

June 18, 1979

NRC PUBLIC DOCUMENT ROOM

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION



BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of )  
 )  
VIRGINIA ELECTRIC AND POWER COMPANY ) Doc. Nos. 50-338 SP  
 ) 50-339 SP  
 )  
(North Anna Power Station, ) (Proposed Amendment to  
Units 1 and 2) ) Operating License NPF-4)

VEPCO'S MOTION FOR INTERIM RELIEF

The applicant in this proceeding, Virginia Electric and Power Company (Vepco), hereby asks the Atomic Safety and Licensing Board (ASLB or Board) to authorize the immediate installation of new high-density spent fuel storage racks and their use for the storage of up to 243 spent fuel assemblies, under the conditions stated later in this motion, until the contested issues in this proceeding are resolved. There are compelling reasons why the Board should grant this interim relief, as we shall explain below.

I. THE PROBLEM

Vepco requested the operating license amendment that would permit the installation and use of the new high-density spent fuel storage racks on May 1, 1978. The company now finds

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itself in June 1979 with a public evidentiary hearing scheduled for July 9. The NRC Staff, Appeal Board, and ASLB have done their best to move this proceeding along promptly, it seems to us. Nevertheless, unless we have a greatly abbreviated schedule for posthearing pleadings, or unless the Board grants summary disposition of all the issues, it seems unlikely that an initial decision can be had before August or September.<sup>1</sup>

As Vepco explained in the Affidavit of E. Ashby Baum attached to Vepco's Response to Motions by NRC Staff and Intervenor to Reschedule Hearing, May 30, 1979, spent fuel from North Anna Unit 1 will need to be stored in September, and so spent fuel storage racks of some kind must be already installed by then. Moreover, there is a pressing need to use the spent fuel racks to store fresh fuel for both Unit 1 and Unit 2 temporarily.

In an attempt to solve the problem, Vepco asked the other parties to agree to an interim solution such as that described below in this motion. Vepco submitted a written proposal to CEF and the Potomac Alliance on May 14, 1979. Counsel for the Alliance has now informed Vepco counsel that the Alliance finds the proposal unacceptable.

As stated in the Baum affidavit cited above, it is

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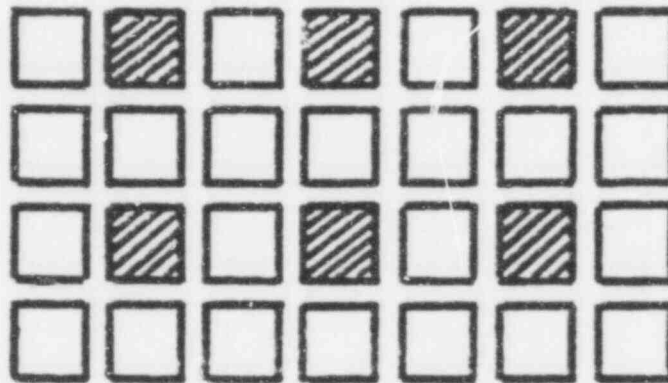
<sup>1</sup>/Fifty days are required after hearing for filing proposed findings, 10 CFR § 2.754(a)(2) and (3), and 35 days is the time within which the Board is expected to render its initial decision, 10 CFR Part 2, App. A, VI(d) (1978).

important that the new racks be installed in the pool before any irradiated fuel is stored there. At present, since irradiated fuel has never been stored in the pool, the new racks can be installed while the pool contains no water, the workers will not be exposed to any radiation, and the old racks can be removed and disposed of without any special precautions. If Vepco has to install the racks after irradiated fuel has been stored in the pool, they will have to be installed with the assistance of divers while the pool is full of water. In addition, the workers will be exposed to radiation; based on our experience with the replacement of the Surry spent fuel racks, Vepco expects these workers to receive approximately 13 man-rems. The old racks will also have been exposed to radioactive contaminants and will have to be disposed of in accordance with NRC regulations for the disposal of radioactive wastes. Finally, we estimate that the additional cost to Vepco and its customers could be as much as \$400,000.

## II. PROPOSED SOLUTION

What Vepco proposes to do, then, is install the high-density spent fuel storage racks that are the subject of this licensing proceeding with certain temporary restrictions on their use such that no more than 243 storage cells may be used -- fewer than are now permitted. Installation of the racks would be at Vepco's own risk.

