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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD



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| In the Matter of | ) | |
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| CAROLINA POWER AND LIGHT COMPANY AND | ) | |
| NORTH CAROLINA EASTERN MUNICIPAL | ) | Docket Nos. 50-400 OL |
| POWER AGENCY | ) | 50-401 OL |
| | ) | |
| (Shearon Harris Nuclear Power Plant, | ) | |
| Units 1 and 2) | ) | |

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# NRC STAFF BRIEF IN REPLY TO THE APPEAL OF JOINT INTERVENORS AND WELLS EDDLEMAN OF THE LICENSING BOARD'S PARTIAL INITIAL DECISION ON ENVIRONMENTAL MATTERS

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Janice E. Moore
Counsel for NRC Staff

Charles A. Barth
Counsel for NRC Staff

May 24, 1985



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# NRC STAFF BRIEF IN REPLY TO THE APPEAL OF JOINT INTERVENORS AND WELLS EDDLEMAN OF THE LICENSING BOARD'S PARTIAL INITIAL DECISION ON ENVIRONMENTAL MATTERS

## I. INTRODUCTION

On March 5, 1985, Joint Intervenors and Wells Eddleman filed a Notice of Appeal in this Operating License Proceeding. They registered their intention to appeal the Partial Initial Decision of the Atomic Safety and Licensing Board (Licensing Board) on Environmental Matters, issued on February 20, 1985. The appellate brief of the Joint Intervenors and Wells Eddleman was filed on April 9, 1985, pursuant to the grant by the Appeal Board of Joint Intervenors' request for an extension of time. "Appeal From Partial Initial Decision on Environmental Contentions" [hereinafter Brief]. For the reasons set forth below, the Licensing Board's decision on all matters which are the subject of the appeal should be affirmed.

## II. STATEMENT OF THE CASE

On January 27, 1982, a "Notice of Receipt of Application for Facility Operating Licenses; Availability of Applicants' Environmental Report; Consideration of Issuance of Facility Operating Licenses; and Opportunity for a Hearing" was published for the Shearon Harris facility in the Federal Register. 47 Fed. Reg. 3898 (January 27, 1982). A Licensing Board was established to conduct the proceeding. "Establishment of Atomic Safety and Licensing Board to Preside in Proceeding" 47 Fed. Reg. 8705 (March 1, 1982).

The Licensing Board received nine petitions for leave to intervene from individuals and organizations. 1/ Seven petitioners were granted standing, and six of those with standing were found to have proposed at least one good contention. LBP-82-119A, 16 NRC at 2070. 2/ The

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1/ The nine petitioners were:

Citizens Against Nuclear Power (CANP), Conservation Council of North Carolina (CCNC), Chapel Hill Anti-Nuclear Group Effort (CHANGE), Mr. Wells Eddleman, Environmental Law Project (ELP), Kudzu Alliance (Kudzu), the Mayor's Task Force to Assess the Effect of the Shearon Harris Nuclear Power Plant on Chapel Hill (MTF), Mr. Daniel Read, and Dr. Richard Wilson. Change and ELP sought and were granted consolidation. Mr. Read also withdrew his petition, and permitted his interests to be represented by CHANGE. MTF ceased to pursue its petition. Instead MTF's Chairman, Dr. Phyllis Lotchin, sought to intervene as an individual. Carolina Power and Light Company and North Carolina Eastern Municipal Power Agency (Shearon Harris Nuclear Power Plant Units 1 and 2), LBP-82-119A, 16 NRC 2069, 2070 (1982).

2/ Ruling on the party status of Dr. Lotchin was deferred, since her proposed contentions related to emergency planning. The emergency plans for the Harris facility were not submitted at the time the contentions were proposed, and rulings on such contentions were deferred. Id.

Intervenors filed over 300 contentions. Id. at 2074. Several of the Intervenors proposed one "Joint Contention" for purposes of litigation in the environmental area. Id. at 2076. This contention was admitted by the Licensing Board. Id. Following a second prehearing conference, the Licensing Board listed those admitted contentions which were classified as environmental contentions. "Memorandum and Order (Reflecting Decisions Made Following Second Prehearing Conference)" at 6, (March 10, 1983). 3/

After issuance of the Staff's Draft Environmental Impact Statement (DEIS), Mr. Eddleman availed himself of an opportunity to propose contentions relating to that document. "Wells Eddleman's Response to Staff DEIS" (June 20, 1983). Three of these additional contentions were admitted by the Licensing Board. "Memorandum and Order (Ruling on Wells Eddleman's Contentions on the Staff's Draft Environmental Statement)" (August 18, 1983). 4/

Several of Mr. Eddleman's original contentions related to the economic cost estimates contained in Applicants' environmental report. These contentions were admitted by the Licensing Board. LBP-82-119A, supra, 16 NRC 2069, 2092-2094. CHANGE also filed a similar contention, a portion of which was admitted by the Licensing Board. Id. at 2086.

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3/ The Contentions designated as environmental contentions were:

Joint Contention II; CCNC 4, 12 and 14; CHANGE 9 and 79(c); Wilson Ia-d, I(e)-(f4), I(g), and IVC; Eddleman 15, 22A & B, 29 & 30, 37B, 75, 80, 83 and 84.

4/ These contentions were: Contention 8F(1), Contention 8F(2), and Contention 15AA.

After further pleadings by the parties, these contentions were rejected by the Board as barred by 10 C.F.R. § 51.53(c) of the Commissions regulations. 5/ Carolina Power and Light Company and North Carolina Eastern Municipal Power Agency (Shearon Harris Nuclear Power Plant, Units 1 and 2), LBP-83-27A, 17 NRC 971 (1983). This section of the regulations precludes the litigation of need-for-power and alternative energy issues at the operating license stage, absent a showing of special circumstances pursuant to 10 C.F.R. § 2.758. Id. The Licensing Board's dismissal of these contentions is one of the issues raised by Intervenors on appeal.

Mr. Eddleman filed a petition for waiver of the need-for-power rule. Pursuant to § 2.758 in June 1983. "Petition Under 10 CFR 2.758 Re Alternatives and Need for Power Rule" (June 30, 1983). The Licensing Board denied that petition and supported that denial in its Partial Initial Decision. Carolina Power and Light Company and North Carolina Eastern Municipal Power Agency (Shearon Harris Nuclear Power Plant, Units 1 and 2) LBP-84-29B 20 NRC 389, 424 (1984); Carolina Power and Light Company and North Carolina Municipal Power Agency (Shearon Harris Nuclear Power Plant, Units 1 and 2) LBP-85-5, 21 NRC --- (February 20, 1985) slip op at 50-58. The denial is one of the subjects of Mr. Eddleman's appeal of the Licensing Board's decision.

Applicants moved for summary disposition of all of the environmental contentions. After the Licensing Board's rulings on these motions, three

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5/ Part 51 of the Commission's regulations was revised in its entirety effective June 7, 1984. The appropriate section is now 10 C.F.R. § 51.106(c).

contentions remained as issues for litigation. They were: Eddleman Contention 8F(1) concerning the health effects of the coal particulates emitted during the uranium fuel cycle, Joint Contention II(c) concerning the appropriate period over which the health effects of normal operation should be estimated, and Joint Contention II(e) concerning the effect on the Staff's and Applicants' dose estimates of the attachment of radionuclides to coal ash.

Hearings were held on these remaining contentions on June 14, 15, 18 and 19, 1984. The Applicants and Staff presented witnesses on all contentions. Intervenors did not present any direct evidence on the contentions. Proposed findings on the environmental contentions were filed by all parties simultaneously. 6/ All parties were also given an opportunity to file reply findings. The Applicants and the Staff took advantage of this opportunity. 7/

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6/ "Applicants' Proposed Findings of Fact and Conclusions of Law on Environmental Matters" (July 20, 1984);

"Wells Eddleman's Proposed Findings and Conclusions Concerning Contention 8F1 (Coal Particulates)" (July 20, 1984);

"Joint Intervenors' Findings of Fact on Joint Contentions II(e) and II(c)" (July 24, 1984);

"NRC Staff Proposed Findings of Fact and Conclusions of Law Regarding Eddleman Contention 8F(1), Joint Contention II(c), and Joint Contention II(e)" (July 20, 1984).

7/ "Applicants' Proposed Findings of Fact In Reply to the Proposed Findings of Fact and Conclusions of Law Submitted by Wells Eddleman on Contention 8F(1) and by the Joint Intervenors on Joint Contentions II(E) and (C)" (August 6, 1984);

"NRC Staff Reply Findings Concerning Eddleman Contention 8F(1), Joint Contention II(e) and Joint Contention II(c)" (August 6, 1984).

Based on the record of this proceeding, on February 20, 1985, the Licensing Board issued the Partial Initial Decision which has given rise to the instant appeal. That Decision resolved all of the pending environmental issues in favor of the Applicants and the Staff. The Licensing Board's rulings with respect to each of these environmental contentions are being appealed by Intervenors. For the reasons set forth below, the Licensing Board's decision on these matters should be affirmed.In addition, all of the previous Licensing Board rulings which are the subject of this appeal should also be affirmed.

## III. QUESTIONS PRESENTED

Intervenors' appeal presents the following questions for resolution by the Appeal Board:

> Whether the Licensing Board properly confined its partial initial decision on environmental matters to those matters placed in controversy;
>
> Whether the Licensing Board properly resolved the environmental issues in controversy in favor of the Applicants and the Staff;
>
> Whether the Licensing Board properly rejected of certain of Intervenors' contentions;
>
> Whether the Licensing Board properly denied Intervenor Eddleman's 2.758 petition.

## IV. STANDARDS FOR REVIEW

Intervenors have stated that the appropriate standard of review of the Licensing Board's decision is that used by courts in reviewing agency decisions. Brief at 8-9. Such a standard is not the one used by Appeal Boards in reviewing Licensing Board decisions. The standards actually

used are less stringent than those described by Intervenors, as are discussed below.

The Appeal Board has previously articulated what it expects to find in an initial decision rendered by a Licensing Board. According to the Appeal Board, a Licensing Board has the general duty to ensure that its decisions contain a sufficient explanation of any ruling on a contested issue of law or fact to enable the parties and the Appeal Board designated to review that decision to readily understand the basis for the ruling. Northern States Power Company (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-104, 6 AEC 179 n.2 (1973). If resort is necessary to technical language not readily comprehensible to a layman, the Appeal Board has found it to be the obligation of the writer of the opinion in question to clearly state the significance of what is being said in the report in terms of what is being decided. Arizona Public Service Company (Palo Verde Nuclear Generating Station Units 1, 2 and 3), ALAB-336, 4 NRC 3, 5 (1976). The Licensing Board must articulate in reasonable detail the basis for the course of action it has chosen to take. Public Service Company of New Hampshire (Seabrook Station Units 1 and 2), ALAB-422, 6 NRC 33, 41 (1977). The Appeal Board has held that this obligation is satisfied if a decision sufficiently informs the parties of the disposition of their contentions. Id.

The Appeal Board has also discussed the weight to be given to Licensing Board's findings. For example, the Appeal Board has noted its reluctance to overturn Licensing Board Findings with respect to the triviality or significance of a particular environmental impact, since the Appeal Board believed that such a determination must be an exercise

of judgment based on the ". . . sum total of the facts of record in the particular case." See, Pugit Sound Power and Light Company, (Skagit Nuclear Power Project Units 1 and 2), ALAB-446, 6 NRC 870, 871 n.3 (1977). Although Skagit concerns the environmental impacts of a particular pre-LWA activity, the same reluctance on the part of the Appeal Board would be justified for a Licensing Board's determination of the significance of any environmental impact. The Appeal Board has recognized that it is not free to disregard the fact that Licensing Boards are the Commission's primary fact-finding tribunals. Northern Indiana Public Service Company, (Bailly Generating Station Nuclear 1), ALAB-303, 2 NRC 858, 867 (1975). However, generally, the Appeal Board has the right to modify or reject the findings of a Licensing Board if, after giving the Licensing Board's decision the probative force it intrinsically deserves, the Appeal Board is convinced that the record compels a different result. Niagara Mohawk Power Corpo ation (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347, 357 (1975). The Appeal Board has noted that it would not exercise its authority to reject or modify a Licensing Board's findings lightly. Id.

In the instant proceeding, the Licensing Board's partial initial decision on environmental matters clearly sets forth the bases for each of the Licensing Board's findings. The Licensing Board has explicitly taken account of the Intervenors' positions taken at hearing and in their proposed findings, and has explained why the Intervenors' positions have not been adopted. The same is true for the Licensing Board's earlier rulings concerning the admission of contentions, and the denial of Mr. Eddleman's 2.758 Petition. The record of this proceeding provides

ample support for the Licensing Board's ruling in this case. Therefore, as discussed below, the Licensing Board's decisions should be upheld on all of the issues raised by Intervenors on appeal.

## V. ARGUMENT

### A. The Licensing Board did not err in confining its partial initial decision on environmental matters to the matters in controversy in the proceeding

Intervenors' first general argument appears to be that the Licensing Board erred in limiting its partial initial decision only to environmental matters in controversy in the proceeding. This complaint of error must be rejected on two grounds.

