



or by error of [Licensee's] employees in preparing the casks for shipment. Second, contrary to the National Environmental Policy Act, 42 U.S.C. 4332(2)(E), consideration was not given to the alternative method of constructing a dry cask storage facility at the Surry Station which is feasible, can be effected in a timely manner, is the least expensive and safest method for at least 50 years, and can be used on or offsite.

Thus, three issues exist. They involve the potential effects of sabotage, the potential effects of human error and the dry cask storage alternative.

In brief, the Licensee's positions are these:

1. The probability and consequences of sabotage have been analyzed thoroughly on the record, and the analysis supports the Staff's conclusion that the Licensee's proposal will not significantly affect the quality of the human environment.
2. The effects of human error in cask preparation are reflected in the values in Table S-4 and need not have been explored at all in this proceeding. Nonetheless, the probability and consequences of human error in cask preparation have been analyzed thoroughly on the record, and the analysis supports the Staff's conclusion that the Licensee's proposal will not significantly affect the quality of the human environment.
3. The Staff correctly concluded that no Environmental Impact Statement was required, and there is no unresolved conflict over alternative uses of available resources. Thus, no analysis of dry cask storage was required in this proceeding. Nonetheless, the dry cask alternative has been analyzed thoroughly on the record, and the analysis reveals no basis for denying Licensee's application.

The Licensee's Proposed Findings of Fact and Conclusions of Law are attached to this brief as Appendix 1.<sup>1/</sup> The Findings are cited but not repeated in this brief.

II.

Sabotage

- A. The probability and consequences of accidents occasioned by acts of sabotage have been adequately analyzed on the record, and the analysis supports the Staff's conclusion that the Licensee's proposal will not significantly affect the quality of the human environment.

Sabotage attacks were not considered by the Staff in the generic environmental analysis that ultimately resulted in the issuance of Table S-4. See 40 Fed. Reg. 1007 (January 6, 1975). Thus, the environmental effects of sabotage are subject to appropriate separate consideration in individual reactor licensing proceedings such as this one. Id. The subject of sabotage, however, is not discussed in the Staff's Environmental Assessment. See Staff Ex. 1. There are two answers to this objection.

First, the subject of sabotage has been analyzed in the Staff's Safety Evaluation Report (SER), see Staff Ex. 2 at 3-8, 3-9, 4-3, 4-4, which was published simultaneously with the Environmental Assessment. CCLC has not challenged the sabotage analysis included in the SER.

Second, the adequacy of the environmental inquiry in a proceeding is not to be judged on the material in the Environmental

---

<sup>1/</sup> Licensee's Proposed Findings of Fact are cited herein as "PFF."

Assessment alone but on the basis of the entire record. Philadelphia Electric Co. (Limerick Generating Station, Units 1 and 2), LBP-84-31, 20 NRC 446, 552-53, (1984); Philadelphia Electric Co. (Limerick Generating Station, Units 1 and 2), ALAB-262, 1 NRC 163, 197 n.54 (1975). The Board, therefore, should judge the adequacy of the environmental inquiry in this proceeding on the basis of the entire record.

The Licensee's analysis of the state of the record with respect to sabotage is set out in its Proposed Findings of Fact 5 through 32. Those Findings reveal that (a) the probability of a sabotage attack on a spent fuel shipment is small, PFF 11, (b) the probability that such an attack would be successful is small, PFF 26, and (c) the probability that a successful attack would have significant consequences for the public or for the environment is small, PFF 32. "Remote and highly speculative consequences" do not trigger an obligation to prepare an Environmental Impact Statement. Duke Power Co., (Amendment to Materials License SNM-1773 - Transportation of Spent Fuel from Oconee Nuclear Station for Storage at McGuire Nuclear Station), ALAB-651, 14 NRC 307, 321 (1981).

CCLC has neither filed testimony on the subject nor cross-examined any witness about sabotage. There is, then, not a word in the record with respect to sabotage that tends to undermine the Staff's conclusion that approval of the Licensee's proposal would not significantly affect the quality of the human environment.

III.