The temporary restrictions we propose would be to administratively control the use of the racks such that alternating rows of storage cells would not be used at all and such that in the intervening rows only alternate cells would be used.<sup>2</sup> This arrangement can be illustrated as follows (with the unshaded squares representing the unused storage cells):



In this manner the capacity of the spent fuel pool would be limited to 243 fuel assemblies (instead of the now-licensed 416) spaced a nominal 28 inches apart center-to-center (instead of the now-permitted 21 inches). This arrangement would in every respect be more conservative than what is permitted under the present operating license.

Vepco would install the new racks at its own risk. That is, it would agree that if any cost-benefit balancing is to be done it should be done as of the time installation begins, so that resources invested in installing the new racks

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<sup>2</sup>/There is a full-time NRC resident inspector at North Anna, and he could observe fuel loading operations to ensure that the fuel assemblies were stored more than 21 inches apart.

will not be excluded from the costs of leaving the racks in place permanently. If Vepco ultimately is denied permission to expand the capacity of the fuel pool, then it will have to live with a capacity of only 243 assemblies, replace the high-density racks with the low-density ones or (after any required NRC approval) with racks of some different design, or apply to the NRC at some time in the future to use more than 243 storage cells.<sup>3</sup>

We will set out below the legal and factual basis for this proposed solution.

### III. ORDER AUTHORIZING INSTALLATION AND SHORT-TERM USE ONLY

The relevant Technical Specifications now read as follows:

#### CRITICALITY

5.6.1 The spent fuel storage racks containing new and/or spent fuel are designed and shall be maintained with a nominal 21 inch center-to-center distance between fuel assemblies placed in the spent fuel storage racks to ensure a keff equivalent of  $\leq 0.95$  with the storage pool filled with unborated water. The keff of  $\leq 0.95$  includes a

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<sup>3</sup>One advantage of this interim relief is its flexibility. If the ASLB should decline to license the high-density racks and Vepco should nevertheless leave them in place with their use limited to 243 cells, and if circumstances were to change in the future so as to make a greater capacity licensable, then Vepco could simply apply at that time for an easing of this restriction.

conservative allowance of 2.6%  $\Delta k/k$  for uncertainties as described in Section 9.1 of the FSAR.

\* \* \* \*

If fresh fuel is stored dry for a first core loading in the spent fuel racks with a nominal 21 inch center-to-center distance between new fuel assemblies, then, on a best estimate basis,  $k_{eff}$  will not exceed .98 with fuel of the highest anticipated<sup>4</sup> enrichment in place assuming optimum moderation.

\* \* \* \*

#### CAPACITY

5.5.3 The fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 416 fuel assemblies.

For the reasons set out above, Vepco hereby asks the Board to authorize a short-term amendment to these Technical Specifications. To be specific, Vepco asks the Board to issue an order authorizing the Staff to approve an interim Technical Specification that authorizes interim storage in accordance with the proposed solution in section II above; a proposed interim Technical Specification is attached to this motion. It has been approved by the Station Nuclear Safety and Operating Committee and the System Nuclear Safety and Operating Committee. It has been determined that the change does not involve an unreviewed safety question. Nor does the proposed interim Technical Specification change the technical intent of

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<sup>4</sup>/E.g., an aqueous foam envelopment as the result of fire fighting.

the present Technical Specification.

The Board's order should specify that the interim Technical Specification would be in effect only until such time as either (1) the Board issues an initial decision denying approval of the requested amendment or (2) until the Staff, with the Board's approval, issues the amendment. Vepco asks the Board to make, in support of such an order, whatever findings may be necessary to authorize the installation and short-term use of the new racks, again with the number of usable cells to be limited by administrative controls. Vepco believes that this Board has the authority to make such interim findings when the public interest so requires. A licensing board has the jurisdiction and power that the NRC has delegated to it. Public Service Co. of Indiana, Inc. (Marble Hill Nuclear Generating Station, Units 1 & 2), ALAB-316, NRCI-76/3 167 (March 3, 1976). In the present case the Board has been delegated authority by the Appeal Board to conduct whatever proceedings are necessary. See Virginia Electric and Power Co. (North Anna Nuclear Power Station, Units 1 & 2), ALAB-552, 9 NRC \_\_\_\_ (Jan. 26, 1979); 43 Fed. Reg. 29634 (July 10, 1978).