The first ground for rejecting Intervenors' argument is that it actually constitutes an attack upon the Commission's regulations rather than an attack on the Licensing Board's decision. As stated in 10 C.F.R. Section 2.760a of the Commission's regulations:

> In any initial decision in a contested proceeding on an application for an operating licensing for a production or utilization facility, the presiding officer shall make findings of fact and conclusions of law on the matters put into controversy by the parties to the proceeding and on matters which have been determined to be the issues in the proceeding by the Commission or the presiding officer. Matters not put into controversy by the parties will be examined and decided by the presiding officer only where he or she determines that a serious safety, environmental, or common defense and security matter exists. . .

Intervenors appear to have misunderstood the difference in the Licensing Board's responsibility between a construction permit proceeding and an

operating license proceeding. 8/ Intervenors have not provided any citations to either the record of this proceeding or to Commission precedent to support their position. Indeed, they cannot. Therefore, this claim of error should be rejected, and the Licensing Board's limitation of its decision only to those environmental matters placed in controversy should be upheld. See, 10 C.F.R. § 51.104(a).

In addition, no questions concerning the Licensing Board's obligations under NEPA to review the entire FES for the operating license were ever raised before the Licensing Board. It is well settled that an Appeal Board will not ordinarily entertain an issue raised for the first time on appeal. Tennessee Valley Authority (Hartsville Nuclear Plant, Units 1A, 2A, 1B and 2B), ALAB-463, 7 NRC 341, 348 (1978). The Appeal Board's disinclination to entertain such an issue is particularly strong where the issue could have been put before the Licensing Board in a timely fashion. Puerto Rico Electric Power Authority (North Coast Nuclear Power Plant, Unit 1), ALAB-648, 14 NRC 34 (1981). Since Intervenors did not raise this issue before the Licensing Board either at hearing or in proposed findings, their complaint of error must be rejected.

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8/ Applicants have described the differences between a CP and OL proceeding, and the Staff agrees with the distinctions described by Applicants. "Applicants' Brief In Reply To Intervenors' Appeal From The Partial Initial Decision On Environmental Contentions" at 6-10 (May 9, 1985).

B. The Licensing Board Did Not Err in Resolving The Environmental Issues in Controversy in Favor of the Applicants and the Staff

1. The Licensing Board Did Not Err in Resolving Joint Contention II(e) in Favor of the Applicants and the Staff

Joint Contention II(e) as litigated in this proceeding states:

> The longterm somatic and genetic health effects of radiation released from the facility during normal operations, even where such releases are within existing guidelines, have been seriously underestimated for the following reasons: (e) The radionuclide concentration models used by Applicants and the NRC are inadequate because they underestimate or exclude the following means of concentrating radionuclides in the environment . . . radionuclides absorbed in or attached to fly ash from coal plants which are in the air around the SHNPP site. . . .

As the Licensing Board pointed out, testimony on this contention was presented by the Applicants and Staff experts. 9/ PID at 21 ¶ 2. Intervenors presented no expert witnesses.

Intervenors' argument on appeal has two prongs. First they argue that the Licensing Board's decision on this contention lacks sufficient foundation in the record. Next they argue that many of the assumptions in the Applicants' dose estimates were found deficient. Brief at 10-11. Intervenors' argument ignores the full description of the evidence presented by the Applicants and the Staff contained in the Licensing Board's decision. PID at 21-31.

As the Staff testified, the primary pathway of potential concern in resolving this contention is exposure of an individual to radioiodines

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9/ "NRC Staff Testimony of Edward F. Branagan, Jr. on Joint Contention II(e)" ff. Tr. 1865 [hereinafter Branagan, ff. Tr. 1865]; "Applicants' Testimony of John J. Mauro and Steven A. Schaffer on Joint Contention II(e) (Fly ash)" ff. Tr. 1605 [hereinafter Mauro-Schaffer, ff. Tr. 1605].

and particulates through inhalation. Branagan, ff. Tr. 1865 at 2-3. The dose conversion factors used by both the Applicants and the Staff to estimate doses from inhalation of iodines and particulates were taken from Regulatory Guide 1.109. Id. at 3-4; Mauro-Schaffer, ff. Tr. 1605 at 5. The equations for calculating internal dose conversion factors were derived from those given in ICRP Publication 2 "Report of ICRP Committee II On Permissible Dose For Internal Radiation." This committee assumed that 75 percent of the particles that were inhaled would be deposited in the respiratory tract. Branagan, ff. Tr. 1865 at 4. Applicants demonstrated through references to actual experimental studies that this deposition rate is conservative. Mauro-Schaffer, ff. Tr. 1605 at 8; PID at 26, ¶ 11.

The Licensing Board pointed out that the Staff in its analysis of the effect of the attachment of radionuclides to coal fly ash on their dose estimates assumed that 100 percent of airborne particulates were deposited in the respiratory tract. Branagan, ff. Tr. 1865 at 4; PID at 28, ¶ 15. The Staff testified that even with 100 percent deposition, the dose estimates in the FES would only increase by a factor of 1/3. Branagan, ff. Tr. 1865 at 4; PID at 28, ¶ 15. This would mean an increase from 0.2 millirem to 0.3 millirem, in the dose to the thyroid of the maximally exposed individual from inhalation of iodines and particulates. The dose to the maximally exposed organ would increase from 4.6 mrems/year to 4.7 mrems/year. Branagan, ff. Tr. 1865 at 4-5; PID at 28, ¶ 15.

The Licensing Board carefully considered all of the issues raised by Joint Intervenors during cross-examination. PID at 22-23, 26-27, ¶¶ 4,

5, 6, 12 and 13. They determined that these issues resulted in insignificant changes to the Staff's and Applicants' dose estimates. Id. at 29-30, ¶¶ 17-18. As the Licensing Board Pointed out, even if all of the particulates and iodines, no matter by what mechanism they are attached to coal fly ash, are deposited in the lung, the dose would only increase by one-tenth of a millirem. The Licensing Board found the range of uncertainty bounding the issues raised by Intervenors to be on the order of one tenth of one millirem per year. The Licensing Board found this range of uncertainty to be acceptably small. Id. They reached this conclusion by comparing this potential increase with the dose limit of 500 millirem contained in 10 C.F.R. § 20.105 and the dose design objective of 15 millirems per year in 10 C.F.R. Part 50, Appendix I, Section IIC. Id. at 30, ¶ 18.

Intervenors do not point to anything in the record which would support their position that the facts with which the Licensing Board and Intervenors were in agreement should lead to a different conclusion than that reached by the Licensing Board. Indeed they cannot, for the record amply supports the Licensing Board's conclusions. Intervenors questioned Applicants' witnesses at length as to whether it would make a difference, for example, whether the radionuclides were absorbed into or adsorbed onto the coal fly ash in the results of their analysis. Applicants' witnesses testified that it would not make a difference in their analysis of the behavior of the radionuclides. Mauro, Tr. 1611-1613. See, Schaffer, Tr. 1664. Applicants witnesses testified that their lung dosimetry model is transparent to the method of attachment of the radionuclides to coal fly ash. Mauro, Tr. 1666-1667.

Intervenors also claim on appeal that the Licensing Board needed to know the exact concentration and particle size distribution of coal particles in the vicinity of the Harris plant in order to make its decision. Brief at 10-11. The record demonstrates that the exact concentration and particle size distribution around Harris would not adversely effect Applicants' dose estimates. This is because Applicants chose for their particle concentrations and size distributions a Northeastern Industrial City, rather than the rural area surrounding Harris. It is Applicants' witnesses' opinion that this choice renders their dose estimates conservative. Shaefer, Tr. 1731.

Intervenors failed to demonstrate on this record that knowledge of the mechanism of attachment of radionuclides to the coal fly ash, the exact deposition rate in the lung, or the exact particle size and distribution around Harris would significantly affect the dose estimates produced by the Applicants and the Staff. Intervenors did not elicit any evidence to show that the Applicants' and Staff's assessments of the effect of the attachment of radionuclides to coal fly ash were incorrect. They did not contradict either the Applicants' or Staff's testimony on this matter. Therefore, the Licensing Board's conclusion is supported by uncontradicted, reliable, substantial and probative evidence, and the decision on this contention should be upheld.

Intervenors' claims concerning deficiencies in the assumptions used in Applicants' analysis reflects a misunderstanding of the Licensing Board's ruling. The Licensing Board never agreed with Intervenors that the assumptions used by the Applicants in their analysis were deficient. Rather, they agreed that Applicants had not estimated the exact

deposition rate because it varied with the manner of breathing. They also agreed that Applicants had not predicted the exact particle size distribution around Harris, or the exact degree of attachment of particles to coal fly ash. The Licensing Board went on to find, however, that it was not necessary to establish these particular facts to determine the effect of the attachment of radionuclides to coal fly ash on dose estimates. PID at 30. There is nothing in the record to support Intervenors' apparent claim that Applicants' analysis is deficient, or to support their claim that without the particular facts discussed above, the Licensing Board could not make a decision with regard to this contention.

Finally, Intervenors assert that the Staff has failed in a material way "to fairly and directly assess the impacts of radionuclides when they are attached to particulates." Brief at 11. Intervenors further assert that Applicants' testimony only contributes to the uncertainty of the potential impacts. Id. Intervenors provide no citations to the record to support these assertions, and as the Licensing Board's decision clearly points out, they are unfounded. Intervenors appear to believe that their citation to ALAB-479 applies here. However, they do not demonstrate its applicability. 10/ Since both the Staff and Applicants have performed analyses which demonstrate in a manner which is uncontradicted that the effect of the attachment of radionuclides to coal fly ash is insignificant, that case has no applicability to the situation

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10/ Boston Edison Company, et al. (Pilgrim Nuclear Generating Station, Unit 2) ALAB-479, 7 NRC 774 (1978)

before the Appeal Board. For all of the reasons set forth above, the Licensing Board's decision concerning Joint Contention II(e) should be upheld.

2. The Licensing Board Did Not Err in Resolving the Issue Raised by Joint Contention II(c) in Favor of the Applicants and the Staff

As admitted for litigation by the Licensing Board, Joint Contention II(c) states:

> II. The longterm somatic and genetic health effects of radiation released from the facility during normal operations, even where such releases are within existing guidelines, have been seriously underestimated for the following reasons: (c) The work of Gofman and Caldicott shows that the NRC has erroneously estimated the health effects of low-level radiation by examining effects over an arbitrarily short period of time compared to the length of time the radionuclides actually will be causing health and genetic damage.

Applicants and the Staff presented testimony on this issue. 11/ Intervenors did not present any direct evidence on the contention.

In ruling on Applicants' motion for summary disposition of this portion of Joint Contention II, the Licensing Board barred litigation of the question of effects of routine releases over millions of years into the future as speculative. 12/ However, the Board did permit litigation of the issues of whether the Staff should present estimates of life of

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11/ "Applicants' Testimony of John J. Mauro and Stephen F. Marschke on Joint Contention II(c) (radiological dose calculations)" ff. Tr. 1971 [hereinafter Mauro-Marschke, ff. Tr. 1971]; "NRC Staff Testimony of Edward F. Branagan, Jr. on Joint Contention II(c)" ff. Tr. 2058 [hereinafter Branagan, ff. Tr. 2058].

12/ Carolina Power and Licensing Company and North Eastern Municipal Power Agency (Shearon Harris Nuclear Power Plant, Units 1 and 2), LBP-84-7, 19 NRC 432, 458 (1984).

the plant risk in the FES, and whether the annual risk approach takes into account the incremental risk to people who live near the facility for many years. Id. at 457-458.

In its Partial Initial Decision the Licensing Board found that the Staff's annualized results, while not explicitly presenting the dose over the life of the plant, only requires a simple calculation to reveal such a dose, and thus are adequate for the purpose for which they were intended. PID at 6. The Licensing Board also specifically found that the effects which intervenors contended should be considered in the FES were shown by the record to be insignificant. Id. These findings are amply supported by the record of this proceeding.

Intervenors argue on appeal that the Licensing Board erred in making its findings despite what Intervenors claim are deficiencies in the Staff's analysis. Brief at 11. This claim ignores the evidence in the record of this proceeding, as summarized by the Licensing Board in its decision. PID at 13-20. Therefore, Intervenors' claim is without merit and the Licensing Board's decision on this matter should be upheld.

Intervenors claim that the Board recognized as a deficiency in the Staff's analysis the estimation of risk on an annual basis. Brief at 11. The Licensing Board did not find it to be a deficiency that the Staff estimated health risks on an annual basis. PID at 20, ¶ 19. In fact, the Licensing Board found that for all practical purposes, the use of annual risk estimates is adequate to describe the risks associated with the facility. Id.

As the Licensing Board noted, both the Applicants and the Staff calculated the risks of forty years of plant operation, and compared them to the background risks afforded over the same period of time. PID at

16, ¶ 7; Mauro-Marshke, ff. Tr. 1971 at 8-9; Branagan, ff. Tr. 2058 at 7-8. To do this the Staff estimated the whole body dose to the maximally exposed individual based on the Staff witnesses judgment as to what estimate would represent plant operation over such a time period, and multiplied that estimate by 40. The Staff also multiplied the estimates of doses from background radiation given in the FES by 40. Branagan, ff. Tr. 2058 at 5-6, 8; Branagan, Tr. 2138-2140.

