the magnitude of the additional exposure that might ensue to people downstream who drink the water. Consequently, this contention does not meet the requirements of 10 CFR 2.714(b) and is disallowed.

**CESG Contention 21 (Palmetto 47):** This contention asserts that the Applicants' Environmental Report is deficient in respect to the consideration of some radioactive sources and to the water exposure pathway. The Commission's Staff is very explicit about the content of environmental reports. Section 3.5.1 of Reg. Guide 4.2 (NUREG-0099) specifies the source terms (including tritium) that are to be included. Section 5.2.1 of Reg. Guide 4.2 specifies the exposure pathways (including water) that must, as a minimum, be covered. Further, Reg. Guide 1.109 provides

detailed guidance for the calculation of radiation doses from both liquid and atmospheric pathways.

In this instance, Intervenors have had an opportunity to study the Environmental Report which is the particular document in contention. This document does, in fact, contain the type of information alleged to be missing. See Sections 3.5.1.1.4, 5.2.4.1, 5.2.4.2. If some specific sections or tables of the report are believed to be deficient the contention should have specifically identified them. This contention is disallowed for lack of specificity.

The Commission fulfills its obligations under the National Environmental Policy Act, in part, by the issuance of its own environmental assessment and environmental statements. Environmental reports prepared by applicants (sometimes found to be deficient) are major source documents used by the Commission's Staff. When the Staff's draft environmental statement for Catawba is issued, Intervenors will have an opportunity to study it and to submit comments about any item of concern, including source terms, environmental pathways, and health effects. However, any additional contentions on this subject will have to be based on new information.

**Contention 22 (Palmetto 48):** The first sentence of this contention about dilution of ownership refers to "responsibility and liability," but it does not say for what. We have admitted Palmetto Contention 24, which addresses the ability of the small owners to produce the funds needed to operate the plant. This contention may overlap that contention, but it seems to add nothing of substance.[15] The remainder of this contention must also be disallowed because it does not raise any issue properly cognizable in an operating license proceeding. The NRC is not concerned with whether purchasers of nuclear generating capacity enter into unfavorable agreements.

**The Security Plan.**

Palmetto Contention 23 alleges in general terms that the Applicants have not developed and demonstrated an adequate security plan. The contention does not point to any particular deficiencies presumably because, as the Applicants point out, "the security plan is protected under the Commission's regulations (10 CFR 2.790), and is not available for inspection." Applicants' Response, p. 78. The Applicants go on to argue that Palmetto nevertheless "must frame [a sufficiently specific] contention

[15] We will consider later on whether allowance of substantially similar contentions by two or more intervenors should lead to consolidation of their presentations on that contention.

on information available to it," this despite the fact that, by hypothesis, no information about the plan is available. We reject that argument.

In the instances of unavailable information discussed so far, we expected the problem to be resolved later when the relevant documents become publicly available. Here, however, unless ordered by the Board, the Catawba security plan will remain unavailable to the Intervenors.

Because an intervenor cannot reasonably be required to advance specific contentions about a security plan he has never seen, and because Palmetto has expressed a formal interest in the Catawba plan, we believe we could at this juncture order the Applicants to grant Palmetto access to that plan. We could now find that disclosure of the plans is "necessary to a proper decision in the proceeding." 10 CFR 2.744(e), as recently amended, 46 Fed. Reg. 51718, 51723. However, we are uncertain whether Palmetto is fully aware of the procedural complexities and costs associated with pursuing security plan issues under the Commission's case law and new regulations. For one thing, we would condition a disclosure order on Palmetto having obtained the services of a qualified security plan expert. Beyond that, access would be conditioned as to time, place, note-taking, and the like. A copy of the protective order entered in the *Diablo Canyon* case is enclosed as illustrative of these restrictions. A copy of the new security plan regulations is also enclosed [46 Fed. Reg. 51718 - 51726].

A logical next step, then, is for Palmetto to consider the matter further and inform us, within ten days of receipt of this Order, whether it wishes to gain access to the Catawba security plan, subject to the kinds of conditions we have indicated. If it wishes to proceed, we will then hear from the other parties and consider what further procedures are appropriate.

**Service of Documents.**

During the prehearing conference Palmetto complained that they had had only limited access to the Applicants' FSAR and Environmental Report and that their ability to formulate contentions had been significantly hampered. Palmetto anticipated that they would have further difficulties of that nature unless documents yet to come — particularly amendments to FSAR — were served upon them. The Applicants rejected these complaints. Without attempting to resolve these disagreements, the Board suggested that Palmetto make a motion that henceforth the Intervenors be served with copies of all relevant documents generated by the Applicants and the Staff in connection with this operating license proceeding. This would include, most significantly, amendments to the FSAR, other formal technical exchanges between the Applicants and Staff, emergency plans generated by State and local authorities, the draft and final

environmental impact statements, and the Staff's Safety Evaluation Report, as supplemented.

The Board believes that it would not significantly burden either the Staff or the Applicants to serve a copy of the papers they generate in the future on the Intervenors. This is suggested by the fact that the Staff and some applicants have provided such service in some past cases. In the case of a particularly bulky document which the Applicants or the Staff believe will not be viewed important by the Intervenors, the Applicants or Staff may seek the permission of the Board Chairman to serve only one copy of the document on one lead intervenor. In such a case, the Intervenors would be expected to consult with one another and to share access to that document. With that narrow exception, however, the Board grants Palmetto's motion for service of documents on all intervenors in this case.

**Discovery and Schedule for Further Proceedings.**

Discovery is to commence as of the date of this Order. The scope of discovery is to be confined to the contentions we have admitted either conditionally or unconditionally.

The following filing dates are established by this Order:

| Page of Order | Matter | Filing Date |
|---|---|---|
| 574-575 | Discovery on Contentions 6, 7, 18 and 25 (Palmetto) and 13 and 17 (CESG) | June 3 (for last answers to interrogatories) |
| 574-575 | Revisions of above contentions | July 6 |
| 574-575 | Revisions of contentions presently non-specific for lack of information | 30 days after receipt of relevant document |
| 574-575 | New contentions based on new information | 30 days after receipt of information |
| 580 | Information and comments on spent fuel questions | March 26 |
| 577-578 | Comments on operator qualifications questions | March 26 |
| 589-590 | Whether Palmetto wishes to pursue their security plan contention | 10 days after receipt of this Order |

The schedule for other matters will be considered and established by the Board following receipt of scheduling suggestions from the parties, as discussed at the Prehearing Conference. Tr. 372-73.

Orders of this kind are governed by 10 CFR 2.751a(d), which provides in pertinent part that —

> Objections to the order may be filed by a party within five (5) days after service of the order, except that the regulatory staff may file objections to such order within ten (10) days after service. The board may revise the order in the light of the objections presented and, as permitted by §2.718(i), may certify for determination to the Commission or the Atomic Safety and Licensing Appeal Board, as appropriate, such matters raised in the objections as it deems appropriate. The order shall control the subsequent course of the proceeding unless modified for good cause.

In view of the number and complexity of contentions in this case, the Applicants and the Intervenors may mail their objections to this Memorandum and Order no later than March 26, 1982. Any Staff objections shall be mailed by April 2, 1982.

THE ATOMIC SAFETY AND
LICENSING BOARD

James L. Kelley, Chairman
ADMINISTRATIVE JUDGE

Dr. A. Dixon Callihan
ADMINISTRATIVE JUDGE

Dr. Richard F. Foster
ADMINISTRATIVE JUDGE

Dated at Bethesda, Maryland,
this 5th day of March, 1982.

Enclosures:
1. Diablo Canyon protective order
2. Recent NRC regulations on security plans

[Enclosures 1 and 2 have been deleted from this publication, but may be found in the NRC Public Document Room, 1717 H Street, Washington, D.C. 20555.]

Cite as 15 NRC 593 (1982) LBP-82-17

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Marshall E. Miller,** Chairman
**Dr. Kenneth A. McCollom**
**Dr. Richard F. Cole**

**In the Matter of**

**Docket Nos. 50-445**
**50-446**
**(Application for Operating License)**

**TEXAS UTILITIES GENERATING COMPANY, *et al.***
**(Comanche Peak Steam Electric Station, Units 1 and 2)**

**March 5, 1982**

The Licensing Board denies intervenor's request that it adopt certain of intervenor's contentions as its own, and grants Applicants' motion for summary disposition of the contentions.

## RULES OF PRACTICE: SUMMARY DISPOSITION

Where intervenor filed neither an answer opposing Applicants' motion for summary disposition of certain contentions, nor a statement of material facts as to which it contended that there existed a genuine issue to be heard, and where extensive affidavits and statements filed by the Applicants and the Commission Staff in support of the motion demonstrated that no such issue existed, intervenor's request that the Board adopt such contentions as its own would be rejected. If a party has established its entitlement to summary disposition of a contention, it would distort the Commission's regulations to abort this result by permitting an opposing party to withdraw the contentions without prejudice.

## RULES OF PRACTICE: SUMMARY DISPOSITION

Motions for summary disposition under §2.749 of the Commission's Rules of Practice are analogous to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure and Federal Court decisions interpreting that rule may be relied upon in NRC proceedings.

### ORDER
### (Granting Summary Disposition of Contentions 2 and 7)

On January 26, 1982, the Applicants, pursuant to the provisions of 10 CFR §2.749, filed their motion for summary disposition of Contentions 2 and 7. Those contentions had been admitted as issues pleaded by Citizens for Fair Utility Regulation (CFUR). The Applicants' motion was supported by detailed affidavits of Chun-Mong Jan, Arthur C. Spencer, William R. Spezialetti, C. H. Gatchell, Raymond C. Mason, Ralph E. McGrane, John T. Merritt, and P. M. Milam. A statement of material facts as to which there is no genuine issue to be heard was also filed by the Applicants (10 CFR §2.749(a)).

By our Order Subsequent to the Prehearing Conference of April 30, 1980, entered on June 16, 1980, Contentions 2 and 7 were admitted when framed as follows:

> "**Contention 2**: One or more of the reports used in the construction of computer codes for the CPSES/FSAR have not been suitably verified and formally accepted; thus conclusions based upon these computer codes are invalid.
>
> "**Contention 7**: Applicants have failed to adequately evaluate whether the rock overbreak and subsequent fissure repair using concrete grout have impaired the ability of category I structures to withstand seismic disturbances."

The Staff filed its answer supporting the Applicants' motion for summary disposition of Contentions 2 and 7 on February 12, 1982. The Staff submitted that its attached affidavits[1] together with its SER (NUREG-0797) and supplements Nos. 1 and 2 thereto, demonstrated the absence of any genuine issue of material fact and warranted summary disposition as a matter of law.

The Intervenor CFUR has not filed an answer opposing the motion for summary disposition, nor a statement of material facts as to which it is contended that there exists a genuine issue to be heard (10 CFR §2.749).

[1] Affidavits were filed by Jai Raj N. Rajan, John S. Berggren, Sammy S. Diab, Thomas G. Dunning, Barry J. Elliot, Joseph J. Holowich, James E. Knight, Ralph O. Meyer, David H. Shum, Robert C. Stewart, Owen Thompson, Frank Rinaldi and John P. Matra.

However, the Board was informed by telephone on February 8, 1982 that for financial reasons CFUR was withdrawing all of its remaining contentions. Accordingly, an Order was entered February 9, 1982 cancelling an evidentiary hearing scheduled to consider CFUR's contentions, and indicating that the Board would await CFUR's written filing regarding its withdrawal before determining the appropriate disposition of CFUR's contentions.

A written "motion for voluntary withdrawal of Contentions 2, 3, 5 and 7" was filed by CFUR on February 23, 1982. However, CFUR also stated therein that it "respectfully prays that it be allowed to voluntarily withdraw its status as an Intervenor party and that this Board, rather than dismissing CFUR's Contentions Two, Three and Seven, adopt said contentions as their own" (CFUR Motion, p. 2). The Board rejects CFUR's request for it to adopt Contentions 2 and 7 as its own. Once a motion for summary disposition has been made and supported by affidavits, the opposing party may not rely upon mere allegations or statements of concern, but rather must demonstrate by affidavit or otherwise that a genuine issue exists as to a material fact.[2] If a party is otherwise entitled to summary disposition, it would distort our regulations to abort this result by permitting an opposing party simply to withdraw the contention without prejudice. CFUR's statement of concerns, in which "[n]o attempt is made to categorize the following problems according to the respective contentions," will be dealt with by the Board in a subsequent order.

Motions for summary disposition under Section 2.749 are analogous to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure, and Federal court decisions interpreting that rule may be relied upon in NRC proceedings.[3] To defeat a motion for summary disposition, an opposing party must present facts in an appropriate form. Conclusions of law and mere arguments are not sufficient.[4] The asserted facts must be material and of a substantial nature,[5] not fanciful or merely suspicious.[6] A party cannot go to trial on the vague supposition that

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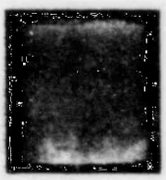
[2] Florida Power and Light Company (Turkey Point Nuclear Generating, Units 3 and 4), LBP-81-14, 13 NRC 677, 687 (1981); *aff'd.* ALAB-660, 14 NRC 987 (1981).

[3] Alabama Power Co. (Joseph M. Farley Nuclear Plant, Units 1 and 2), ALAB-182, 7 AEC 210, 217 (1974); Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), LBP-74-36, 7 AEC 877, 878-79 (1974).

[4] Pittsburg Hotels Association, Inc. v. Urban Redevelopment Authority of Pittsburg, 202 F. Supp. 486 (W. D. Pa. 1962), *aff'd.* 309 F. 2d 186 (3rd Cir. 1962).

[5] Egyes v. Magyar Nemzeti Bank, 165 F. 2d 539 (2nd Cir. 1948); Beidler and Bookmeyer v. Universal Ins. Co., 134 F. 2d 828, 831 (2nd Cir. 1943).

[6] Griffin v. Griffin, 327 U.S. 220, 236 (1946); Banco de Espana v. Federal Reserve Bank, 28 F. Supp. 958, 973 (S.D.N.Y. 1939) *aff'd.* 144 F. 2d 433 (2nd Cir. 1940).



"something may turn up,"[7] or on the mere hope that on cross-examination the movant's evidence will somehow be discredited.[8]

In its recent Statement of Policy, the Commission directed licensing boards to use procedural tools available to expedite the hearing process, stating:

> "In exercising its authority to regulate the course of a hearing, the boards should encourage the parties to invoke the summary disposition procedure on issues where there is no genuine issue of material fact so that evidentiary hearing time is not unnecessarily devoted to such issues."[9]

In another aspect of the instant proceeding, the Commission further held that "given the availability of summary disposition procedures, the admission of a contention does not automatically require exploration of that contention at hearing."[10]

The Appeal Board has also stated that "the Section 2.749 summary disposition procedures provide in reality as well as in theory, an efficacious means of avoiding unnecessary and possibly time-consuming hearings on demonstrably insubstantial issues . . ."[11] Accordingly, the admission of a contention "does not carry with it any implication that we view the contention to be meritorious" (*Id.*, at 549). As the Appeal Board recently observed, a hearing on each contention "is not inevitable," but whether one "will be necessary wholly depends upon the ability of the intervenors to demonstrate the existence of a genuine issue of material fact respecting any of the issues they previously raised."[12]

The Board has carefully reviewed the extensive affidavits and statements filed by the Applicants and the Staff in support of the motion for summary disposition. These filings show that there is no genuine issue as to any material fact concerning Contentions 2 and 7, within the meaning

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[7] 6 Moore's Federal Practice 56.15(3).

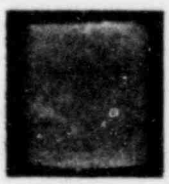
[8] Radio City Music Hall v. United States, 136 F. 2d 715 (2nd Cir. 1943); Orvis v. Brickman, 95 F. Supp. 605 (D. D.C. 1951).

[9] Statement of Policy on Conduct of Licensing Proceedings, CLI-81-8, 13 NRC 452, 457 (1981).

[10] Texas Utilities Company, *et al.* (Comanche Peak Steam Electric Station, Units 1 & 2), CLI-81-36, 14 NRC 1111, 1114 (1981).

[11] Houston Lighting and Power Company (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542, 550 (1980), *citing* Virginia Electric and Power Company (North Anna Nuclear Power Station, Units 1 and 2), ALAB-584, 11 NRC 451, 463 (1980). *See also* Mississippi Power and Light Company (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 426 (1973).

[12] Philadelphia Electric Company, *et al.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-654, 14 NRC 632, 634 (1981).



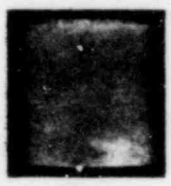
of 10 CFR §2.749. Accordingly, Contentions 2 and 7 are summarily dismissed.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND LICENSING BOARD

Marshall E. Miller, Chairman
ADMINISTRATIVE JUDGE

Dated at Bethesda, Maryland
this 5th day of March, 1982.



Cite as 15 NRC 598 (1982) **LBP-82-18**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Marshall E. Miller,** Chairman
**Dr. Kenneth A. McCollom**
**Dr. Richard F. Cole**

**In the Matter of** **Docket Nos. 50-445**
**50-446**
**(Application for Operating License)**

**TEXAS UTILITIES GENERATING COMPANY, *et al.***
**(Comanche Peak Steam Electric Station, Units 1 and 2)**

**March 8, 1982**

The Licensing Board denies intervenor's motion for extension of time for discovery.

## RULES OF PRACTICE: EXTENSIONS OF TIME

In light of the Commission's express direction that licensing boards conduct their proceedings at an expeditious pace consistent with the demands of fairness by setting and adhering to reasonable schedules; and that the special circumstances faced by a participant do not relieve that party of its hearing obligations; intervenor's motion for extension of time for discovery would be rejected where no good cause for that extension had been shown.

## ORDER

Citizens Association for Sound Energy (CASE) filed a motion on March 1, 1982 seeking an extension of time for discovery concerning Contention 5. That contention relates to the Applicants' alleged failure to adhere to the quality assurance/quality control provisions required by the

Comanche Peak construction permits. The cutoff date for Contention 5 discovery is March 29, 1982. The motion for extension of time is denied.

CASE argues that circumstances have changed since the establishment of the cutoff date because CFUR has moved for its voluntary dismissal from the proceedings. However, on December 1, 1981 at a prehearing conference, the Board severed the prior consolidation of CFUR and CASE as to discovery on Contention 5.[1] CASE was therefore free to conduct its own discovery immediately on the facts involved in Contention 5, and all parties were urged to conclude discovery expeditiously. It was also ordered that discovery "shall commence immediately on all issues."[2] The Order establishing the March 29 cutoff date for discovery on Contention 5 was entered February 9, one day after the Board was advised by telephone of CFUR's withdrawal of all of its contentions. Consequently, there are no significantly changed circumstances which would justify any further extension of discovery time. The documents described in CASE's motion should be discoverable, if such discovery is appropriate, by March 29.