A. Legal Basis for Interim Findings

Section 50.91 of 10 CFR says that the issuance of an amendment to an operating license is analogous to the issuance of the license itself:

Sec. 50.91. Issuance of Amendment. -- In determining whether an amendment to a license or construction

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permit will be issued to the applicant the Commission will be guided by the considerations which govern the issuance of initial licenses or construction permits to the extent applicable and appropriate. . . .

This means we must turn to the regulations for the issuance of operating licenses. In a contested operating license proceeding, insofar as radiological health and safety issues are concerned, the licensing board is to decide the issues put in controversy by the parties, 10 CFR Part 2, App. A, § VIII(b).<sup>5</sup> As we shall demonstrate below, the contested issues in this proceeding involve the incremental effects of storing large amounts of fuel for long periods of time;<sup>6</sup> those effects will not occur during the brief period of interim relief Vepco requests. Installation and short-term use of the high-density racks are not matters in controversy in this proceeding. That being the case, the Board can simply make the necessary findings based on the Staff's Safety Evaluation and the affidavits and pleadings that have already been filed by Vepco and the Staff.

Since the considerations that govern issuance of an

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5/Even in construction permit proceedings, the ASLB may rely on uncontradicted Staff and applicant evidence for uncontested matters. Consumers Power Co. (Midland Plant, Units 1 & 2), ALAB-123, 6 AEC 331, 334-35 (1973); Boston Edison Co. (Pilgrim Nuclear Power Station), ALAB-83, WASH-1218 (Supp. 1) 552, 555-56 (Dec. 4, 1972), aff'd, UCS v. AEC, 499 F.2d 1069 (D.C. Cir. 1974).

6/A possible exception is CEF's contention that local boiling and hot spots will occur. We address this question below.



amendment are the same ones that govern issuance of a license, it is appropriate to turn to 10 CFR § 50.57(c), which allows a licensing board to issue an interim operating license before all the issues of the operating license stage have been resolved:

(c) An applicant may, in a case where a hearing is held in connection with a pending proceeding under this section make a motion in writing, pursuant to this paragraph (c), for an operating license authorizing low-power testing (operation at not more than 1 percent of full power for the purpose of testing the facility), and further operations short of full power operation. Action on such a motion by the presiding officer shall be taken with due regard to the rights of the parties to the proceedings, including the right of any party to be heard to the extent that his contentions are relevant to the activity to be authorized. Prior to taking any action on such a motion which any party opposes, the presiding officer shall make findings on the matters specified in paragraph (a) of this section as to which there is a controversy, in the form of an initial decision with respect to the contested activity sought to be authorized. The Director of Nuclear Reactor Regulation will make findings on all other matters specified in paragraph (a) of this section. If no party opposes the motion, the presiding officer will issue an order pursuant to § 2.730(e) of this chapter, authorizing the Director of Nuclear Reactor Regulation to make appropriate findings on the matters specified in paragraph (a) of this section and to issue a license for the requested operation.

There is an analogous set of provisions in the case of the construction permit. A licensing board designated to decide whether a construction permit may be issued is empowered to first issue a "limited work authorization" based only on the resolution of site suitability issues. See 10 CFR §§ 2.101(a-1), 2.600-2.606, 50.10(e). In essence the regulations provide for a stepwise decision process, with the

ASLB authorizing the initial stages of the work separately from the entire proposed action.

B. Prairie Island

The issue of an ASLB's authority to grant interim relief in a spent fuel pool proceeding was raised in the Prairie Island proceeding, but it was mooted and expressly left undecided by the Appeal Board. Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 & 2), LBP-77-33, 5 NRC 1267 (1977), motion for directed certification denied, ALAB-419, 6 NRC 3 (1977). In Prairie Island the licensee asked permission to install its new spent fuel racks in the smaller of the two compartments of its spent fuel pool, basing its request on the same regulations Vepco has cited above, 10 CFR §§ 50.57(c) and 50.91. The ASLB denied the licensee's motion, having concluded that licensing boards lack authority to grant such relief. The licensee then asked the Appeal Board for directed certification under 10 CFR § 2.718(i). The question it sought to have certified was whether a licensing board has "authority to grant interim authority for those portions of operating license amendment activities which do not involve matters in controversy." 6 NRC at 5.

