

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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In the Matter of
VIRGINIA ELECTRIC
AND POWER COMPANY

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Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

REGISTRY
SERVICE

(Proposed Amendment to Operating
License to Allow Receipt and
Storage of 500 Spent Fuel Assem-
blies From Surry Power Station
Units No. 1 and 2)

COUNTY OF LOUISA, VIRGINIA, AND THE BOARD
OF SUPERVISORS OF THE COUNTY OF LOUISA, VIRGINIA
PETITION FOR LEAVE TO INTERVENE

This is a petition for leave to intervene filed on behalf of the County of Louisa, Virginia and the Board of Supervisors of the County of Louisa, Virginia ("the County" or "Louisa County") with respect to a license amendment proposed by Virginia Electric and Power Company ("Vepco") to permit the receipt of 500 spent fuel assemblies from Surry Power Station Units No. 1 and 2 for storage in the spent fuel pool for North Anna Power Station Units No. 1 and 2. Petitioners are also seeking to participate in two other Nuclear Regulatory Commission ("the Commission") actions involving Vepco's spent fuel storage plans. First, Louisa County is petitioning to intervene in related proceedings in which Vepco has applied for amendments to the North Anna operating licenses to expand the capacity of the North Anna 1 and 2 spent fuel pool by installing neutron absorber racks and reducing the permissible

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space between racks. Second, the County has petitioned the Commission to institute proceedings to revoke its approval of routes proposed by Vepco for transshipment of Surry spent fuel to North Anna.

Interest of the Petitioners

The North Anna Power Station is located in Louisa County, Virginia. The Board of Supervisors of the County of Louisa is responsible for protecting the well-being of the inhabitants, property and environment of Louisa County and therefore has an interest in ensuring that the Commission carefully review the economic, health and safety, and environmental consequences of the proposed action. Because the North Anna Power Station is located in the County, it is the citizens of Louisa County who will experience most directly any adverse economic, health and safety, or environmental consequences flowing from a Commission decision to allow storage of Surry spent fuel at North Anna or expansion of the North Anna spent fuel pool.

Because of Petitioners' concern about the adverse economic consequences to the County of any plans to store spent fuel at North Anna that was not used at North Anna, the Board of Supervisors enacted the Louisa County Spent Fuel Ordinance^{1/} on

^{1/} It shall be unlawful for any person, partnership, corporation or any other entity to store or maintain in Louisa County any spent nuclear fuel or any other waste radioactive materials of similar qualities, except such materials as may result from nuclear fuel being used in Louisa County.

(con't)

December 18, 1978. The same concern, coupled with health and safety and environmental concerns, has led Petitioners to seek leave to intervene in this proceeding to ensure that the Commission fulfills its statutory duty to conduct a full and careful review of the consequences of Vepco's spent fuel storage plan.

It should be noted that the receipt and storage of spent fuel assemblies from Surry necessarily requires the shipment of spent fuel from Surry to North Anna. The Commission, without providing affected parties any notice or opportunity to comment, issued an Order July 28, 1982 approving transshipment routes proposed by Vepco on July 13, 1982. All the routes approved by the Commission pass through and terminate in Louisa County, and therefore Petitioners have an interest in ensuring that the Commission adequately consider the health, safety and environmental consequences of the proposed transshipment. Because Petitioners do not believe that such a review has been conducted, Petitioners have already filed, pursuant to 10 C.F.R. § 2.206, a

Anyone violating or causing anyone to violate this ordinance shall be fined not more than \$1,000.00; and each day that any such violation continues shall be a separate offense.

If any phrase, clause, sentence, part or portion of this ordinance shall be declared unconstitutional or invalid by any valid judgment or decree of a Court of competent jurisdiction, such unconstitutionality or invalidity shall not effect any of the remaining phrases, clauses, sentences, portions or parts of this ordinance.

request that the Commission institute proceedings to revoke the Commission's approval of the routes proposed by Vepco for transshipment of Surry spent fuel to North Anna. Petitioners therefore have an interest in all three aspects of Vepco's current plan for dealing with the shortage of storage capacity at Surry, namely, expansion of North Anna's pool capacity, shipment from Surry to North Anna, and storage of Surry spent fuel at North Anna.