Applicants performed a more detailed analysis. They computed the dose to the maximally exposed individual by calculating age-specific doses. These dose estimates were then multiplied by the time periods the individual remained in each age group during plant operation. The resulting doses were summed over the life of the plant. Mauro-Marshke, ff. Tr. 1971 at 12-13; PID at 16, ¶ 8. The Applicants also calculated a residual dose for 100 years after the cessation of plant operation and arrived at an estimate of 8 person rem to the population within 50 miles of the plant. Mauro-Marshke, ff. Tr. 1971 at 6; PID at 14-15, ¶ 5. In calculating the dose to the maximally exposed individual, Applicants added the residual dose that this individual would receive between the ages of 41 and 70. Applicants determined that the maximally exposed individual would receive a dose of 130 millirem over the life of the plant. Mauro-Marshke, ff. Tr. 1971 at 12-13; PID at 16, ¶ 8.

Using the methodology set forth in BEIR I, including age-specific cancer risk coefficients, Applicants then estimated the cancer risk to both the population within 50 miles of the plant and to the U.S. population from 40 years of operation of the Harris facility. In both instances it was determined that plant operation over 40 years would

result in less than one cancer fatality. Mauro-Marshke, ff. Tr. 1971 at 8; PID at 16, ¶ 7. The Applicants' and Staff's estimates of life of the plant risk to the maximally exposed individual were consistent even though different analyses were performed. PID at 16-17, ¶ 10, 19-20, ¶ 18. Based on the above, the Licensing Board found that the annual risk and benefit estimates used by the Staff in its FES were not misleading. PID at 20, ¶ 19. The Licensing Board's decision on this aspect of the contention is amply supported by the record and should be upheld.

The second deficiency alleged by Intervenors, without citation to the record to support their position, is that the Staff's analysis fails to estimate the effects of plant operation over many years on people living near the plant. Brief at 12. In its decision the Licensing Board specifically found that it was satisfied by Applicants' and the Staff's testimony on this issue. The Licensing Board found that the calculations of the dose to the maximally exposed individual and to the population within 50 miles of the plant over the plant's life satisfied their request for information as to the effects on people who live near the plant for many years. PID at 17, ¶ 12. The Licensing Board's findings on this issue are amply supported by the evidence in the record of this proceeding and should be upheld.

Intervenors characterization of the failure to consider effects after the cessation of operation as a deficiency which would render the Licensing Board's findings inadequate is not supported by the record. As the Intervenors pointed out, the Applicants calculated such a residual dose for 100 years after the cessation of operation. What Intervenors failed to point out is that such calculations were performed for both the

population within 50 miles of the plant, and for the U.S. population as a whole. This residual dose was also included in the dose to the maximally exposed individual, as discussed above. Applicants determined that the residual dose to the population within 50 miles of the plant is 1.3 percent of the dose to that population from 40 years of plant operation. Mauro-Marshke, ff. Tr. 1971 at 6; PID at 14-15, ¶ 5. The 40 percent figure quoted by Intervenors is the percentage of the dose to the entire population of the U.S. for 40 years of plant operation attributable to the residual dose. Mauro-Marshke, ff. Tr. 1971 at Attachments 3 and 4; PID at 15, ¶ 6. Applicants went on to state, however, that the average individual dose to a member of the U.S. population from 40 years of operation of Harris is $7 \times 10^{-6}$ rems and the associated risk to that member of the population is $1 \times 10^{-9}$. PID at 15. As the Licensing Board pointed out, adding 40 percent of a very small number to a very small number, particularly in light of the unknowns in these analyses, does not constitute a significant change in dose estimates. PID at 15, ¶ 6. Intervenors have not demonstrated why this conclusion is not a valid one. Therefore, the Licensing Board's view of this issue is supported by the record and should be upheld.

Intervenors next claim that neither the Staff nor Applicants analyzed the effects of plant operation on fetuses from conception to birth, although the risk to the fetus is five times greater than to an adult. Brief at 12. Intervenors argue that this omission means that the Licensing Board's finding is unsupportable. However, Intervenors ignore the evidence in the record on this matter as summarized by the Licensing Board. PID at 17-18, ¶ 13. As the Board pointed out, on

cross-examination Applicants stated that they had not considered this effect in their analysis, but further analysis had shown that such a consideration would have little effect on their final conclusions. Applicants' witnesses testified that, although the risk to a fetus is five times greater than that to an adult, it occurs only for nine months out of an assumed 70 year life-span. Applicants testified that the addition of this risk would not have a significant effect on the sum of the risks over all age groups. Maruo Tr. 1978, 1982. Intervenors did not challenge this conclusion successfully either by direct evidence or during cross-examination. The Licensing Board agreed with Applicants' conclusion, and this agreement is supported by evidence in the record. Therefore, the Licensing Board should be upheld in this finding.

Finally Intervenors argue that neither the Staff nor the Applicants "fully considered the effects of fetal losses, genetic effects, birth defects, etc. occasioned by radioactive plant effluents." Brief at 12. This argument is somewhat vague, and fails to take account of the record as summarized by the Licensing Board. As the Licensing Board pointed out, the Staff did in fact calculate the genetic effects over a period of 40 years, using genetic risk estimators recommended by BEIR I. As the Staff testified, these estimators were recommended based on all genetic effects that would cause some serious handicap during an individual's lifetime. The Staff's calculation resulted in 0.16 of a potential genetic disorder that may occur over all future generations of the exposed population due to exposure for the plant's operating life, as compared with the normally occurring statistical value of 11 percent in each generation of the population of 1.75 million persons. Branagan, ff.

Tr. 2058 at 9; Branagan, Tr. 2135; PID at 18, ¶ 15. Intervenors did not present or elicit any evidence which would provide the Licensing Board with a basis for finding this estimate inadequate, nor do they cite to any such evidence in their brief. It is incumbent upon them to do so, rather then to make broad general assertions. 10 C.F.R. § 2.762(d)(1). Therefore, the Licensing Board's finding on this issue is supported by the record and should be upheld.

Since the Licensing Board has articulated its findings and the bases therefor, and these findings are supported by the record of the proceeding, the Licensing Board's decision should be upheld.

3. The Licensing Board Did Not Err in Resolving The Issues Raised by Eddleman Contention 8F(1) in Favor of the Applicants and the Staff

Eddleman Contention 8F(1) as admitted for litigation by the Licensing Board states:

> 8F. Appendix C of the DEIS underestimates the environmental impact of the effluents in Table S-3 for the following reasons: (1) health effects of the coal particulates 1,154 MT per year, are not analyzed nor given sufficient weight.

The Licensing Board found that the Staff correctly concluded in the FES that there are minuscule incremental environmental impacts from Table S-3 particulate emissions. PID at 46-47, ¶ 30. This finding was based on the testimony of Dr. Leonard Hamilton for Applicants, [13/] and on the

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13/ "Applicants' Testimony of Leonard D. Hamilton on Wells Eddleman's Contention 8F(1) (Table S-3 coal particulates)" ff. Tr. 1178 [hereinafter Hamilton, ff. Tr. 1178].

testimony of Staff witnesses Dr. Loren J. Habegger, Dr. A. Haluk Ozkaynak and Mr. Ronald L. Ballard. 14/ The expertise of these witnesses was not challenged by Intervenors, and the record demonstrates that all of the witnesses are eminently qualified experts in their respective fields.

Intervenors claim as error that the Licensing Board limited its consideration of the effects of particulate emissions to within 50 miles of the plant, and that the Licensing Board failed to weigh whatever deaths did occur outside of the 50 mile area against the benefit of the electricity which Harris would produce. Brief at 13. In support of this argument Intervenor states that even if environmental effects are small, they must be considered. They also claim that no matter how small they are, these effects must be weighed in the cost-benefit analysis. Brief at 16-18.

Intervenors' claim misinterprets the scope of the environmental analysis which must be performed and set forth in an environmental impact statement prepared pursuant to NEPA and the Commission's regulations in 10 C.F.R. Part 51. The scope of such environmental analyses has been specifically discussed by the courts. An Environmental Impact Statement is required to consider the significant aspects of the probable environmental consequences of a proposed action.

Trout Unlimited v. Morton, 509 F.2d 1276, 1283 (C.A. 9, 1975); Life of the Land v. Brinegar, 485 F.2d 460, 472 (9th Cir. 1973, cert.

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14/ "NRC Staff Testimony of Dr. Loren J. Habegger, Dr. A. Haluk Ozkaynak and Mr. Ronald L. Ballard regarding Eddleman Contention 8F(1) (health effects of coal particulates at the Table S-3 level)" ff. Tr. 1380 [hereinafter Habegger, et al., ff. Tr. 1380].

denied, 416 U.S. 961 (1974). See, Public Service Electric and Gas Company, Atlantic City Electric Company, (Hope Creek Generating Station, Units 1 and 2), ALAB-518, 9 NRC 14, 38-39 (1979). As Trout stated, judgment of the contents of an EIS is subject to a rule of reason. The central focus of the analysis should be on those impacts which have a significant impact on the environment. Id. at 1284. This interpretation has been carried into the recent amendment to Part 51 implementing NEPA. These regulations provide for the elimination from detailed study those issues peripheral to the proposed action, or which are not significant. 10 C.F.R. Section 51.29(a). Intervenors cite the case of Calvert Cliffs Coordinating Committee Inc. et al. v. United States Atomic Energy Commission, 449 F.2d 1109 (D.C. Cir. 1971) in support of their position that even insignificant environmental impacts must be considered in detail. This case does not make such a statement. In fact, a reading of the case demonstrates that in its concern for revision of the Commission's rules to assure that NEPA reviews were carried out promptly, the Court raised its concern that significant environmental damage must be avoided. Calvert Cliffs, supra at 1129. Therefore, the cited case does not stand for the proposition that the Staff's FES must consider all environmental impacts, no matter how small, in detail.

The Licensing Board clearly set forth its rationale for limiting its consideration of the health effects of coal particulates emitted during the uranium fuel cycle to areas within 50 miles of those coal-fired plants which might provide power to the gaseous diffusion plants engaged in the uranium enrichment process. It is these plants which use the largest amount of electricity in the uranium fuel cycle. PID at 48, ¶

32; Habeggar et al., ff. Tr. 1380 at 4-6, 15; Hamilton, ff. Tr. 1178 at 3-4. The Licensing Board found that the 50 mile area around these coal plants is the area most affected by particulate emissions. Therefore, they concluded that the analysis of these areas amounts to a worst-case analysis. PID at 48, ¶ 32. The Licensing Board went on to note that even in these areas, the health effects of the coal particulate emissions are very small. Id. These Licensing Board findings are supported by the evidence of record in this proceeding.

In support of his argument that one must consider the effects beyond 50 miles, Mr. Eddleman cites Staff testimony that particles do not stop at 50 miles. Brief at 13. However, the Staff went on to testify that their model shows the effects of coal particulates at the outer bounds of the 50 mile radius to be, if not completely negligible, then very nearly so. Therefore, the Staff concluded that they would certainly be negligible beyond a 50 mile radius. Habeggar, Tr. 1571-1572. The Staff specifically decided not to continue the analysis beyond 50 miles due to the insignificant concentrations estimated at the outer boundary of the 50-mile radius, and to the large uncertainties in modeling such long range predictions. Habeggar, Tr. 1569; Habeggar et. al., ff. Tr. 1380 at 15. Therefore, while Intervenors may be correct that coal particles can travel beyond a 50-mile radius of a coal plant, they have not demonstrated that the concentrations beyond 50 miles would result in a significant number of health effects. Therefore, the Licensing Board's limitation of consideration of the health effects of coal particulates to within a 50 miles radius of specific coal plants is based on reliable, substantial and probative evidence in the record and should be upheld.

The Licensing Board's conclusion that the impacts of coal particulates beyond 50 miles are insignificant is further supported by an analysis of such impacts performed by Applicants. Applicants' witness calculated the additional risk to the entire U.S. population from the emission of coal particulates as part of the uranium fuel cycle. His estimates of excess deaths would be in the range of 0.013 to 0.26 deaths per year. Hamilton, ff. Tr. 1178 at 15. Dr. Hamilton stated that this risk estimate is biologically indistinguishable from zero. 15/ Hamilton, Tr. 1275.

Intervenors also claim that the Licensing Board erred in its treatment of Mr. Eddleman's proposed findings, in that the Licensing Board did not use the latest data concerning risk estimates for health effects. Brief at 17-18. This complaint of error misunderstands the Licensing Board's decision and thus is without merit.

In considering Mr. Eddleman's proposed findings, the Licensing Board found that his estimate of 32-180 deaths over 40 years, which would represent the operating life of the Harris facility, was unrealistically high. PID at 49, ¶ 33. The Licensing Board did not dispute the use of a damage function of 2.31, but rather questioned the way it was used by Mr. Eddleman in the analysis put forth in his proposed findings. Id. As the Licensing Board pointed out, Mr. Eddleman used this fine particle damage function in relation to the total mass of emissions in Table S-3.

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15/ The Staff also included zero in the range of cross-sectional mortality coefficients employed in their analysis. Habegger et al. ff. Tr. 1380 at 33-34.

Id. The Licensing Board concluded that it is inappropriate to use a fine particle damage function in this manner, since that total mass does not consist solely of fine particles. Id. Both the Staff and Applicants testified that not all particles are fine particles. Habegger et al., ff. Tr. 1380 at 9; Hamilton, ff. Tr. 1178 at 12. For the reasons set forth above, Intervenors' claim of error on this matter is unfounded. 16/

The Licensing Board has presented a thorough discussion of the evidence of record on this contention and the bases for its conclusions that the Staff has correctly and succinctly stated the environmental impacts of the particulate emissions contained in Table S-3. Therefore, the Licensing Board's decision concerning Eddleman Contention 8F(1) should be upheld.