After the motion for certification was filed, however, the ASLB ruled that there were at least two matters in controversy that related to the installation of the racks in

the small compartment: (1) the "occupational exposures of the workers who would be involved in that activity" (it appears that the Prairie Island licensee had spent fuel already stored in the pool and had therefore to rerack underwater); and (2) the "necessity for the staff to prepare an environmental impact statement before the proposed modifications were approved" (this issue was ultimately decided against the intervenor, as it has been in every decided case). With these findings, said the Appeal Board, the issue that a licensee wanted certified had become an abstract question, and so it denied the certification motion.

In the North Anna fuel pool proceeding, on the other hand, the installation and short-term use of the fuel racks are not matters in controversy, as we shall demonstrate below. The Prairie Island licensing board's decision is not binding on the North Anna ASLB, and the question left unresolved by the Appeal Board in Prairie Island should (despite the licensing board's contrary finding), be resolved in favor of interim relief in this proceeding. It should be so decided in this proceeding in particular because, as we will now show, a failure to do so will result in higher occupational radiation doses than necessary.

Let us take the intervenors' contentions one at a time to show that they are not affected by the proposed interim relief.

#### IV. EFFECT ON THE MATTERS IN CONTROVERSY

This proposal would not affect the ultimate resolution of the intervenors' contentions. The intervenors have said that they wish to litigate only the incremental effects of the requested license amendment, and those effects will not result from Vepco's interim proposal, because the storage time will be short and the number of assemblies few. Moreover, if the intervenors should succeed in convincing the Board that the high-density racks should not be approved, Vepco could remove them and install the original low-density racks, or (with NRC approval if required) racks of some different design.<sup>7</sup>

Let us consider each of the contentions in turn, as arranged in the Board's Order Granting Intervention of April 21, 1979.

##### Thermal Effects (CEF)

In its first contention CEF raises the possibility that "the additional 6 MBtu/hr of heat to be discharged as a result of the proposed modification" may cause unacceptable environmental impacts. The additional 6 MBtu/hr, of course, is for 966 fuel assemblies. Until more than the presently authorized 416 assemblies are stored in the pool, there can be

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<sup>7</sup>Vepco wishes to reserve the right to install the now-licensed low-density racks in the future if the Board should ultimately refuse to license the full use of the high-density racks.

no "additional" heat. Accordingly, Vepco's interim proposal has no effect on this contention.

CEF also argues that the effect of a crack in the pool liner would be more severe "in light of the additional fuel to be stored in the pool." Again, during the interim period Vepco does not propose to store any "additional" spent fuel over and above the now-authorized 416 assemblies.

CEF contends that the increase in storage capacity might cause "hot spots" and localized boiling. This contention involves allegations about the flow-restricting effects of increased corrosion and the increased heat resulting from the additional fuel assemblies that will be stored. It may be that the intervenors also take the position that the new racks have inadequate flow characteristics even with only 243 or fewer assemblies stored in the configuration described above. If so, then this is perhaps the single instance in which a contention is relevant to short-term interim storage, and a Board finding may be necessary. A hydraulic analysis of the high-density racks has been performed, summarized in section 6.6 of Vepco's Summary of Proposed Modifications and also addressed in Vepco's Motion for Summary Disposition. It shows that local boiling will not occur. With the fuel assemblies stored in the interim even farther apart than now authorized and with no more than 243 of them stored, there is all the more reason to believe that the thermal problems CEF envisions cannot arise.

#### Radioactive Emissions (CEF)

CEF and the Alliance raise the issue of the additional "liquid and gaseous radioactive emissions" that will result from the increased fuel storage. The emissions will not be increased, of course, until more than 416 assemblies are stored in the pool. Vepco proposes to store no more than 243 pending further authorization.

#### Missile Accidents (Potomac Alliance)

Potomac Alliance, in its first contention, argues that the use of the high-density racks will increase "both the likelihood and the consequences of an accident involving turbine or tornado missiles." We understand the Alliance to be saying that a missile may hit a greater number of fuel assemblies once the assemblies are stored only 14 inches apart. Using the Alliance's reasoning, with the assemblies stored 28 inches apart under Vepco's interim proposal, the consequences of a missile accident should be less.

