

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED
USNRC

In the Matter of
VIRGINIA ELECTRIC AND POWER COMPANY
(North Anna Power Sta., Units 1 & 2)
(Proposed Amendment to Operating License
to Permit Storage of Surry Spent Fuel)

'83 JAN 19 P2:54
Docket Nos.
50-338 OLA-1
50-339 OLA-1

CITIZENS' REVISED CONTENTIONS

The following is a list of the contentions that Concerned Citizens of Louisa County ("Citizens") intends to advance in the above-captioned proceeding. Each contention is followed by a summary of the factual basis for it. Those contentions that were listed in Citizens' Petition for Leave to Intervene, filed October, 22, 1982, should be disregarded henceforth, as they are superceded by those contentions listed herein.

Citizens has secured the assistance of two experts in the field of spent fuel transportation and storage: Mr. Lindsay Audin of Ossining, NY, and Dr. Marvin Resnikoff, of New York City. Both have written and spoken

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Together they have prepared an in-depth study of the economic, safety, environmental, and other aspects of spent fuel transportation and storage. This study will be published in book form in March, 1983. They have assisted counsel in the preparation of contentions, and intend to present testimony in support thereof.

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.

The transportation of spent fuel by truck creates a risk of accidents causing tremendous human health and environmental damage. Although the NRC has promulgated standards, 10 C.F.R. Pt. 71 App. B, governing spent fuel cask safety, these standards would not prevent serious consequences in the event of an accident. Moreover, these standards are outdated and unreliable.

The 30-foot drop standard corresponds to the impact that would be sustained in a 30-m.p.h. collision. Since, however, there is no reason to believe that VEPCO's spent fuel trucks will travel at less than 55-60

m.p.h., an accident exceeding NRC criteria is quite possible. 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. Batelle Pacific Northwest Laboratory, An Assessment of the Risk of Transporting Spent Nuclear Fuel by Truck, PNL-2588 (Nov. 1978) at 6-4.

Further, NRC fire standards are inadequate. More than 1.5% of all highway accidents involve fires. PNL-2588, supra. Many commonly transported substances, e.g., diesel fuel, burn at a temperature higher than the NRC's design basis fire temperature of 1,450 degrees. Indeed, many substances, e.g., propane, burn at 4000 degrees or higher. Moreover, highway fires in rural areas can be expected to burn for more than the NRC standard of 30 minutes. Many transportation-related fires burn for hours or days. An 1,850 degree-fire which burns for only 30 minutes can cause failure in valves essential to cask integrity.

A hypothetical accident scenario analyzed by our experts for other purposes involves a single truck cask which is involved in an accident in a rural area. They predict impacts including hundreds of cancer deaths per year for several years following the accident, and economic damage ranging in the tens to hundreds of millions of dollars. Whether impacts of this magnitude can

be expected should one of VEPCO's shipments become involved in an accident has not yet been determined, but it is safe to say that roughly comparable results are probable.

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 traffic 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 involves significant environmental effects.

2. Applicant 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 routing 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 quite possible. Thus, a large fraction of the volatile radionuclides within the fuel rods would be released to the ambient air, causing hundreds or thousands of cancer deaths and extensive environmental damage.

The document ("Spent Fuel Storage") that was submitted to the NRC by VEPCO in support of its license amendment application indicates only that "[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. Applicant has not shown that there exists an emergency response plan adequate to protect the public health and safety.

The severity of an accident involving a spent fuel shipment depends on the steps taken by response authorities. Essential to an adequate emergency response plan are proper equipment (e.g., protective clothing, breathing apparatus, radiation monitors, communications equipment, cask lifting equipment), proper training of officials and emergency personnel, proper response procedures, means of sharing information among agencies, advance public education, and evacuation plans. NRC,

Survey of Current State Radiological Emergency Response Capabilities for Transportation-Related Incidents, NUREG-1620 (Sept. 1980). The fire fighting and emergency response personnel in the vicinity of the North Anna plant have little or none of the necessary equipment or training. In support of its application VEPCO has stated only that it will have an emergency response plan, and that the plan's objectives will consist largely of assisting local response personnel. There is now no reason to believe that any potential response authority, be it VEPCO or state or local agencies, has or will acquire the rudimentary elements of an adequate emergency response plan. Unless such a plan is put in place, the issuance of the requested license amendment will be inimical to the public health and safety and thus beyond the Atomic Safety and Licensing Board's authority.

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

The use of shipping-type casks for indefinite storage of spent fuel has been shown to be feasible. In the opinion of Mr. Audin and Dr. Resnikoff, dry cask storage methods are among the cheapest and safest of all spent fuel storage methods, including pool storage. Dry cask storage may well be safe and reliable for up to 50 years or more. In ad-

dition 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 the dry cask storage facility at the Surry station would eliminate the need to transport spent fuel off-site.

VEPCO has already 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 discharge ("FCD") capability at the Surry spent fuel pool in 1984, and with the shutdown of one of the Surry units in 1987. These dates can be deferred substantially .

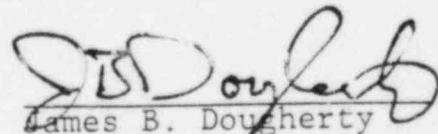
First, VEPCO can install three spent fuel racks in the cask lay-down area in the Surry pool. In an internal VEPCO memorandum in Citizens' possession, this alternative is held out as presenting no problems from a technical standpoint. It is said to defer the loss of FCD capability by "at least two years."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

neutron-absorbing materials. 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 transshipment program becomes necessary. Since FCD capability is not essential to safety, see Department of Energy, U.S. Spent Fuel Policy, Storage of U.S. Spent Power Reactor Fuel vol. 2 (May 1980) at II-12, dry cask storage remains an attractive option even if it can't be implemented until roughly 1990.

5. Applicant 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 public health 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. Citizens intends to review the adequacy of VEPCO's security plan, and assumes that means can be devised for protecting VEPCO's legitimate security interests.

Respectfully submitted,


James B. Dougherty

Dated this 19th day
of January, 1983

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CERTIFICATE OF SERVICE

I certify that copies of the foregoing CITIZENS'
AMENDED CONTENTIONS were served this 19th day of January,
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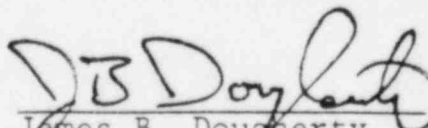
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