CASE seems to be under a misapprehension that there is an "early cutoff of discovery," or that this litigation is "premature" or "hasty". Such conclusions are grossly inaccurate. The Commission has expressly advised licensing boards in a Policy Statement to see "that the process moves along at an expeditious pace, consistent with the demands of fairness."[3] As to CASE's problems as a citizen group, the Commission stated:

> "While a board should endeavor to conduct the proceeding in a manner that takes account of the special circumstances faced by any participant, the fact that a party may have personal or other obligations or possess fewer resources than others to devote to the proceeding does not relieve that party of its hearing obligations."[4]

It further provided the following specific guidance to boards:

> "The Commission expects licensing boards to set and adhere to reasonable schedules for proceedings. The Boards are advised to satisfy themselves that the 10 CFR 2.711 'good cause' standard for adjusting times fixed by the Board or prescribed by Part 2 has actually been met before granting an extension of time."[5]

In this proceeding, CASE has failed to show good cause for a further extension of time for discovery. At its own request, it was permitted to conduct independent discovery on Contention 5 after December 1, 1981. Ample time was established for this purpose and all parties were directed

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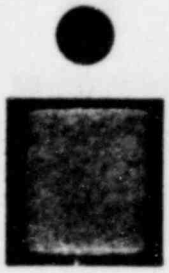
[1] Tr. 101.
[2] Scheduling Order entered December 11, 1981, p. 2.
[3] Statement of Policy on Conduct of Licensing Proceedings, CLI-81-8, 13 NRC 452, 453 (1981).
[4] *Id.*, at 454.
[5] *Id.*



to proceed expeditiously. Time remains for any further necessary discovery to be accomplished. However, according to monthly reports furnished by NRC to the Bevill Committee of Congress, an initial decision is scheduled to be entered by this Board in September, 1982.[6] It is obvious that to comply with this schedule an evidentiary hearing must be shceduled soon, with imminent cutoff dates for discovery, motions, trial briefs and prefiled testimony. All parties must therefore proceed expeditiously to comply with the Commission's planning guidance "which urged Boards to take firm hold of hearings and keep them moving."[7]

Accordingly, CASE's motion for extension of time for discovery on Contention 5 is denied.

It is so ORDERED.

FOR THE ATOMIC SAFETY AND LICENSING BOARD

Marshall E. Miller, Chairman
ADMINISTRATIVE JUDGE

Dated at Bethesda, Maryland
this 8th day of March, 1982.

[6] Fifteenth report by NRC to the Honorable Tom Bevill, Chairman, Subcommittee on Energy and Water Development, Committee on Appropriations, United States House of Representatives, dated January 29, 1982, Table 1, page 1.

[7] U. S. Nuclear Regulatory Commission Policy and Planning Guidance 1982, NUREG-0085, Issue 1, page 4.

Cite as 15 NRC 601 (1982) LBP-82-19

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Lawrence Brenner**, Chairman
**Dr. James H. Carpenter**
**Mr. Frederick J. Shon**

**In the Matter of** **Docket Nos. 50-322-OL**
**50-322-CPA**

**LONG ISLAND LIGHTING COMPANY**
**(Shoreham Nuclear Power Station, Unit 1)**

**March 15, 1982**

The Licensing Board rules on the admissibility of contentions and confirms establishment of hearing schedule.

## OPERATING LICENSE HEARINGS: TMI-RELATED ISSUES

TMI related issues may be litigated in individual proceedings even if they are not included in the NUREG-0737 list of TMI requirements applicable to new operating licenses provided that the issue to be litigated is not a challenge to the existing regulations. The Commission's Revised Statement of Policy for litigation of TMI issues, CLI-80-42, 12 NRC 654 (1980), broadened the range of TMI issues which could be litigated in individual proceedings to include the requirements contained in NUREG-0737, whether or not those requirements might have been considered challenges to the regulations. The policy statement did not cut back the pre-existing right to litigate issues which do not challenge the regulations just because those issues are not included in NUREG-0737. *Pacific Gas and Electric Company* (Diablo Canyon, Units 1 and 2), CLI-81-5, 13 NRC 361, 363 (1981).

## ADMISSIBILITY OF CONTENTION: CLASS 9 ACCIDENTS

The Commission's "Class 9" accident interim policy statement, 45 Fed. Reg. 4010 (June 13, 1980), requires that a probabilistic assessment of environmental risk of accidents previously not considered within the design basis of nuclear power plants be included in Final Environmental Statements (FES) issued after the June 13, 1980 policy statement. However, this does not bar a contention in proceedings in which the FES issued before that date alleging that the Applicant and Staff have not applied an adequate methodology, such as a probabilistic analysis, to analyze the reliability of systems to determine which sequences of accidents should be considered within the design basis of the plant.

## RULES OF PRACTICE: BURDEN OF GOING FORWARD

In the circumstance where a contention is a general inquiry into the plant design systems analysis methodology, with no specification of design examples, it is appropriate to require the intervenor to file and present its direct testimony first, in which intervenor may include a maximum of three design examples to support its allegation of inadequate methodology. The Staff and Applicant will file their responsive testimony after the cross-examination of intervenor's testimony. If the Board finds that the testimony of the parties, including that on any design examples discussed by intervenor's testimony, raises doubts about the methodology applied to the design of the plant, this could require the Applicant and the Staff to go forward with an expanded system-by-system analysis on the record of the proceeding.

## ADMISSIBILITY OF CONTENTION: PENDENCY OF RULEMAKING

Where a generic issue has a direct bearing on the safe operation of the individual plant and the ability of that plant to meet present regulations, the issue cannot be put aside for resolution after the issuance of the operating license simply because it is the subject of an uncompleted generic rulemaking proceeding. In the absence of a finding by the Commission that it is acceptable for an individual license to issue while a rulemaking is pending, the board would either have to defer any authorization otherwise justified in the individual case until a determination is reached in the rulemaking proceeding and then factor that determination in, or be able to conclude that such authorization can be

granted in the individual case in advance of resolution of the issue on a generic basis. As in instances involving Unresolved Safety Issues, this latter determination could be premised on findings that the problem has been resolved for the individual reactor, or that there is reasonable assurance the problem will be resolved before it has adverse safety implications for the individual reactor, or that alternative means will be available for assuring that lack of resolution of the problem generically would not pose an undue risk from operation of the individual reactor. *Cf. Virginia Electric and Power Co.* (North Anna, Units 1 and 2), ALAB-491, 8 NRC 245 (1978); *Gulf States Utilities Co.* (River Bend, Units 1 and 2), ALAB-444, 6 NRC 760, 775 (1977).

**ADMISSIBILITY OF CONTENTION: ANTICIPATED TRANSIENTS WITHOUT SCRAM**

Although the ATWS issue is pending before the Commission in a rulemaking proceeding, it is permissible to litigate a contention that the measures taken at a facility for the interim period pending completion and implementation of the rulemaking, including operational procedures and operator training, do not provide the level of protection required by the regulations.

**RULES OF PRACTICE: INTERVENTION BY GOVERNMENTAL AGENCY**

A governmental agency, in this instance a County, which has elected to participate as a full intervenor on specified contentions does not lose its right to participate as an interested governmental agency on other issues in the case pursuant to 10 CFR §2.715(c). *Project Management Corporation* [Clinch River Breeder Reactor Plant), ALAB-354, 4 NRC 383, 392-93 (1976). However, such participation must be in accordance with the responsibilities imposed upon a §2.715(c) participant, including timeliness consistent with the need to prevent unfair surprise to the other parties in the proceeding. *See Gulf States Utilities Co.* (River Bend, Units 1 and 2), ALAB-444, 6 NRC 768-70 (1977).

**EMERGENCY PLANNING: SIZE OF EPZ**

There is flexibility in the emergency planning rule, 10 CFR §50.47(c)(2), for adjustment of the general approximate 10 and 50 mile

Emergency Planning Zone (EPZ) where particular local conditions warrant adjustment. Therefore, contentions that such adjustments must be made due to specified local conditions would be admissible. However, contentions seeking a totally new case by case probabilistic accident risk analysis to determine on an ad hoc basis the zones to be established for the plume exposure pathway and ingestion pathway EPZ's are challenges to the rule since they would render meaningless the general specification in the rule of 10 and 50 mile EPZ's.

**EMERGENCY PLANNING: PERSONS OUTSIDE THE APPROXIMATE 10-MILE EPZ**

A contention would be admissible which alleges that because of the geography of Long Island, evacuation planning within an approximate 10 mile EPZ may not be adequate because of the impacts of persons outside and to the east of the EPZ choosing to evacuate and having to do so by coming through the EPZ.

## MEMORANDUM AND ORDER CONFIRMING RULINGS MADE AT THE CONFERENCE OF PARTIES (REGARDING REMAINING OBJECTIONS TO ADMISSIBILITY OF CONTENTIONS AND ESTABLISHMENT OF HEARING SCHEDULE)

This order confirms the Board's rulings made at the Conference of Parties held on March 9 and 10, 1982, with respect to the Shoreham operating license proceeding. Our ruling at the conference denying the request of the Shoreham Opponents Coalition (SOC) for a hearing on the Construction Permit extension amendment will be confirmed in a separate order. In some instances, the reasons in support of our rulings are set forth more fully in this order than in the record. Due to the desirability of issuing this order promptly, there may be certain filings which the parties were directed to make which are not confirmed in this order. In such instances, the record directives continue to have full force and effect.

**TMI Issues Allegedly Unresolved for Shoreham (SOC Contentions 7B(1)-(4) and SC Contentions 6, 7, 29 and 30)**

Each of these four SOC contentions are either identical or similar to the four Suffolk County (SC) contentions, and each pair may be summarized together as follows:

**SOC 7B(1) and SC 29 - IREP-Probabilistic Risk Assessment:** By these contentions, intervenors contend that the need for plant specific safety

improvements at Shorcham to prevent and mitigate accidents beyond those previously considered by the old review, which excluded so-called "Class-9" accidents as beyond the "design basis accident" review, must be analyzed by LILCO and the NRC Staff. The contention further alleges that the analysis needed is the approach of the Interim Reliability Evaluation Program (IREP),[1] which applies probabilistic risk assessment (including event-tree and fault-tree logic) to a plant specific system to assess the reliability of systems which prevent or mitigate accidents and thereby to identify risk-dominant sequences, design weaknesses, and system modifications that could be made to improve the performance of the systems under various transient and LOCA events.[2]

**SOC 7B(2) and SC 7 - Systems Interaction:** While not identical, both contentions, in effect, allege that a systems interaction analysis of the Shoreham design must be performed to assure that all interactions of control and non-safety systems with safety systems have been considered when such interactions could cause or exacerbate an accident. SC 7 adds the allegation that physical inspection of separations between power and control cables is necessary to assess potential systems interactions detrimental to safety. SOC 7B(2) notes that systems interaction has been the subject of unresolved safety issue (USI) A-17 under NUREG-0606 "Unresolved Safety Issues Summary" (Aqua Book), as well as item II.C.3 of NUREG-0660.[3]

**SOC 7B(3) and SC 30 - Documentation of Deviations:** These identical contentions allege that neither the FSAR not SER document and justify all deviations from current regulatory practices (*i.e.*, Regulatory Guides, Branch Technical Positions, and Standard Review Plans).

**SOC 7B(4) and SC 6 - Classification and Qualification of Safety Equipment:** Although not identical, in effect both contentions allege that in

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[1] The IREP Program is discussed as item II.C.1 of NUREG-0660 ("NRC Plan Developed as a Result of the TMI-2 Accident").

[2] SC 29 only consists of the last paragraph of SOC 7B(1). That paragraph may be viewed as a summary of the action requested by the entire contention — the performance of an IREP analysis or what is termed a "simplified system reliability analysis." This paragraph and therefore SC 29, do not expressly discuss the need to consider accidents formerly placed in that unconsidered residuum known as "class 9 accidents." However, an important part of the underlying rationale in favor of such a systems reliability analysis is to attempt to identify whether there is a sufficient risk of such sequences for a plant so as to require changes (*e.g.*, in design, training, or operations).

[3] This item, like IREP, is included within the overall item II.C category of Reliability Engineering and Risk Assessment. As noted in item II.C.3, the approach to systems interaction described there overlaps with IREP. As may be inferred from discussion of item II.C.3 in NUREG-0660, and as stated in NUREG-0606, Vol. 3, No. 3, at 26, the work originally planned under USI A-17 will now be performed under item II.C.3 of NUREG-0660.

the absence of a systematic event-tree/fault-tree accident sequence analysis for Shoreham there is no assurance that all equipment "important to safety" as used in GDC 1 has been properly classified and qualified (including being subjected to the Quality Assurance Standards of 10 CFR Part 50, Appendix B). SOC 7B(4) cites items I.F.1 and II.F.5 of NUREG-0660.[4] SC 6 adds that the proper analysis would include a review of Shoreham's Emergency Operating Procedures to insure that all equipment relied upon in the procedures is properly classified and qualified.

**Discussion**

LILCO and the NRC Staff argue that none of the above contentions may be admitted because they are barred by the Commission's guidance on the extent to which issues arising out of the lessons learned from the Three Mile Island, Unit 2 accident ("TMI Issues") may be litigated in individual operating license proceedings. We disagree.

LILCO and the Staff are correct that the Commission approved the NUREG-0737 list of TMI requirements for application to new operating licenses, and that this list was culled from the larger list of TMI lessons learned which had evolved into the TMI task action plans published as NUREG-0660.[5] However, they are clearly incorrect in their position that if a TMI related item is not included in NUREG-0737, it may not be admitted for that reason alone.[6] Such a view would lead to odd results, is inconsistent with the Commission's rationale, and clearly is inconsistent

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[4] As noted in NUREG-0660 at I.F.1, this item involves applying the results of the IREP and systems interaction tasks to develop guidance to expand and rank the equipment included on QA lists. Item II.F.5 is a program to develop a generic standard classification of instrumentation, control and electrical equipment based on the level of their importance to safety.

[5] *[Revised] Statement of Policy: Further Commission Guidance for Power Reactor Operating Licenses*, CLI-80-42, 12 NRC 654 (December 18, 1980) ("Revised Statement of Policy"). This revised statement superseded the earlier Statement of Policy of June 16, 1980 (45 Fed. Reg. 41738, June 20, 1980).

[6] The Commission has published a proposed rule for comment which, if adopted, would make the substance of NUREG-0737 items part of the regulations (proposed new paragraph (f) to §50.34) for operating license applications. 46 Fed. Reg. 26491 (May 13, 1981). Since the Revised Statement of Policy has not been modified by the proposed rule, and that policy makes these items applicable to Shoreham, there would appear to be no difference created by the pendency or even adoption of the rule, at least in the absence of a challenge by LILCO to the necessity of a NUREG-0737 item. It may be that adoption of the rule could affect the present right of an intervenor, under the revised policy statement, to challenge the sufficiency of a NUREG-0737 item, depending on whether the particular circumstances involved would lead to the contention being viewed as a "challenge" to the new section 50.34(f) of the regulations. However that is not pertinent to our ruling on these contentions which do not raise matters in NUREG-0737. In any event, we need not decide the point with respect to Shoreham contentions unless and until the regulation is adopted and the revised Statement of Policy is superseded by it.

with the Commission's express additional guidance on this point in *Pacific Gas and Electric Company* (Diablo Canyon, Units 1 and 2), CLI-81-5, 13 NRC 361, 363 (1981).

We need not undertake a detailed analysis of the wording of the Revised Statement of Policy, which in our (unnecessary) view is wholly consistent with the Commission's further guidance in *Diablo Canyon, supra,* because the Commission has squarely addressed this point, as follows:

> Parties are generally free to raise issues of compliance with NRC regulations, subject to 10 CFR 2.714 specificity and lateness requirements, where applicable, and standards for reopening records, where applicable. This holds true for TMI-related issues, and nothing in the Revised Policy Statement affects this. Thus, if a party comes forward on a timely basis with significant new TMI related evidence indicating that an NRC safety regulation would be violated by plant operation, we believe that the record should be reopened notwithstanding that the noncompliance item is not discussed in NUREG-0737 . . . .[7]

*Diablo Canyon, supra,* at 363.

We have eschewed a detailed analysis of the Revised Statement of Policy as unnecessary in this instance in view of the opportunity to rely on the Commission's clear statement quoted above. However, it might be helpful to note why the position that a TMI related requirement may be litigated only if it is in NUREG-0737 misapprehends the rationale and meaning of the Revised (and indeed the original) Statement of Policy. Prior to the TMI policy statement, there were recommendations made in various documents of lessons learned from the TMI accident. Some of these recommendations could be implemented by interpretation, refinement or quantification of existing regulations — *i.e.*, improved recognition of actions necessary to meet existing regulations. Such issues addressing TMI related recommendations in terms of deciding whether existing regulations are met could of course always be litigated, from either direction (sufficiency or necessity of the requirements). Neither the original nor revised policy statement changed this.

Another category of TMI related recommendations could only be implemented by going beyond the requirements of the existing regulations because compliance with the existing regulations would not solve the

[7] The last sentence of the quoted excerpt discusses a permissible allegation that an NRC regulation would be violated in terms of "significant" evidence only because, as is clear from the rest of the sentence, the posture in *Diablo Canyon* was one of deciding whether a closed record should be reopened.

problem disclosed by the particular lesson learned from TMI. The Commission recognized this category well before its original policy statement in its cautionary instruction that:

> In reaching their decisions the Boards should interpret existing regulations and regulatory policies with due consideration to the implications for those regulations and policies of the Three Mile Island accident. In this regard it should be understood that as a result of analyses still underway the Commission may change its present regulations and regulatory policies in important respects and thus compliance with existing regulations may turn out to no longer warrant approval of a license application.

Suspension of 10 CFR 2.764 and Statement of Policy on Conduct of Adjudicatory Proceedings, (November 5, 1979) (44 Fed. Reg. 65049, at 65050, November 9, 1979), republished as Appendix B to 10 CFR Part 2.

The second sentence is no longer the part of the regulations. Presumably, at least in part, this is because the general caution that in light of the TMI accident compliance with existing regulations may no longer be sufficient has been superseded by the guidance of the Statement of Policy that requirements in NUREG-0737 are to be met even if they impose new requirements beyond the existing regulations.[8]

Under the policy statement, then, the Shoreham operating license application is to be measured by the NRC Staff, and as to contested issues by this Board, against the regulations as augmented by the requirements of NUREG-0737. Revised Statement of Policy, 5 NRC at 659.[9]

Our inquiry then cannot end with a finding that an issue is not within NUREG-0737.[10] We must decide if such an issue is a challenge to the presently existing regulations.

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[8] The effect of this was similar to amending the regulations to include those NUREG-0737 items which would otherwise have been considered challenges to the existing regulations. Unlike regulations, however, without special Commission action Applicants could challenge the necessity of a "supplemental" NUREG-0737 requirement, and under the revised policy statement, intervenors could challenge the sufficiency of such a "supplemental" requirement. The Commission believes the number of "supplementary", as distinguished from "interpretive", requirements in NUREG-0737 to be quite small. 5 NRC at 655.

[9] Commissioner (then Chairman) Ahearne dissented from the Revised Statement of Policy because he wanted the Commission to remain directly involved in deciding, through requests for certification on a case by case basis, whether an intervenor should be allowed to litigate the sufficiency of not going beyond the regulations (as augmented by the NUREG-0737 requirements). 5 NRC 662. This disagreement aside, Commissioner Ahearne's dissent is in full agreement with the majority on the point before us. He notes that a party should go through the Licensing Board to request certification of TMI matters going beyond the existing regulations in part because "the Board might rule that the issue is within the existing regulations rendering certification unnecessary . . . ." 5 NRC at 663, n.3.