#### Materials Integrity (Potomac Alliance)

The Alliance argues that "increasing the inventory of radioactive materials in the spent fuel pool" will increase corrosion and resulting problems. During the interim, however, Vepco does not propose to increase the inventory of radioactive materials over the 416 assemblies already authorized.

#### Corrosion (CEF)

CEF raises the issue of a "potential incremental

increase in the amount of corrosion upon the spent fuel assemblies and racks," suggesting both that the fuel may be stored longer because of the proposed modification and that "incremental impurities" may be produced by the additional assemblies. The interim relief requested by Vepco, of course, will involve storage for only a short period of time (until the Board can finally resolve the issues) and storage of only a small number of assemblies, much fewer than the now-authorized 416.

#### Occupational Exposure (Potomac Alliance)

The Alliance wishes to litigate the "increased occupational radiation levels which will result from the spent fuel pool modification." Until more than 416 assemblies are stored in the pool, however, there can be no increased radiation levels.

#### Alternatives (Potomac Alliance)

The Board has accepted as admissible issues three of the Alliance's proposed six alternatives to the high-density racks:

(a) The construction of a new spent fuel pool on site;

(b) The physical expansion of the existing fuel pool; and

(c) The use of the spent fuel pool at North Anna Units 3 and 4, (including the completion of construction of such pool, if necessary) for storage of spent fuel from Units 1 and 2.

These alternatives are not affected by the proposed interim

relief; Vepco could still construct a new spent fuel pool onsite, for example, after it had installed the new racks.

Revised Component Cooling Water Temperature (Potomac Alliance)

The Potomac Alliance has proposed the following additional contention:

Service Water Cooling System. The intervenor contends that the service water cooling system for the facility will be inadequate to support the component cooling system for the spent fuel pool if the proposed modification of the pool is permitted.

This new contention is prompted by the recently revised maximum service water temperature.

The effect of the increased service water temperature on the spent fuel pool cooling system was reported to the NRC as a Licensee Event Report (LER 79-44) dated April 4, 1979. As a result of the estimated increased service water temperature, the component cooling water used to cool the fuel pool coolers will increase to a calculated maximum of 113.2°F. However, Vepco's Motion for Summary Disposition takes into account the revised temperatures and shows maximum calculated spent fuel pool temperatures of 135.4°F for the normal case and 154.2°F for the abnormal case. Also, the conditions described in LER 79-44 necessary to achieve the elevated service water temperatures involve four units in operation. North Anna Units 3 and 4, however, will not go into service until at least the mid-1980's. Therefore, for the purpose of this interim proposal there is no change from the information presently in



the FSAR and the original high-density spent fuel rack licensing submittal.

#### V. SUMMARY DISPOSITION

To the extent that the interim relief Vepco requests does bear on the matters put into controversy by the intervenors, there is a way to resolve the affected issues quickly: summary disposition under 10 CFR § 2.749. Summary disposition may be used in license amendment proceedings. Boston Edison Co. (Pilgrim Nuclear Station, Unit 1), ALAB-191, 7 AEC 417 (1974). Vepco has already moved for summary disposition on all the issues, and the NRC Staff has supported the motion as to the Thermal Effects, Radioactive Emissions (in part), Materials Integrity, Corrosion, Occupational Exposure, and Alternatives contentions. Vepco hereby moves for summary disposition of any matters that the Board may decide are in controversy and may be affected by interim relief.

#### VI. PUBLIC INTEREST

The cost of preventing Vepco from installing the high-density racks is of course the risk that the old racks will have to be used before this licensing proceeding is finished and that they will thereby become contaminated. If the outcome of the proceeding is thereafter to permit the use of the high-density racks, then those racks will have to be installed in a contaminated pool, and the work will have to be done under

water with the assistance of workers in divers' suits. The stored fuel will then have to be transferred from the old racks to the new ones. Finally, the contaminated low-density racks will have to be disposed of as radioactive waste instead of as ordinary scrap. The NRC Staff's Environmental Impact Appraisal says that approximately 2695 cubic feet of low-level radwaste would thus be created (Environmental Impact Appraisal, page 26).

