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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

'84 OCT -2 P3:35

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

In the Matter of	)	Docket Nos. 50-338/339
VIRGINIA ELECTRIC & POWER COMPANY	)	OLA-1
	)	(Receipt of Spent Fuel)
(North Anna Nuclear Power Station,	)	OLA-2
Units 1 and 2)	)	(Expansion of Spent Fuel Pool)

NRC STAFF BRIEF IN REPLY TO  
CONCERNED CITIZENS' BRIEF ON TABLE S-4 ISSUES

I. BACKGROUND

At the September 7, 1984 Supplemental Special Prehearing Conference the Licensing Board invited briefs from the Petitioner, Concerned Citizens of Louisa County ("Citizens" or Petitioner), and the parties on the questions of applicability of Table S-4 to an operating license proceeding. Tr. 168-169.<sup>1/</sup> Pursuant to the Board's invitation, briefs were filed by Citizens, the Applicant and the Staff on September 21, 1984. In the present brief the Staff responds to the arguments raised by Citizens as to the inapplicability of Table S-4 to an operating license proceeding.

1/ This invitation for briefs was memorialized in the Board's order of September 13, 1984; the Board's Order also permitted the parties to file reply briefs.

DESIGNATED ORIGINAL

Certified By DSOY SNB

## II. DISCUSSION

### A. Table S-4 Is Applicable to This Proceeding

Citizens urges that Table S-4 was intended to be used in cost-benefit analyses within environmental reports and environmental impact statements for construction permits and is not, therefore, appropriate for use in an operating license amendment proceeding. Citizens' Brief at 8, 13. Citizens further argues that the use of Table S-4 by the Staff prevents a "serious look at the environmental effects" of the instant license amendment, and precludes it from advancing contentions relating to the environmental aspects of the transshipment of spent fuel from Surry to North Anna.<sup>2/</sup> Id. at 3, See 10 C.F.R. § 2.758.

In the Staff's September 21, 1984 brief (Staff Brief) on the applicability of Table S-4, the Staff's position regarding applicability of Table S-4 to the operating license stage, including operating license amendments, was set forth. Specifically, the Staff concluded in its brief that there are no restrictions set forth in the Commission's regulations or its case law nor is there any restriction noted in any Federal case that would limit the use of Table S-4 in the manner asserted by Citizens. Staff Brief at 7.

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<sup>2/</sup> Citizens correctly notes that sabotage and diversion of fuel and waste are not covered by Table S-4 and are, therefore, areas that could be raised in contentions without impermissibly challenging a Commission regulation. See 10 C.F.R. § 2.758. Citizens' Brief at 18. However, such contentions must meet the provisions of 10 C.F.R. § 2.714. See NRC Staff Response to the Concerned Citizens of Louisa County "Third Draft of Contentions", dated August 15, 1984 at 6 and 7.

Citizens relies in part on the Limerick decision<sup>3/</sup> to support its argument that the Commission's regulations, specifically 10 C.F.R. § 51.53, do not permit use of Table S-4 at the operating license stage. Citizens' Brief at 10. It is true as the Board notes in the Limerick decision that the language of 10 C.F.R. § 51.53, setting forth the requirements for an applicant's environmental report at the operating license stage, expressly states that matters discussed in such report (one such matter referenced in the regulation concerns the use of Table S-4, 10 C.F.R. § 51.52) need only be discussed "to the extent that they differ from those discussed or reflect new information in addition to that discussed in the final environmental impact statement prepared by the Commission in connection with the construction permit" See 10 C.F.R. § 51.53. What is important, and missed by Citizens, is that section 51.53 directs an applicant at the operating license stage to look at 10 C.F.R. § 51.52 (which concerns Table S-4) to determine if the values of Table S-4, if used at the construction permit stage, are still valid for the proposed action and if not used at the construction permit stage whether conditions are appropriate for its use. See Staff Brief at 3 and 4. Accordingly, while the Limerick decision stands for the proposition that duplication of information in operating license environmental reports is not required by NEPA, this decision does not stand for the proposition that use of Table S-4 is prohibited at the operating license stage.

The Staff did not address in its brief the argument emphasized by Citizens that Table S-4 is only a cost-benefit tool and for this reason

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<sup>3/</sup> Philadelphia Electric Co. (Limerick Generating Station, Units 1 and 2), LBP-82-43A, 15 NRC 1423 (1982).

not appropriate for use in the instant proceeding. Citizens' Brief at 7 and 8. Citizens relies on excerpts from the Table S-4 Statement of Considerations that contain the words "cost benefit analysis" Id. at 8. However, as the Commission made clear in its Statement of Considerations for Table S-4: (40 Fed. Reg. 1005, 1008)

[T]he purpose of this proceeding is to quantify the associated environmental impact of transportation of fuel and wastes under an existing set of circumstances.