[10] We note further that such an approach would lead to the absurd result of applying a policy statement that was issued to expand the scope of a proceeding to include NUREG-0737

(CONTINUED)

LILCO and the Staff also assert that the IREP and Systems Interactions contentions are underlain by an insistence that so-called Class 9 accidents, beyond those previously considered for the design basis of the plant, be analyzed for Shoreham. They argue that such litigation is barred by the Commission's Statement of Interim Policy on consideration of Class 9 accidents under NEPA.[11] This Commission statement revoked the old proposed 1971 Annex to 10 CFR Part 51 (originally to 10 CFR Part 50, Appendix D) under which it was not necessary to include the environmental risk of Class 9 accidents in NEPA evaluations. The Commission's statement further included guidance for inclusion of the environmental evaluation of the risk (a combination of probability and consequences) of Class 9 accidents, but requires these new NEPA treatments only for proceedings in which a Final Environmental Statement (FES) has not issued as of the time of the interim policy statement — June 13, 1980. The Shoreham FES was issued long before this date, in October 1977.

It is clear under the policy statement that an environmental assessment of the risk of Class 9 accidents need not be performed for Shoreham. It is also clear that IREP probabilistic risk analysis is not required for Shoreham in the sense that failure to do one is not *per se* insufficient under the regulations. However, we see no bar to contentions such as those advanced here which allege that the previously applied methodology is inadequate for determining whether the design of the plant adequately protects from accident sequences which should be considered.

In the first instance, the contentions objected to as a challenge to the Commission's policy on treatment of Class 9 accidents are not solely directed to Class 9 accidents. We agree that an important part of the underlying thrust is the assertion that accident sequences beyond those previously considered for Shoreham may have to be considered and that this cannot be determined properly under the present allegedly inadequate analysis. However, even if we held that contentions seeking a systematic design analysis must draw the line at consideration of accidents beyond those previously considered design basis, the contentions could be admitted as so limited.

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requirements whether or not they were outside the regulations so as to limit a hearing to issues related solely to NUREG-0737 issues. In some cases, including some of the four pairs of contentions before us, issues related to TMI also arose out of other matters predating TMI, *e.g.*, unresolved safety issues. The Applicant's and Staff's position that NUREG-0737 contains the entire universe of TMI-related issues which may be litigated would result in now barring such issues, even though the issues could have been litigated before the policy statement and to some extent (although not with the benefit of the new lessons learned) even before the TMI accident.

[11] "Nuclear Power Plant Accident Considerations Under the National Environmental Policy Act of 1969," 45 Fed. Reg. 4010 (June 13, 1980).

More importantly, however, we do not read the Class 9 policy statement to bar the contentions. The allegations, as we construe them, are not that a full probabilistic assessment of environmental risk of Class 9 accidents (*i.e.*, an envelope or range of risk of radiological doses and consequences) must be performed.[12] The contentions allege that under the design approach applied to Shoreham, there is no assurance that the plant systems design provides the protection from accident sequences required by applicable regulations, including the specified GDC in Appendix A to 10 CFR Part 50, will be met. Even the now revoked Annex provided for flexibility to show that accident assumptions other than those in the Annex "may be more suitable for individual cases."[13] As basis, the contentions point to different techniques of systems analysis which in intervenor's view would provide a proper methodology, which are not being applied. In addition, the contentions note that potential systems interaction is an acknowledged consideration, partly because of TMI and partly because it is an unresolved safety issue, which must be taken into account as part of the systems analysis which allegedly should be performed. We note also that, as is obvious from our summary of the safety classification contention, it too is a part of the analysis which intervenors believe has been lacking.

We do believe that the contentions are too vague to put the parties or the Board on notice of which plant systems are inadequate and will fail to protect as designed due to reliance on improperly classified or qualified equipment, or due to failure to consider particular systems interactions. While there is sufficient basis to permit inquiries into LILCO's and the Staff's methodology of safety systems analysis, there is not at this time the basis for commencing, on the record of this proceeding, a system by system analysis or physical inspection[14] on the mere possibility that a defect may turn up during consideration of the assumed failure modes and protective systems operations.

However, the contention pairs of SOC 7B(1) - SC 29, SOC 7B(2) - SC 7, and SOC 7B(4) - SC 6 may be combined as a contention going to the methodology or lack thereof used by LILCO and the Staff along the lines of our previous description, restated as follows:

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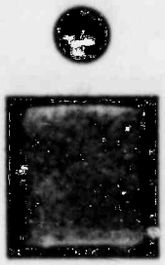
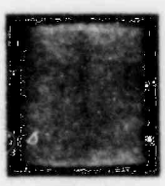
[12] At the Conference of Parties, it appeared that SOC was now asking for this NEPA analysis also, in addition to an analysis more directly applied to assessing the systems design of the plant. If so, to this extent the contentions are barred by the Commission's implementation schedule for such a NEPA analysis in its Class 9 policy statement.

[13] A full discussion of the historical treatment of Class 9 accidents may be found in *Metropolitan Edison Company* (Three Mile Island, Unit 1), LBP-79-34, 10 NRC 828, 832-35 (1979).

[14] SC 7 in part alleges, again without specification as to particular systems, that electrical separations must be inspected as part of the needed systems analysis. Admitted contentions SOC 19(g) and SC 31 will involve litigation of physical independence of electrical cables and raceways.





LILCO and the Staff have not applied an adequate methodology to Shoreham to analyze the reliability of systems, taking into account systems interactions and the classification and qualification of systems important to safety, to determine which sequences of accidents should be considered within the design basis of the plant, and if so, whether the design basis of the plant in fact adequately protects against every such sequence. In particular, proper systematic methodology such as the fault-tree and event-tree logic approach of the IREP program or a systematic failure modes and effect analysis has not been applied to Shoreham. Absent such a methodological approach to defining the importance to safety of each piece of equipment, it is not possible to identify the items to which General Design Criteria 1, 2, 3, 4, 10, 13, 21, 22, 23, 24, 29, 35, 37 apply, and thus it is not possible to demonstrate compliance with these criteria.

As stated, this contention shall be SOC and SC 7B, replacing the three pairs of contentions noted.

Such a contention, which we find fairly restates the contentions, would be a general inquiry into the methodology used by LILCO and the Staff to determine whether there is reasonable assurance that the Shoreham design adequately protects from credible accidents. The mere listing of all the key plant systems, in the last paragraph of 7B(1) and in SC 29, taken from generic documents, does not provide a basis for requiring detailed testimony from LILCO and the Staff analyzing or inspecting all the systems. Similarly, the assertion in SC 6 that the turbine control system causes transients and therefore should be in a safety classification so as to be subject to QA requirements does not provide a basis for testimony from LILCO or the Staff analyzing whether the turbine control systems should be reclassified.

Although we have viewed the contentions as going to the general methodology (if viewed as asking for a substantive system-by-system analysis or inspection they would have been too vague and without adequate basis), a problem arises in that one useful way to test the methodology would be an examination of its application to a particular system. Accordingly, if intervenors wish to use this approach as part of their evidence, they must, in their direct combined presentation of testimony, discuss a maximum of three examples of plant design which in their view illustrate the inadequacy of the methodology as alleged in the restated contention. Intervenor's testimony shall be filed on the April 13 testimony date, and will be the first testimony presented in the evidentiary hearing. LILCO and the NRC Staff need not file any direct testimony (which will include rebuttal testimony) until after intervenors' testimony is presented. LILCO and the Staff will be required, regardless of intervenors' testimony, to

address the restated contentions by explaining their methodology and why they believe it is adequate. In addition, any specific design examples raised by intervenors' testimony will be addressed in the testimony of LILCO and the Staff. If, after considering the proposed findings of the parties (or perhaps earlier) the Board finds that the testimony, including any of intervenor's examples, raises doubts about the methodology applied by LILCO and the Staff, this could require LILCO and the Staff to go forward with an expanded system-by-system analysis on the record of this proceeding.

**SOC Contention 7B(3) - SC 30** (regarding documentation of deviations) may be viewed separately from the other three pairs of contentions. We find it inadmissible as being too vague. This is consistent with our previous ruling on SOC 19.[15] Intervenors must point to particular deviations which they believe have not been justified. Otherwise, there is no notice of what would be litigated, and no ability by us to examine the basis for the particular factual contentions. If viewed merely as a legal contention that such a listing of deviations is required, we find that it is not. Although it may be convenient to have such a uniform listing for all facility applications, and it may be required for future applications under a proposed rulemaking, 45 Fed. Reg. 67099 (October 10, 1980), it is not now required. Unlike the other three pairs of contentions, the absence of doing what is asked for by the contention presents no basis to contend that therefore the regulations will not be met.

**Contention SC-16 ATWS:**[16]

The Contention states:

> Suffolk County contends that LILCO and the NRC Staff have not adequately demonstrated that Shoreham meets the requirements of 10 CFR 50, Appendix A, GDC 20, regarding correction of the anticipated transients without scram (ATWS) problem.

As further amplified in the County's response, it contends that because the Shoreham standby liquid control system ("SLCS") is not automatically initiated, is not totally redundant and does not meet the single failure criterion, the plant design does not meet GDC 20.[17]

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[15] Order Ruling on Petition of Shoreham Opponents Coalition, at pp. 22-23 (unpublished) (March 5, 1980).

[16] This contention was discussed at Tr. 218-238 and admitted as clarified at Tr. 495-97.

[17] GDC 20 states:

*Protection system functions.* The protection system shall be designed (1) to initiate automatically the operation of appropriate systems including the reactivity control systems, to assure that specified acceptable fuel design limits are not exceeded as a result of anticipated operational occurrences and (2) to sense accident conditions and to initiate the operation of systems and components important to safety.

As clarified, the contention is specific in alleging a current safety requirement is not met. Applicant objects that we may not consider the contention because there is a generic rulemaking proceeding on ATWS before the Commission. Indeed, we note that one of the options being considered by the rulemaking is whether to require automatic initiation of the SLSC for Boiling Water Reactors (BWRs).

We agree with Applicant's application of the *Douglas Point* and *Rancho Seco*[18] cases only to a limited extent. Where a generic matter is in rulemaking and will have little if any effect in the interim on the licensing of the individual plant, then there is no harm in issuing a license even if the rulemaking is not resolved. However, where a generic issue has a direct bearing on the safe operation of the individual plant and the ability of that plant to meet present regulations, the issue cannot be put aside for resolution after the issuance of the license simply because it is the subject of an uncompleted generic rulemaking proceeding. To do so would permit blanket exemptions from the regulation without underlying supporting findings for all plants which could fortuitously be licensed while a rulemaking proceeding is pending.

However, an individual Licensing Board must have a sensitive regard, consistent with the regulations, for the relationship of the rulemaking proceeding to the individual proceeding. Therefore, it may often be prudent to defer consideration of an issue so long as it appears that the rulemaking may be completed before the individual plant licensing decision will be reached. That is not the case here. We expect to complete the hearing this year. The Commission predicted a two to four year period from November 1981 to "implement" a new ATWS rule.

We believe the correct legal approach, and also the best practical approach in the context of this case, is to approach a generic issue involved in rulemaking which would affect the licensing of a plant in a manner similar to treatment of an unresolved safety issue under the *River Bend* and *North Anna* Appeal Board decisions.[19] ATWS is in any event on the list of Category A unresolved safety issues, but we believe the same approach would be valid even if it was not.

As set forth in an unpublished order issued by the Licensing Board in the Three Mile Island, Unit 1 restart proceeding:[20]

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[18] *Potomac Electric Power Co.* (Douglas Point, Units 1 and 2), ALAB-218, 8 AEC 79, 83-85 (1974). *Sacramento Municipal Utility District* (Rancho Seco), ALAB-655, 14 NRC 799, 816-17 (1981).

[19] *Gulf States Utilities Co.* (River Bend, Units 1 and 2), ALAB-444, 6 NRC 760, 775 (1977). *Virginia Electric and Power Co.* (North Anna, Units 1 and 2), ALAB-491, 8 NRC 245 (1978).

[20] *Metropolitan Edison Co.* (Three Mile Island, Unit 1), Docket No. 50-289 (restart), slip op. at p. 4 (March 12, 1981).

> However the fact that an issue relevant to an individual proceeding will be resolved in a generic rulemaking proceeding does not perforce permit the individual proceeding to conclude as if the generic issue does not exist. The board would either have to defer any authorization otherwise justified in the individual case until a determination is reached in the rulemaking proceeding and then factor that determination in, or be able to conclude that such authorization can be granted in the individual case in advance of resolution of the issues on a generic basis. This latter determination could be premised on findings that the problem has been resolved for the individual reactor, or that there is reasonable assurance the problem will be resolved before it has adverse safety implications for the individual reactor, or that alternative means will be available for assuring that lack of resolution of the problem generically would not pose an undue risk from operation of the individual reactor. *Cf. Gulf States Utilities Co.* (River Bend, Units 1 and 2), ALAB-444, 6 NRC 760, 775 (1977).

Under such an approach, we may permit litigation before us of whether it is acceptable under presently applicable safety requirements to authorize Shoreham to operate in the estimated period[21] before the ATWS problem will be resolved by completion of the rulemaking. In terms of the SLCS, the question will be whether the plant design and operator actions in place pending completion of the rulemaking will compensate for the lack of automatic initiation of the SLCS in terms of providing the level of protection required by GDC 20. Where operator actions are relied on by LILCO in the interim, it will be material to the contention to examine the time available to take the action, and the procedures and training (technical and attitude) for assuring the action will be implemented when necessary.

There may of course be cases where the Commission has made the finding that it is acceptable for an individual license to issue while a rulemaking is pending. Indeed, on the particular hydrogen control question involved in *Rancho Seco* the Commission had made such a determination in the Three Mile Island restart proceeding,[22] although we see no explicit recognition of this by the *Rancho Seco* Appeal Board in its decision. 5 NRC 799, 816-17.

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[21] One to three years from the fall of 1982.

[22] *Metropolitan Edison Co.* (Three Mile Island, Unit 1), CLI-80-16, 11 NRC 674 (1980). *See also* the TMI-1 Licensing Board's order of March 12, 1981, *supra*, at pp. 4-5. This Commission determination was also recognized and applied in this proceeding. *See* Order (unpublished) of Appeal Panel Chairman, dated May 20, 1980, and this Board's Order Admitting SOC Contention 12-3rd Subpart, dated July 2, 1980.

In the ATWS notice of proposed rulemaking, the Commission records its belief that the likelihood of severe consequences arising from an ATWS event is acceptably small in the interim based on a number of factors. One of these is "the initial steps taken to develop procedures and train operators." This is necessarily plant specific, and will be the subject of the litigation on ATWS in Shoreham. Manifestly, the Commission's notice cannot be taken to have made this important finding for us for Shoreham.

We have considered the *Perry* Licensing Board decision cited by the parties.[23] Our result is similar, albeit on the basis of the reasons we have recited. To the extent *Perry* does not make clear that its inquiry may be restricted to the interim period before a rule is adopted, we have so specified in the circumstances of the Shoreham proceeding before us.

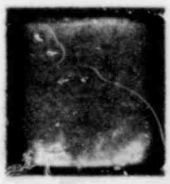
In accordance with the above discussion, we admit SC 16 on ATWS, restated as follows:

> Although the anticipated transients without scram issue is generically before the Commission in a rulemaking proceeding, Suffolk County contends that LILCO and the NRC Staff have not adequately demonstrated that Shoreham meets the requirements of 10 CFR Part 50, Appendix A, GDC 20, regarding correction of the ATWS problem in the interim period of several years pending completion and implementation of the result of the rulemaking for Shoreham. This is because the interim measures to be taken at Shoreham, including operational procedures and operator training, will not compensate for the lack of an automatically initiated and totally redundant standby liquid control system (SLCS) which meets the single failure criterion.

**Remaining Suffolk County Contentions Not Previously Ruled Upon (SC 12, 13, 18, 20, 22, and new 32)**

The following Suffolk County contentions were either objected to in whole or in part prior to the conference of parties, or were presented for the first time in Suffolk County's filing of March 1, 1982.

In the absence of objections, the new Suffolk County contention on electrical penetrations, now designated SC 32, was admitted as presented in the County's filing of March 1, 1982, at page 37. (Tr. 296-298.) Although almost identical to the first paragraph of SC 32, due to minor differences which will probably prove to be without any distinction, SOC 19(f) will remain admitted. (Tr. 477-80.)



[23] *Cleveland Electric Illuminating Co.* (Perry, Units 1 and 2), LBP-82-1A, 15 NRC 43 (1982).

After discussion on the first day of the conference, it became apparent that the parties had suggestions which could lead to resolution of the disputes on the other County contentions noted above. Accordingly, the parties were asked to confer that evening. With commendable cooperation and obvious hard work, the parties resolved their differences, and agreed to the admissibility of these contentions, as revised. The County agreed to file formally the revised contentions.

In view of the agreement on SC 12, dealing with design and construction QA/QC, which SOC will also be a party on, SOC has withdrawn its contention 6(a)(i) in lieu of responding to LILCO's motion for summary disposition of that contention. The withdrawal of 6(a)(i) is with prejudice, (except for the possibility of material new information which would be considered if the situation arises), to any intervenor relying on the particular alleged construction defects which were the subject of SOC 6(a)(i) for the basis of claiming inadequate QA/QC with respect to the admitted contentions bearing on that subject. The parties will consider whether revised SC 12 can be combined expressly in some fashion with SC 15. (Tr. 452-62.)

Contention 13a on QA/QC operations was agreed to as originally worded, except that the last phrase "and the guidance in all applicable regulatory guides will be satisfied" was deleted by agreement. (Tr. 467-70.)

SC 18 regarding Human Factors Equipment was agreed upon, as revised, with SOC also a party on the contention. SC 18(d) is revised as set forth in the County's filing of March 1, at page 17. The "for example" is deleted from SC 18(e), and three more control room items were added to the contention: range of the reactor water level display, strip chart recorders and reactor mode switch and key location. SC 28(a)(ii) and SOC 7(A)(2) were deleted in lieu of revised SC 18. (Tr. 470-73.)

SC 20 (Human Factors - Simulator) was revised to focus on the interim period until LILCO obtains a Shoreham specific simulator. The County, if it has a contention on the adequacy of the planned permanent Shoreham simulator, will advance it by the time of the final prehearing conference scheduled for April 13, 1982. (Tr. 473-76.)

SC 22 (SRV Test Program) was agreed to, as modified in the County's filing of March 1, at page 20. SOC will be a party on SC 22 as revised. SC 28(a)(v) and SOC 7(A)(5) were deleted in lieu of SC 22. (Tr. 293-95, 477.)

**Security Plan**

The County and LILCO are discussing matters relating to whether the County will raise a security plan contention. The County has been pursu-

ing this possibility actively, including having its expert qualified, and under a non-disclosure requirement, to review the plan and talk with LILCO about it. (Tr. 298-300.) If the County wishes to advance a security plan contention, it will do so by April 2, 1982. As part of that same filing, or by separate filings if necessary on the same day, the positions of LILCO and the Staff on any SC security plan contention shall be set forth. If such filings are made, any necessary inclusion of protected information should of course be properly segregated and protected from disclosure to unauthorized persons.