Based on Vepco's experience at Surry, the occupational exposure resulting from installing the racks in a contaminated pool can be expected to be about 13 man-rem.<sup>8</sup> The additional cost to Vepco could be as much as \$400,000. No one would benefit from these increased costs.

In deciding whether Vepco's interim proposal is a wise course to follow, it is important to assess the likelihood that the high-density racks will be approved at the conclusion of this proceeding. As of November 1977 twenty applications to expand at-reactor spent fuel storage capacity had been approved, according to NUREG-0404, the Draft Generic Environmental Impact Statement on Handling and Storage of Spent Light Water Power Reactor Fuel (page ES-5). That figure is now

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8/In Prairie Island the estimated occupational exposure during removal of the old racks and installation of the new ones was 28 man-rems, 6 NRC at 2/8-79. (The Prairie Island decision cites exposures at other plants ranging from 2.62 to 20 man-rems for the entire replacement job, 6 NRC at 2/9).

at least 31. Four such applications have reached the Appeal Board and been approved. Duquesne Light Co. (Beaver Valley Power Station, Unit No. 1), ALAB-484, 7 NRC 984 (June 7, 1978); Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 and 2) and Vermont Yankee Power Corp. (Vermont Yankee Nuclear Station), ALAB-455, 7 NRC 41 (Jan. 27, 1978) remanded, Minnesota v. NRC, \_\_\_ F.2d \_\_\_ (D.C. Cir., Nos. 78-1269 & 78-2032, May 23, 1979); Portland General Electric Co. (Trojan Nuclear Plant), ALAB-531, 9 NRC \_\_\_ (Mar. 21, 1979). None that we know of has been denied. As for North Anna 1 and 2, the NRC Staff has concluded that the license amendment should be approved.

The Commission has a duty to serve the public interest, and that duty implies a duty to make the wisest possible decision. Also, the Commission's policy favoring a prompt resolution of contested issues, combined with its "as low as is reasonably achievable" (ALARA) policy, may very well require the Board to grant interim relief when it is timely requested and adequately supported.

The ALARA Policy is embodied in 10 CFR § 20.1(c):

[P]ersons engaged in activities under licenses issued by the Nuclear Regulatory Commission . . . should, in addition to complying with the requirements set forth in this part, make every reasonable effort to maintain radiation exposures . . . as low as is reasonably achievable. . . .

We have shown that Vepco can avoid occupational exposure to 13 man-rem merely by getting permission to install the

high-density racks early (assuming, as is more likely than not, that the high-density racks are ultimately approved). In such a case the Commission would be violating one of the fundamental principles of its own regulations if it were to deny interim relief.

This idea is reinforced by the many provisions in the NRC Rules of Practice calling for promptness in licensing proceedings. In matters of scheduling the paramount consideration is the public interest. The public interest is usually served by as rapid a decision as is possible consistent with everyone's opportunity to be heard. Potomac Electric Co. (Douglas Point Nuclear Generating Station, Units 1 & 2), ALAB-277, 1 NRC 539 (1975). This policy is most evident in Appendix A to 10 CFR Part 2. Consider, for example, V(d)(4) of that Appendix:

The proceedings [that is, the hearing] should be conducted as expeditiously as practicable, without impairing the development of a clear and adequate record. . . .

Likewise section V begins by saying:

The board should use its powers under §§ 2.718 and 2.757 to assure that a hearing is focused upon the matters in controversy among the parties and that the hearing process for the resolution of controverted matters is conducted as expeditiously as possible, consistent with the development of an adequate decisional record.

These goals are exactly what would be accomplished by granting Vepco's request for interim relief. Separating the matter of installation from the matters of long-term storage would "focus

the hearing upon the matters in controversy" and, by removing the time pressure from the parties, allow the development of an adequate decisional record.

#### VII. EXEMPTION

In the alternative, Vepco petitions for a waiver of the Commission's rules pursuant to 10 CFR § 2.758(b). The regulations that should be waived are such of those of 10 CFR §§ 2.100-2.106 and 10 CFR Part 50 that the Board determines may, singly or in combination, require the conclusion of the public hearing or the rendering of an initial decision before interim relief may be granted. Vepco submits that the affidavits already submitted in this proceeding are sufficient to make the showing required by 10 CFR § 2.758(b).

