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DOCKET NUMBER 50-338 OLA 1
PROD. & UTIL. FAC. 50-339 OLA 1
DOCKET NUMBER 50-338 OLA 2
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July 30, 1984

'84 JUL 31 P2:53

Sheldon J. Wolfe, Chairman
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington DC 20555

Dr. George A. Ferguson
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington DC 20555

Dr. Jerry Kline
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington DC 20555

In the Matter of
VIRGINIA ELECTRIC AND POWER COMPANY
(North Anna Power Station, Units 1 and 2)
Docket Nos. 50-338/339 OLA-1 and OLA-2

Dear Administrative Judges:

Pursuant to the Board's directive, counsel for the parties have met twice to discuss the contentions put forward by my client, Concerned Citizens of Louisa County, in light of the environmental and safety analyses published by the Staff on July 3. The discussions, which were frank and productive, led to changes in the wording of the bases for several of the contentions, and to the dropping of one contention concerning emergency planning. In addition, a single new contention has been added (with regard to both OLA-1 and OLA-2) concerning alleged deficiencies in the Staff's environmental assessment. The complete list of current contentions is attached as Attachment 1.

Because VEPCO and the NRC Staff, however, continue to have objections to some of the contentions, it was not possible to reach agreement as to their admissibility. Accordingly, those parties intend to file responses to the contentions on or before August 17.

The parties agreed to begin informal discovery effective immediately.

Sincerely,

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PDR ADDCK 05C00338
Q PDR

James B. Dougherty

Attachment
cc: parties

Counsel for Concerned
Citizens of Louisa County

DS03

THIRD DRAFT OF CONTENTIONS

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OLA - 1

1. The proposed license amendment constitutes a major federal action significantly affecting the human environment, and thus may not be granted prior to the preparation of an environmental impact statement.

Basis:

The transportation of spent fuel by truck creates a risk of accidents causing tremendous human health and environmental damage. Studies show that if a spent fuel cask were to strike a bridge abutment sideways at no more than 12.5 m.p.h., the cask cavity could be expected to rupture. Battelle Pacific Northwest Laboratory, An Assessment of the Risk of Transporting Spent Nuclear Fuel by Truck, PNL-2588 (Nov. 1978) at 6-4. This could result in continuous releases of radioactive water and steam. Resnikoff, The Next Nuclear Gamble, (1983)(hereinafter cited as Resnikoff) at 259. Accidents at higher speeds are much more likely, and would likely result in significant damage to spent fuel assemblies and substantial releases of radioactive materials.

In a hypothetical but credible truck accident postulated by Citizens' consultant to occur in a rural area, radioactive materials would likely be deposited on agricultural lands, leading to the ingestion of such materials by humans through the consumption of meats, grains, and dairy products. More than 50% of the affected population could contract cancer as a result. Resnikoff at 276. In addition, farmland in the area would have to be removed or plowed under to a great depth, dramatically reducing the productivity and thus the value of the land. Id. at 277.

Other environmental costs associated with the proposed license amendment include the risk of sabotage, the effects of which would be comparable to those of a serious transportation accident. In addition, the possibility of error by VEPCO employees when performing such tasks as sealing the shipping casks creates additional risks. Because of all of these risks, the proposed license amendment will give rise to significant environmental effects.

2. VEPCO has not shown that the shipping casks to be used to transport Surry spent fuel to North Anna meet NRC standards.

10 C.F.R. §§ 71.35 and 71.36 require that all casks used for spent fuel shipments meet specific standards set out in Pt. 71 App. A and B. Noncompliance with these standards creates a great risk of harm to the public health and safety. If a noncomplying cask were involved in a highway accident it would be quite possible that the cask would rupture following impact or exposure to fire. Serious damage to the fuel rods within the cask would be likely. Thus, a large fraction of the volatile radionuclides within the fuel rods would be released to the ambient air, causing hundreds or thousands of cancers and deaths and giving rise to great environmental damage.

The document ("Spent Fuel Storage") that was submitted to the NRC by VEPCO in support of its license amendment application indicates, only the "[t]he spent fuel cask used will have been approved and certified by NRC." Sec. 5.0 at 50 (emphasis added). Compliance with the applicable standards must be shown before the license amendment can be issued.

3. Neither VEPCO nor the NRC Staff has adequately considered the alternative of constructing a dry cask storage facility at the Surry station.