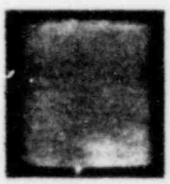
OHILI/NSC Contention 7(i) on security planning was dismissed for failure to pursue discovery and specify the contention in accordance with the Board's order of over four years ago (January 27, 1978, at page 23). (Tr. 300-305.)

**Status of County**

As discussed (Tr. 305-314), the County does not lose its right to participate as an interested governmental agency pursuant to 10 CFR §2.715(c) because it has elected to participate as a full intervenor on specified contentions. *Project Management Corporation* (Clinch River Breeder Reactor Plant), ALAB-354, 4 NRC 383, 392-93 (1976). However, it may not at this stage, less than two months before the start of the hearing, raise new issues in the case not already embraced within the scope of admitted contentions.[24] Accordingly, if the County seeks to litigate new seismic issues as it has indicated it might, it will have to satisfy the balancing test applicable to late contentions. *Gulf States Utilities Co.* (River Bend, Units 1 and 2), ALAB-444, 6 NRC 760, 768-70 (1977).

The Board also noted the potential for unfair surprise in this proceeding if the County files direct testimony on a contention of another intervenor which is not similar to the many contentions the County has chosen to submit. That is, because the County has many contentions in common with SOC, it may have been fairly assumed that the County would file no direct testimony on SOC contentions which it did not have in common. For example, parties would not have been put on notice to pursue discovery of the County on SOC contentions which the County did not share. If the problem arises, we will deal with it. In the meantime, the County is free to file direct testimony on any admitted contention.

SOC and Suffolk County (SC) are directed to coordinate their direct testimony on all contentions which they have in common (as defined by common subject matter) and on all of SOC's contentions on which the



[24] This does not apply to emergency planning issues, which are being scheduled separately, and the possible security issues discussed above.

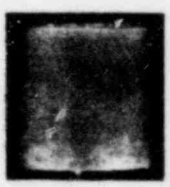
County wishes to take a position through the filing of direct testimony. The coordination shall to the extent practicable, be pursued in good faith, without unduly burdening either SOC or SC, but also without unduly burdening the proceeding with duplicative testimony. Where practicable, SOC and SC are encouraged to co-sponsor joint written testimony, and shall where possible co-sponsor panel presentations of similar written testimonies. Similarly, where their positions are similar, the Staff and LILCO shall co-sponsor joint panel presentations of their written testimonies. In view of the coordination we are now seeking, and our confidence that the parties will pursue this in good faith with the result of much more efficient hearing, the Board can be more flexible on the schedule for the filing of testimony than was indicated at the hearing. We discuss this below.

**Emergency Planning Contentions**[25]

SOC Contentions 1 and 2, as framed by the filings of SOC in response to the motions for summary disposition by LILCO and the Staff, and SOC's response to the Board's Order of February 8, 1982, and the discussion at the conference (Tr. 346-385), were dismissed as a challenge to the Commission's emergency planning regulations. 10 CFR §50.47 and Appendix E to 10 CFR Part 50. Our reasons were outlined at the Conference. (Tr. 388-92).

We found that the contentions as framed by the filings and argument were asking for a totally new probabilistic accident risk and consequences analysis to determine on a clean slate (as if the rule did not exist) what zones should be established for the plume exposure pathway and ingestion pathway EPZ's. The emergency planning rule was promulgated after these contentions were admitted. If it were construed to permit such a case by case ad hoc analysis the 10 and 50 mile general specifications for the respective EPZ's would be meaningless, notwithstanding the flexibility in the rule.

As indicated, the dismissal was without prejudice to the submission, on the schedule to be established for offsite emergency planning contentions, of contentions that adjustments must be made to the approximate 10 and 50 mile Emergency Planning Zones due to particular local conditions within the flexibility permitted by the regulations. In addition, our ruling does not preclude a contention that because of the geography of Long Island, evacuation planning within an approximate 10 mile EPZ may not be adequate because of the impacts of persons outside and to the east of the EPZ choosing to evacuate and having to do so by coming through the



[25] SOC Contention 12 (Part 2), regarding downcomer supports was withdrawn (Tr. 325).

EPZ. The Board indicated that whether or not contentions were filed on this issue, it would be pursued by the Board (Tr. 396-97).

The Board directed the parties present at the conference to file by March 29, 1982, their joint (or at least coordinated) advice as to whether the filings and litigation of on-site emergency planning contentions can be scheduled in advance of off-site emergency planning. (Tr. 450-52.) If the OHILI/NSC intervenor group wishes to participate, it must contact the parties.[26]

The Board also directed the respective parties to file by March 29 the documentation in their possession, along with whatever explanations or caveats they wish to make as to *e.g.*, the incomplete draft nature of the material, its lack of usefulness or applicability for emergency planning issues, the fact that the further final documents will be forthcoming (and when), etc. The NRC Staff shall file its existing computer run of the CRAC code for Shoreham. LILCO shall file its accident consequence study. Suffolk County shall file its draft emergency (including evacuation) plan. (Tr. 397.)

In addition by March 29, the County will file its schedule for completion of its emergency plan, including interim milestones if possible and a description of what remains to be done. The Staff will provide a status and schedule for all other pertinent emergency plans and the FEMA review. Counsel for the New York State Energy Office and Public Service Commission will provide further detail with respect to the status of the State plan. (Tr. 397-99.)[27]

### Schedule

The Board will hold a final prehearing conference pursuant to 10 CFR §2.752 on April 13, 1982, at approximately 10:00 AM. The exact time and location in Suffolk County will be announced.

The Board will visit the Shoreham site on the morning of April 14, hopefully as early as 8:30 AM, so as to conclude by 1:00 PM, if that can be arranged by LILCO. Counsel for the parties are encouraged to attend.

The Board will hear limited appearance statements on the evening of April 13 and the afternoon and evening of April 14. The exact time and location in Suffolk County will be announced. Counsel for LILCO and the

[26] The broad NSC/OHILI contention 7(j) will be dismissed if it is not particularized on the schedule to be established for on-site and off-site emergency planning contentions. (Tr. 400.)

[27] Although not tied to emergency planning, we confirm here that, also by March 29, the Staff will file a status report detailing the schedule of the remaining Staff review, focusing on matters related to contentions in the proceeding. (Tr. 436-37.). In addition, the Staff and LILCO will each file by March 29 their estimates, or range of estimates, for the completion of construction of Shoreham, with explanation of the uncertainties. (Tr. 449-50).

Staff are required to attend. Counsel for the other parties are encouraged to attend.

The following schedules do not include emergency planning issues.

**Completion of Discovery** (Tr. 512-15)

The following schedules were established in the event the intercession of the Board is needed to resolve a discovery dispute. However, the Board is pleased that the parties are continuing their productive discovery meetings which serve the purposes of efficiently providing the discovery sought and keeping misunderstandings and disputes requiring our resolution to a minimum.

All dates are received-by-5:00-PM dates (unless otherwise stated) by lead counsel for the Staff, LILCO, Suffolk County and SOC and by the Board. Others on the service list shall be served by placing the filings in the first class mail on the same date. Extensive discovery documents need not be included with the cover material to other than those enumerated in the first sentence.

For all contentions except SC-16 (ATWS) and SC-20 (simulator): these discovery requests were due by the March 9 conference of parties. If the response time in the regulations is less (due to earlier filing of the request), it shall be followed but considered as a receipt-of-responses date rather than a mailing date.

| | |
|---|---|
| March 15 (12 Noon): | Objections received |
| March 18: | Motions to compel received |
| March 19: | Conference call by Board if necessary to rule |
| March 26: | Responses to requests, received |
| March 26: | Last date for taking of depositions (permitted on a minimum of five days from receipt of oral notice. Written confirmation shall be filed rapidly). |

For contentions SC-16 (ATWS) and SC-20 (Simulator);

| | |
|---|---|
| April 2: | Requests received |
| April 9: | Objections received |
| April 13: | Motions to compel (received at beginning of prehearing conference) to be ruled on at prehearing conference |
| April 23: | Responses to requests, received |
| April 23: | Last date for taking of depositions (permitted on a minimum of 10 days from receipt of written notice). |

**Testimony**

At the conference of parties, the Board directed that testimony on all contentions, except SC-16 and SC-20 and Staff and LILCO testimony on SC-7B be filed by placement in the mail (or by more rapid means) by April 13, and that at least one copy for each of the parties and Board also be distributed at the April 13 prehearing conference. In the first instance, the Board erred in not also excluding testimony on SC-1 (remote shutdown panel), SC-8 and SOC-19(h) (environmental qualification), and SC-23 (containment isolation). Since matters affecting these three issues are still under Staff review, and will not be completed by the Staff until even after the still pending Supplement-2 of the SER, the Board intended to establish no schedule for the filing of testimony on these three issues, consistent with the discussion at Tr. 437-440. However, preparation of testimony now should anticipate that the testimony will be required approximately one month from issuance of the NRC Staff's review. That completion of the Staff review should be filed in the most expeditious written form by the Staff (*i.e.*, an SER supplement, an advance portion of an SER supplement, or Staff testimony).

At the conference, the Board further required the receipt of testimony on SC-16 and SC-20 by May 25 (at the hearing which should then be in session). Intervenor's direct testimony on 7B must be filed by April 13, as discussed in the ruling on this contention since it will be the first testimony presented at the hearing.

The first three weeks of the hearing have been scheduled for May 4-7, May 11-14, and May 25-28. The Board reconsidered its testimony filing schedule. We believe the initial schedule to be fair after the extensive amount of prehearing time to prepare testimony (at least five months and arguably years), even though the filing time of mid-April was not set until our February 8, 1982 order. However, to assure better high quality testimony which is fully coordinated as required above and carefully honed to focus on that which is really significant and material to the matters in controversy, we believe the schedule can be relaxed without delaying the hearing schedule.

The parties shall file direct testimony on the April 13 schedule on a sufficient number of contentions *to assure* four weeks of hearing time. The parties shall reach agreement on this by jointly specifying the contentions on which testimony need not be filed by April 13. Any disagreements shall be noted. This specification must be received by the Board as soon as possible, and not later than March 22. Testimony on all other contentions, except those three not scheduled due to the incomplete Staff review, shall be received by May 25.

The direct testimony shall have a brief cover outline setting forth its purposes and objectives. This outline which is in effect an advance very "bare-bone" skeleton of the proposed findings, will be bound into the record with the testimony. However, it is not part of the record and may not be cited in support of proposed findings. The testimony shall also contain a listing of all exhibits (or portions thereof) which will be moved into evidence as part of the support for the testimony. The exhibits (except for LILCO's and the Staff's main review documents) shall be served with the testimony, unless the exhibit also is being served with other testimony being filed by the same or another party. Professional qualifications of the witnesses shall be filed with the testimony. Where there are multiple witnesses, the testimony shall specify which witness prepared each part within the combined testimony, unless it is impossible to do so. Such inseparable parts of the testimony shall be kept to a minimum.

Cross-examination plans shall be received by the Board at the beginning (usually Tuesday) of the hearing week *before* the testimony is estimated to be given. Accordingly, cross-examination plans for the first hearing week of May 4-7 must be received by April 27, 1982. The Board will clarify the discussion of cross-examination plans which was conducted at the conference of parties (Tr. 314-23) in a written order issued in advance of the April 13 prehearing conference.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

Lawrence Brenner, Chairman
ADMINISTRATIVE JUDGE

James H. Carpenter
ADMINISTRATIVE JUDGE

Frederick J. Shon
ADMINISTRATIVE JUDGE

Bethesda, Maryland
March 15, 1982

Cite as 15 NRC 623 (1982) **LBP-82-19A**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Peter B. Bloch,** Chairman
**Jerry R. Kline**
**Hugh C. Paxton**

**In the Matter of** **Docket Nos. 50-266-OLA**
**50-301-OLA**

**WISCONSIN ELECTRIC POWER COMPANY**
**(Point Beach Nuclear Plant, Units 1 and 2)**

**March 19, 1982**

The Licensing Board affirms its earlier decision that rescission of a liberal policy toward the admission of contentions was proper once the time pressure that justified the policy was relieved by a change in the applicant's plans. The ruling permits the intervenor to challenge the policy change by showing specific prejudice that has resulted from expectations raised by the institution of the liberal policy.

**RULES OF PRACTICE: ADMISSION OF CONTENTIONS**

Though a Board may admit a single broad contention in the interest of expedition, its liberal policy toward the admission of contentions may be rescinded when the time pressure justifying it is relieved by a change in applicant's operational plans. Issues already raised under the liberal policy are not retroactively affected its rescission.

**MEMORANDUM AND ORDER**
**(Concerning a Motion to Reconsider)**

On February 19, 1982, Wisconsin's Environmental Decade (Decade) requested reconsideration or clarification of one portion of our decision of February 19, 1982, LBP-82-10, 15 NRC 341.

In the contested portion of its decision, section IV, the Board rescinded its previous policy of permitting Decade to raise new issues freely, without regard to the requirements of 10 CFR §2.714(a)(1). In so acting, the Board explained that its previous policy had been adopted in response to time pressures needed to meet Wisconsin Electric Power Company's (applicant's) operational needs but that the time pressures had been relieved because applicant no longer planned to sleeve Unit 1 this Spring. The Board also ruled that "Decade may properly raise all matters already submitted on the record of this proceeding."

## I. REQUEST TO RECONSIDER

Decade bases its request to reconsider on assurances provided to it in the course of a telephone conference, conducted on January 11, 1982. Decade states that the Board assured it that it would not be necessary to provide a basis for its subcontentions (arguments related to the single contention admitted by the Board) until the proceeding reached the stage of summary disposition. Tr. 866-867; see also, Tr. 770. Decade also states that it:

> has been acting in good faith reliance on the Board's representations cited above. Therefore, it would be inappropriate to fundamentally alter previously established procedures in mid stream to the egregious disadvantage of the intervenor.

Motion to Reconsider at 3. The Commission's staff agrees with this argument.

Applicant opposes Decade's motion for reconsideration on the ground that the Board's liberal invitation for new contentions has always exceeded its authority and that, in any event, it is appropriate to decide to apply Commission regulations when there is no reason to continue to waive them. It also argues that Decade has not shown how it would be prejudiced by returning to the full application of the rules. Licensee's Answer (March 10) at 2.

We agree with Applicant and have decided to affirm the contested ruling. The Board initially adopted a series of measures in order to expedite the proceeding to meet Applicant's needs. LBP-81-39, 14 NRC 819 (1981). In that order, we stated that the need for expedition had been created by applicant, "which delayed filing its amendment only because of its incorrect assumption that a hearing would not be necessary." *Id.* at 823. Consequently, we granted some special procedural advantages to Decade in order to help to offset the disadvantages accruing to it from the press of time.

In the same telephone conference on which Decade relies for its argument that we assured it that it need not provide basis for its contentions

until a later stage of the proceeding, the following dialogue also took place:

> CHAIRMAN BLOCH: Mr. Churchill [for applicant], our reason for the continuing leniency on bases [for contentions], if you recall, was that you were asserting that there is a possibility that you might want to go ahead with full-scale sleeving on Unit 1 this spring. Is that still a possibility, *or are we now using more lenient standards on contentions than we need to, given the requirements of the case?*
>
> MR. CHURCHILL: I can't answer that question; I really don't know. Yes, it is a possibility. It is likely that there will be full-scale sleeving; I don't know the answer to that . . . .

[Emphasis supplied.] Tr. 874. In this dialogue, the Board indicated that the invitation for filing new subcontentions, under the broad contention admitted by the Board, was contingent on the continuing need for expedition in the proceeding. Hence, it should have been no surprise to Decade that when applicant informed the Board that sleeving would not occur in the Spring, thus destroying the rationale for continued leniency regarding contentions, the Board considered it necessary to return to the more ordinary application of the Commission's procedural rules.

Although we felt that our return to the application of ordinary rules was compelled by changed circumstances, we were impressed by staff's argument that Decade should be able to continue relying on the Board's assertions. We would not want to create a situation in which we in any way misled a party into forfeiting its rights. Consequently, we carefully examined Decade's filing to see whether it suffered any prejudice as the result of our assurances. However, we find that Decade has not alleged any specific prejudice, merely asserting "egregious disadvantage" without explaining any way in which it was disadvantaged. Hence, we believe it is correct to rescind an extraordinary privilege whose rationale disappeared; and we do not believe that the rescission of this privilege has been shown to have damaged Decade in any way. (Should Decade subsequently demonstrate specific prejudice resulting from our procedures, we will consider the nature of the prejudice and whether it has been raised in a timely fashion and will consider whether a remedy is appropriate).

## II. REQUEST FOR CLARIFICATION

Decade urges that we clarify the status of matters raised by it in its letter to staff on January 18, 1982. We agree with staff and with the carefully limited concession made by applicant that the matters listed in Decade's January 18, 1982, letter to the Staff were "matters already submitted on the record" and therefore were properly raised under the single broad contention admitted by the Board. Decade need not dem-

onstrate the basis for these contentions until it submits its Motion Concerning Litigable Issues, pursuant to LBP-82-10, 15 NRC 341, 344-346 (1982). (Decade also is under a continuing obligation to respond to interrogatories which have requested it to supply a basis for its contentions.)

**ORDER**

For all the foregoing reasons and based on consideration of the entire record in this matter, it is this 19th day of March, 1982,

ORDERED

Wisconsin's Environmental Decade's Motion to Reconsider, filed on February 24, 1982, is denied, except to the extent that this memorandum clarifies the meaning of certain language used by the Board.

FOR THE ATOMIC SAFETY AND LICENSING BOARD

Peter B. Bloch, Chairman
ADMINISTRATIVE JUDGE

Bethesda, Maryland

Cite as 15 NRC 627 (1982) **LBP-82-19B**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Peter B. Bloch,** Chairman
**Dr. Oscar H. Paris**
**Mr. Frederick J. Shon**

**In the Matter of** **Docket No. 50-155**
**(Spent Fuel Pool Amendment)**

**CONSUMERS POWER COMPANY**
**(Big Rock Point Plant)** **March 19, 1982**

The Licensing Board refuses to admit any of [illegible] late-filed contentions.

**RULES OF PRACTICE: SUMMARY DISPOSITION**

A summary disposition decision that an allegation presents no genuine issue of fact may preclude admission of a subsequent, late-filed contention based on the same allegation.

**RULES OF PRACTICE: GOOD CAUSE FOR LATE FILING OF CONTENTIONS**

If an intervenor has special permission to file a contention prior to an extended deadline, it must file the entire contention by that deadline, including the basis for it. If it fails to meet that obligation, it must show good cause for late filing.

**LICENSING BOARDS: *SUA SPONTE* AUTHORITY**

Because Boards may raise important safety and environmental issues *sua sponte* they should review even untimely contentions to determine that they do not raise important issues that should be considered *sua sponte*.

## MEMORANDUM AND ORDER
## (Concerning Additional Contentions)

On September 4, 1981, Christa-Maria, Jim Mills and Joanne Bier (Christa-Maria) filed a motion styled alternatively "Additional Contentions" or "Motion for Leave to File Additional Contentions." The Commission's staff (staff) responded on September 15, 1981, and Consumers Power Company (applicant) responded on the same day. Then, in its Reply, filed on October 9, 1981, Christa-Maria attempted to provide a basis for its 18 additional contentions (plus subparts). Staff and applicant oppose the admission of all of the new contentions.