C. The Licensing Board Did Not Err In Rejecting Certain Eddleman Contentions

1. The Licensing Board Did Not Err In Rejecting CCNC Contentions 16, 17 and 18 and Eddleman Contention 2 Concerning Environmental Monitoring

CCNC Contention 16-18 state as follows:

Contention 16: A composite sample of water over a two-week period at sample point 26 (the spillway) is not adequate to protect the water quality of Buckthorn Creek and the Cape Fear River. A daily composite sample would better determine if radioactive water is entering off-site surface waters. Tests should include gross beta, gamma, isotropic tritium, as well as for I-131, so that corrective measures can be taken as soon as radiation levels are greater than background.

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16/ It should be noted that even using Mr. Eddleman's assumptions as set forth in the appellate brief, the increase in risk to the U.S. population would be very small. Cf. PID at 50, ¶ 34.

Contention 17 One deepwell groundwater monitoring station (sample point 39) is not adequate to protect the wells in the area (listed in Table 2.4.3-3). All of the listed wells are used for drinking purposes by schools, homes, and communities and the people using the wells need to be adequately protected from radioactive materials causing health problems. A weekly composite sample should be made at each of the wells to determine if radioactive material is contaminating groundwater in the area. Tests should include gross beta, gamma, isotropic tritium, as well as for I-131, so that corrective measures can be taken as soon as radiation levels are greater than background.

Contention 18 The sampling at the Lillington Water Supply intake (sampling point 40) is not adequate to protect the people in Lillington who drink that water. A monthly composite sampling will not monitor the immediate presence of radioactive materials in the drinking water. A daily composite sample with tests for gross beta, gamma, isotropic tritium, as well as for I-131, would better protect the health of people in Lillington by allowing for corrective measures to be taken by the Applicant or at the Lillington Water Supply as soon radiation level are greater than background.

"Conservation Council of of North Carolina Supplement To Petition To Intervene" at 9-10, (May 14, 1982) [hereinafter CCNC Supplement].

Eddleman Contention 2 states as follows:

CP&L should be required to have installed on its main Harris Plant stack releasing radioactive gases to the environment two (2) pressurized-ionization monitors or equivalently capable equipment that can analyze not only the rate of emissions in gross terms (counts per second, etc) but the precise radionuclides being emitted and in what quantities. Such equipment should also be required on every discharge point for radioactive gases at the Harris plant, for analysis of radioactive liquid effluents before discharge, and at least ten such monitors in the environmental monitoring system around the plant, in order to be able to determine what radionuclides the plant is emitting in order for the Radiation Protection Section, Dept of Human Resources, State of NC, and EPA and NRC and emergency response personnel to better protect the health and safety of the public by obtaining timely and accurate information concerning the specific radionuclides being released by the Harris plant and the quantities of such being released. The two monitors on the stack are to provide continuous capability for monitoring while one monitor might be malfunctioning, being serviced, or otherwise unable to give accurate readings, concerning the radioactive material being emitted by the plant.

> I also believe that all towns and cities within 30 miles of the Harris plant should receive such pressurized-ionization monitors paid for by CP&L for the use of town personnel including emergency response personnel (fire, police, public safety, public health and emergency response plan decisionmakers) to assure accurate and complete information on radioactive materials on the loose at any given location during a major radiological release, for the use of the emergency response personnel, health officials, medical personnel, and others, and to assure the public it is getting accurate information and thus to prevent panic. All of this is necessary to protect the public health and safety in such a major release, as is:
>
> All such monitors should have both low and high-range capability so that they will not just 'go off scale' if a major release occurs, but will simply be able to shift to another range on their readout and continue to give accurate information either remotely (by telephone line, for example) or to personnel on-site where the monitoring devices are. (The devices described in FSAR pp TMI-60-62 do not meet all of the above criteria & are thus inadequate).

"Supplement To Petition To Intervene by Wells Eddleman, pro se" at 29-30 (May 14, 1982) [hereinafter Eddleman Supplement].

Intervenors argue as a general matter that the Licensing Board must hear all environmental claims to reach an informed decision under NEPA concerning the licensing of the Harris facility. Brief at 19. This argument is unsupported by either Commission regulations or precedent, and thus is without merit. The Standards for the admissibility of contentions is set forth in 10 C.F.R. Section 2.714(b) of the Commission's regulations. This regulation makes no distinction between safety and environmental contentions. In addition, the Commission's case law concerning the admissibility of contentions have applied the 2.714(b)

standards to environmental contentions. 17/ Therefore, Intervenors' general argument is without merit and should be rejected.

With regard to CCNC Contentions 16-18, Intervenors argue specifically that the Licensing Board's rejection of the contentions went to the merits of these contentions. Brief at 21. They assert that the Licensing Board should have admitted the contentions and allowed the parties to move for summary disposition. Id.

Both Applicants and the Staff opposed the admission of these contentions. The Applicants alleged that the contentions were concerned with a program already reviewed at the construction permit stage, that they lacked basis, and that the type of environmental monitoring requested in these contentions would be performed by another system, not mentioned in the contentions, which is described in the FSAR. "Applicants' Response to Supplement to Petition to Intervene by Conservation Council of North Carolina" at 6-8 (June 15, 1982) [hereinafter Applicants' Response]. The Staff opposed the admission of these contentions on the grounds that they lacked adequate basis. "NRC Staff Response to Supplemental Statements of Contention by Petitioners to Intervene" at 87 (June 22, 1982) [hereinafter Staff Response].

The Licensing Board in rejecting these contentions found that they did not accurately address Applicants' proposal. LBP-82-119A, supra, 16 NRC 2069, 2082. They noted that the Intervenors had ascribed to the

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17/ Philadelphia Electric Co. (Peach Bottom Atomic Power Station), 8 AEC 13 (1974); Houston Lighting and Power Co. (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542 (1980).

sampling points which were the subjects of the contentions, functions which they are not intended to perform. Id. The Licensing Board's rejection is not based on the merits of the contentions. The contentions claim that more needs to be done at certain sampling points. The Licensing Board did not express its opinion on whether that was correct. Rather, the Licensing Board decided in accordance with Peach Bottom, that the additional requirements Intervenors were requesting did not relate to the monitoring system for public health and safety as proposed by Applicants. Id. [18/] In addition, it should be noted that these contentions do not allege any reasons why the sampling procedures in place to confirm the accuracy of Applicants' dose prediction model are inadequate. Therefore, the contentions also lack basis, and should not have been admitted. In these circumstances the Licensing Board's decision on CCNC Contentions 16-18 should be upheld.

With respect to Eddleman Contention 2, Intervenors now argue both that the Licensing Board went to the merits in rejecting this contention, and that the Licensing Board erred in rejecting this contention as redundant of Joint Contention VI. Brief at 21. Since the Licensing Board never discussed the merits of the contention in its decision, but merely described the contention and stated that it was redundant of Joint Contention VI, the first portion of Intervenors' argument is without

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18/ Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 (1974).

merit. 19/ Intervenors claim that the contention is more specific than Joint Contention VI, and so should have been admitted. Intervenors also allege again without citation, that if the Licensing Board wished to consolidate contentions, it was required to give the parties an opportunity to respond to that consolidation. Brief at 21. These arguments are without merit.

Both the Staff and Applicants opposed the admission of this contention on the grounds that the contention lacked basis, in that it did not provide any reasons why the existing monitoring equipment would be inadequate, and why Mr. Eddleman's proposed additional monitoring equipment would enhance emergency response decision-making capability. "Applicants' Response to Supplement to Petition to Intervene by Wells Eddleman" at 104-105 (June 15, 1982) [hereinafter Applicants' Eddleman Response]; Staff Response at 16. As mentioned above, the Licensing Board rejected this contention on the ground that it was redundant of Joint Contention VI. LBP-82-119A, supra, 16 NRC at 2090. Joint Contention VI states: 20/

> The radiation detection and monitoring system of SHNPP is unable to assure that in-plant and off-site emergency response personnel receive timely and accurate information necessary to protect employees and the health and safety of the public under the ALARA

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19/ The portion of this contention which related to the monitoring of cities within 30 miles of the plant was deferred. Intervenors do not appear to be discussing this part of the contention in their brief.

20/ This contention was dismissed by the Licensing Board due to the Intervenors' failure to respond either to discovery or to Applicants' Motion for Summary Disposition of the Contention. "Order (Ruling on Various Procedural Questions and Eddleman Contention 15AA)" at 6-7 (May 10, 1984).

> standard. The monitoring system is not able to promptly detect the specific radionuclides and their amounts being released inside and outside the plant.

As can be seen from the statement of these contentions, Eddleman Contention 2 is indeed more specific than Joint Contention VI. It can also be seen that the issues raised by the two contentions are identical. Therefore, Mr. Eddleman, in conjunction with the rest of the Joint Intervenors, could have litigated the issues raised in his Contention 2 had he chosen to do so. He did not. Mr. Eddleman never did, and does not now, dispute that the issues raised by Joint Contention II are encompassed within the broader framework of Joint Contention VI. Therefore, he has no error of which to complain. He was in no way injured by the Licensing Board's ruling. The Licensing Board's rejection of this contention as redundant of Joint Contention VI should be upheld.

Intervenor argues that the Licensing Board, in consolidating his contention with Joint Contention VI was required to provide him with an opportunity to address the consolidation. Brief at 21. He provides no citation to the Commission's regulations to support his position, and indeed, he cannot. As Intervenor himself notes, the Licensing Board's authority regarding consolidation of parties for whatever purpose is set forth in 10 C.F.R. § 2.715a of the Commissions regulations as follows:

> On motion or on its or his own initiative, the Commission or the presiding officer may order any parties in a proceeding for the issuance of a construction permit or an operating license for a production or utilization facility who have substantially the same interest that may be affected by the proceeding and who raise substantially the same questions, to consolidate their presentation of evidence, cross-examination, briefs, proposed findings of fact, and conclusions of law and argument. . . A consolidation under this section may be for all purposes of the proceeding, all of the issues of the proceeding, or with respect to any one or more issues thereof.

The regulation does not require the Licensing Board to provide parties an opportunity to respond to its rulings on these matters. Therefore, Mr. Eddleman's argument is unfounded. Intervenors' argument also ignores the facts of this case. In fact, the Licensing Board gave all parties an opportunity to make whatever objections they deemed appropriate to the special prehearing conference order in which they rejected Eddleman Contention 2 as redundant of Joint Contention VI. LBP-82-119A, supra, 16 NRC at 2113-2114. Mr. Eddleman filed certain objections to the order and requests for clarification. "Wells Eddleman's Objections to 9-22-82 Board Memorandum and Order Reflecting Decisions Made Following (Special) Prehearing Conference" (October 15, 1982). Therefore, Mr. Eddleman was actually given an opportunity to address the Licensing Board's ruling on this contention and to object to the consolidation of his contention with Joint Contention VI. For this reason also his claim of error is unfounded. For the reasons set forth above, the Licensing Board's rulings with respect to CCNC Contentions 16-18 and Eddleman Contention 2 should be upheld.

2. The Licensing Board Did Not Err In It's Rejection of Eddleman Contention 12 Concerning Ocean Dumping

Eddleman Contention 12 states:

> Applicants' FSAR, ER, the SER, and the ES do not properly include the environmental effects of dumping low-level radioactive wastes produced at SHNPP into the ocean, which EPA has proposed a rule-making to allow (1982). This issue is particularly relevant to SHNPP as a special case because the State of NC is not now a member of any radioactive waste disposal compact, has no land burial facility for low-level radioactive wastes, and thus may in 1986 (well within the operation period anticipated for Harris 1 and 2) have no other alternative means of disposing of the low-level wastes produced by the Harris project, other than ocean disposal.

Eddleman Supplement at 61. On appeal Intervenors claim that the Board erred in rejecting this contention in that the Board ruled on the merits of the contention in order to reject it. Brief at 21-22. This argument is without merit.

Both the Applicants and the Staff opposed the admission of this contention. Applicants' Eddleman Response at 52-53; Staff Response at 22. Applicants stated that they did not contemplate ocean dumping, and the Staff stated that there was no reason to believe that the Applicants intended to engage in ocean dumping. The Licensing Board found that the contention lacked basis in that Mr. Eddleman advanced no reasons for the consideration of ocean dumping in relation to this particular license application. In this connection the Licensing Board noted that there was no indication that ocean dumping was contemplated. LBP-82-119A, supra, 16 NRC at 2092.

It is for the proponent of a contention to set forth the basis for his contentions with reasonable specificity. 10 C.F.R. § 2.714(b). To do this, the contention would have to be shown to apply to the facility which was the subject of the license application. See, Peach Bottom, supra, 8 AEC at 20-21. Since Mr. Eddleman failed to indicate in his contention that ocean dumping was indeed contemplated by the Applicants, he failed to establish a basis for the contention and the Licensing Board appropriately rejected it. The Licensing Board rejected the contention in accordance with the Commission's standards for the admissibility of contentions and its decision on this matter should be upheld.