Basis:

The use of shipping-type casks for surface storage of spent fuel has been shown to be feasible. In the opinion of Citizens' consultant, dry cask storage methods are among the least expensive and safest spent fuel storage methods, including pool storage. Dry cask storage may well be safe and reliable for up to 50 years or more. In addition to its economic and environmental advantages, dry cask storage provides a capability for on-site as well as off-site transportation of spent fuel. E.R. Johnson Associates, Inc., A Preliminary Assessment of Alternative Methods for the Storage of Commercial Spent Nuclear Fuel, (Nov. 1981) at 4-1. And in this case the construction of a dry cask storage facility at the Surry station would eliminate the need to transport spent fuel off-site.

In 1982 VEPCO applied to the NRC for authority to construct such a facility at Surry. It cannot be determined at this time how long the NRC review process will take. But even if the facility cannot be completed for several years, the safe operation of VEPCO's reactors will not be threatened. VEPCO claims that it is threatened with the loss of full core reserve ("FCR") capability at the Surry spent fuel pool in 1986, and the with the shutdown of the two Surry units in 1986 and 1988. These dates can be deferred long enough to utilize the dry cask alternative.

First, VEPCO can install three spent fuel racks in the cask lay-down area in the Surry spent fuel pool. In an internal VEPCO memorandum in Citizens' possession, this alternative is held out as presenting no problems from a technical standpoint. It is said to defer the loss of FCR by "at least two years." Another memo in Citizens' possession suggests that loss of FCR can be extended by at least another year by replacing the stainless steel racks now in the Surry spent fuel pool with new, lighter racks equipped with neutron-absorbing materials. Loss of FCR can also be deferred by a nearly-completed plan to ship Surry spent

fuel to a Department of Energy storage facility in the western United States. And, if necessary, a limited number of spent fuel assemblies could be shipped from Surry to North Anna, so that the dry cask storage facility could be completed before a full trans-shipment program becomes necessary.

4. VEPCO has not shown that its physical protection system satisfies NRC regulatory requirements.

10 C.F.R. § 73.37 provides that VEPCO, if it is to ship spent fuel from Surry to North Anna, must implement a security program meeting a number of specific requirements. Compliance with these requirements is essential if the risks to the public health and safety are to be minimized. However, all of the information concerning such security measures has been deleted from the available documentation on file at the NRC's public document room.

5. The Environmental Assessment prepared by the NRC Staff is inadequate in the following respects:

- (a) it does not evaluate the risks of accidents (including sabotage) involving Surry - North Anna shipments;

- (b) it does not evaluate the consequences of credible accidents involving Surry - North Anna shipments;

- (c) it does not evaluate the alternative of constructing a dry cask storage facility at the Surry station.

Basis:

The Environmental Assessment prepared by the NRC Staff in connection with the proposed license amendment admittedly contains no "site-specific" discussion or analysis of the environmental effects of the amendment. Instead, the document simply

mental effects of the amendment. Instead, the document simply discusses the relation of the amendment to the "parameters" contained in Table S-4 of 10 C.F.R. 51.52. It does not even incorporate by reference the environmental analyses contained in the environmental impact statements prepared in connection with licensing of the Surry reactors. Citizens contends that Table S-4 is inapplicable to the proposed license amendment. Even if it were not, some discussion of the environmental and human health effects of the amendment would nevertheless be required.

Nowhere, including the environmental impact statements prepared in connection with the licensing of Surry, has the NRC Staff considered the possible effects of spent fuel shipments on Louisa County and its residents. The Surry EISs, for example, address only the effects of shipping spent fuel south, to South Carolina, and otherwise contain an antiquated and inadequate discussion of the risks of spent fuel shipments. And the Environmental Assessment nowhere states that the proposed shipments might hurt people, or that it might adversely affect the environment. Nor does it attempt to quantify or describe those environmental risks and effects.

Further, the Environmental Assessment does not mention the alternative of constructing a dry cask storage facility at Surry. The merits of this alternative were identified in contention 2 above, and the discussion of the basis for that contention is incorporated herein.

OLA-2

1. The proposed license amendment constitutes a major federal action significantly affecting the human environment, and thus may not be granted prior to the preparation of an environmental impact statement.