We have decided not to admit any of the additional contentions as issues in this proceeding. We find that intervenor has not shown good cause for the late filing of the basis of these contentions, that the untimely allegations of the reply failed to show a basis for these contentions and that there are no issues of such importance that the Board should consider them *sua sponte*. We also review the relationship between the additional contentions and out decision in LBP-82-8 (February 19, 1982) and we find that some of the issues raised by the additional contentions have already been either included or excluded from the proceeding in our earlier decision.

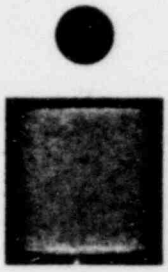
### I. GOOD CAUSE FOR LATE FILING

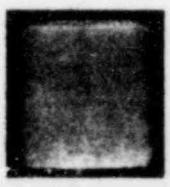
Christa-Maria seeks admission for its additional contentions on two separate grounds: (1) that the January 17, 1981, Special Prehearing Conference Order, LBP-80-4, 11 NRC 117 (1980) authorized late filing; (2) that language of the Board's chairman in the course of the Special Prehearing Conference authorized late filing. Christa-Maria made no attempt in its September 4 filing to explain how it satisfied the criteria for late filing set forth in 10 CFR §2.714(a)(1)(i-v); its attempt to satisfy those criteria was made in its subsequent Reply.

#### A. Special Prehearing Conference Order

Christa-Maria argues that the special prehearing order authorized late filing of contentions related to its initial contentions 4 and 7. Intervenors' Reply at 3-4; LBP-80-4, 11 NRC 117, 124 (1980)

Contention 4 related to: (1) the insufficiency of information in the application about the spent fuel racks, including their configuration, the type of rack and the vendor, and (2) the pool environment, including whether it is borated, oxygenated, stagnant or demineralized. Contentions





of Christa-Maria, October 30, 1979 at 3. Contention 7 dealt with increased radiation absorbed by the plant's demineralizers and then "released to the atmosphere through the off-gas system." *Id.* at 4.

The stipulation governing the withdrawal of Contention No. 4 and extended by the Board to include Contention No. 7, stated:

> Contention No. 4 is withdrawn by Christa-Maria at this time; provided that after reviewing information concerning the matters raised in the contention as written in the October 30, 1979 submittal to the Licensing Board, Christa-Maria may assert a new contention within the subject matter parameters of said Contention No. 4; and provided further that said new contention must be filed before the close of the time for discovery as provided by the Licensing Board.

Stipulation Among NRC Staff, Christa-Maria and Consumers Power Company (November 26, 1979) at 3. Since the stipulation was signed by the parties and accepted by the Board, it is binding on this proceeding. The September 4 filing was received roughly within the specified deadline, since the Board ruled that the schedule provided in its Special Prehearing Conference Order (11 NRC 134) should be measured from July 22, 1981, rather than from the date of issuance of the Safety Evaluation Report and the Environmental Impact Assessment. ORDER (Revising Schedule), June 16, 1981. The additional contentions were filed September 4, roughly 47 days after July 22.

Intervenors Reply, which contained its allged basis for the additional contentions was not, however, timely. It was filed more than 30 days after the close of discovery and the extended deadline for the filing of contentions based on the SER and EIA. To be timely under the Board's order, the additional contentions had to be filed before the end of discovery. In addition, to be timely under the authorization for filings related to the EIA and SER, the filings also had to be completed within the 47 day deadline. In this case, the period allotted for discovery was extended by the Board on motion of the intervenors. The extension was intended to permit ample time for the filing of late contentions. No further extension of the time for filing was requested. Yet the intervenors failed to provide the basis for their contentions in a timely fashion.

This lack of timeliness cannot be lightly excused. By that stage of the proceeding, intervenors were fully informed of their obligations concerning the filing of contentions. The Special Prehearing Conference Order in this case applied the requirement that the basis of contentions be specified. Intervenors had ample time to study the relevant papers to decide whether or not they had a basis for their contentions and to assemble that basis for filing in the appropriate document. There simply is no excuse for the basis of contentions not being included in the September 4 filing and the Board

finds that there has been an inadequate showing that the untimely attempt to supply a basis for these contentions should be accepted. Consequently, we rule that the basis for these contentions was not filed in a timely fashion.

## II. EFFECT OF THE BOARD CHAIRMAN'S COMMENTS

In the course of the Special Prehearing Conference, the following exchange occurred:

> MR. O'NEILL: Well, again I'm just a poor country boy. Maybe you can clarify a matter for me.
>
> If *during discovery* I find out that there's another . . . specific matter, let's say, you know, what is the effect of a worker dropping his lunch pail in the pool, is it possible then for me to formulate another contention based on that?
>
> CHAIRMAN GROSSMAN: Let me say this: Any time during the proceeding that you *discover* a safety question that ought to be addressed, you certainly ought to apply to the Board, and I can't see that we would ever deny a request if there is a legitimate safety question involved.

[Emphasis supplied.] Tr. 195-6.

We do not interpret chairman Grossman's statement to be a general invitation to file late contentions without regard to the regulatory criteria for late filing. The language we have emphasized indicates that the Chairman was focusing on matters uncovered in the course of discovery, not on matters that just happened to occur to an intervenor as time passed. To that extent, the Chairman's ruling is consistent with the Board's continuing views. LBP-82-8, 15 NRC 299, 329-330 (1982) (admissibility of overflight of national guard airplanes) and *id.* at 331-332 (admissibility of contentions arising from facts uncovered in the course of discovery).

This interpretation also is consistent with the Board's action in establishing a special deadline for "filing any new contentions based on new information contained in SER and EIA within 47 days of SER and EIA issuance." Special Prehearing Conference, Order 11 NRC 134. It is clear from the wording of the deadline, pursuant to which the present filing was made, that the only new contentions being invited were those based on the SER and EIA, documents that has not previously been available. We note that this interpretation is consistent with 10 CFR §2.714(a)(1)(i-v).

We conclude that there was not broad-brush invitation to file late contentions in this proceeding.

## III. GOOD CAUSE FOR LATE FILING

Commission regulations provide criteria for late filing. In its Reply, Christa-Maria attempted to show that its September 4 filing met these criteria for late filing. However, it made no showing that it was necessary for it to wait until October 9, 1981 to file the basis for these contentions.

We have generally been somewhat congratulatory in tone concerning the usefulness of intervenors' participation in this proceeding. *See* LBP-82-8, 15 NRC 336-337. However, intervenors' September 4 filing of additional contentions was lacking in quality. There were no citations to specific documents except for general citations to the application. There was little effort to describe in detail the specific items of concern to intervenors. Indeed, the contentions filed at this late point in the proceedings were generally less specific than those filed by Christa-Maria at the outset of the proceedings. Contentions of Christa-Maria, October 30, 1979.

Hence, we reach the conclusion that intervenors failed to provide a basis for the contentions it filed on September 4 and that good cause for late filing of the bases for these contentions has not been shown. A consequence of intervenors' omission of the bases for its contentions is that applicant and staff both filed extensive responsive pleadings arguing that basis was lacking. These pleadings would be entirely wasted and irrelevant were we to accept the addition of bases by intervenors at a subsequent juncture. We cannot accept that consequence of intervenors' unexplained tardiness. We rule that there was no showing of good cause for the late filing of the bases for the contentions.

## IV. BASIS FOR ADDITIONAL CONTENTIONS

Even though there has been no showing of good cause for late filing, we are hesitant to reject any contention supported by sufficient basis to demonstrate that the public health and safety or the environment would be endangered. In such a case, we would be obligated to exercise our authority to declare such an issue part of the proceeding, perhaps by analogy to the *sua sponte* authority provided for in operating licensing cases.

Consequently, we have reviewed Christa-Maria's contentions to determine whether any serious safety issues have been included in its filings, and we have determined that no serious *new* issues have been raised by it. Some of the issues Christa-Maria mentions are important; but we find that each of those important issues already is a part of the proceeding as the result of our earlier decision in this case. LBP-82-8, 15 NRC 299 (1982). In the course of this review, we also have found that the contentions that have not already been admitted under LBP-82-8 are without basis and should be excluded from consideration on that independent ground.

In addition, we consider that LBP-82-8 is determinative concerning the

admissibility of several of the additional contentions. In some instances, it ruled that intervenors had failed to show the existence of a genuine issue of fact. Since those issues of fact already were relevant to admitted contentions, failure to show the existence of a genuine issue of fact precludes admission of a new contention which depends on the same genuine issue of fact. In other instances, the Board admitted issues into the proceeding that permit intervenors to litigate some of the most important points they sought to raised in their late contentions.

We find the following portions of LBP-82-8 to relate to the additional contentions:

† LBP-82-8, *id.* at 312-315 rules that there is a lack of a genuine issue concerning an increased hazard of radioactive effluents from the expansion of the fuel pool. Hence, there is no genuine issue concerning Iodine-129 and Krypton 85, as asserted in additional contention 1.

† *Id.* at 322 admits for litigation a broad issue concerning the adequacy of hiring, training and supervision and health physics safeguards during installation of new fuel racks. This would permit intervenors to challenge applicant's health physics plans if they do not deal adequately with problems created by radioactive crud, thus covering the concern raised in contention 4.

† *Id.* at 331-332 permits litigation of a cask drop incident, thus permitting intervenors to raise some of the issues covered by their contentions 6 and 7. Whether or not intervenors may argue for a pool cover depends on their first establishing the credibility of an accident which might require such a solution. Then intervenors will need to show the credibility of their preferred solution. We note that intervenor's reply, at 10, does not show any reason for believing that a pool cover is feasible or would be helpful in the event of a cask drop or that such a cover would not create additional safety problems of its own.

† *Id.* at 332-333 admitted a $K_{eff}$ contention. Under this contention, if intervenors should show a danger of criticality during the removal and installation of racks, they will be able to litigate additional contention 8, concerning boration of the pool during removal and installation. Under the admitted contention, proof concerning the effect of rack deformations such as are suggested under contention 14 would be admissible providing that intervenor shows the event is credible and would affect $K_{eff}$.

† *Id.* at 309-310, 311-312 admits a contention relating to a zircaloy/steam reaction, thus admitting a portion of new contention 12. However, *id.* at 308 finds that there is no genuine issue relating a TMI-accident because there was no showing that expansion of the fuel pool would exacerbate such an accident. Since intervenors could have shown a connection between a meltdown and expansion of the fuel pool as part of its TMI-contention it cannot introduce this issue as an additional contention in contention 12.

We also note that several of the additional contentions are basically not factual contentions but are legal argument. If we can be persuaded that these legal arguments are correct and that there is a requirement for preparation of an environmental impact statement or the assessment of environmental alternatives then we will act accordingly.

Additionally, we find that most of the factual contentions have not specified their basis with sufficient particularity, for the reasons shown in Table 1.

There are two common deficiencies which bear discussion. In some instances, intervenors have expressed dissatisfaction with the completeness of the SER. However, that is not enough to raise a safety issue in this proceeding. Intervenors must show that there is a serious safety or environmental deficiency in the application, not in the staff's work. Only in an egregious case, where the staff's work appears to have been so deficient as to deprive the public of the protection the staff generally affords to public health and safety, would it be appropriate to defer a licensing decision because the staff work is inadequate. Generally, minor deficiencies in the SER must be shown to be safety problems in the application or they will not be admitted as contentions in a licensing proceeding.

The other common deficiency is that intervenors have in several instances cited another proceeding without showing why that proceeding is relevant or even indicating a knowledge of how the two proceedings differ. Such a use of precedent is not an adequate method of establishing basis for a contention.

**TABLE 1**

| Contention | Reason It Lacks Basis |
|---|---|
| 1 | No basis for rejecting staff's finding in the cited portion of the EIA that there would not be significant additional emissions of Iodine-129 and Krypton-85. |
| 2 | No reason to believe that fuel elements need to be encapsulated. No reason to believe that there is a relationship between staff findings on p. 8 of the EIA and this contention. |
| 3 | No reason to believe the containment should be isolated during fuel transfer operations. Cited EIA sections and the cited case do not support this notion. No reason to believe that there is faulty isolation equipment or that expansion of the fuel pool calls for new fuel transfer procedures. |

(CONTINUED)

| Contention | Reason It Lacks Basis |
|---|---|
| 4 | Basis is not at issue. The issues that are raised may be discussed under Christa-Maria Contention 2. |
| 5 | No reason to believe that the spent fuel storage racks will be cut up and shipped. EIA §5.3.3 and licensee's answers to intervenors' interrogatories indicate that the racks will not be cut up. |
| 6 | Basis is not at issue. The issues may be discussed under O'Neill II C., as revised, and under O'Neill II E.-3, to the extent that realistic rack deformations can be shown. |
| 7 | No reason for believing a pool cover would be helpful or feasible as a response to possible cask drop accidents. |
| 8 | No reason to believe that boration is necessary or that racks containing fuel can be overturned, spilled or damaged. |
| 10 | No reason to believe that local meteorology or turbine characteristics may credibly lead to the generation of such missiles or that the expansion of the fuel pool would substantially add to the risk of such missiles. |
| 12 | No indication of how a steam explosion or meltdown would occur or would disperse the contents of the fuel pool |
| 13 | No basis for believing that alternative sources of power are not available or reliable or that an expected outage would be of sufficient duration to affect the pool. |
| 14 | No reason to believe a criticality excursion would occur unless boration is used. Also no basis for believing that the accident mechanisms are credible. |
| 15 | Withdrawn. |
| 16 | No reason to believe any radioactivity will leak. |

(CONTINUED)

| Contention | Reason It Lacks Basis |
|---|---|
| 17 | No reason to believe that Big Rock Point is not seismically qualified or that whether it is seismically qualified is related to the fuel pool expansion. No reason to believe an earthquake would lead to a meltdown in the fuel pool or that the pool would somehow contribute to a meltdown in the reactor. |
| 18 | No reason to believe a rad-waste facility related to the fuel pool expansion is proposed or planned or would cause any problems. |

**ORDER**

For all the foregoing reasons and based on consideration of the entire record in this matter, it is this 19th day of March, 1982,

ORDERED

None of the Additional Contentions of Intervenors Christa-Maria, Jim Mills and Joanne Bier, as filed on September 4, 1981, shall be admitted as issues in this proceeding. However, the Board defers its decision on the need for an Environmental Impact Statement and for the assessment of alternatives, pending receipt of briefs on these issues.

FOR THE ATOMIC SAFETY AND LICENSING BOARD

Peter B. Bloch, Chairman
ADMINISTRATIVE JUDGE

Oscar H. Paris
ADMINISTRATIVE JUDGE

Frederick J. Shon
ADMINISTRATIVE JUDGE

Bethesda, Maryland

Cite as 15 NRC 636 (1982) LBP-82-20

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Ivan W. Smith**, Chairman
**Dr. Walter H. Jordan**
**Dr. Linda W. Little**

**In the Matter of** **Docket No. 50-289 (Restart)**

**METROPOLITAN EDISON COMPANY**
**(Three Mile Island Nuclear Station, Unit No. 1)**

**March 23, 1982**

Pursuant to licensee's motion, the Licensing Board clarifies a provision of its Partial Initial Decision of December 14, 1981, relating to the separation of Three Mile Island Units 1 and 2.

## MEMORANDUM AND ORDER

In the Partial Initial Decision of December 14, 1981 (LBP-81-59, 14 NRC 1211) the Board imposed a condition relating to the separation of TMI Units 1 and 2:

> During any Unit 2 fuel movements Licensee will suspend work in the Unit 1 area of the fuel handling building and whenever Unit 1 fuel movements are in progress the engineered safety feature filtration system for Unit 1 will be in operation.

PID ¶ 1326(a).

The condition was imposed as practical (but not literal) compliance with short-term item 4 of the August 9, 1979 Notice of Hearing relating to the separation of the fuel handling areas of Units 1 and 2. 10 NRC at 145; PID ¶ 1261.

On March 12, 1982 the Licensee filed its motion for clarification, or in the alternative, reconsideration of the Board's ruling with respect to the fuel-handling building engineered safety feature (ESF) filtration system.

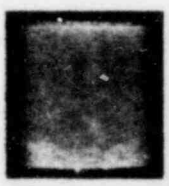
Because the evidence indicated that there would be no fuel handling in the TMI-1 fuel handling area until the first refueling outage after restart, we approved delayed operability of the ESF filtration until then. PID ¶ 1266. Licensee reports now that the Unit 1 steam generators recently have been observed to be subject to some chemical attack, a circumstance which has received wide public attention. Concerned that the same situation may prevail within the reactor vessel, Licensee intends to remove the vessel head for inspection. Further examination might indicate the need to defuel the core and possibly to transfer the fuel to the spent-fuel pool for temporary storage. The present schedule is to remove the reactor head on April 2. No schedule has been set for any fuel removal. The filtration system has not been, and cannot be installed by April 2, or, apparently, in time for any possible fuel removal during the forthcoming inspection.

The first portion of Licensee's March 12 motion is a request that the Board clarify that it did not intend to require operation of the ESF filtration system during fuel movement prior to restart. Licensee correctly observes that the condition taken literally would prohibit fuel movement at any time — before or after restart — without the filtration system in operation.

The second portion of the motion requests modifications of the condition even as to its application after restart.

The Board discussed this motion with the parties present at the public preliminary hearing on another matter on March 18, 1982. Intervenors Sholly and Union of Concerned Scientists do not intend to answer the motion. The NRC Staff orally supported the motion insofar as it relates to pre-restart fuel movement, but will answer in writing in the normal course with respect to the other modifications requested by Licensee. The Commonwealth of Pennsylvania, which originally requested the filtration condition, has no objection to any aspect of Licensee's motion. No other party has previously demonstrated an interest in this aspect of the proceeding. We are therefore ruling on the pre-restart aspect of the motion before the expiration of the normal time afforded parties to answer motions.

The motion as it relates to pre-restart fuel handling is granted on two bases. First, the Board was not granted jurisdiction in the August 9, 1979 Notice of Hearing to control the Licensee's activities attendant to pre-restart cold shutdown. 10 NRC 141. Second, jurisdiction aside, imposing the ESF filter system requirement prior to restart would result in a consequence not anticipated at the hearing or intended by the Board's order. Licensee points out, and the Staff agrees, that the fuel now in the Unit 1 core has passed through a decay time of more than three years; thus movement of the fuel without an operable ESF filter system would

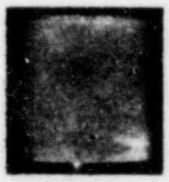


not present a safety problem.* Moreover, neither the Board nor any party anticipated the current need for pre-restart fuel movement. Therefore the relief requested by Licensee with respect to pre-restart fuel movement is correctly stated to be a clarification, not a reconsideration, of the condition. The condition is therefore clarified according to this order. We will later address the balance of the motion.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

Ivan W. Smith, Chairman
ADMINISTRATIVE LAW JUDGE

Bethesda, Maryland
March 23, 1982



* See affidavit attached to Licensee's motion. The Staff's position was stated by counsel at Tr. 27,020-022

Cite as 15 NRC 639 (1982) **LBP-82-21**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Peter B. Bloch,** Chairman
**Michael A. Duggan**
**Robert M. Lazo**

**In the Matter of** **Docket No. 50-389A**

**FLORIDA POWER & LIGHT COMPANY**
**(St. Lucie Plant, Unit No. 2)** **March 24, 1982**

In light of a comprehensive settlement agreement among the parties, the Licensing Board grants the joint motion of applicant and intervenors to dismiss the proceeding.