#### VIII. INSTALLATION OF ORIGINAL RACKS

As a result of delays in this proceeding and the operating license proceeding, Vepco feels it is necessary to proceed with the installation of sufficient low-density storage racks to accommodate the new fuel that will be arriving at the North Anna site in the near future. This new fuel consists of reload assemblies for the scheduled refueling of North Anna Unit 1. Also, enough additional low-density racks will be installed to accommodate a full core discharge should it become necessary during the refueling.

In the remaining space, Vepco will install enough of

the new high-density racks to bring the total capacity of the pool up to the presently authorized 416, but it will not use them to store fuel without further NRC approval. In this way Vepco hopes to minimize the exposure and additional cost which will be suffered when, as Vepco believes will surely happen, the high-density racks are finally licensed. The installation of these racks will be in accordance with 10 CFR § 50.59 in that Vepco will not store fuel in these racks until a decision in this proceeding is rendered by the Board. It is our feeling that proceeding in this manner is in keeping with the NRC's guidelines for maintaining exposures as low as reasonably achievable (ALARA). Unless otherwise directed by the Board or the NRC Staff within 20 days, Vepco will proceed with the installation of the high-density racks as described in this section VIII.

#### IX. CONCLUSION

For the above reasons, Vepco asks the Board to grant interim relief in accordance with this motion.

Respectfully submitted,

VIRGINIA ELECTRIC AND POWER  
COMPANY

By /s/ James M. Rinaca  
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for Virginia Electric and  
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DATED: June 18, 1979

## DESIGN FEATURES

- a. In accordance with the code requirements specified in Section 5.2 of the FSAR, with allowance for normal degradation pursuant to the applicable Surveillance Requirements,
- b. For a pressure of 2485 psig, and
- c. For a temperature of 660°F, except for the pressurizer which is 680°F.

## VOLUME

5.4.2 The total water and steam volume of the reactor coolant system is  $9957 \pm 10$  cubic feet at a nominal  $T_{avg}$  of 525°F.

## 5.5 METEOROLOGICAL TOWER LOCATION

5.5.1 The meteorological tower shall be located as shown on Figure 5.1-1.

## 5.6 FUEL STORAGE

**POOR ORIGINAL**

## CRITICALITY

5.6.1 The spent fuel storage racks containing new and/or spent fuel shall be maintained with a minimum 21 inch center-to-center distance between fuel assemblies placed in the spent fuel storage racks to ensure a  $k_{eff}$  equivalent of  $< 0.95$  with the storage pool filled with unborated water. The  $k_{eff}$  of  $< 0.95$  includes a conservative allowance of 2.6%  $\Delta k/k$  for uncertainties as described in Section 9.1 of the FSAR.

The new fuel pit storage racks are designed and shall be maintained with a nominal 21 inch center-to-center distance between new fuel assemblies such that, on a best estimate basis,  $k_{eff}$  will not exceed .98 with fuel of the highest anticipated enrichment in place assuming optimum moderation.\*

If fresh fuel is stored dry for a first core loading in the spent fuel racks with a minimum 21 inch center-to-center distance between new fuel assemblies, then, on a best estimate basis,  $k_{eff}$  will not exceed .98 with fuel of the highest anticipated enrichment in place assuming optimum moderation.\*

\*E.G., an aqueous foam envelopment as the result of fire fighting.



## DESIGN FEATURES

### DRAINAGE

5.6.2 The spent fuel pit is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 288.83 feet Mean Sea Level, USGS datum.

### CAPACITY

5.6.3 The fuel storage pool shall be maintained with a storage capacity limited to no more than 416 fuel assemblies.

### 5.7 COMPONENT CYCLIC or TRANSIENT LIMIT

5.7.1 The components identified in Table 5.7-1 are designed and shall be maintained within the cyclic or transient limits of Table 5.7-1.

**POOR ORIGINAL**

CERTIFICATE OF SERVICE

certify that I have served a copy of Vepco's Motion  
for Interim Relief on each of the persons named below by  
first-class mail, postage prepaid:

Secretary  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

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Atomic Safety and Licensing Board Panel  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Atomic Safety and Licensing Appeal Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

By /s/ James M. Rinaca  
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Power Company

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