Human Error

- A. The environmental effects of human error in cask handling are reflected in the values in Table S-4, and, as a matter of law, no further analysis of human error need have been made in this proceeding.

The radiological and non-radiological environmental effects of transportation of spent fuel are examined in WASH-1238, "Environmental Survey of Transportation of Radioactive Materials To and From Nuclear Power Plants," December 1982, and in Supplement I, NUREG-75/038, April 1975. PFF 33. For use in licensing proceedings, these effects are summarized in Summary Table S-4, "Environmental Impact of Transportation of Fuel and Waste To and From The Light-Water-Cooled Nuclear Power Reactor." Id.

Table S-4 was intended to provide a generic measure of fuel transport impacts. Statement of Considerations, 40 Fed. Reg. 1005 (January 6, 1975). It was designed to eliminate the need for case-by-case, site-specific development of transshipment impacts absent a showing that the particular fuel transport contemplated involves distances, population exposures, accident probabilities or other factors much greater than those assumed in developing the Table S-4 impact value such that a waiver of application of Table S-4 is warranted pursuant to 10 C.F.R. § 2.758. Id. No such showing is possible here.

Comparing the key parameters used in WASH-1238 for calculation of environmental effects through the use of Table S-4 with the parameters for the proposed transshipments from Surry to North Anna, the radiological impact would be less by a factor of 3 for number of shipments, a factor of 2.5 for decay time, and a factor

of about 6 for distance shipped. PFF 36. Indeed, the Staff concluded in its Environmental Assessment that the radiological impact on the environment associated with the proposed transshipment would be less by a factor of at least 30 than that shown in Table S-4. PFF 37. Accordingly, the Staff relied on Table S-4 to evaluate the environmental impact -- including potential accidents -- of the transportation activity associated with the proposed transshipment of spent fuel from Surry to North Anna. Staff Ex. 1 at 27-28. Moreover, this Board has ruled that, as a matter of law, the Staff properly relied on the values in Table S-4 in its Environmental Assessment. In the Matter of Virginia Electric and Power Co. (North Anna Power Station, Units 1 and 2), Docket Nos. 50-338/339 OLA-1, Memorandum and Order (Ruling on Motions for Partial Summary Disposition) (January 7, 1985).

Further, as is evident from a reading of WASH-1238, the generic environmental impact analysis in Table S-4 for transportation of radioactive materials includes consideration of accidents attributable to human error. PFF 40 and 41. Estimates in WASH-1238 indicate that the probable frequency of casks being improperly closed prior to shipment is extremely low. PFF 41. WASH-1238 also concludes that the likelihood of an error, such as a package being used in a manner not in accordance with the design, is small in light of the regulatory requirements for quality assurance and for various observations and tests before each shipment. Id. The estimated frequency of improper cask closure due to human error as reported in WASH-1238 has been substantiated by the more recent NUREG-0170 (Final Environmental Statement on the Transportation of Radioactive Material by Air and Other Modes). PFF 42.

In sum, the environmental effects of human error in cask handling are reflected in the values in Table S-4, and, as a matter of law, need not have been analyzed on a site-specific basis in this proceeding.

- B. The probability and consequences of accidents attributable to human error in cask preparation have been adequately analyzed on the record, and the analysis supports the Staff's conclusion that the proposal will not significantly affect the quality of the human environment.

While no analysis beyond that done in Table S-4 need have been made in this proceeding, the probabilities and consequences of potential accidents from human error in cask handling have been adequately analyzed on the record. As reflected in Licensee's Proposed Findings of Fact 52 through 72, the record shows that design features and cask handling procedures associated with the cask the Licensee plans to use make insignificant the likelihood and effect of any human error in preparing casks for shipment. CCLC has filed no testimony whatever on the subject of human error in cask handling.

In short, the record supports the Staff's conclusion that approval of the Licensee's proposal would not significantly affect the quality of the human environment.

#### IV.

##### The Dry Cask Alternative

- A. As a matter of law, no analysis of dry cask storage was required in the Environmental Assessment.