**ANTITRUST PROCEEDING: JURISDICTION OF LICENSING BOARD**

Once the Attorney General of the United States has withdrawn from the proceeding and permission has been granted to the remaining intervenors to withdraw, the Board no longer has jurisdiction to entertain an antitrust proceeding under the provisions of the Atomic Energy Act.

**APPEARANCES**

J.A. Bouknight, Esq. and Herbert Dym, Esq. for Florida Power & Light Company.

Robert A. Jablon, Esq., Alan J. Roth, Esq., Daniel Guttman, Esq. and Marta Manildi for Florida Cities, intervenors.

Ann Hodgdon, Esq. and Benjamin Vogler, Esq. for the Nuclear Regulatory Commission Staff.

Lynn Bregman, Esq. for Parsons & Whittemore, Inc., *et al.*, *amicus curiae*.

## MEMORANDUM AND ORDER
## (Concerning Motions to Dismiss, Terminate and Vacate)

Florida Power & Light Company (FPL) has entered into a comprehensive settlement agreement with Lake Worth Utilities Authority, the Utilities Commission of the City of New Smyrna Beach, the Sebring Utilities Commission, and the Cities of Alachua, Bartow, Fort Meade, Homestead, Key West, Kissimmee, Leesburg, Mount Dora, Newberry, St. Cloud, Starke, Tallahassee and Vero Beach, Florida, and the Florida Municipal Utilities Association (Cities). Pursuant to that agreement, on March 10, 1982, FPL and Cities filed a Joint Motion to Withdraw Interventions, Dismiss and Terminate Proceedings, and Vacate Memorandum and Order. On the same day, Cities also filed a Withdrawal of Request for Hearing.

These motions are opposed by Parsons & Whittemore, Inc. and Resources Recovery (Dade County), Inc. (collectively RRD) as *amicus curiae (letter of March 15, 1982), a status to which RRD was admitted by Board orde, affirmed in a footnote of an appeals board decision, LB-81-19, 14 NRC 87, 96 (1981); compare* LBP-81-28, 14 NRC 333, 346 (1981) (invitation withdrawn); *but see* ALAB-665, 15 NRC 22, 35 (footnote 19, paragraph 2)(RRD has been granted *amicus* status).

### I. DISMISSAL

FPL and Cities argue that their Settlement Agreement should be accepted as a basis for dismissing this case. They state, correctly, that an antitrust proceeding is not required by statute and occurs only if a party has intervened or the Attorney General of the United States advises that a proceeding is required, under Section 105c(5) of the Atomic Energy Act. Consequently, an antitrust proceeding is in the nature of an operating license proceeding and it ordinarily is appropriate to terminate such a proceeding when all admitted intervenors have withdrawn. *In the Matter of Georgia Power Company (Edwin I. Hatch Nuclear Power Plant, Unit No. 2),* LBP-74-52, 8 AEC 107 (1974); *see also In the Matter of Baltimore Gas & Electric Co. (Calvert Cliffs Nuclear Plant, Units 1 & 2),* LBP-73-15, 6 AEC 375, 377 (1973).

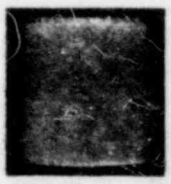
In its letter as *amicus* RRD does not oppose the argument presented to us about the nature of our jurisdiction, and that unopposed argument appears to us to be correct. We therefore conclude that our jurisdiction depends on the presence in the proceeding of either the Attorney General of the United States or of an intervenor. Since RRD has been denied status as an intervenor and since the Attorney General withdrew pursuant

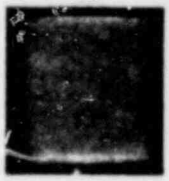
to a prior settlement agreement (*see* our Memorandum and Order, April 24, 1981, unpublished), there seem to be no parties before us and we seem to lack jurisdiction. (*See* Section II of this decision, formally dismissing two parties that are not part of the settlement agreement but that sought to withdraw from this case earlier.)

Despite our apparent lack of jurisdiction, we have reviewed the settlement documents to see whether there is any lack of fairness. *See* 10 CFR §2.759 (encouraging fair and reasonable settlements). A reason we undertook that review was that the Atomic Energy Act anticipates that we will apply the purposes of the antitrust laws, and courts acting pursuant to those laws have jurisdiction to approve or disapprove proposed settlement agreements under the Tunney Act (the Antitrust Procedures and Penalties Act of 1974). *See U.S.* v. *American Telephone and Telegraph Co., et al.*, U.S. District Court, District of Columbia, Case No. 74-1698 (D.D.C.) 1982-1 *Trade Cases* ¶64,465 (January 12, 1982) at 72,610-611. However, that act has only suggestive authority here, and our review of the settlement agreement failed to disclose any egregious unfairness; hence, we have decided not to pursue further, on our own motion, the question of whether the proposed settlement is in the public interest. *Compare* Clayton Act, 15 U.S.C. §5.(b). In this case, consideration by us of whether the settlement is in the public interest seems particularly unnecessary both because there was an earlier settlement approved in this case after notice of the agreement was given to the public and because the settlement before us also is before a federal district court which will approve or disapprove of the settlement pursuant to procedures which differ little from those we would apply. (Were the court to reject the settlement, we might then need to reconsider our decision to dismiss the proceeding.)

We are not impressed by RRD's argument that our prior decisions provide it with a right to contest the remedies to be made available in this case and that our own decisions therefore stand in the way of accepting this settlement. First, we note that the Appeal Board affirmed our finding that RRD has failed to show that its complaint has a nexus to this proceeding. ALAB-665, 15 NRC 32-33 (1982). The principal deficiency in its case is that it failed to show that the activities for which a license is sought would "play an active role in creating or maintaining the anticompetitive situation." *Id.* at 32.

We reject RRD's complaint that "the Board's grant to Parsons & Whittemore of status to participate at the remedial stage of the proceedings as *amicus curiae* could have served no useful purpose." First, our grant of *amicus* status gave RRD the opportunity to demonstrate that we should not accept the settlement placed before us in this case. Second, the grant of *amicus* status anticipated a continuing contest over the appropriate relief to be granted in this case; and *amicus* status would under





those circumstances have provided an opportunity for RRD to attempt to affect the Board's decision to its advantage. That RRD has been unable to use its *amicus* status to advance its underlying interests does not demonstrate that the initial grant "could have served no useful purpose."

For these reasons, the motion to dismiss is granted.

## II. EARLIER MOTIONS TO WITHDRAW

The Orlando Utilities Commission moved to withdraw from this proceeding on June 20, 1980 and the Gainesville Utilities Department moved to withdraw on August 4, 1981. Since there are no reasons to refuse these motions, they are granted.

## III. MOTION TO VACATE

FPL and Cities have requested that our Memorandum and Order Concerning Florida Cities' Motion for Summary Disposition on the Merits, dated December 11, 1981 (LBP-81-58, 14 NRC 1167) should be vacated. They argue by analogy to established federal practice that when an appeal becomes moot it is appropriate to vacate the trial court's decision. *United States* v. *Munsingwear*, 340 U.S. 36, 39 (1950).

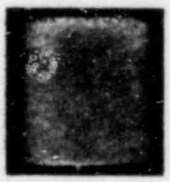
We accept this argument as valid. Moreover, our decision of December 11, 1981, was tentative, being left open by us for further objection by the parties. Given the preliminary nature of that opinion and the agreement of the parties not to contest it, that opinion ought to be vacated. It is our duty to adjudicate disputes and not to stand in the way of settlements by refusing a reasonable request to vacate our order.

## ORDER

For all the foregoing reasons and based on consideration of the entire record in this matter, it is this 24th day of March, 1982,

ORDERED

(1) The motions to withdraw from this proceeding filed on June 20, 1980, by the Orlando Utilities Commission and on August 4, 1981, by the Gainesville Utilities Department, are granted.



(2) Our Memorandum and Order of December 11, 1981, (LBP-81-58) is vacated.

(3) This proceeding is dismissed.

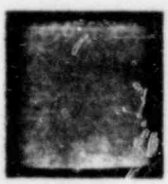
FOR THE ATOMIC SAFETY AND LICENSING BOARD

Peter B. Bloch, Chairman
ADMINISTRATIVE JUDGE

Michael A. Duggan
ADMINISTRATIVE JUDGE

Robert M. Lazo
ADMINISTRATIVE JUDGE

Bethesda, Maryland



Cite as 15 NRC 644 (1982) LBP-82-22

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Charles Bechhoefer**, Chairman
**Dr. James C. Lamb**
**Mr. Ernest E. Hill**

**In the Matter of** **Docket Nos. STN 50-498 OL**
**STN 50-499 OL**

**HOUSTON LIGHTING AND POWER COMPANY, *et al.***
**(South Texas Project, Units 1 and 2)**

**March 26, 1982**

The Licensing Board denies intervenors' request for disclosure by sworn affidavit of the substance of any and all *ex parte* communications alleged to have occurred as a result of NRC Commissioners' visits to the site of the South Texas facility.

## RULES OF PRACTICE: EX PARTE COMMUNICATIONS

Intervenors' request for identification of all persons involved in arranging the visits of NRC Commissioners to the site of the South Texas facility, and for sworn affidavits from each such person, was essentially a request for discovery. As such, it was required to be relevant to some contention or question before the Licensing Board. Because intervenors had not demonstrated that any *ex parte* contacts actually took place and had alleged no *ex parte* contacts by the Licensing Board itself, the request was not relevant to the proceeding before the Board and would be denied.

## MEMORANDUM AND ORDER
## Denying CEU Motion To Require Full Disclosure and Independently Prepared Affidavits)

On March 1, 1982, Citizens for Equitable Utilities (CEU), an intervenor in this operating-license proceeding, filed a motion seeking relief as a

result of certain alleged *ex parte* contacts which are said to have resulted from visits to the site of the South Texas facility undertaken (on separate occasions) by Commissioners Gilinsky and Roberts. CEU claims that it was not notified of Commissioner Gilinsky's visit and, although it was advised on very short notice of Commissioner Roberts' visit and was invited to participate, Commissioner Roberts was delayed and did not begin his visit until several hours after the stated time for the visit, resulting in a missed connection between Commissioner Roberts and CEU's representative.

CEU opines that HL&P, the Staff, and the Commissioners "apparently engaged in extensive *ex parte* communications", in violation of 10 CFR §2.780. As "interim remedies", it asks us to require HL&P and the NRC Staff to identify persons involved in arranging the visits and in the visits themselves, all contacts between such persons, and the substance of any communications. CEU seeks separate sworn affidavits from each such person, prepared independently and without review by any other person. CEU also has written Commissioners Gilinsky and Roberts seeking other relief as a result of the site visits in question.

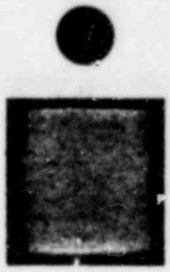
Citizens Concerned About Nuclear Power (CCANP), another intervenor, supports CEU's motion, adding that it too had "totally inadequate" notice of Commissioner Roberts' visit. CCANP additionally has written Commissioner Roberts seeking further relief.

The Applicants and NRC Staff oppose the motion before us. Each of them takes the position that we have no jurisdiction to grant the relief requested or, in any event, that the relief requested is not appropriate for the conduct in question or consistent with NRC regulations. The Staff additionally stresses that CEU has made no showing that anyone engaged in *ex parte* communications, pointing out that Commissioners have duties other than adjudicatory with respect to any given facility.

We agree with the Applicants and Staff that CEU's motion must be denied, but on somewhat different grounds.[1] What is being sought is essentially a form of discovery. This type of relief is inconsistent with the self-policing remedy provided by NRC Rules for *ex parte* contacts. 10 CFR §2.780.[2] But even on its own terms, the requirements for discovery

[1] The jurisdictional issue raised by the Applicants and Staff presents a close question, upon which we decline to rule. We note that there may well be a difference between our authority to explore the conduct of Commissioners (which is discussed by the Applicants and Staff) and our authority to inquire into the conduct, including associations with other persons, of various parties before us. In any event, we have jurisdiction to take the action which we take by this Memorandum and Order. *Cf. Duke Power Co.* (Perkins Nuclear Station, Units 1-3), ALAB-591, 11 NRC 741 (1980).

[2] In that connection, we have been served with a note from Commissioner Gilinsky to all parties to this proceeding, dated March 23, 1982, concerning his December, 1981 site visit.



have not been met. Discovery must be relevant to some contention or question before us. 10 CFR §2.740(b)(1); *cf.* 10 CFR §2.720(a). CEU has not demonstrated either that any *ex parte* contacts took place or, assuming they did, how such contacts by certain Commissioners could have a bearing on any determination which we are called upon to make in any of the phases of this proceeding. No *ex parte* contacts by this Board are alleged. Any determinations we make in this proceeding will be our own, based on the record before us, and will be unaffected by any activities engaged in by individual Commissioners.

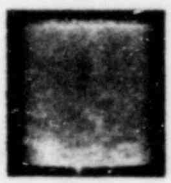
For the above reasons, it is, this 26th day of March, 1982,

ORDERED

That CEU's Motion To Require Full Disclosure And Independently Prepared Affidavits is *denied*.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

Charles Bechhoefer, Chairman
ADMINISTRATIVE JUDGE



Cite as 15 NRC 647 (1982) LBP-82-23

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Louis J. Carter,** Chairman
**Frederick J. Shon**
**Dr. Oscar H. Paris**

**In the Matter of** **Docket Nos. 50-247 SP**
**50-286 SP**

**CONSOLIDATED EDISON COMPANY OF NEW YORK**
**(Indian Point, Unit 2)**

**POWER AUTHORITY OF THE STATE OF NEW YORK**
**(Indian Point, Unit 3)**

**March 29, 1982**

The Licensing Board denies licensees' motion in the alternative for a stay of the Commission's orders governing the proceeding, for dismissal of the proceeding, or for certification of issues to the Commission.

**LICENSING BOARDS: JURISDICTION**

Licensing Boards exercise only those powers which the Commission has given them. Where the Commission's only direction to the Licensing Board in this proceeding was to formulate recommendations on the questions posed in the Commission's order, the Commission did not delegate to the Board the power to issue a stay.

**LICENSING BOARDS: AUTHORITY**

Where virtually the same arguments as those contained in licensees' motion had previously been presented to, and rejected by the Commission, a Licensing Board decision reversing the prior decision of the Commission

would make a mockery of the Board's obligation to follow Commission precedent.

## RULES OF PRACTICE: CERTIFICATION OF ISSUES TO THE COMMISSION

The Licensing Board's power to certify issues to the Commission is discretionary and is to be exercised sparingly. Where licensees' motion to certify presented no novel questions of policy, law or procedure, and no other compelling reasons for certification, the motion would be denied.

### MEMORANDUM AND ORDER
### (Ruling on Licensees' Motion for Stay of Commission's Orders of January 8, 1981 and September 18, 1981)

On November 25, 1981, Consolidated Edison Company of New York Inc. and the Power Authority of the State of New York, Licensees of Indian Point Units 2 and 3 respectively, (hereinafter Licensees) filed "Licensees' Motion For a Stay Of Commission's Orders Of January 8, 1981 And September 18, 1981 Or For Dismissal Of This Proceeding Or, In the Alternative, For Certification To The Commission."[1] Responses to that motion were filed by Robert Abrams, Attorney General of the State of New York, the Union of Concerned Scientists (UCS) and New York Public Interest Research Group (NYPIRG), and the NRC Staff.

We hold that the motion is denied and that the issue is not certified to the Commission.

I

Movants argue that commencement of an adjudicatory proceeding prior to completion of ongoing proceedings to establish generic standards constitutes a denial to Licensees of procedural due process. In support of this, Licensees argue:

(1) that Congress in the NRC Appropriation Act of 1980 directed the NRC to proceed with the establishment of a comprehensive plan to set standards for the evaluation of the safety of all operating nuclear plants;

[1] Licensee also filed a memorandum of Law in support of their motion. The latter contained 5 pages, the former 61 pages. Had this been an application for a stay after a decision of this Board it would have been limited to ten (10) pages exclusive of affidavits, 10 CFR §2.788(b). "Praised be he who can state a cause in clear, simple manner, and then stop." Belt J., Jungewirth v. Jungewirth, 115 Or. 668, 672 (1925).

(2) that agencies should use their rulemaking powers in lieu of adjudication;

(3) that Licensees have been given no notice of what new level of safety will be acceptable for Indian Point or "fair notice of warning" of what is acceptable so they may act accordingly; and

(4) that the proposed proceeding "permits and encourages an arbitrary and discriminatory enforcement of the law".

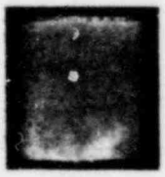
The Attorney General and Staff correctly assert that many of these arguments were raised with the Commission in 1979 and reasserted again in 1980 but to no avail, all having been rejected by the Commission.[2]

II

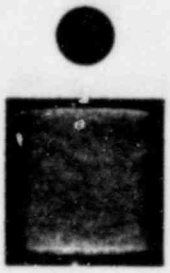
Staff and the Attorney General argue that the Board does not have the power to order a stay of the Commission's orders or a dismissal of this proceeding where to do so would fly in the face of the clear intent of the Commission. This position is likewise advanced by Staff and UCS arguing further that "licensing boards are delegates of the Commission and exercise only those powers which the Commission has given them" citing *Public Service Co. of Indiana Inc.* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 NRC 167, 170 (1976), *Northern Indiana Public Service Co.* (Bailly Generating Station Nuclear 1), ALAB-249, 8 AEC 980, 987 (1974). *Houston Light and Power* (South Texas Units 1 and 2), ALAB-381, 5 NRC 582 (1977). Thus, the entire case cannot be disposed of by the Board when it has been instructed not to make an initial decision, but instead to formulate recommendations to the Commission.

We have canvassed the cases cited and agree that their holdings are controlling. See also *Carolina P&L Co.* (Shearon Harris Nuclear Power Plant, Units 1-4), ALAB-526, 9 NRC 122, 124 (1979); *Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-90 at n. 6 (1979).

Staff believes that the Commission's order is clear: that the only direction this Board was given was to formulate recommendations on the questions posed in its order of September 18, 1981, CLI-81-1, as revised, at 5 n. 4 and 8.



[2] *Consolidated Edison Company of New York* (Indian Point, Unit 2) and *Power Authority of the State of New York* (Indian Point, Unit 3) CLI-81-1, 13 NRC 1 (1981); CLI-81-23, 14 NRC 610 (1981).



We hold that the Commission did not delegate to this Board the power to issue a stay.[3]

Staff also asserts that the Commission alone is the proper forum for a request for a stay, citing 10 CFR §2.788(f)[4] and statements of consideration to Part 2 entitled "Commission Review of Appeal Board Decisions and Procedure for Requests for Stays", 42 Fed. Reg. 22128 (May 2, 1977). Staff argues that the issue of a stay must be presented to the "deciding body", viz., the Commission which initiated this proceeding. In this case, the proper forum for this application is the Commission.