The Commission conducted a "generic" analysis to "provide the basis for the applicant's and the Commission's analysis of the impact on the environment of the transportation of fuel and solid radioactive waste under normal conditions of transportation and the design basis accident, i.e., accident damage test conditions specified in the regulations."

WASH-1238, at 3.

As the Staff noted in its brief the purpose of this "generic" analysis was to avoid consideration of such impacts on a case-by-case bases. Staff Brief at 6. The Staff further noted, citing the Supreme Court's decision in Baltimore Gas and Electric Company v. NRC, 76 LEd 2d 437, 449 (1983), that not only does the Court approve of this generic approach in terms of administrative efficiency, consistency of decisions and avoidance of needless repetition of litigation but the Court finds that this generic approach "is clearly an appropriate method of conducting the hard look required by NEPA." Citizens' asserted limitation on the use of Table S-4 would be inconsistent with this generic application sought by the Commission.

Finally, in the Statement of Considerations which discusses the scope of the S-4 rule and how it should be applied, there is no limitation on the application of the Table, depending upon whether the environmental

evaluation being conducted is in the nature of an environmental impact statement with a cost-benefit analysis or whether a 10 C.F.R. § 51.30 environmental assessment is being prepared. See Staff Brief at 5 and 6.

In sum, the Staff submits that Table S-4 is a generic rule which establishes values, based on a generic analyses, applicable to environmental evaluations whether such evaluations are conducted at the construction permit stage, at the operating license stage or for licensing amendments.

B. The Surry Fuel To Be Transhipped to North Anna Meets The Requirements of 10 C.F.R. § 51.52(a)(3) Concerning Irradiation

Citizens argues that Table S-4 is not applicable because the Surry spent fuel that is to be shipped to North Anna does not meet the Table S-4 requirement of 10 C.F.R. § 51.52(a)(3) that "[t]he average level of irradiation of the irradiated fuel from the reactor does not exceed 33,000 megawatt -days per metric ton." Citizens relies on a Table 4-1 at page 23 of the Staff's Environmental Assessment entitled "Spent Fuel Pool Modifications Estimated Release Rate of Kr-85". Citizens' Brief at 17, 18.

This table referenced by Citizens and the figure of 36,000 megawatt-days per metric ton (MWD/MTU) irradiation (or burnup) does not support Citizens' argument. The 36,000 figure represents the amount of burnup for fuel assumed by the Staff in its analysis of estimated release rate of krypton 85 for purposes of determining radiological environmental impacts associated with the expansion of the spent fuel storage capacity at North Anna (the OLA-2 proceeding). See Assessment at Section 4. This figure was used in the Staff's analysis based on information from the Applicant (letter from W, L. Stewart to Harold Denton, dated September 13, 1983<sup>4/</sup>) indicating

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<sup>4/</sup> The letter and the relevant page which was attached to the letter are attached.



that the Surry and North Anna equilibrium reload cores are being designed now for an average discharge burnup of approximately 36,000 MWD/MTU. The same information from the Applicant addressing the transshipment proposal (OLA-1) states:

However, it should be noted that the average burnup of the 500 Surry Fuel assemblies which are to be stored at North Anna will be less than 33,000 MWD/MTU.

Accordingly, for purposes of evaluation of the transshipment of Surry spent fuel to North Anna (the OLA-1 proceeding) the requirement referenced by Citizens, 10 C.F.R. § 51.52(a)(3), is satisfied and Table S-4 is appropriate.

C. That The Staff Did Not Rely On Table S-4 With Regard To The Oconee McGuire Transshipment Case Does Not Support Citizens' Argument Limiting Application Of Table S-4

Citizens relies in part on the Oconee-McGuire transshipment case<sup>5/</sup> to support its argument that Table S-4 does not apply to amendment cases. Citizens notes that the Staff in that case conducted a detailed assessment of the environmental impacts rather than relying on the values of Table S-4. Citizens' Brief at 15 and 16. The Staff does not believe that the Oconee-McGuire case supports Citizens' position.

The facts concerning the Oconee-McGuire transshipment case are different than those concerning the transshipment from Surry to North Anna. The important difference being that the Oconee-McGuire proposed transshipment called for 300 truck shipments of spent fuel in a one year period<sup>6/</sup> whereas

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<sup>5/</sup> Duke Power Company (Amendment to Materials License SNM-1773 for Oconee Nuclear Station Spent Fuel Transportation and Storage at McGuire Nuclear Station) LBP-80-28, 12 NRC 459 (1980), denying the requested amendment; Duke Power Company (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, (1981), reversing the Licensing Board and authorizing issuance of the amendment.