The Staff's Environmental Assessment of the receipt and storage of Surry fuel at North Anna does not include an analysis of alternatives, see Staff Ex. 1, but there is no reason that it should. No analysis of alternatives is required of the Staff

when (a) the circumstances do not require the preparation of an Environmental Impact Statement and (b) there is no "unresolved conflict concerning alternative uses of available resources" within the meaning of § 102(2)(E) of the National Environmental Policy Act of 1970, 42 U.S.C. § 4332(2)(E) (1982). Duke Power Co., supra at 321-22; Portland General Electric Co. (Trojan Nuclear Plant), ALAB-531, 9 NRC 263, 266 (1979); Virginia Electric and Power Co. (North Anna Nuclear Power Station, Units 1 and 2), ALAB-584, 11 NRC 451, 457-58 (1980). As for the first requirement, the Staff correctly concluded that the Licensee's proposed action will not significantly affect the quality of the human environment and that no Environmental Impact Statement is required in connection with the Licensee's transshipment proposal. See PFF 100. Thus, no analysis of alternatives was required in the Environmental Assessment unless there existed unresolved conflicts concerning alternative uses of available resources.

The difficulty for CCLC, of course, is that no such unresolved conflict exists. The record shows that the proposal to receive and store Surry fuel at North Anna will in fact involve only the most miniscule use of resources such as steel, lead, copper, resin, and the like. PFF 104. We expect CCLC to contend, however, that the existing storage space in the North Anna pool is a "resource" within the meaning of § 102(2)(E). The sole basis in the record for that argument is Mr. Smith's statement that the space is a "resource." See PFF 104. But neither that statement nor the question to which it responded purported to state a legal conclusion with respect to § 102(2)(E).

Whatever the word "resource" in § 102(2)(E) may mean, the Licensee does not believe that it includes the space in its North Anna pool. There is no NRC precedent precisely on this point, but prior Appeal Board opinions indicate that an asset such as storage space built by the Licensee is not the kind of "resource" contemplated by § 102(2)(E). For example, in Portland General Electric Co., supra at 263, 266, which involved a spent fuel pool expansion proposal, the Appeal Board held that § 102(2)(E) did not require an analysis of "possible alternatives," because there was "no serious question [of] the manner in which this country's resources are being expended." In Duke Power Co., supra at 322, the Appeal Board framed the § 102(2)(E) question in terms of "a substantial national resources commitment question." On the face of it, CCLC has raised no serious question about the use of "national" resources.

But even if the North Anna space were deemed a "resource" within the meaning of § 102(2)(E), CCLC's argument that an analysis of alternatives is required would fail. CCLC has produced no evidence for the proposition that there is an "unresolved conflict" over the use of the North Anna pool. The legislative history of § 102(2)(E) indicates that Congress meant for alternatives to be considered only where the recommended course of action was known to involve "unresolved conflicts over competing and incompatible uses" of available resources. S.Rep. No. 296, 91st Cong., 1st Sess. 21 (1969). The record shows that the Licensee will not run out of storage space at North Anna in any event for perhaps ten years. PFF 98. It also shows that the Licensee can replace any

North Anna space committed to Surry fuel in two ways: consolidation in the North Anna pool or installation of dry casks at North Anna. PFF 96 and 98.

Moreover, since Surry fuel can be accommodated in North Anna space and can be consolidated or stored in dry casks, it could eventually be removed from its original space in the North Anna pool, thus restoring that space for the use of North Anna fuel if that were deemed necessary. PFF 104. Use of the North Anna pool for Surry fuel, then, is not "incompatible" with its use for North Anna fuel. CCLC has made no effort to refute any of these facts. There simply is no "unresolved conflict" over the use of the North Anna space within the meaning of § 102(2)(E) of NEPA.

CCLC thus finds itself in the same position as the intervenors in the Duke case, where the licensee sought authority to ship 300 spent fuel assemblies from its Oconee Station to its McGuire Station. There the Appeal Board held:

To our mind, it simply cannot be seriously contended that the transportation by motor carrier of 300 spent fuel assemblies over the 170-mile distance separating Oconee and McGuire presents a substantial national resources commitment question.

Duke Power Co., supra at 322.