It is absurd to suggest that a Board could reverse a prior decision of the Commission made in the same case on virtually the same motion. Such a result would make a mockery of the Board's obligation to follow Commission precedent. See *Virginia Electric and Power Company*, (North Anna Nuclear Power Station, Units 1 and 2), ALAB-584, 11 NRC 451, 465 (1980).

III

On the question of our power to certify this issue to the Commission we find that though we have the power to do so, 10 CFR §2.718(i), we shall not. The power is discretionary and is to be exercised sparingly. Though Part 2 rules do not specifically articulate any standard for Licensing Boards, Appendix A, Part V(f)(4) restates the standard applicable to the Appeal Board in §2.785(d). The Statement of Policy provides that a Licensing Board may in its discretion certify to the Commission for its determination "major or novel questions of policy law or procedure." We find none present here.

Nor does there appear to be any compelling reason[5] in this case for certification. In fact, as Staff asserts there exists a compelling interest for this Board to proceed with the development of the record to enable it to meet the September 18, 1982 date for this Board's recommendations.

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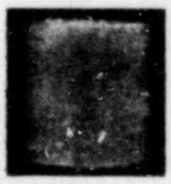
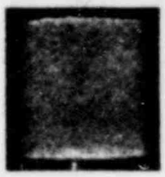
[3] A Licensing Board has the power, in the first instance, to rule on the scope of its jurisdiction, see *Kansas Gas and Electric Co.*, (Wolf Creek Nuclear Generation Station, Unit 1), ALAB-321, 3 NRC 293, 298 (1976), aff'd CLI-77-1, 5 NRC 1 (1977).

[4] 10 CFR §2.788(f) provides:

> (f) An application to the Commission for a stay of a decision or action by an Atomic Safety and Licensing Appeal Board will be denied if a stay was not, but could have been, sought before the Appeal Board. An application for a stay of a decision or action of a presiding officer may be filed before either the Atomic Safety and Licensing Appeal Board or the presiding officer, but not both at the same time.

[5] See *Vermont Yankee Nuclear Power Corporation*, (Vermont Yankee Nuclear Power Station), 7 AEC 982, 984 (1974).





We have considered all other arguments of the Licensees and find they are without merit.

It is, this 29th day of March, 1982

ORDERED

That Licensees' Motion for a Stay of Commission's Orders of January 8, 1981 and September 18, 1981 or For Dismissal of this Proceeding or, in the Alternative for Certification to the Commission is *denied*.

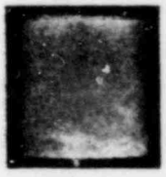
FOR THE ATOMIC SAFETY AND
LICENSING BOARD

Oscar H. Paris
ADMINISTRATIVE JUDGE

Frederick J. Shon
ADMINISTRATIVE JUDGE

Louis J. Carter, Chairman
ADMINISTRATIVE JUDGE

Bethesda, Maryland



Cite as 15 NRC 652 (1982) LBP-82-24

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Louis J. Carter,** Chairman
**Ernest H. Hill**
**Dr. David R. Schink**

**In the Matter of** **Docket No. 30-6931**

**ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE**
**(Cobalt-60 Storage Facility)** **March 31, 1982**

The Licensing Board rules that notions of elementary fairness require consideration of an untimely petition to intervene and request for hearing where the late filing may have resulted from petitioner's reliance on NRC Staff representations, but denies the petition for lack of standing.

## BY-PRODUCT MATERIALS LICENSES: RULES APPLICABLE TO

Pursuant to 10 CFR 30.34, by-product materials licenses are subject to the provisions of the Atomic Energy Act of 1954, as amended, as well as to all valid rules, regulations and orders of the Commission.

## BY-PRODUCTS MATERIAL LICENSE: RULES APPLICABLE TO

By its terms, §2.700 of the Commission's Rules of Practice does not contemplate that the provisions of §2.714 relating to the timeliness of intervention petitions should apply to materials licenses issued pursuant to 10 CFR 2.7103 and 10 CFR, Part 30, unless the Commission orders that a hearing be held or determines that an opportunity for a public hearing should be afforded.

**BY-PRODUCT MATERIALS LICENSE: RENEWAL; REQUIREMENT OF HEARING**

Section 2.103 of the Commission's Rules of Practice provides that the Director of Nuclear Reactor Regulation or the Director of Nuclear Materials Safety and Safeguards may issue a license if it finds that the application complies with the requirements of the Atomic Energy Act and the Commission's regulations, and restricts the right to a hearing to an Applicant who has been notified of a denial of the application. Consequently, the issuance of a by-product materials license renewal is not a proceeding under the Atomic Energy Act of 1954, as amended, §189(a), 42 USC 2239(a), and a hearing is not required before the license is renewed.

**RULES OF PRACTICE: UNTIMELY INTERVENTION PETITION**

Where petitioner's counsel alleged that Commission Staff had represented to her that no action would be taken on licensee's application for renewal of its by-product materials license until completion of pending reactor licensing proceedings to which petitioner was a party, and such allegations were not denied by Staff, the action of Staff could be asserted as an estoppel on the issue of the timeliness of petitioner's petition for leave to intervene.

**RULES OF PRACTICE: UNTIMELY INTERVENTION PETITION**

Where petitioner relied to its detriment on Staff's representations, notions of elementary fairness required that its petition to intervene be considered even though it was filed after the issuance of the license renewal to which it pertained.

**RULES OF PRACTICE: STANDING**

Although an organization may establish standing through its members, it must allege a potential injury which is particularized to it and not one which is shared in substantially equal measure by all of a large class of citizens.

## RULES OF PRACTICE: STANDING

Since the Cobalt facility that was the subject of this petition did not have the potential for accidental release of fission products, the proximity nexus for establishment of standing in nuclear reactor proceedings was not applicable here. Since petitioner's only allegation of injury to its members was proximity to the Cobalt facility, it failed to establish standing and its petition was denied.

## MEMORANDUM AND ORDER (RESOLVING ISSUES RAISED BY PETITION FOR LEAVE TO INTERVENE)

On July 28, 1981, the Director of Nuclear Material Safety and Safeguards granted the application of the Armed Forces Radiobiology Research Institute (AFRRI), filed August 28, 1980, for renewal of its By-Products Material License No. 19-08330-03 under 10 CFR Part 30. The license (amendment 14), as renewed, allows for the storage of Cobalt-60 in the AFRRI facility on the grounds of the National Naval Medical Center in Bethesda, Maryland, until July 31, 1986.

On August 31, 1981, the Citizens for Nuclear Reactor Safety, Inc. (CNRS) filed a Petition for Leave to Intervene requesting a hearing on this licensing action. CNRS is an intervenor in the ongoing proceeding for the renewal of the operating license for the TRIGA reactor located at the AFRRI facility in Bethesda. See Docket 50-170 OL. Just prior thereto, on August 7, 1981, CNRS' counsel wrote to the Commission's Secretary, requesting that the Commission grant a hearing on the materials license application and to consolidate it with the operating license proceeding. The Board considers that letter as having merged into the Petition for Leave to Intervene.

By order dated October 8, 1981, the Commission directed the Chairman of the Atomic Safety and Licensing Board Panel (ASLBP) to designate a board to review the CNRS' Intervention Petition, to determine whether the hearing requirements of section 189(a) of the Atomic Energy Act of 1954, as amended, 42 U.S.C. §2239(a), and 10 CFR §2.714 of the Commission's regulations have been met and, if so, to conduct an appropriate licensing proceeding under Parts 2 and 30 of the Commission's rules. Pursuant to this order, this Board was established by an Order of the Chairman and Chief Administrative Judge of the ASLBP dated October 13, 1981, to rule on the aforementioned Intervention Petition. (46 *Fed. Reg.* 51516)

Pursuant to said Order, this Board was directed to determine

(1) whether the hearing requirements of section 189(a) of the Atomic

Energy Act, 42 U.S.C. §2239(a), and 10 CFR §2.714 of the Commission's regulations have been met;

(2) whether the petition must be denied because the instant proceeding terminated when the license was renewed on July 28, 1981; and

(3) whether the staff had timely notice of the petitioner's interest in obtaining a hearing in this case.

Section 189(a), *supra* provides in pertinent part, that:

> In any proceeding under this Act, for the granting, suspending, revoking or amending of any license . . . the Commission shall grant a hearing upon the request of any person whose interest may be affected by the proceeding . . .

Pursuant to 10 CFR §30.34, each license issued under Part 30 of the Commission's regulations is made subject to the provisions of the Act, as well as to all valid rules, regulations and orders of the Commission.

In Licensee's view, the first three words of section 189(a), "In any proceeding", are crucial to the determination of whether petitioner may intervene, as of right, Licensee contending that the issuance of its license renewal terminated these proceedings, thus terminating any rights of CNRS to intervene under that section. Under that interpretation, the CNRS petition can, according to Licensee, only be considered as a request to institute a proceeding during the term of a license, under the standards set out in sections 186, "Revocation," and 187, "Modification of License," of the Act, §42 U.S.C. §§2236 and 2237, respectively, and 10 CFR §§2.206 and 30.61. Licensee contends CNRS has not met the requirements of either of these sections and is therefore not entitled to a hearing. We agree that the requirements of sections 186 and 187 have not been met.[1]

CNRS does not address the question of the timeliness of its attempt to intervene, either in its August 29, 1981 petition, or in its August 7, 1981 letter to Commission's Secretary. Counsel for CNRS stated in that letter, that she had discussed the pendency of Licensee's Cobalt-60 storage license renewal in a telephone conversation with one John Hickey of the NRC's Materials Licensing Branch on February 4, 1981, and had been told at that time that Mr. Hickey had not yet assigned the review of that license to anyone. Mr. Hickey is alleged to have stated his intention to delay making any decision on the Cobalt-60 storage renewal until the completion of the AFRRI reactor licensing proceedings, since some of the issues being litigated there also relate to the Cobalt storage license. These allegations

[1] In general, Section 186 involves revocation for material false statements or facts or conditions that would warrant refusal of the original application, or failure to construct or operate in accord with the terms of the permit or license. Section 187 permits amendment, revision or a modification of the act or rules and regulations issued in accordance with the terms of the act.

concerning Mr. Hickey's representations are not denied by Staff nor does Staff argue that the petition is untimely.

Petitioner's counsel also stated in her August 7, 1981 letter that she had learned, only the day before, that the NRC "plans to take first action on the application to renew License No. 19-08330-03 before the reactor proceedings were completed," and noted that "since notice of proposed actions on materials license application is not published in the *Federal Register*, counsel cannot determine when and what the final decisions will be."

Licensee responds by urging that this Board consider the letter as an admission by CNRS that it had actual notice of the proceedings on the renewal of AFRRI's by-products material license not later than February 4, 1981, and argues that no hearing should be granted where a would-be intervenor had actual notice of the proceeding prior to the determination. This rule is proposed to apply even if the failure to publish notices of proposed actions in the Federal Register might otherwise be considered a denial of procedural due process.

This Board is unaware of any NRC decision which has defined the time frame within which petitions to intervene in domestic materials license proceedings must be filed. Nor is this Board aware of any precedent which has squarely addressed the issue of whether the Commission's failure to provide notice of pending domestic materials licensing applications in the Federal Register would constitute a violation of procedural due process, such as to suggest that the untimeliness of an intervention petition in such proceedings ought to be excused.[2]

The Commission's general rule as to timeliness of an intervention petition is set forth in 10 CFR §2.714 (a)(1), which provides, in pertinent part,

> that [t]he petition and/or request [for leave to intervene] shall be filed not later than the time specified in the notice of hearing, or as provided by the Commission, the presiding officer of the atomic safety and licensing board designated to rule on the petition and/or request, or as provided in §2.102 (d)(3) (relating to hearings on antitrust matters).[3]

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[2] Because of their frequency, low individual impact, and the historical absence of controversy regarding them, materials licenses have not been noticed in the Federal Register, see *Edlow International Company* CLI-76-6, 3 NRC 563 at 579 nor does such appear to be required under 10 CFR Part 2.

[3] The subsection also sets forth factors which may be balanced in determining whether a nontimely filing should be entertained. This rule, however, has been interpreted by the Commission to "assume that procedures for convening a hearing have already been commenced."

On the basis of the foregoing language, staff argues that this rule does not govern the timeliness of an intervention petition in an action such as this, where the license was issued by the Director of Nuclear Material Safety and Safeguards. See *Edlow International Company* (Agent for the Government of India on Application to Export Special Nuclear Material) CLI-76-61, 3 NRC 563, 579 (1976).

Furthermore, 10 CFR §2.700, which describes the scope of "Subpart 6 — Rules of General Applicability" of the Commission's regulations (of which §2.714 is a part) states only that the provisions of this subpart are to govern [certain] procedures in adjudications, via those initiated by the issuance of an order to show cause, pursuant to 10 CFR §2.202; an order directing a hearing relating to the imposition of civil penalties, pursuant to 10 CFR §2.205 (e); a notice of hearing, pursuant to 10 CFR §2.104; a notice of proposed action, pursuant to 10 CFR §2.105 or a notice of hearing on antitrust matters, pursuant to 10 CFR §2.102(d)(3). By its very terms, then 10 CFR §2.700 does not contemplate that the provisions of §2.714 relating to the timeliness of intervention petitions should apply to materials licenses issued pursuant to §10 CFR §2.103[4] and Part 30, unless the Commission orders that a hearing be held pursuant to 10 CFR §2.104, having found that such a hearing would be in the public interest, or unless the Commission, pursuant to 10 CFR §2.105 (a)(4), "determines that an opportunity for a public hearing should be afforded."

Simply stated, it is the board's opinion that the issuance of the license renewal is not a "proceeding" under the act and that under §189(a) it need not hold a hearing *before* the license is renewed. See *People of the State of Illinois v. NRC* 591 F.2d 12, (1979) holding that the Atomic Energy Act gave Illinois no right to a hearing by the Commission of a "Request to Institute a Proceeding and Motion to Modify, Suspend or Revoke Special Nuclear Material License" where no formal proceeding had begun, for granting, suspending or revoking the license.[5]

We think, however, that this case differs from the Illinois case since a fair interpretation of the facts indicates that staff indicated to petitioner that this material license would be consolidated with the ongoing proceeding making the operating license. In *Illinois* the opposite occurred, there

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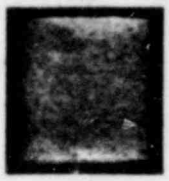
[4] Section 2.103 which prescribes the action to be taken on applications for by-product material license simply provides that the Director of Nuclear Reactor Regulation or the Director of Nuclear Material Safety and Safeguards may issue a license if it found that the application complies with the requirements of the Act and the regulations. The right to a hearing under this section is limited to an applicant who has been notified of a denial of the application.

[5] While *Sholly v. NRC*, US App. D.C. 651 F.2d 780, 11/19/80 cert. granted 5/26/81, would appear to hold that a request for a hearing is sufficient under section 189(a) we believe that ruling applies only with regard to significant changes in the operation of a nuclear facility and not to material licensing.



complying with 10 CFR §2.206 (b) and Section 555 (e) of the APA, the Director of Nuclear Material Safety and Safeguards advised the State of Illinois that no proceeding would be instituted.

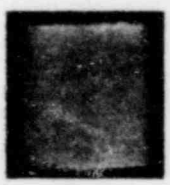
We hold also that the issue of timeliness is not determinative even though the Petition for Leave to Intervene was filed after the issuance of the license because justice and fair play require consideration of the petition. The representation of staff to intervenor's counsel has not been denied. The action of staff, we hold, is an estoppel that may be asserted—even against the government. We think petitioners relied to their detriment on staff's representations. To hold otherwise would violate our notions of "elementary fairness" *Moser v. United States* 341 U.S. 41 at 47, 71 S.Ct 553, 95 L. Ed 729 (1951); *USA v. Lazy FC Ranch* 481 F.2d 985 (1973). See also *Wisconsin Public Service Corporation, Kewaunee Nuclear Power Plant*, LBP-78-24, 8 NRC 78 (1978) where our brethren held that confusing and misleading letters from the staff to a prospective *pro se* petitioner for intervention and the failure of the staff to respond in a timely fashion to certain communications from such a petitioner, constituted a strong showing of good cause for an untimely petition.

Thus, under the compelling circumstances[6] of this case we believe petitioner should have opportunity to be heard if petitioner has the requisite standing.

In the related operating license proceeding (Docket 50-170), the petitioner was granted the right to intervene where members were identified who lived 0.3 to 4.6 miles from the site of the reactor. An organization such as CNRS can establish standing through its members. Here, protection of the members is within the "zone of interests" and staff does not dispute this concern for the protection of the health and safety of its members. Not every risk with which the Commission is substantially concerned is perforce, one which must be deemed to create standing in some member of the public. It is necessary to determine whether or not petitioners have alleged a potential injury which is particularized to the individual petitioner and not one which is "shared in substantially equal measure by all of a large class of citizens" *Edlow International Company* supra at 576 citing *Warth v. Seldin* 422 US 490, 499 (1975). See also *Houston Lighting and Power Company* (Allens Creek Nuclear Generating Station Unit 1), ALAB 535, 9 NRC 377, 390 (1979).

We believe that petitioners have failed to make such particularized contention.

A general description of the nature of cobalt storage may assist in understanding why this is so.



[6] See *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.* 435 US 519, at 543, 98 S Ct. 1197, at 1211, 55 L Ed 2d 4601 (1978).

Unlike reactors, which generate fission products and have the potential for airborne and waterborne effluent releases, cobalt-60 in a facility, such as this, serves only as a source of gamma radiation. We can conceive of no pathway by which either airborne or waterborne contaminants could be released to adversely affect members of the public.

The cobalt-60 source is maintained within water and concrete shielded structures to protect the workers in the facility. If the shielding were to in some way be lost, the intensity of the gamma radiation is reduced very rapidly by distance. At a distance of 300 meters the dose rate would be reduced to a very low safe level (10-100 mr/hr). At 600 meters (0.4 miles) it would be reduced to the level allowed for a worker in a restricted area (2.5 mr/hr 10 CFR 20). At 2000 meters (1.25 miles) it would be reduced to the level allowed for a person in an unrestricted area (0.25 mr/hr 10 CFR 20) and at 3 to 5 miles it would be reduced to approximately background level.

Thus there is no mechanism by which the AFRRI Cobalt-60 facility could possibly cause gamma radiation exposure to members of the public residing at distances of 3 to 5 miles.

The petitioner alleges as an injury only proximity of the cobalt facility to its members. Unlike the proximity nexus of nuclear reactor proceedings where accidental fission product release from the reactor may occur such cannot here occur because of the wholly dissimilar nature of a cobalt facility. Reactors may generate fission products and do have the potential for airborne and waterborne effluent releases while the cobalt in this facility does not produce that effect since it is used only as a gamma irradiator. In summary, this is staff's position and we agree.

Petitioner argument that there is a hazard of low level gamma radiation which will emanate from the storage facility is not supported by the physical facts of the nature of the facility.

The further allegation of interest relating to the issues of emergency planning building access and security are not sufficiently particularized. To assume, arguendo, that petitioner is correct, any order which may be entered in the licensing proceeding will affect the cobalt facility located within the same building.