3. The Licensing Board Did Not Err In Rejecting Eddleman Contention 82 Concerning Preoperational Monitoring

Eddleman Contention 82 states as follows:

> Applicants' pre-operational radiation monitoring program for SHNPP and surrounding areas is deficient in that
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> (1) it has insufficient sampling points and numbers of samples taken over time to establish background radiation levels and radionuclide concentrations (including those from nuclear weapon fallout and other nuclear plants already operating) on a statistically valid and reliable basis throughout the area of concern, e.g. within 10 miles for emergency response (20 miles as requested by Citizens' Task Force to NRC, PRM-50-31 of 1982) and within 50 miles for E.P.Z.
>
> (2) It does not establish specific concentrations of radionuclides in the air with the same type of pressure-ionization or continuous reading monitors that will be used (see contentions 1 and 2 above) for post-operational monitoring and advising emergency response personnel of radiological releases and what and how much radioactive material is being released.
>
> (3) does not monitor algae and other lower forms of life, e.g. in the Harris lake, which are the first step in most aquatic food chaing, [sic] and does not do sufficient monitoring of such algae to establish statistically reliable baseline concentration data on the radionuclides concentrations (specific nuclides and concentrations for all fission products, transuranics and activation products to be produced by SHNPP, e.g. see source term FSAR 11, EP 3, etc.) so that contamination from SHNPP will be detectable readily, to give early warning of radioactive contamination from SHNPP to ensure the health and safety of the public.
>
> (4) does not assure that the monitors, test samples and other things tested have not been "seeded" or contaminated accidentially or deliberately with radionuclides, e.g. from transportation on US 1 and US 64 (leaks, accidental releases), from nearby medical and research facilities (research triangle park, etc.) (Duke and UNC and NCCU and NCCentral universities, etc.) or their radioactive wastes, in order to show higher than actual background radiation levels near the site. Accidental contamination e.g. transport of such nuclides on shoes or clothing of sampling personnel who visit hospitals, labs and SHNPP rad sampling sites. Deliberate, e.g. seeding with radionuclides from low-level waste by CP&L.

Eddleman Supplement at 188-189. Both Applicants and the Staff opposed the admission of the contention on the grounds that it lacked basis and was speculative. Applicants' Eddleman Response at 45-47; Staff Response

at 49. The Licensing Board ruled that the contention must be rejected for lack of basis. LBP-82-119A, supra, 16 NRC at 2104. The Licensing Board in its decision stated that the Contention failed to assert how the alleged inadequacies would adversely affect the public health and safety or the environment, and the Licensing Board could not find such adverse impacts to be self-evident. Therefore, the contention was rejected for lack of basis. Id.

Intervenor argues on appeal that "It is readily apparent that if a program that is designed to provide a baseline for radioactive emissions is deficient then any monitoring program utilized while the plant is in operation will not provide accurate measurement above background." Brief at 22. In this appeal Intervenor is attempting to provide the basis which the Licensing Board found to be lacking in the contention in the first instance. This argument, even were it to be accepted at this late stage although not raised before, does not cure the defectiveness of the contention. Mr. Eddleman gave no reasons why the number of sampling points or the frequency of sampling as described in the preoperational monitoring program was inadequate. Therefore, the contention still lacks the requisite basis to be admitted as a matter in controversy in the proceeding. For the reasons set forth above, the Licensing Board did not err in rejecting this contention, and its ruling should be upheld.

4. The Licensing Board Did Not Err In Rejecting Eddleman Contentions 15, (Cost of Waste Disposal); 22A (Fuel Costs); and 22B (Payroll Costs); and CHANGE Contention 79C (Regulatory Costs)

Intervenors have appealed the Licensing Board's rulings concerning three contentions which question the adequacy of the Applicants' and

Staff's cost-benefit analysis because they either fail to take account of or underestimate certain costs. The contentions in question state in pertinent part:

> Applicants' cost-benefit analysis in Sections 8 and 11 of the Environmental Report (ER) is deficient and inaccurate, as detailed later. . . Applicants' ER makes no mention of the costs of nuclear waste disposal as a cost in its cost-benefit analysis, though it does include such costs as a 'benefit' in its calculation of per-kilowatt-hour charges to customers. (Table 8.2.1-2, page 8.2.1-4, line under 'fuel cycle costs' for 'spent fuel storage/disposal'). Nuclear waste disposal costs should be included as costs, at more realistic figures than 1.2 mills/kwh. . .

Eddleman Supplement at 72.

> 22. (a) CP&L's Amendment 2 fuel cost estimates in Table 8.2.1-2 as amended are erroneously low, as are the fuel cost lifetime estimates in section 8.2 as amended and section 11 as amended (all in the ER).
>
> (b) CP&L's estimates in the amended section 8 of the ER that the payroll at the Harris plant . . . based on only two units will not be decreased by any significant amount, compared to the . . . operation of all four units at the site, is not accurate. . .

Eddleman Supplement at 85.

> 79. The external costs estimated by the Applicant are incorrect in that: (c) the cost to the United States and state governments for additional regulatory and monitoring personnel, waste storage, waste disposal, tax benefits accruing to the utilities which would otherwise go to the federal and state governments, and other costs are not taken into account.

"Supplement to Petition for Leave to Intervene" at 23 (May 14, 1982). On appeal Intervenors argue that these contentions pertain to direct costs of the Licensing of Harris, and that such costs must be litigated under NEPA. Brief at 23. This argument is without merit.

First, as far as CHANGE Contention 79C is concerned, it is not for Joint Intervenors to appeal the Board's ruling on this contention. While CHANGE was a Joint Intervenor for purposes of certain contentions, there was no indication that CHANGE and the other Intervenors were consolidated for all purposes. Only a party injured by a Board ruling may appeal that

ruling. Houston Lighting and Power Co. (Allens Creek Nuclear Generating Station, Unit 1), ALAB-631, 13 NRC 87, 89 (1981). CHANGE is represented by Counsel in this proceeding. Counsel did not file a notice of appeal of this Licensing Board's ruling concerning CHANGE Contention 79(c). Therefore, other Intervenors' attempt to appeal this contention must be rejected.

Both Applicants and the Staff opposed the admission of these contentions on the ground that they lacked the requisite basis. Applicants' Eddleman Response at 32-33, 39; "Applicants' Response to Supplement to Petition to Intervene by Chapel Hill Anti-Nuclear Group Effort and Environmental Law Project" at 11-12 (June 15, 1982); Staff Response at 23, 25, 98. The Licensing Board originally admitted the contentions. LBP-82-119A, supra, 16 NRC at 2086, 2092-2094. Later in the proceeding Mr. Eddleman submitted new proposed contentions concerning Amendment V to Applicants' Environmental Report. This amendment contained a cost savings analysis. By Order dated March 25, 1983, the Licensing Board raised two questions. They were as follows:

> 1. Are contentions concerning alleged system savings resulting from lower operating costs of a nuclear power plant, compared to an alternative energy source such as coal, barred by the rule?
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> 2. If the answer to Question 1 is 'yes' (a) can the Staff nevertheless include such operating cost savings in its cost/benefit analysis for the Shearon Harris plant; and (b) if the Staff does include these savings, is the rule barring contentions on this issue then waived?

"Memorandum and Order (Memorializing Telephone Conference and Setting Forth Questions for Briefing)" at 2 (March 25, 1983).

By Order dated May 27, 1983, the Licensing Board rejected Mr. Eddleman's contentions concerning Applicants' cost savings analysis and the three originally admitted contentions quoted above on the ground

that litigation of the contentions was barred by § 51.53(c) of the Commission's regulations. 21/ The Licensing Board stated in explanation of its ruling that litigation of those contentions which would directly implicate need for power projections and comparison with coal-fired generation are precluded by 10 C.F.R. § 51.53(c). Carolina Power & Light Company and North Carolina Eastern Municipal Power Agency (Shearon Harris Nuclear Power Plant, Units 1 and 2), LBP-83-27A, 17 NRC 971, 974-976 (1983). The Licensing Board also concluded that litigation of such contentions with regard to an already constructed facility would be an aggregious waste of time and resources, absent a showing of exceptional circumstances. Id. at 975. The Staff agrees.

The purpose of litigating the Applicants' and Staff's cost estimates of fuel costs and payroll costs, as well as the failure of the Staff and Applicants to consider the costs to the federal and state governments of licensing the Harris facility in the cost-benefit analysis would be to attempt to determine that the costs of the facility outweigh the benefits of the facility, and thus that the facility is not needed. The Commission has already determined by promulgation of the need for power rule that the need for power has already been established. 46 Fed. Reg. at 39940-41 (1981). The second reason for litigating such costs would be

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21/ See note 5 supra.

to compare them to the costs of alternate energy sources. Such comparisons have already been determined by the Commission not to affect the cost-benefit balance. 47 Fed. Reg. at 12940. There would be no other purpose for litigation of such costs. Intervenors have not demonstrated that the requisite special circumstances exist for the litigation of the need for power issue in this proceeding. See Section V.D. infra. Therefore, to litigate these contentions would be contrary to the Commission's regulations, and the Board was correct in rejecting them.

In addition, the Staff maintains its positions that these contentions do not meet the standards for admissibility of contentions. For all of the above reasons, the Licensing Board's decision with regard to Eddleman Contentions 15, 22A and 22B should be upheld.

5. The Licensing Board Did Not Err in its Dismissal of CCNC Contention 4, and Eddleman Contentions 25, 64(d), 64(e) and 126x Concerning Shipment of Spent Fuel From Other Reactors

CCNC and Mr. Eddleman appealed from the Licensing Board's dismissal of CCNC Contention 4 and denial of Mr. Eddleman's Contentions 25, 64(d), 64(e) and 126. Brief at 34. 22/ Those contentions deal with the environmental effects of the transportation of spent fuel. They are set out at length immediately below.

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22/ We assume that Intervenors intended to appeal the Board's dismissal of Eddleman Contention 126x rather than 126, since Contention 126 does not refer to the shipment of spent fuel to Harris from other nuclear sites. The subject of Contention 126 is class 9 accident consideration, which has not been briefed by Intervenors.

CCNC 4

The Applicant's request for authorization to store source, special nuclear and by-product material irradiated in nuclear reactors licensed under DPR-23, DPR-66, and DPR-71, should be denied as there has been no analysis in the ER of the environmental, safety, and health effects of transportation of radioactive wastes and other material from the other reactors to SHNPP and no analysis of safety risks from long-term storage. The Applicants' reliance on 10 C.F.R. 51.20(g), including the table of Environmental Impact of Transportation of Fuel and Waste To and From One Light-Water-Cooled Nuclear Power Reactor (taken from WASH-1238), is inappropriate as the 10 C.F.R. 51.20(g) exemption only applies to the transportation of radioactive material to and from one reactor only, not from several reactors as in this instance. There needs to be a full description and detailed analysis in the ER under 10 C.F.R. 51.20(g)(1)(a)(ii), to include the contribution of such effects to the environmental costs of licensing the reactor, and the environmental impact under normal conditions and the risk from accidents. Further there has been no analysis of safe storage of irradiated fuel assemblies and other radioactive materials at SHNPP and assurances for safe storage at the expiration of the proposed licensing period. 23/

EDDLEMAN 25

(The description of how terrorists can breach a spent fuel shipment and harm the public health and safety thereby, from the contention 24 above, is incorporated herein by reference.)

An alternative of less environmental impact than spent fuel shipments from Robinson and Brunswick to Harris needs to be considered, both because of NEPA and because of the unwarranted risks of terrorist activity posed by such shipments which provide numerous almost indefensible targets over long routes and a long period of time for multiple spent fuel shipments.

Such alternatives include re-racking of spent fuel (including the use of poison rods made proof against breakage) spent fuel consolidation (with appropriate measures against accidental criticality, for all alternatives herein), and/or expansion of on-site spent fuel pools at Brunswick and Robinson and any other reactor from which spent fuel might be shipped to the Harris site. A further alternative for both Harris and the

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23/ "Conservation Council of North Carolina Supplement to Petition to Intervene" at 5 (May 14, 1982).

other plants referred to above is to store all waste (spent fuel) on site for the operating life of the plant, and then put it all on one, extremely well-guarded and completely unpublicized) unit train for shipment to a final repository, if one exists then. This alternative as suggested by Dr. Marvin Resnikoff of CRP and others had the advantages of letting the spent fuel's heat and radioactivity decay, over a period of many years for most such spent fuel, resulting in less risk to the public from either terrorism or accidents in transporting the fuel both for the reason of less radioactivity in the spent fuel and because a one unit train is less subject to accident or terrorist attack than a large number of train shipments or truck shipments.

NEPA requires that such alternatives be fully considered in the ES. They are not, at least not accurately. And the ER discussion of spent fuel transport is wholly inadequate in that it does not consider these alternatives which reduce the radiological risk, terrorism risk, and/or cost and/or environmental impact of spent fuel going to and from the Harris site. It is not enough to say the impacts fall within Table S-4 limits -- you have to say why, prove it, and also prove that other alternatives are not environmentally superior under NEPA or superior under the common defense provisions of the Constitution and protection of public health and safety as stated 10 C.F.R. 2 Appendix A VIII(b)(6).

Eddleman Supplement at 89.