<sup>6/</sup> Id. LBP-80-28, at 489; ALAB-651 at 317, 318.

the Surry-North Anna transshipment proposal only calls for 40 truck loads of spent fuel per year. Assessment at 27. Moreover, the number of annual truckload shipments of spent fuel involved with the Oconee-McGuire proposal is considerably more than the number of truckload shipments (60 truck loads per reactor per year) used in the generic analysis that formed the basis for Table S-4. WASH-1238 Table 1 at 6.

Another difference between the Oconee-McGuire proposal and the Surry-North Anna transshipment proposal is that the burnup of fuel shipped from Surry to North Anna will be less than 33,000 MWD/MTU, meeting the requirement of 10 C.F.R. § 51.52(a)(3). See section II. B above. This is not the case for the Oconee-McGuire proposal. The Staff's Environmental Impact Appraisal related to Spent Fuel Storage of Oconee Spent Fuel at McGuire Nuclear Station Unit 1 (published December 1979) states at page ix: "Burnup of fuel shipped shall be no greater than 36,000 MW days per metric ton (see Section A.6)." For these reasons the Staff submits that the fact that the Staff in conducting its review of the Oconee-McGuire proposal did not rely on Table S-4 does not support Citizens' argument that Table S-4 can not be used to evaluate the environmental impacts of the instant proposed amendment.

### III. CONCLUSION

For the reasons set forth above, Table S-4 values are appropriate for use in environmental evaluations at the operating phase of the Nuclear Reactor licensing application process and accordingly, were appropriate for use in the Staff's Environmental Assessment concerning the amendments

to the North Anna Power Station, Units 1 and 2 operating licenses for receipt and storage of Surry spent fuel and increase in storage capacity at the North Anna Power Station.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'H. McGurren', with a long horizontal flourish extending to the right.

Henry J. McGurren  
Counsel for NRC Staff

Dated at Bethesda, Maryland  
this 1st day of October 1984



VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

W. L. STEWART  
VICE PRESIDENT  
NUCLEAR OPERATIONS

September 13, 1983

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
Attn: Mr. James R. Miller, Chief  
Operating Reactors Branch No. 3  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Serial No. 456  
PSE/HSM:jdm:0004N  
Docket Nos. 50-338  
50-339  
License Nos. NPF-4  
NPF-7

Gentlemen:

ADDITIONAL INFORMATION  
PROPOSED OPERATING LICENSE AMENDMENT NPF-4 AND NPF-7  
NORTH ANNA POWER STATION UNIT NOS. 1 AND 2

We have reviewed your letter of July 25, 1983 in which you requested additional information on the Spent Fuel Pool Storage Capacity Expansion. (8 questions) In addition to these questions, we have recently received on an informal basis additional questions from the Auxiliary Systems Branch (3), the Materials & Qualifications Branch (2), the Core Performance Branch (1), the Meteorology and Effluent Treatment Branch (1), and the Radiological Assessment Branch (3).

The eight questions in your letter of July 25, 1983 will be labeled A.1 through A.8. The thirteen questions from the Auxiliary Systems Branch will be labeled B.1 through B.13. The two questions from the Materials & Qualifications Branch will be labeled C.1 and C.2. The question from the Radiological Assessment Branch will be labeled D.1. The three questions from the Meteorology and Effluent Treatment Branch have been previously answered and forwarded to you by our letter dated June 16, 1983, Serial No. 450B.

The answers to the above questions are enclosed herein with the exception of the following: A.4, A.6, B.2, B.4, B.7, C.1, and E.3. These remaining questions will be answered by October 1, 1983.

If you require further information on this matter, we would be pleased to meet with your staff at their earliest convenience.

Very truly yours,

*W. L. Stewart*  
W. L. Stewart

cc: Mr. James P. O'Reilly  
Regional Administrator  
Region II  
U.S. Nuclear Regulatory Commission  
Atlanta, Georgia 30303

Mr. M. B. Shymlock  
NRC Resident Inspector  
North Anna Power Station

Question E.1:

Please provide the calculated burnup (equilibrium core) of North Anna and Surry fuel, in megawatt - days per metric ton of uranium.

Answer:

The Surry and North Anna equilibrium reload cores are being designed now for an average discharge burnup of approximately 36,000 MWD/MTU. However, it should be noted that the average burnup of the 500 Surry fuel assemblies which are to be stored at North Anna will be less than 33,000 MWD/MTU.

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CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF BRIEF IN REPLY TO CONCERNED CITIZENS' BRIEF ON TABLE S-4 ISSUES" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or as indicated by an asterisk through deposit in the Nuclear Regulatory Commission's internal mail system, this 1st day of October, 1984:

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A handwritten signature in black ink, appearing to read "Henry J. McGurren", written over a horizontal line.

Henry J. McGurren  
Counsel for NRC Staff