Basis:

Citizens contends that for purposes of the environmental review required under the National Environmental Policy Act ("NEPA"), the environmental impacts of the proposed license amendment cannot be evaluated apart from the environmental impacts of the Surry-to-North Anna spent fuel transshipment proposal which is being addressed in the companion licensing proceeding. The modification of the North Anna spent fuel pool is designed to accommodate the 500 fuel assemblies that VEPCO intends to remove from the Surry spent fuel pool. Actions that are related in this way cannot be "segmented" for purposes of the environmental review required by NEPA. Therefore, in evaluating the significance of the two proposed actions, the effects of the spent fuel pool modification must be summed with the effects of the spent fuel transshipment proposal. As discussed below, the effects of the transshipment are themselves "significant."

The transportation of spent fuel by truck creates a risk of accidents causing tremendous human health and environmental damage. Studies show that if a spent fuel cask were to strike a bridge abutment sideways at no more than 12.5 m.p.h., the cask cavity could be expected to rupture. Battelle Pacific Northwest Nuclear Fuel by Truck, PNL-2588 (Nov. 1978) at 6-4. This could result in continuous releases of radioactive water and steam. Resnikoff, The Next Nuclear Gamble, (1983)(hereinafter cited as Resnikoff) at 259. Accidents at higher speeds are much more likely, and would likely result in significant damage to spent fuel assemblies and substantial releases of radioactive materials.

In a hypothetical but credible truck accident postulated by Citizens' consultant to occur in a rural area, radioactive materials would likely be deposited on agricultural lands, leading to the ingestion of such materials by humans through the consumption of meats, grains, and dairy products. More than 50% of the affected population could contract cancer as a result. Resnikoff at 276. In addition, farmland in the area would have to be removed or plowed under to a great depth, dramatically reducing the productivity and thus the value of the land. Id. at 277.

Other environmental costs associated with the proposed license amendment include the risk of sabotage, the effects of which would be comparable to those of a serious transportation accident. In addition, the possibility of error by VEPCO employees when performing such tasks as sealing the shipping casks creates additional risks. Because of all of these risks, the proposed license amendment will give rise to significant environmental effects.

2. Neither VEPCO nor the NRC Staff has adequately considered the alternative of constructing a dry cask storage facility at the Surry station.

Basis:

The use of shipping-type casks for surface storage of spent fuel has been shown to be feasible. In the opinion of Citizens' consultant, dry cask storage methods are among the least expensive and safest spent fuel storage methods, including pool storage. Dry cask storage may well be safe and reliable for up to 50 years or more. In addition to its economic and environmental advantages, dry cask storage provides a capability for on-site as well as off-site transportation of spent fuel. E.R. Johnson Associates, Inc., A Preliminary Assessment of Alternative Methods for the Storage of Commercial Spent Nuclear Fuel, (Nov. 1981) at 4-1. And in this case the construction of a dry cask storage facility at the Surry station would eliminate the need to transport spent fuel off-site.

In 1982 VEPCO applied to the NRC for authority to construct such a facility at Surry. It cannot be determined at this time how long the NRC review process will take. But even if the facility cannot be completed for several years, the safe operation of VEPCO's reactors will not be threatened. VEPCO claims that it is threatened with the loss of full core reserve ("FCR") capability at the Surry spent fuel pool in 1986, and the with the shutdown of the two Surry units in 1986 and 1988. These dates can be deferred long enough to utilize the dry cask alternative.

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Basis:

The Environmental Assessment prepared by the NRC Staff in connection with the proposed license amendment admittedly contains no "site-specific" discussion or analysis of the environmental effects of the amendment. Instead, the document simply discusses the relation of the amendment to the "parameters" contained in Table S-4 of 10 C.F.R. 51.52. It does not even incorporate by reference the environmental analyses contained in the environmental impact statements prepared in connection with licensing of the Surry reactors. Citizens contends that Table S-4 is inapplicable to the proposed license amendment. Even if it were not, some discussion of the environmental and human health effects of the amendment would nevertheless be required. .

Nowhere, including the environmental impact statements prepared in connection with the licensing of Surry, has the NRC Staff considered the possible effects of spent fuel shipments on Louisa County and its residents. The Surry EISs, for example, address only the effects of shipping spent fuel south, to South Carolina, and otherwise contain an antiquated and inadequate discussion of the risks of spent fuel shipments. And the Environmental Assessment nowhere states that the proposed shipments might hurt people, or that it might adversely affect the environment. Nor does it attempt to quantify or describe those environmental risks and effects.

Further, the Environmental Assessment does not mention the alternative of constructing a dry cask storage facility at Surry. The merits of this alternative were identified in contention 2 above, and the discussion of the basis for that contention is incorporated herein.