EDDLEMAN 64(d)

The risk and probability of transport accidents for spent fuel are increased by transshipment to Harris -- the more miles you travel with nuclear fuel, the more wrecks are possible and the more other accidents can occur to the fuel in transit. The analysis of section 3.8 of the ER is inadequate in that without basis it claims that the environmental impacts of such shipments will be within those set forth in Summary Table S-4 which clearly states that it is for "One Light-Water Cooled Nuclear Power Reactor" and note 4 to said table (evidently what CP&L relies on) says the accident risk is not capable of being estimated. Sandia Laboratories has published a study (probably more than 1, too) on nuclear waste transport accidents indicating that one involving loss of coolant (e.g. from striking bridge supports or abutments; from ripping in a sideswipe accident with a bus, car, truck, power pole, bridge support, guardrail, light pole, phone pole; from puncture; from crushing the heat sink of the cooling system; from cask flexing if it lands at an angle after a rollover accident; etc) could promptly kill up to 2000 persons with more delayed cancers, etc.

> And it is obvious that the more fuel that is moved, the greater the risk, further, the radiological impact of spent fuel shipment in Table S-4 is not covered in footnote 4; thus there is no basis for excluding it under NEPA and AEA.

Id. at 168.

> EDDLEMAN 64(e)
>
> The risks of releasing the 2 million curies (74 billion million radioactive disintegrations per second) in one spent fuel shipment of 0.5 metric ton are underestimated by Applicants and NRC because they do not take account of the new information in the Sandia study referred to in (d) above and in other studies, use no empirical data on waste shipment accidents and frequency of accidents to similar trucks carrying loads of similar dimensions and weight, and do not sufficiently protect the integrity of the cask and coolant in the event of an accident.

Id. at 169.

> EDDLEMAN 126X
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> The Applicant's Environmental Report should provide a full description and detailed analysis of the environmental effects of the transportation of spent fuel shipments to the Harris Plant from other CP&L Company facilities and of the contribution of such effects to the environmental costs of licensing SHNPP, the values determined for such analysis for the environmental costs being figured into the NEPA cost-benefit balance for SHNPP.

Id. at 233.

Mr. Runkle discussed his proposed Contention CCNC 4 at the prehearing conference held on July 13, 1982, at transcript pages 172 through 182. Mr. Eddleman discussed his profferred Contention 64 on July 14, 1982 at transcript pages 382 and 383. The Licensing Board's Order of September 22, 1982 admitted CCNC Contention 4 [24/] and deferred

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24/ LBP-82-119A, supra, 16 NRC 2069, 2080.

ruling upon Eddleman Contentions 25, [25/] 64(d) and (e) [26/] and 126x. [27/] On July 8, 1983 the Applicants moved for reconsideration and dismissal of the spent fuel transportation contentions. [28/] The Staff supported the Applicants' Motion. [29/] Mr. Eddleman replied in opposition to the Applicants' Motion. [30/] CCNC made no response. The Applicants' Motion and Staff's support set forth the Staff's position here on appeal. Our position here is identical to the Staff's position on the appeal of the spent fuel transportation contentions in Catawba which is now pending. [31/]

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25/ Id. at 2094.

26/ Id. at 2100.

27/ Id. at 2108.

28/ "Applicants' Motion For Reconsideration of CCNC Contention 4 and CHANGE Contention 9 and Applicants' Response to Intervenor Wells Eddleman's Contentions Regarding Spent Fuel Transportation" (July 8, 1983).

29/ "NRC Staff Response to Applicants' Motion to Dismiss Contentions Regarding Spent Fuel Transportation" (July 28, 1983).

30/ "Response to Applicants' Motion for Reconsideration of CCNC Contention 4 and Change Contention 9 and Applicants' Response to Intervenor . . ." (July 29, 1983).

31/ "NRC Staff Response Brief In Opposition To The Appeal of Palmetto Alliance and Carolina Environmental Study Group From Partial Initial Decisions Authorizing Full-Power Operation Of Catawba Nuclear Station" at 66 (February 25, 1985). Duke Power Company, et al, (Catawba Nuclear Station, Units 1 and 2), Docket Nos. 50-413, 50-414. Also, in an Order dated April 25, 1985 the Catawba Appeal Board inquired whether the Notice of Opportunity for Hearing fairly illuminated that spent fuel from other reactors may be stored at Catawba. Judges Thomas S. Moore and Howard A. Wilber are members of the Appeal Boards for both Harris and Catawba. The Notice for

(FOOTNOTE CONTINUED ON NEXT PAGE)

On appeal CCNC and Mr. Eddleman claim the Licensing Board committed error in its Order of August 24, 1983 dismissing the spent fuel transportation contentions. 32/ Brief at 34-36.

Intervenors fairly characterize the gravamen of the Board Order with the addition of the fact that in their motion for reconsideration Applicants committed to keep any shipments of spent fuel from Robinson or Brunswick to Harris within the assumptions of Table S-4, i.e., number of shipments, core power level, 33/ and thus the environmental effects of those shipments would be within the values of Table S-4. Brief at 34. Intervenors do not address the gravamen of the Licensing Board's Order. Specifically, nowhere do Intervenors address whether the environmental effects of transferring spent fuel from Robinson and Brunswick have been factored into the NEPA cost-benefit analysis of those facilities. 34/

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Harris, 47 Fed. Reg. 3898, January 27, 1982, did not specifically indicate that Robinson or Brunswick spent fuel might be stored at Harris. The Notice did cite to the Application for an O.L., E.R. and FSAR, all of which made clear that Brunswick or Robinson fuel might be stored at Harris. See Application page 6. In addition, here the Intervenors did have knowledge of the request to store fuel from Robinson and Brunswick at Harris and did, in fact, proffer contentions in this area.

32/ "Memorandum and Order, (Ruling on Spent Fuel Transportation Contentions and Miscellaneous Motions)" (August 24, 1983).

33/ See Applicants' Motion at 3 and attached affidavit of L. H. Martin dated July 1, 1983.

34/ The Commission has already considered the environmental impacts of the transportation of spent fuel from Robinson and Brunswick to any facility authorized to receive it in the context of the licensing

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A careful review of Intervenors' Brief discloses that they have not appealed from that part of the Licensing Board's Order of August 24, 1983 which held that the environmental effects of the transportation of spent fuel from Robinson and/or Brunswick to Harris for interim storage have been factored into the NEPA cost-benefit balances for the Robinson and Brunswick facilities. Thus, in this vital respect the Board Order is unchallenged. This being so, it perforce follows that there is nothing regarding spent fuel transportation impacts properly before this Appeal Board. This proceeding is upon the Harris license application and environmental effects properly attributable to Brunswick and Robinson are beyond the scope of this proceeding.

Nowhere on Appeal (or below) do Intervenors show error in that part of the Board Order which stated that no specific incremental impacts were identified. Nowhere do Intervenors show that the Licensing Board was in error when it held that the Table S-4 values were small. The Intervenors' Brief does not "clearly identify the errors of fact or law" allegedly made by the Licensing Board in the Board Order of August 24, 1983, rejecting all of the spent fuel transportation contentions, nor does that Brief provide proper citation to the record to support their allegations, both of which are required by 10 C.F.R. § 2.762(d)(1).

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proceeding for those two facilities. See U.S. Nuclear Regulatory Commission, Final Environmental Statement Related to the Operation of H.B. Robinson Nuclear Steam-Electric Plant Unit 2 (NUREG-75/024), at § 5.4.4.2 (April, 1975); U.S. Atomic Energy Commission, Final

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The only part of the Brief which does seem to deal with transportation of spent fuel alleges, without argument or citation to authority, as quoted immediately below:

> Table S-4 is clearly stated as summarizing the "environmental impact of transportation of fuel and waste to and from one light-water-cooled nuclear power reactor" (emphasis added). The additional impacts from shifting fuel and waste from one reactor to another and the cumulative problems this will cause is [sic] outside the Table S-4 analysis. [Brief at 35]

The Staff finds this amorphous and confusing. When read in pare materia with Mr. Eddleman's filings, 35/ we understand the Intervenors to argue that shipment from a reactor or reactors to another reactor is not covered by Table S-4; that only shipment from a reactor to a permanent receiving site is covered by Table S-4. Reduced to its simplest terms, the Brief states ". . . impacts from shifting fuel . . . from one reactor to another [reactor]. . . is [sic] outside the Table S-4 analysis." Brief at 35.

Although 10 C.F.R. § 51.20(g)(1) 36/ used the phrase "from the reactor to a fuel reprocessing plant," the very next paragraph, § 51.20(g)(2), gave the criteria for applicability of the Table S-4

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> Environmental Statement Related to the Continued Construction and Proposed Issuance of an Operating License for the Brunswick Steam Electric Plant, Units 1 and 2, at V-45 to V-55 (January, 1974).

35/ "Wells Eddleman's filings re 5 factors and answer to Staff and Applicants re DEIS Contentions and 15 AA", at 29, lines 21 and 23; footnote 10, at 2, line 1, (July 29, 1983).

36/ Part 51 has been amended, and the appropriate section of the Regulations is now 10 C.F.R. § 51.52(a)(6).

values, which made no mention of the destination of the fuel. 37/ WASH-1238, 38/ on which the rule is based, the Statement of Considerations for the rule, 39/ as well as Table S-4 itself, make no mention of "in plant" radiological aspects of transportation. Environmental impacts from transshipment are examined based on distances and methods of transport, not upon the destination of the spent fuel. Thus, by its content, Table S-4 values apply to the shipment of spent fuel from Robinson and Brunswick to Harris.

There are several matters which we feel should be clarified, even though they may be unnecessary to the Appeal Board's decision on the spent fuel transportation issue.

Intervenors in their Brief at page 35 state:

> The NEPA cases, such as Calvert Cliffs, supra, are clear that the reviewing body must afford the Intervenors the opportunity for hearing to ensure the "fullest possible consideration of the environment" in its reaching the decision on this action.

No NEPA case, except Calvert Cliffs is cited. Calvert Cliffs Coordinating Committee v. USAEC, 449 F.2d 1109 (1971) does not contain

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37/ Since the Licensing Board's Order, in Harris, August 24, 1983, 10 C.F.R. Part 51 has been revised. Table S-4 and related provisions on spent fuel transportation are contained in 10 C.F.R. § 51.52. The rule is substantively unchanged; however, the revised rule drops reference to the destination of the spent fuel being transported, further reinforcing the argument that the original provision did not treat destination as bearing on the environmental impacts of transportation. See 49 Fed. Reg. 9352, 9389-9390. (March 30, 1984).

38/ "Environmental Survey of Transportation of Radioactive Materials to and from Nuclear Power Plants", WASH-1238, at 3, 38, 43-44, 53, (December 1972).

39/ 40 Fed. Reg. 1005.

the language "fullest possible consideration of the environment" as stated above by the Intervenors, nor is such language in any U.S. Court of Appeals or District Court decision. The quotation was taken from lines 16 and 17 of the Palmetto Alliance Brief on Appeal in Catawba, dated January 9, 1985 which misquotes the Catawba Licensing Board's March 5, 1982, Memorandum, 15 NRC 566 at 574. Also, Calvert Cliffs is not a mandate affording Intervenors hearing rights; rather, it instructs federal agencies what they must consider under NEPA. And, more importantly, Table S-4 does consider the appropriate environmental values of spent fuel transportation and, they are very small. The Intervenors' legal discussion is not appropriate to this Appeal.

Intervenors' refer to "the additional impacts from shifting fuel . . . from one reactor to another and the cumulative problems this will cause . . . ." Brief at 35. In the three years since CCNC and Mr. Eddleman filed their original proffered contentions, neither of them has identified any significant environmental impact associated with the transportation of spent fuel from one reactor to another that is not already encompassed by Table S-4. The end of the Intervenors' sentence quoted above refers to "cumulative problems." However, again, neither CCNC nor Mr. Eddleman has in the last three years identified any "cumulative problems" arising out of the shipment of spent fuel from one reactor to Harris. Thus, even after three years have passed since Intervenors proffered their contentions, no factual issue in dispute has arisen concerning the transportation of spent fuel which could be resolved in an evidentiary hearing. Intervenors' assertions on Appeal of "additional impacts" and "cumulative problems", unsupported by the record below, are not appropriate to this Appeal.

At the bottom of Appellants' Brief page 35 and top of page 36, a purported Duke Power Company "cascade plan" is discussed. As the Appeal Board in Materials License SNM-1773 stated, 40/ no cascade plan has been devised by NRC or Applicants [for Carolina Power and Light Company nuclear reactors] and thus no NEPA assessment is called for. See 14 NRC at 312 and 313. Intervenors' discussion of a purported Duke Power Company "cascade plan" is not here relevant.

Finally, for purposes of completeness, we reiterate that in the Staff's view the environmental impacts associated with transportation of spent fuel from Brunswick and/or Robinson to Harris were factored into the NEPA cost-benefit analysis for these facilities and putting those impacts, even though they are very small, into the Harris cost-benefit analysis would be a double counting which is not required by law. 41/

The Staff's position on the foregoing spent fuel transportation issue is summarized below.

1) The 10 C.F.R. § 51.52 Table S-4 Environmental Impact Values apply to shipment of spent fuel from Applicants' reactors to the Harris reactor.

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40/ Duke Power Company (Materials License SNM-1773), ALAB-651, 14 NRC 307, 315 (1981).

41/ "NRC Staff Response to Applicants' Motion to Dismiss Contentions Regarding Spent Fuel Transportation", at 3 (July 28, 1983).

2) These impacts have been factored into the cost-benefit analyses for the Brunswick and Robinson facilities.

3) No significant environmental impacts of the transportation of spent fuel from one reactor to Harris not included within Table S-4 values have been identified below or on appeal by Intervenors.

4) No cumulative problems resulting from the transportation of spent fuel from Robinson or Brunswick to Harris have been identified by Intervenors either below or on appeal.