In conclusion, we determine the answers to the issues raised by the Commission in its October 13, 1981 order as follows:

(1)(a) The requirements of section 189(a) of the Atomic Energy Act 42 USC 82239(a) have not been met since the renewal of a by-products material license is not a "proceeding".

(1)(b) The requirements of 10 CFR §2.714 have not been met because the petitioners has failed to make at least one particularized contention alleging a potential injury which is not shared in substantially equal measure by a large class of citizens.

(2) The petition if otherwise sufficient for reasons of standing would not be denied on the grounds that the instant proceeding terminated because (a) the license renewal is not a proceeding and (b) even if considered a terminated proceeding there were sufficient grounds based on reasons of elementary fairness or estoppel to permit a hearing.

(3) The staff, in the board's view, had timely notice of the petitioner's interest in obtaining a hearing in this case, but for petitioner's lack of standing this was of no significant consequence in this case.

Therefore, it is this 31st day of March 1982

ORDERED

That the petition for a hearing is denied.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

Louis J. Carter, Chairman
ADMINISTRATIVE JUDGE

Cite as 15 NRC 661 (1982) LBP-82-24A

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Peter B. Bloch**, Chairman
**Jerry R. Kline**
**Hugh C. Paxton**

**In the Matter of** **Docket Nos. 50-266-OLA**
**50-301-OLA**

**WISCONSIN ELECTRIC POWER COMPANY**
**(Point Beach Nuclear Power Plant, Units 1 and 2)**

**March 31, 1982**

The Licensing Board denies a motion to reconsider its previous decision not to certify a *sua sponte* question to the Commission.

## LICENSING BOARDS: *SUA SPONTE* ISSUES

The regulations limiting the Board's authority to raise *sua sponte* issues restrict its right to consider safety, environmental or defense matters not raised by parties but does not restrict its responsibility to oversee the fairness and efficiency of proceedings and to raise important procedural questions on its own motion.

The Commission's direction to Boards to notify it of *sua sponte* matters does not create rights in private parties.

## RULES OF PRACTICE: PROPRIETARY DETERMINATIONS

A Board may raise a procedural question, such as whether a portion of its record should be treated as proprietary or should be released to the public, regardless of whether the full scope of the question has been raised by a party.

## MEMORANDUM AND ORDER
## (Concerning Reconsideration of Our Denial Of a Motion to Certify a *Sua Sponte* Question)

On March 9, 1982, Westinghouse Electric Corporation (Westinghouse) moved for reconsideration of our Memorandum and Order of February 26, 1982, in which we denied its motion to certify a *sua sponte* question to the Commission. Wisconsin Electric Power Company (applicant) supported this motion in a filing of March 24, 1982. Staff has not filed. Wisconsin's Environmental Decade (Decade) commented in a March 12, 1982 letter:

> In addition to the legal arguments against the substance of Westinghouse's claims, the issue is now completely moot in light of our having challenged the confidentiality of the matters previously only challenged by the Board.

We agree with Decade that the motion deserves to be summarily denied, for reasons previously stated. We also find that the issue is moot and that there are no remaining *sua sponte* issues because Decade has expressed its interest in each issue in which the Board is interested.

However, we find that applicant's filing managed to raise a few issues in a manner that has not been addressed directly to this time and that a few more explanatory words may be appropriate. In particular, we will clarify the extent of our interest in the confidentiality issue, along lines suggested by applicant, which stated that if "the Board's actual inquiry is limited to the issues raised by the Intervenor, [its] concerns regarding the adverse impact on its interests will be substantially assuaged." Answer at 3. We also will comment on the validity of our observation that the *sua sponte* rule affects the substantive inquiries of the Board but does not restrict its procedural authority.

### I. SCOPE OF THE BOARD'S INTEREST

The Board has already issued a decision concerning the confidentiality of an affidavit that we previously styled the Wiesemann affidavit. Westinghouse considers that this action was *sua sponte*; however, that action is completed, is subject to appeal, and has no further effect on this proceeding.

The principal issue Decade has raised is whether or not a portion of our record dealing with safety tests performed by Westinghouse should be released to the public. The Board's present interest is limited to that issue, although our concern may extend beyond the initial periphery of that issue as defined by Decade. At first, Decade limited its interest to certain sections of the Westinghouse Sleeving report. We stated, however, that our interest might include related materials in the appendices. Decade has

subsequently extended its interests to parallel ours. We believe that this slight extension of Decade's initial interests is clearly within the Board's prerogatives, whether or not Decade agreed to take up the issues in its own right. However, Decade's interest makes it moot as to whether this was initially a *sua sponte* issue.

## II. PROCEDURAL VERSUS SUBSTANTIVE

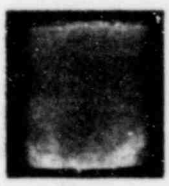
Applicant challenges the Board's assertion that the *sua sponte* rule affects its authority to pursue substantive issues but not its authority to issue necessary procedural determinations. Applicant argues that we have not adequately explained our use of the term "procedural" and that the Supreme Court has defined a substantive rule as one "affecting individual rights and obligations." *Morton v. Ruiz*, 441 U.S. 199, 232 (1974).

We find applicant's effort to define "procedural" to be wholly without merit, but we are grateful to it for providing us with this opportunity to more fully expound our views on why a confidentiality issue is procedural rather than substantive. The issue is among the thorniest in law. Indeed, in some law schools it is the first and often the most confusing issue taught to first year law school students, who must study *Sibbach v. Wilson & Co.*, 1941, 62 S.Ct. 422, 312 U.S. 1, 85 L.Ed. 479. *See also* Charles Alan Wright, *Federal Courts*, 1963 at 225, footnote 20.

In *Sibbach* the court upheld the federal rules of civil procedure against a challenge that a particular rule was substantive and not procedural and that the rule was therefore barred by the terms of the enabling act pursuant to which the rules had been issued. The particular rule whose validity was challenged had been interpreted by the lower courts to require that plaintiff be jailed for contempt for failing to take physical examination pursuant to court order. In its discussion, the majority concluded that the rule involved was procedural and that it was valid even if it had such an important effect as requiring incarceration. However, the majority also found that the proper result (which also was procedural) was the dismissal of plaintiff's action if she would not be examined, rather than the extreme penalty of imprisoning the plaintiff. Hence, we find that an issue can be *procedural* even if its effect is to dismiss the entire action and determine its result.

The core of *Sibbach* is instructive here:

> If we were to adopt the suggested criterion of the importance of the alleged right we should invite endless litigation and confusion worse confounded. The test must be whether a rule really regulates procedure, —the judicial process for enforcing rights and duties recognized by substantive law and for justly administering remedy and redress for disregard or infraction of them.



*Id.* 312 U.S. at 14, 85 L.Ed. at 485. At first blush, the rule appears to be somewhat circular, testimony to the difficulty of this definitional problem. However, the circularity is not complete. Application of this rule to Commission cases suggests that if an issue relates to a safety, environmental or common defense matter then it is substantive. Such issues are the meat and potatoes of our proceedings. They are the underlying issues which have a direct effect on whether a license should be issued.

When an issue does not relate to safety, the environment or common defense, it is unlikely to be substantive. If it relates to the methods by which such substantive issues are determined, it is procedural. Hence, rulings on scheduling matters, discoverability, the order of presentations, sanctions for violation of Board rulings and the like are all procedural. Included in this procedural category, because it relates to the fairness of the way in which substantive issues are decided, are issues related to the completeness and public availability of the record of this proceeding. We come to such issues because of our responsibility to govern the proceeding fairly. Though such issues may be crucial to the parties, they are nevertheless procedural.[1]

## III. STANDING TO DEMAND COMPLIANCE WITH *SUA SPONTE* MEMORANDUM

In conclusion, we call into question whether the memorandum of June 30, 1981, from Samuel J. Chilk to the Chairman of the Atomic Safety and Licensing Board Panel and to others creates any rights whatsoever for private parties. The memorandum directs licensing boards to follow certain procedures when they have raised an issue *sua sponte*. The memorandum states that:

> The Commission made clear that in so requesting, it was not altering in any way the provisions of the Commission's rules

[1] We find *Morton v. Ruiz* at 232, as cited by applicant, to be entirely inapposite. It holds that a legislative rule promulgated by an agency must be published in the Federal Register in order to comply with procedural requirements of the Administrative Procedure Act.

*Chrysler v. Brown*, 1979, 441 U.S. 281, 310-11 is somewhat more relevant. That case deals with the ability of an agency to use its housekeeping authority (5 U.S.C. §301) to enact regulations that are contrary to a criminal statute. It concludes that agencies lack such authority absent express statutory authorization. In that setting, the court ruled that 5 U.S.C. §301 authorized only "procedural rules" which cannot abridge protections of confidentiality included in the criminal code. However, we do not have a similar problem in this proceeding and do not find the court's interpretation of "procedure" in this very specialized context to be helpful to us in this proceeding.

We note that no party has suggested that *Chrysler* invalidates the Commission's rules governing the release of confidential information in the public interest, presumably because the Commission's regulations on the release of confidential information in the public interest are grounded in the Atomic Energy Act and are valid.

regarding the raising and consideration of issues *sua sponte*. Accordingly, the Boards shall continue to make the initial determination of whether a Board question is an exercise of *sua sponte* authority . . . .

We think it clear that the Commission intended that Boards would have the discretion to determine whether to treat an issue as *sua sponte*. It did not anticipate that this very issue would become a source of complication and delay in Commission proceedings. Since all of our decisions on this issue have been delivered to the commissioners, and read by the Appeal Board as well, there is an adequate opportunity for higher authorities to express dissatisfaction with our reasoning. But we do not think the parties have any further right to pursue this matter.

**ORDER**

For all the foregoing reasons and based on consideration of the entire record in this matter, it is this 31st day of March, 1982,

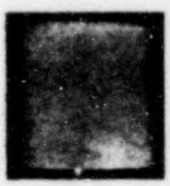
ORDERED

Westinghouse Electric Corporations's March 9, 1982, Motion for Reconsideration of our February 26, 1982, order is denied.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD

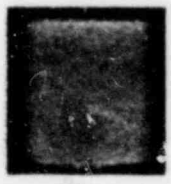
Peter B. Bloch, Chairman
ADMINISTRATIVE JUDGE

Bethesda, Maryland



# Directors' Decisions Under 10 CFR 2.206





UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**OFFICE OF NUCLEAR REACTOR REGULATION**

**Harold R. Denton,** Director

**In the Matter of**

**PETITION REQUESTING "CLOSEDOWN (OF) ALL SUSPECT REACTORS" PENDING RESOLUTION OF ALL PRESSURIZED-THERMAL-SHOCK NON-CONSERVATISMS**

**March 31, 1982**

The Director of Nuclear Reactor Regulation denies a petition under 10 CFR 2.206 which requested that all reactors potentially subject to pressurized thermal shock be shut down until all areas of nonconservatism in the analysis of the pressurized thermal shock issue are resolved.

## TECHNICAL ISSUES DISCUSSED:

The potential role of seismic loads, hydrodynamic loads and vibratory loads in analysis of pressurized thermal shock.

## DIRECTOR'S DECISION UNDER 10 CFR 2.206

By letter dated October 16, 1981, Mr. Marvin I. Lewis petitioned that the U. S. Nuclear Regulatory Commission "close down all suspect reactors, BWRs and PWRs, until and unless all areas of non-conservatism are explored." Mr. Lewis stated that the areas of non-conservatism which must be explored are:

"A. Seismic loads which may have been the prime mover for the transient in question;

B. Hydrodynamic loads, both normal and abnormal to the operation of a transient;

C. Vibratory loads, either associated with hydrodynamic and seismic loads or not;

D. Any other sources of nonconservatism mentioned or *not* mentioned on this page of your ACRS presentation." (This last item refers to Dr. T. Murley's September 11, 1981 presentation to the ACRS, in transcript thereof on page headed, "Potential Sources of Nonconservatism in Analysis.)"

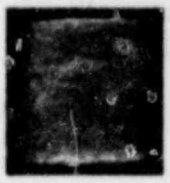
The staff has evaluated the issues raised in the subject petition. For the reasons set forth below, I find there is reasonable assurance that operation of BWRs and PWRs can continue pending resolution of the pressurized thermal shock issue without endangering the health and safety of the public. For this reason the petitioner's request for shutdown of "suspect reactors" is denied.

**Background**

In an earlier paper[1], the staff outlined the technical aspects of the issue of pressurized thermal shock (PTS) and provided the bases for the conclusion that no immediate licensing actions were required for operating reactors. In a later paper[2], the staff further examined the issues and concluded that no new information had come to light that would alter the staff's conclusion that no immediate licensing actions are required for operating reactors.

The above conclusions are partially based upon the fact that PTS events require a precursor event, such as a pipe break or control system failure, plus several additional coincident or subsequent failures that exacerbate pressure and temperature behavior during the event. Plant operating experience and supporting analyses show that, although certain types of precursor events such as control and instrumentation system failures do occur, the combined probability of the occurrence of both the precursor and exacerbating failures that would result in a significant PTS event is sufficiently low to allow continued plant operation in the interim period while the PTS issue is being resolved by ongoing NRC and industry programs. The acceptability of continued plant operation is further supported by fracture mechanics analytical results which show that if one assumes the existence of preexisting cracks and the occurrence of a severe yet realistic transient,* reactor vessel failure would be unlikely even in the most vulnerable plants within the next few years. The general rationale involving a precursor plus other events that make the transient more

[1] SECY-81-286 dated May 4, 1981 to the Commissioners from W. J. Dircks.
[2] SECY-81-286A dated September 8, 1981 to the Commissioners from W. J. Dircks.
* The example used in the analyses was the transient which occurred at Rancho Seco on March 20, 1978.

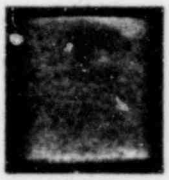


serious or more difficult to recover from is important and relevant to several of the issues raised in the subject letter. The occurrence probability of many exacerbating failures or events was considered in reaching our conclusions, including the occurrence probability of the exacerbating events cited in the subject letter. Mr. Lewis' points are discussed below in the same order as quoted.

A. A PTS event involves superposition of thermal stress loads on pressure loads, or the sequential application of thermal stress loads followed by pressure loads from repressurization. Thermal stress loads do not become significant until several minutes after a reactor shutdown. Therefore a seismic event would have to be severe enough to cause reactor shutdown before it could contribute to a PTS event, and then it would only be the random cause of shutdown (precursor), requiring subsequent exacerbating failures to occur before a significant PTS event could develop. One might postulate that these exacerbating failures could conceivably be caused by the seismic event itself or by a severe aftershock, but the primary coolant system is seismic Class I which means that it is specifically designed to resist failure from a seismic event. The main steam lines are seismic Class I up to and including the main steam isolation valves. Failure in the non-seismic portions of the steam system can be isolated by closing the isolation valve which happens automatically for large breaks. Thus the plant design will prevent seismically-caused exacerbating failures and we view them as very unlikely to occur.

   There is some small possibility that a seismic event may cause multiple control system failures and contribute to operator confusion and error. The reactor control system as distinguished from the reactor protection system is not designed to standards equivalent to seismic Class I. The possibility of contributing failures, however, is being addressed in the Task Action Plans of Unresolved Safety Issues A-46 and A-47, "Seismic Qualification of Equipment in Operating Plants," and "Safety Implications of Control Systems," respectively, and results will be incorporated into PTS regulatory positions as appropriate.

   The critical region for PTS is the vessel beltline. The neutron radiation is greatest there and some of the welds exposed to the neutron radiation have been found to be sensitive in terms of the loss of ductility or toughness (i.e., embrittlement). The primary stresses at the beltline from internal pressure and from



thermal shock during a PTS event will be very much greater than those that would accrue from an SSE* event. Therefore, the latter may be neglected. Because the vessel has a very low natural vibration frequency there will be no significant stresses for seismic-induced resonance. The SSE-induced stresses will be within the uncertainty generally ascribed to the principal PTS stresses. It is reasonable to conclude that seismic events will not contribute significantly to the non-conservatism of PTS analyses.

B. Discussion of hydrodynamic loads as possible sources of non-conservatism in PTS calculations must begin with a qualifying statement. The nuclear industry and the NRC have established a working definition of hydrodynamic loads for purposes of analysis. Strict adherence to that definition would lead to the conclusion that hydrodynamic loads can be discounted in PTS events. The basis for such a conclusion is that this category of loads are of concern only in BWR plants. For example, when coolant is blown into the suppression pool in a Boiling Water Reactor (BWR) as a result of a plant malfunction severe shaking is induced in the supports and is transmitted to the vessel. Strict adherence to the working definition allows the assertion that there will be no hydrodynamic loads on a PWR vessel. Since PTS is of relatively little concern in BWRs it follows that hydrodynamic loads play no role in PTS.

For the sake of completeness, there are some hydraulic sources of loads in PWR plants which should be mentioned although technically they are non *hydrodynamic*. One source of hydraulic loading is the phenomenon of water hammer. The affected PWR systems, however, would be confined to other than the primary loop. Since water hammer would not occur in a PWR primary loop there would be no significant load on the vessel, thus no influence on a PTS transient. A second class of PWR hydraulic loads would occur as a result of a major cold-leg LOCA and the assymetric blowdown forces. The loads, although significant, would be essentially confined to the supports, not the vessel itself. More importantly, the magnitude of the load on the supports would be proportional to the size of the break but a large LOCA would discharge so much coolant that the pressure (or repressurization) would be kept to a low value

*SSE: Safe Shutdown, Earthquake; a design-basis accident.

and, absent the pressure, there would be no PTS event at all. Finally, PWRs may be subjected to pressure spikes during a number of transients. In all cases, the resulting hydraulic loadings are reckoned with by including them in the piping system design both by analysis and pre-operational testing. Such transient-induced hydraulic loads will be too low in magnitude at the vessel beltline to be a factor in PTS analyses.

It is reasonable to conclude that hydrodynamic or hydraulic loads will be insignificant with respect to PTS events.

C. The location of pumps and valves or other sources of mechanical vibration in the system is such that there is negligible probability of significant vibratory loads at the critical time and location as described in item B above. Vibratory loads can be significant with respect to the fatigue life of piping but the duration of a PTS event is too brief for them to influence the outcome. Also, the magnitude of vibratory loads *at the vessel beltline* is so low as to be well within the uncertainty allowances used in calculating pressure and thermal stresses. Thus there is no reason to expect that vibratory loads could contribute significantly to the severity of a PTS event.

D. The NRC staff believes it has duly considered the contribution of all known sources of non-conservatism in reaching our conclusions regarding PTS. We do not believe there are other significant sources of non-conservatism that have not been considered.

Based on the foregoing discussion, I have concluded that acceptable bases exist for continued operation of all PWRs and BWRs pending resolution of the PTS issue. I believe that our previous conclusions and bases for those conclusions are valid in that regard, and that there is reasonable assurance that the health and safety of the public is protected. Therefore, I have determined that the petitioner's request for shutdown of all "suspect" BWRs and PWRs is denied.

A copy of this decision will be placed in the Commission's Public Document Room located at 1717 H Street, N.W., Washington, D. C. 20555. A copy of this decision will be filed with the Office of the Secretary

of the Commission for its review in accordance with 10 CFR 2.206(c) of the Commission's regulations.

FOR THE NUCLEAR
REGULATORY COMMISSION

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland
this 31st day of March 1982.