In summary, no unresolved conflict concerning alternative uses of resources, within the meaning of § 102(2)(E) of NEPA, is at issue in this proceeding. That being so, and because an Environmental Impact Statement was not required, the Staff was not required to include in its Environmental Assessment any analysis of alternatives.

- B. In any event, the dry cask storage alternative has been adequately analyzed.

Here, as in the case of sabotage, the environmental inquiry is not to be made on the basis of the Environmental Assessment alone but on the basis of the entire record. See Section II.A. above at pages 3-4. The record before the Board indicates that the dry cask storage alternative has been comprehensively analyzed. See PFF 84-104. Indeed, the Licensee has applied for an NRC license for a facility that would employ dry cask storage, NRC has completed its Environmental Assessment of that proposal, and the Environmental Assessment is included in the record of this proceeding. PFF 86. The Environmental Assessment concludes that the dry cask storage facility will not significantly affect the quality of the human environment, precisely the same conclusion reached with respect to the transshipment proposal now before the Board. PFF 102. So from an environmental perspective, neither alternative - dry cask storage or transshipment - is preferable to the other.<sup>2/</sup> PFF 103.

There is also a good deal of testimony in the record about the relative costs of dry cask storage and transshipment. See PFF 94-99. The Licensee introduced that testimony because the cost question was raised by CCLC and reflected in Consolidated

---

<sup>2/</sup> Environmental effects to one side, the record in this proceeding further shows that dry cask storage, although feasible in a technical sense, was not "available" at the time of the hearing, simply because the NRC Staff had not yet issued a license for the Licensee's proposed Surry dry cask storage facility. PFF 93.

Contention 1. The Licensee's testimony indicates that whether one alternative will be more expensive than the other will depend on what the costs of fuel consolidation turn out to be. PFF 94-99. So far as can be shown now, however, neither alternative can be said to be financially preferable to the other. PFF 99.

More to the point, the relative costs of the two alternatives are unimportant as a matter of law. In Virginia Electric and Power Co., supra at 456-457, the Appeal Board held that there need be no consideration of suggested alternatives that are said to be economically, but not environmentally, superior to the applicants' proposal. Accord Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-458, 7 NRC 155 (1978). The Virginia Electric decision is controlling here. As we have demonstrated, dry cask storage is not environmentally preferable to transshipment. PFF 103. That being so, any consideration of the relative costs of the two options is wholly irrelevant in determining whether transshipment should be authorized.

One final point. The Licensee might ultimately obtain NRC authorization for both transshipment and dry cask storage. We know of no legal reason why it should not. On the contrary, Congress has effectively made it a necessity that the Licensee seek and obtain both authorizations. Section 111(a)(5) of the Nuclear Waste Policy Act of 1982 (NWPA), 42 U.S.C. § 10151(a)(1) (1982), imposes on utilities the responsibility for dealing with their own interim spent fuel storage problems. PFF 91. Section 135(b)(1)(B), 42 U.S.C. § 10155(b)(1)(B) (1982), effectively requires a utility to exhaust all of its self-help options before it can qualify for use of federal interim storage. Id. The

Licensee, therefore, has no choice but to attempt to license both the proposal involved in this proceeding and the dry cask storage facility that it is pursuing in a parallel proceeding. We know of nothing in the law that prohibits the Licensee from obtaining authorization for both alternatives; indeed, NWPA reflects a policy in favor of it.

To summarize, there is no basis in the record for denying the proposal to receive and store Surry fuel at North Anna, notwithstanding the possibility that dry cask storage will make transshipment unnecessary.

V.

Summary

For the reasons set out herein, the Licensee requests that the Board find in the Licensee's favor in accordance with the arguments in this brief and the Licensee's Proposed Findings of Fact and Conclusions of Law and that the Board issue promptly an Order in the form attached to this brief as Appendix 2.

Respectfully submitted,

VIRGINIA ELECTRIC AND POWER COMPANY

By: /s/ Michael W. Maupin  
Michael W. Maupin

Of Counsel

Michael W. Maupin  
Marcia R. Gelman  
Hunton & Williams  
P. O. Box 1535  
Richmond, Virginia 23212

Dated: June 21, 1985