5) Intervenors' legal discussion of NEPA and Calvert Cliffs is not appropriate to this appeal.

6) Intervenors' discussion of a purported "cascade plan" is not relevant to this issue.

For all the above summarized reasons, the Staff urges that this appeal on the spent fuel transportation contentions of CCNC and Mr. Eddleman be denied and that the Licensing Board's "Memorandum and Order (Ruling on Spent Fuel Transportation Contentions and Miscellaneous Motions)", dated August 24, 1983, be sustained as to dismissal and rejection of CCNC Contention 4 and Eddleman Contentions 25, 64D, 64E and 126x.

D. The Licensing Board Did Not Err in Denying The Petition Filed By Mr. Eddleman Pursuant to 10 C.F.R. § 2.758 Regarding Need For Power and Alternative Energy Issues

On May 14, 1982, Mr. Eddleman filed Contentions 14, 15, 16, 17, 21, 23, 59 and 60, relating to the need for power to be produced at the Shearon Harris facility and the existence of alternatives to the Shearon Harris facility. Eddleman Supplement at 68-71 and 158-163. In February 1983, Mr. Eddleman proposed additional contentions and amended

Contention 15 based, he alleged, on Amendment 5 to the Applicants' Environmental Report. "Wells Eddleman's Revised, Amended and Additional Contentions based on Eddleman 15 and ER Amdt. 5" (February 11, 1983). These amended and revised contentions related to what Mr. Eddleman perceived as faults or omissions in the Applicants' analysis of the costs and benefits of the Harris facility. In LBP-83-27A, supra, 17 NRC 971, 976 (1983), the Licensing Board rejected these additional and amended contentions on the ground that they were encompassed by the provisions of 10 C.F.R. § 51.53(c), 42/ which precludes the admission of contentions concerning need for power or alternative energy sources in operating license proceedings. The Licensing Board had previously rejected Mr. Eddleman's Contentions 59 and 60, 16 NRC at 2099, on the basis that they were barred by 10 C.F.R. § 51.53(c) and noted in its Order that intervenors could apply for a waiver pursuant to 10 C.F.R. § 2.758, 16 NRC at 2073.

On June 30, 1983, Mr. Eddleman filed a petition for a waiver of 10 C.F.R. § 51.106(c). In his petition and the supporting documentation, 43/ Mr. Eddleman purports to have made the special circumstances

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42/ 10 C.F.R. Part 51 has been revised and that section now is 10 C.F.R. § 51.106(c) and will be referred to from now on as § 51.106(c).

43/ Mr. Eddleman's supporting documentation here relevant consists of:

A) Wells Eddleman Affidavit In Support of 2.758 Petition [hereinafter Eddleman Affidavit].

B) Comments by John Blackburn and Ray Weintramb upon methodology used in the North Carolina Utilities Commission

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showing which would allow litigation of need for power and alternative energy source issues in this operating license proceeding. The Staff and Applicants responded in opposition to Mr. Eddleman's petition. 44/ Mr. Eddleman filed a reply to the Staff's and Applicants' opposition. 45/ The Licensing Board denied Mr. Eddleman's petition in an August 3, 1984 Order 46/ and stated that its reasons would be set forth in its Partial Initial Decision. The Licensing Board issued its Partial Initial Decision on February 20, 1985 (PID). The Licensing Board's analysis and reasoning by which it denied Mr. Eddleman's petition for a waiver of 10 C.F.R. § 51.106(c), which bars litigation of need-for-power in an operating license proceeding, is set forth on pages 50 through 58 of the PID slip opinion. It is from that Partial Initial Decision that

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1979 Public Staff Report on long range needs in North Carolina [hereinafter Blackburn and Weintraub 1979].

C) Parts of four papers by C. George Reeves, an electrical engineer [hereinafter Reeves Affidavit July 14, 1982; Reeves Affidavit Feb. 10, 1983; Reeves Affidavit Feb. 11, 1983; and, Reeves Affidavit June 25, 1983], which suggest measures to reduce future peak load growth.

44/ NRC Staff Response to Intervenor Wells Eddleman's Petition For a Waiver Pursuant to 10 C.F.R. § 2.758, (August 26, 1983) and Applicants' Response to Eddleman Petition Under 10 C.F.R. § 2.758 Re Alternatives and Need for Power Rule, (August 31, 1983).

45/ Wells Eddleman's Response re 2.758 Petition of 6-30-83 an Need for Power and Alternatives To Shearon Harris Plant, (September 30, 1983).

46/ Memorandum and Order, LBP-84-29B, 20 NRC 389, 424 (1984).

Mr. Eddleman appeals. In the Staff's view the Licensing Board's record is correct and should be sustained based upon the discussion below.

Effective as of April 26, 1982, the Commission amended its rules to prohibit litigating need for power or alternative energy source contentions in operating license proceedings. 47/ The Commission's Statement of Considerations which accompanied the new rule provided that a waiver of the rule, now 10 C.F.R. § 51.106(c), would be permitted in cases where special circumstances could be demonstrated in accordance with 10 C.F.R. § 2.758. That regulation (10 C.F.R. § 2.758(b)) states, in pertinent part:

> A party . . . may petition that the application of a specified Commission rule . . . be waived . . . . The sole ground for waiver or exception shall be that special circumstances with respect to the subject matter of the particular proceeding are such that application of the rule or regulation (or provision thereof) would not serve the purposes for which the rule or regulation was adopted. The petition shall be accompanied by an affidavit that identifies the specific aspect or aspects of the subject matter of the proceeding as to which application of the rule or regulation (or provision thereof) would not serve the purposes for which the rule or regulation was adopted, and shall set forth with particularity the special circumstances alleged to justify the waiver or exception requested . . .

The showing which is required is a prima facie showing that the application of the rule or regulation in question to a particular aspect of an operating license proceeding would not serve the purpose for which it was intended and that application of the regulation should be waived. 10 C.F.R. § 2.758(c). A prima facie showing involves the presentation of evidence which, if uncontradicted, is sufficient on its face to establish

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47/ 47 Fed. Reg. 12940, March 26, 1982.

a given fact. See, Words and Phrases, Vol. 33(A). 48/ This, of course, requires that the evidence appear on its face to be reliable and probative. Mr. Eddleman's major support consists of: (i) a 1979 analysis by Blackburn and Weintraub, qualified economists; (ii) upon a 1979 Staff Report of the North Carolina Utilities Commission, a document which is not directed to, nor relevant to, the issue before the Appeal Board; and (iii) parts of four papers by a George Reeves, an electrical engineer by training and experience with no expertise in econometric forecasting or in economics.

The Commission has provided guidance regarding the showing which must be made to satisfy the "special circumstances" requirement of 10 C.F.R. § 2.758(b). In the Statements of Consideration relating to the rule which Mr. Eddleman seeks to challenge, the Commission indicated that it views this standard for admission of contentions challenging the Commission's regulations as a much stricter standard than that ordinarily used for the admission of issues as matters in controversy in an

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48/ Mr. Eddleman takes issue with the Licensing Board's definition of prima facie as set forth in note 16 page 55 of the PID. Mr. Eddleman would use the definition in Black's Law Dictionary (Brief at 32). Mr. Eddleman's definition is quite close to the Staff's. Also, we are of the view that the Licensing Board was not in error in the definition it used. As we stated above the Licensing Board quite properly stated that the evidence must be by qualified experts with appropriate supporting facts in order to make the case. We think that the Licensing Board's definition is consistent with our views. That Board simply took into consideration the Commission's statement that the required prima facie showing is a much stricter standard than current requirements for raising Contentions. Regardless of whether the Staff's, Mr. Eddleman's, or the Licensing Board's definition is used, Mr. Eddleman has not, as we will show later, made his case for a waiver of 10 C.F.R. § 51.106(c).

operating license proceeding. "Need for Power and Alternative Energy Issues in Operating Licensing Proceedings." 47 Fed. Reg. 12940 (March 26, 1982). In an earlier opinion discussing the subject of special circumstances the Commission held that no such special circumstances existed where the issue raised by an intervenor was not peculiar to the reactor which was the subject of the proceeding. Metropolitan Edison Company (Three Mile Island Nuclear Station, Unit No. 1), CLI-80-16 11 NRC 674, 675 (1980). In TMI the Commission answered the question whether the provisions of 10 C.F.R. § 50.44 should be waived or an exception made in the TMI-1 proceeding due to a prima facie showing that hydrogen gas generation during the TMI-2 accident was well in excess of certain design basis requirements in 10 C.F.R. § 50.44. The Commission pointed out that this issue was not peculiar to TMI-1, since, as was the case at TMI-2, operators of all lightwater power reactors generally have the capability to interfere with ECCS function. Therefore, the Commission found no special circumstances. Id. The application of the Commission's decision to this proceeding is clear. Mr. Eddleman must show special circumstances which uniquely relate to the Shearon Harris facility and which are different than those which apply to all other reactors.

In this situation, the graveman of the issue is has Mr. Eddleman made out a case of special circumstances. In its rulemaking the Commission generically considered energy conservation and reduction measures, coal vs. nuclear operating costs, other energy sources and that nuclear power could, if needed, be substituted for base load coal plants. They also considered suggestions of Amory Lovins who proposed more

efficient household appliances, conservation, additional insulation, making lights, motors, smelters, and appliances more efficient and rate reform so that a user pays its true marginal costs. 49/ The Commission rejected Mr. Lovin's arguments.

Mr. Eddleman claims in his petition and supporting affidavits he has shown that an economically and environmentally superior alternative exists which eliminates the need for Shearon Harris and that therefore, that he has established the special circumstances necessary to litigate alternative energy and need for power issues in this proceeding. Eddleman Affidavit at 1. This argument is without merit. Mr. Eddleman misperceives his legal burden. He must show that there is something unique and different about Shearon Harris and the Applicants' service area that makes the rule (10 C.F.R. § 51.106(c)) not apply in this proceeding. He must make out a convincing case that the matters considered by the Commission in its rulemaking, conservation, more efficient use of appliances and electric devices, lights, motors, passive solar devices, rate reform and the use of Harris to replace existing base load coal facilities, do not apply to the Shearon Harris project and the

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49/ 47 Fed. Reg. at 12941. Lovins letter to the Commission dated August 21, 1982 regarding the then proposed rule, page 5-8. Docket Number Proposed Rule PR-51 (46 Fed. Reg. 39446). Mr. Lovins was a witness for the then intervenors at the construction permit stage and advanced his conservation program for Harris. This program as advanced by intervenors and Mr. Lovins was rejected as not a viable alternative to Harris. Carolina Power and Light Company (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), LBP-78-4, 7 NRC 92, 135 (1978); Carolina Power and Light Company (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), ALAB-490, 8 NRC 234 (1978).

Applicants' service area. Nowhere in his petition and supporting documentation does Mr. Eddleman even purport to identify what is different about the Shearon Harris project and the Applicants' service area that distinguish them from other nuclear power plant projects so that the rule would not serve the purpose for which it was adopted. 50/ Mr. Eddleman does not identify anything at all about the Applicants' service area and its physical production facilities that differentiate it from the service area and production facilities of other utility companies which are included within 10 C.F.R. § 51.106(c). Having totally failed to make any showing at all that the Harris project is different from other nuclear power projects, the Licensing Board's decision should be sustained and this Appeal denied.

The sole basis upon which Mr. Eddleman appeals from the Licensing Board's decision below is that "the Licensing Board . . . us[ed] a false premise (that the use of Harris to displace coal-fired generation is 'not addressed' in the petition, P.I.D. p. 56." Brief at 24. Mr. Eddleman continues: "The Board's error appears to be made without reference to the source documents . . . . However, a look at the four scenarios ('Petition' at 10 ff) makes it obvious that the Board below is wrong . . . ." Brief at 25.

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50/ See TMI-Unit 1 cited supra and Houston Lighting and Power Company, et al. (South Texas Project, Units 1 and 2) LBP-83-49, 18 NRC 239, 240 (1983) where, in regard to a 10 C.F.R. § 2.758 petition the Board stated: "[Intervenors]" would have to present evidence that the STNP is so different from other projects that the rule would not serve the purposes for which it was adopted.

The pertinent text of the Licensing Board's decision from which Mr. Eddleman appeals and to which he has referred is reproduced below.

> Mr. Eddleman compares his alternative to operating Harris under four different scenarios, the principal variables being cancellation or [55] postponement of Unit 2 or Unit 1. In each of these scenarios, however, operation of Harris or implementation of the alternative is considered only with reference to meeting increased demand or peak loads. These scenarios do not take account of the fact -- as Mr. Eddleman himself points out -- that about two-thirds of the Applicants' existing baseload plants (3500 of 5000 MW) are coal-fired plants. Presumably, these coal plants are of varying ages and efficiencies, both in terms of operating costs and effects on the environment. It was just this situation that the Commission had in mind when it adopted the need for power of rule. The Commission's statement bears repeating:
>
> > [A] constructed nuclear power plant is virtually certain to be used as a base load plant, replacing other less efficient generating capacity, if not to meet increased demand. It is also very likely to be preferable to any realistic alternative, given the nuclear plant's typically power cost of operation compared to coal and oil.
>
> Thus, the burden is on Mr. Eddleman, as the petitioner for a waiver, to show that the Harris facility would not be used to displace existing coal-fired capacity.
>
> Mr. Eddleman's petition does not address this probable use of the Harris facility. [PID 56]

The Licensing Board quoted immediately above is correct as our discussion infra of Mr. Eddleman's four scenarios will demonstrate. The PID in this regard should be sustained.