How Petitioners' Interest Will be Affected

The purpose of the proposed license amendment is to permit fuel burned at Surry to be received at North Anna and stored there for an indefinite period of time. The proposed action, along with the related actions noted above, could adversely affect Louisa County in several ways. First, whether or not Vepco's pool expansion amendment is granted, the storage of Surry spent fuel at North Anna will reduce the space available for storage of spent fuel burned at North Anna, potentially causing the premature shutdown of North Anna 1 and 2 with consequent deleterious effects on Louisa County's economic well-being--for example, loss of jobs and substantial tax revenues. Second, transshipment of spent fuel necessarily involves health, safety and environmental risks which, should the risks become realities, could have adverse consequences for the citizens of Louisa County. Third, if Vepco's application to expand the spent fuel pool is granted, the pool would be required to house more spent fuel for longer periods of time than have been considered heretofore. The expanded capacity and extended storage in a pool

initially designed and licensed to store 400 spent fuel assemblies for only a few years carries the potential for adverse economic, environmental, health and safety impacts for the citizens of Louisa County.

Of additional concern is a plan described in a Vepco brochure, Interim Storage of Spent Nuclear Fuel: Vepco's Solution (February 1982). That publication indicates that the proposed shipment of Surry spent fuel to North Anna and the accompanying expansion of North Anna's spent fuel pool is but the first step in a "longer-term interim" plan to store virtually all Vepco's spent fuel from both Surry and North Anna in Louisa County. As the Vepco brochure explains:

The second phase of this option is to expand the capacity of the spent fuel pool now being designed for North Anna Unit 3, Vepco's fifth nuclear unit which now is under construction. This will not solve our immediate problem at Surry because the newly-expanded pool will not be completed until 1989. However, it will meet our longer-term interim storage needs by providing adequate spent fuel storage capacity for the entire operating lives of all five of our nuclear units, or until a Federal repository for high-level nuclear waste becomes available. The estimated cost for this expansion is about \$43 million.

Interim Storage at 10-11.

The possibility of Louisa County's becoming the storage center for all of Vepco's reactors for their "entire operating lives" raises serious economic, health and safety and environmental questions. First, the use of North Anna as Vepco's primary fuel storage site would undermine Louisa County's efforts to attract other, non-nuclear industry. Second, it would degrade

the County's recreational features and seriously diminish the County's appeal to campers and other outdoor recreation enthusiasts who now make a substantial contribution to the County's economic well-being. Third, it would affect the psychological well-being of the County's inhabitants.

Moreover, approval now of expansion of North Anna's pool and transshipment of Surry spent fuel to North Anna effectively decreases Vepco's incentive to find a long-term, cost-effective, environmentally sound method of dealing with Surry's spent fuel problems on-site. Twice before Vepco has sought and obtained NRC approval to expand its spent fuel storage capacity: the Surry pool was expanded in 1978 (from 464 to 1044 assemblies), the North Anna pool in 1979 (from 400 to 966 fuel assemblies). In each case the proposed expansion was presented as a stopgap measure, necessary only for the near-term until a reprocessing capability was developed or a permanent repository for the storage of nuclear wastes was established.

Vepco candidly concedes that the segments of its plan currently before the Commission offer, at best, only an "interim solution" to the spent fuel dilemma. The realistic prospect, then, is that--if Vepco's current proposal is approved--in a few years Vepco will appear once again before the Commission with another "interim solution." To the extent the Commission approves a series of interim solutions, it ratifies a piecemeal approach to a problem that will not go away and effectively forecloses a comprehensive solution to the spent fuel storage

problems faced by Vepco and every other utility with nuclear power plants. The inevitable result of proceeding ad hoc is that Louisa County will one day find itself saddled with environmental, health and safety and economic consequences never even evaluated by this Commission, thus seriously undermining the County's interest in an environmentally acceptable long-term solution.

Specific Aspects of the Subject Matter
As To Which Intervention Is Sought

Commission approval of the proposed license amendment requires a finding that the licensing action will not be inimical to the common defense and security or to the health and safety of the public. 10 C.F.R. § 50.57(a)(6). Moreover, the Commission must satisfy itself that the proposed action conforms to the standards for protection against radiation (10 C.F.R. Part 20) as well as the Commission's obligations under the National Environmental Policy Act of 1969 (10 C.F.R. Part 51). 10 C.F.R. § 50.40.

Petitioners are interested in all aspects of the proceeding insofar as they relate to the economic, health and safety, and environmental impacts of the proposed action on the citizens of Louisa County. In general, Petitioners are concerned that Vepco's analyses of the health and safety common defense and security and environmental issues associated with its spent fuel plan are unduly narrow both substantively and temporally.^{2/} Vepco's

^{2/} For example, Vepco's assertion that receipt and storage at North Anna of Surry spent fuel assemblies has "independent utility" is patently absurd. Summary of Information In Support Of The Storage of Surry Spent Fuel At North Anna Power Station (cont'd)

presentation, by treating storage of Surry fuel at North Anna as a discrete issue separate from pool expansion and by excluding consideration of transshipment and the planned expansion of the North Anna 3 pool, virtually ignores the cumulative impacts of the total plan. This segmented approach, however, is ill-suited to Commission decisionmaking, especially in carrying out its NEPA responsibilities. Specifically, Louisa County contends that:

1. Vepco's analysis is insufficient to support a conclusion that approval of the license amendment will not be inimical to the health and safety of the public because it fails to consider the health and safety implications of the transshipment component of Vepco's overall scheme.
2. Vepco's environmental analysis is insufficient to support a conclusion that the proposed action will not significantly affect the quality of the human environment because it fails to consider the environmental implications of the other integral elements of Vepco's plan--expansion of the North Anna 1 and 2 pool, transshipment of Surry fuel to North Anna, and expansion of the North Anna 3 pool.
3. Vepco's environmental analysis is deficient because it fails to consider:

Unit Nos. 1 and 2 (July 1982) [hereinafter Storage of Surry Fuel Summary] at 76. Rather, the plan's utility is dependent on shipment from Surry to North Anna and expansion of the North Anna 1 and 2 pool capacity so there is space to house the assemblies "received and stored."

- (a) the environmental impact on the citizens of Louisa County if additional storage facilities and/or reprocessing capabilities are not available when the expanded pool is filled in 1993, thus forcing the premature shutdown of North Anna 1 and 2;
 - (b) the environmental impact on Louisa County if North Anna Station (including North Anna No. 3) is transformed by Vepco into the central storage site for spent fuel from all of Vepco's reactors for their entire operating lives; or
 - (c) the environmental impact on Louisa County if no permanent solution (i.e., either reprocessing or permanent storage) is on-line for handling the spent fuel stored at North Anna at the end of North Anna's licensed operating life.
4. Vepco's analysis of alternatives is insufficient to support its conclusion that "storage of Surry spent fuel in the North Anna 1 and 2 spent fuel pool is the preferred near term alternative for maintaining adequate spent fuel storage capacity at Surry 1 and 2."^{3/} Specifically,
- (a) Vepco has not adequately addressed potential alternatives for solving Surry's spent fuel

^{3/} Storage of Surry Fuel Summary at 16.

problems on-site. These alternatives include transfer of three spent fuel racks currently at North Anna to the rack laydown area in the Surry spent fuel pool, providing additional storage for 108 spent fuel assemblies and extending Surry's full core discharge capability for at least two years; use of aluminum, rather than stainless steel, racks at Surry, increasing the total storage capacity at Surry by about ten percent without exceeding the pool's load capacity; extended burn-up of Surry fuel and other on-site alternatives, all of which have the advantages of requiring no transshipment and less fuel handling than the plan currently proposed by Vepco.

- (b) Vepco has not adequately considered the shipment of Surry spent fuel to a foreign reprocessing center. Vepco asserts that such a plan "would almost definitely be considered inimical to the [common defense and security of the] United States."^{4/} Yet, as recently as September 3, 1982, Mr. John Marcum of the White House Office of Science and Technology Policy, indicated that there were no impediments to

^{4/} Storage of Surry Fuel Summary at 19.

American utilities contracting to have spent fuel reprocessed in foreign plants.^{5/}

- (c) Vepco similarly dismisses the possibility of using dry cask storage at Surry, asserting, without support, that the design, licensing, and construction of this type of facility would take approximately 3-5 years.^{6/} Even if this pessimistic projection were true, dry cask would still be available in time to avoid a shutdown of Surry in 1987; moreover, dry cask used in conjunction with other techniques available to expand Surry's spent fuel capacity could solve Surry's spent fuel problems without even a temporary loss of full core reserve.

The preceding paragraphs note just some of the issues which require airing prior to a Commission decision on Vepco's proposal. Other health and safety and environmental issues Petitioners desire to litigate, Petitioners' specific contentions with regard to each, and to the bases for each contention, will be submitted for Commission consideration in the Supplement to Petition to Intervene required by 10 C.F.R. 2.714(b).

5/ "Bring Back Buy-Back," Nuclear News 61-62, October 1982.

6/ Storage of Surry Fuel Summary at 18.

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Conclusion

On the basis of the foregoing, Petitioners respectfully request:

- (1) that this Petition for Leave to Intervene be granted,
- (2) that the Commission consolidate into one proceeding its consideration of each of the elements of Vepco's plan--i.e., expansion of the North Anna 1 and 2 pool, shipment of Surry spent fuel to North Anna, receipt and storage of Surry spent fuel at North Anna, and expansion of the North Anna 3 pool; and
- (3) that a hearing be held on Vepco's application for license amendments and the related transshipment plan.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on October 22, 1982, I caused a copy of the foregoing Petition to Intervene to be served upon each of the persons listed below by mailing a copy thereof first class postage prepaid to:

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