Scenario 1 Eddleman Affidavit at 3-10. This scenario discusses load shifting, load management, conservation, energy storage, energy saving devices, off-peak water heating, more efficient air conditioners and heat storage in order to reduce daily peak demand. Eddleman Affidavit at 3.

On page 59 of his Affidavit Mr. Eddleman summarizes his scenario 1:

> In sum, a Harris baseload unit (or both units) simply isn't needed to meet CP&L peak loads through the year 2014. This is the principal conclusion of Reeves Affidavit #1 (p. 31) [Reeves July 14, 1982] and is used in the scenarios comparing costs and benefits below. [Emphasis supplied]

The last several words of the quotation state in unmistakable terms that scenario one and the other three scenarios only consider use of Harris to meet future peak demand. Mr. Eddleman's criticism of the PID is without merit.

Clearly Mr. Eddleman, and Dr. Reeves, have not addressed the possibility of substituting Harris for existing base load coal-fired facilities and in regard to Mr. Eddleman's first scenario the Licensing Board is correct.

Scenario 2 Eddleman Affidavit at 10-11 relates to Unit 2 which has been canceled and thus it is not relevant or germane to the 10 C.F.R. § 2.758 petition or the Licensing Board's decision below. 51/

Scenario 3 Eddleman Affidavit at 11 and 12. This scenario merely states that the North Carolina Utilities Commission Public Staff Report 1983, "Analyses of Long Range Needs For Electric Generating Facilities In North Carolina", confirms Mr. Eddleman's position, i.e., that Harris can be delayed until 1992. In his supporting documents Mr. Eddleman includes 7 pages of the PUC Staff Report which set forth a schedule of on line dates for facilities. The Staff has obtained a copy of that 1983 Staff

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51/ On page 11 of his Affidavit, Mr. Eddleman, as did Dr. Reeves on page 9 of his July 14, 1982 paper, alleges that operation of Harris as a substitute for existing coal-fired generation would produce power at less cost than if produced by using coal. However, they did not suggest such a use. This affirms that 10 C.F.R. § 51.106(c) does indeed apply here.

Report. It is a forecast of future demand and how best to fulfill that demand. 52/ Nowhere did the NCUC Public Staff ever even consider substituting Harris nuclear capacity for existing coal-fired capacity. It recommends delay of Harris until 1992 in order to meet future peak demand and base load generating needs.

Scenario 4 Eddleman Affidavit at 12. Mr. Eddleman states that Blackburn and Weintraub assert a long range price elasticity of demand of -1. Not so. Blackburn and Weintraub submitted testimony to the NC Utilities Commission in 1979 commenting on the Public Staff Report as to its design and methodology. On page 10 of their testimony they hypothesize a price elasticity of demand of -1 for the Duke Power Company service area for the NCUC Staff Report of 1979. They did not assert that this was a correct figure. They did this to show the effect that different elasticities would have on future demand. That 1979 Staff Report utilized price elasticities of demand in its forecasting. The 1983 NCUC Public Staff Report did not utilize price elasticities of demand and none are identified. The 1983 NCUC Public Staff Report also did not consider substituting the Harris units for existing coal-fired capacity. Mr. Eddleman's use of a six year old hypothetical elasticity figure for Duke Power Company on page 12 of his Affidavit as though it had some meaning and importance to the issue under consideration is misplaced.

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52/ North Carolina Utilities Commission Public Staff Report 1983, Summary page 1.

In summary, the Licensing Board was correct when it stated that the four Eddleman scenarios concerned future peak demand needs and did not consider using Harris as a substitute for coal-fired capacity. 53/ Regardless of whose definition of prima facie is used, Mr. Eddleman has not made out a persuasive case with reliable evidence that Harris could not be used to substitute for existing base load coal fired generation -- indeed, rather, he has made the case that the Commission's rule 10 C.F.R. § 51.106(c) is correct. Harris could economically be substituted for existing base load coal fired facilities even if it is not needed for future demand and the PID in this regard should be sustained.

The Licensing Board suggests that in opposing Mr. Eddleman's petition "the Staff devotes most of its response to disputing the merits of certain of Mr. Eddleman's claims of economic and environmental superiority for his alternative." PID at 54. The Board is referring to pages 7-9 of the Staff Response cited supra. The Staff did not intend to go to the merits of Mr. Eddleman's Petition, nor do we, upon reflection, believe that our response below did. We intended our response, and believe that it does, go to the merits of Mr. Eddleman's legal burden of making a persuasive prima facie case of special circumstances. We attempted to demonstrate that an informed and qualified person who read the petition and all of its supporting documentation, with no opposing views presented, would conclude from the face of the Eddleman documents themselves that no case of special circumstances had been made. The

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53/ See footnote 47 supra.

Licensing Board noticed our argument regarding air conditioners. PID at 55. The energy saving measures proposed by Mr. Eddleman and Dr. Reeves include more efficient air conditioners. We here repeat our argument below.

> Another example of the lack of analysis and supporting documentation in Mr. Eddleman's petition can be found in Dr. Reeves discussion of the energy savings attributable to higher efficiency air conditioners. In his affidavits of July 14, 1982 and February 10, 1983 addressing the use of room air conditioners, Dr. Reeves assumes a savings of 800MW through the use of such air conditioners. Reeves Affidavit at 13-14; Reeves Affidavit, February 10 at 2. He makes no attempt to provide information on the current number, type, and efficiency of room air conditioners installed in the Applicants service area. He does not provide any basis for his assumptions surrounding the number of air conditioners he predicts will be replaced by higher efficiency air conditioners by 1995 in Applicants service area. Therefore, he provides no basis for the conclusion that one could save 800MW in Applicants' service area through the use of such air conditioners. [NRC Staff Response at 8].

Mr. Eddleman's petition and its attendant documentation provide no basis or rational assurance that Dr. Reeves' panoply of energy reducing measures will ever come to fruition. To assert that the Eddleman-Reeves' alternative of reducing peak demand by more efficient end-use will ever come into being, or that their attendant costs and benefits are correctly calculated, is to do little more than engage in idle speculation. Mr. Eddleman's experts, Blackburn and Weintraub, on page 6 of their paper quote Lord Keynes and that quotation applies here:

> "It would be foolish, in forming our expectations, to attach great weight to matters which are very uncertain."

Keynes, J.M., The General Theory of Employment, Interest, and Money, 1936, p. 198.

It is the Staff's view that an informed and qualified person who would read Mr. Eddleman's Affidavit and all of the accompanying documentation would not be persuaded that special circumstances exist so that 10 C.F.R. § 51.106(c) should not be applied here. In our view an informed and qualified person would find Mr. Eddleman's presentation to be internally inconsistent, lacking in necessary facts and contradictory. 54/

The conservation measures proposed by Mr. Eddleman and Dr. Reeves are independent of the fuel used by production facilities. The real economic advantage to the consumer would be to substitute Harris for existing coal fired units, thus saving money, and let the proposed conservation measures come to fruition, if ever, thus saving more money. Mr. Eddleman rejects this concept. 55/

Mr. Eddleman has made no case, prima facie or otherwise, that his proposed conservation measures to reduce future peak load demand are a viable alternative to substituting Harris for existing base load coal-fired units and thus a waiver of 10 C.F.R. § 51.106(c) is not appropriate.

Mr. Eddleman claims that in addition to obviating the need for the Harris facility, the combination of alternatives he proposes which go to

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54/ For instance, both Mr. Eddleman and Dr. Reeves assert that Harris can produce electricity at a lower cost than existing coal units. See footnote 47.

55/ Wells Eddleman's Response re 2.758 Petition of 6-30-83 on Need for Power and Alternatives to Shearon Harris Plant (September 30, 1983), at 3.

reduce future peak demand are environmentally superior to the Harris facility. Eddleman Affidavit at 1; Brief at 24 and 27. Such superiority, he alleges, would constitute special circumstances requiring the litigation of alternative energy source issues in this operating licensing proceeding. Id. He bases his argument on a statement by the Commission that special circumstances could exist if it could be shown that an environmentally and economically superior alternative to the facility in question existed. 47 Fed. Reg. 12941. Mr. Eddleman's argument somewhat oversimplifies the statement of the Commission. While the Commission noted the existence of an environmentally superior alternative as an example of a situation in which special circumstances could possibly exist, when viewed as a whole, the Commission's statements would make the threshold of superiority much higher than Mr. Eddleman seems to believe. The Commission pointed out its conclusion that marginally superior alternatives would not tilt the NEPA balance against issuance of an operating license. 47 Fed. Reg. 12940. In addition, the Commission pointed out that only in the very unusual cases where it appears that an alternative exists that is clearly and substantially environmentally superior, the Commission would be obligated under NEPA to address the issue in it's Environmental Impact Statement. Therefore, the actual standard to be applied here should be whether the combination of alternatives suggested by Mr. Eddleman are clearly and substantially environmentally superior to the Harris facility.

Although Mr. Eddleman seems to discuss why the environmental impacts of his proposed combination of alternative would be minimal, it is not clear that he actually compares the impacts in detail with the impacts

attributable to operation of the Harris plants. See Eddleman Affidavit at 15-22. His discussion actually seems to be addressed to the subject of why his proposed combination of alternatives minimizes the environmental costs identified by Dr. Medsker in the report attached to Mr. Eddleman's petition. Larry Medsker, "Side Effects of Renewable Energy Sources", Revised Edition (December 1982). In addition, the substantiality of the environmental superiority of Mr. Eddleman's combination of alternatives has not been established. The Staff has concluded in its Draft Environmental Impact Statement (DES) at 6-4 that the impacts of the operation of the Harris facility are minimal. Mr. Eddleman does not present evidence in his petition to contradict this conclusion. At least one Licensing Board has noted that if the environmental impacts of a proposed action are insignificant then the impacts of an alternative to such an action would be greater than or equal to the proposed action. Public Service Electric and Gas Company, et al., (Salem Nuclear Generating Station, Unit 1), LBP-80-27, 12 NRC 435, 444 (1980). Mr. Eddleman's petition and supporting documentation do not provide the necessary prima facie showing on this matter to permit the litigation of alternative energy source issues in this operating license proceeding.

The Staff's position set forth above on Mr. Eddleman's petition for a waiver of 10 C.F.R. § 51.53(c) so that he may have litigated below need for power and alternatives to the Shearon Harris project is summarized below

1) Intervenors have made no showing, or even attempted to do so, of any special circumstances which apply to the Shearon Harris project and the Applicants' service area which would make 10 C.F.R. § 51.106(c) not here serve the purpose for which it was adopted.

2) Intervenors have made no showing, or even attempted to do so, that the Applicants' organization and service area are unique and different from those of other utilities.

3) Intervenors have not addressed whether the Shearon Harris facility could be substituted for existing coal-fired facilities nor addressed the environmental and societal costs and benefits of such substitution.

4) The Licensing Board's determination that Intervenors had made no prima facie showing that the Harris facility could not be used to replace existing coal-fired capacity was correct.

5) Intervenors' scenario alternative one consisting of load shifting, energy storage, and more efficient appliances goes to reducing peak power needs and not to reducing base load needs.

6) The alternatives proposed by Intervenors in their scenario number one are almost identical to those considered and rejected by the Commission in its rulemaking.

7) Intervenors' scenario two relates to Harris Unit 2 which has been cancelled.

8) Intervenors' scenario three relates to projected future peak demand.

9) Intervenors' scenario four relates to a six year old Blackburn and Weintraub paper which addresses a 1979 Public Staff Report of the NCUC regarding future peak and base load demand and does not address substituting Harris for existing coal-fired base load units.

10) Mr. Eddleman and his expert Dr. Reeves both assert that Harris can produce electricity for less cost than existing coal-fired units.

11) Mr. Eddleman's 2.758 petition and supporting documentation are incomplete, inconsistent and by their own terms are not persuasive.

For all of the above summarized reasons, the Staff urges that this appeal as it relates to Intervenors' petition under 10 C.F.R. § 2.758 be denied and that the Licensing Board's decision below be affirmed upon the record.

## VI. CONCLUSION

Based upon the foregoing Staff discussion, the Licensing Board's analysis in its Partial Initial Decision, and the entire record below, the Staff concludes that the Partial Initial Decision should be affirmed and that the appeals of Joint Intervenors and Mr. Eddleman be denied.

Respectfully submitted,

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Janice E. Moore
Counsel for NRC Staff

Dated in Bethesda, Maryland
this 24th day of May, 1985

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD



| | | |
|---|---|---|
| In the Matter of | ) | |
| | ) | |
| CAROLINA POWER AND LIGHT COMPANY AND NORTH CAROLINA EASTERN MUNICIPAL POWER AGENCY | ) | Docket Nos. 50-400 OL<br>50-401 OL |
| | ) | |
| (Shearon Harris Nuclear Power Plant, Units 1 and 2) | ) | |

I hereby certify that copies of "NRC STAFF BRIEF IN REPLY TO THE APPEAL OF JOINT INTERVENORS AND WELLS EDDLEMAN OF THE LICENSING BOARD'S PARTIAL INITIAL DECISION ON ENVIRONMENTAL MATTERS" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or deposit in the Nuclear Regulatory Commission's internal mail system (*), this 23rd day of May, 1985:

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