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'84 SEP 24 A10:25

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

CONCERNED CITIZENS OF LOUISA COUNTY'S BRIEF ON TABLE S-4 ISSUES

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I. INTRODUCTION

In its September 13, 1984 Order memorializing the special prehearing conference held with respect to these proceedings on September 7, 1984, the Atomic Safety and Licensing Board ("the Board")

> "requested that counsel submit briefs as to whether there have been any licensing board, appeal board, Commission, and federal court rulings on the question of whether Table S-4 applies only in construction permit proceedings or whether that table is applicable also in operating license amendment cases."

The answer to the Board's question is no. Research discloses no federal court decisions in which Table S-4, 10 C.F.R. § 51.52 has been even mentioned, much less considered, by the

court.[1] On the other hand, as discussed below, several decisions by adjudicatory panels of the Nuclear Regulatory Commission ("NRC" or "the Commission") have addressed Table S-4. None of these, however, has dealt with the specific issue of Table S-4's applicability to construction permit ("CP") decisions versus its applicability to operating license ("OL") decisions.

This is not to say that the case law, as well as other authorities, do not shed light on the legal questions that face us. Taking advantage of the Board's invitation to address issues that are related to but different from the specific question set out above, Concerned Citizens of Louisa County ("Citizens") presents an analysis of these issues below.

The essential question before the Board is whether Table S-4 precludes Citizens from advancing contentions relating to the environmental and human health effects of shipping spent fuel from Surry to North Anna. The NRC Staff and the Virginia Electric and Power Co. ("VEPCO") have asserted that Table S-4 has such an effect, and Citizens contends that it does not. This is so, Citizens contends, for a number of reasons:

1/ It appears that Table S-4 has made cameo appearances in two court decisions, by virtue of the fact that they involved, and therefore reprinted Table S-3, which refers to Table S-4 in a footnote. See Natural Resources Defense Council, Inc. v. NRC, 685 F.2d 459 (D.C. Cir. 1982), rev'd sub nom. Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc., 103 S. Ct. 2246 (1983).

- Regardless of whether the Table applies to both CP and OL proceedings, the instant proceeding is neither a CP or an OL proceeding, it is a license amendment proceeding. This is not a technical distinction, but one which goes to the heart of the issues.

- Regardless of whether Table S-4 applies to both CP and OL proceedings, it may be used only within Environmental Reports and environmental impact statements. That neither of these documents has been prepared in this case demonstrates the fundamental irrelevance of Table S-4 to this proceeding.

- Even if the foregoing were not true, Table S-4 would nevertheless be inapplicable because it was not designed to be used under the circumstances that exist in this case.

II. The History of Table S-4

Table S-4 has its roots in the D.C. Circuit's seminal decision in Calvert Cliffs Coordinating Committee, Inc. v. AEC,[2/] in which the Court found substantial, generic deficiencies in the

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2/ 449 F.2d 1109 (D.C. Cir. 1971).

AEC's compliance with the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321-61. In the wake of this decision, the Commission developed a completely new regulatory framework for implementing NEPA, which it published in a 1971 policy statement.[3] In that statement the Commission related its view that the new rules were designed to comply with three distinct requirements of the Act:

- independent, substantive weighing of environmental issues by licensing boards:

- compliance with NEPA's procedural requirements in connection with all licensing actions:

- independent cost-benefit analyses weighing the economic benefits of licensing decisions against their environmental costs.[4]

Exactly how the Commission read NEPA to require cost-benefit analyses of licensing decisions was not made clear. Such a requirement does not leap out of the Calvert Cliffs decision, and the clear consensus of the federal courts is that cost-benefit

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3/ See Interim Statement of General Policy and Procedure: Implementation of the National Environmental Policy Act, 36 Fed. Reg. 18071 (1971).

4/ Id.

analysis is a nice, but not mandatory supplement to the "hard look" at environmental impacts that must go into every environmental impact statement.5/ But one thing remains clear: cost-benefit analysis is a decisionmaking tool which **supplements**, but does not **supplant**, the narrative analysis of environmental impacts that lies at the heart of every environmental document required by NEPA.6/

Among the various stages in the licensing process at which a cost-benefit analysis could be prepared, one stands out - the beginning. Accordingly, the policy statement directed applicants

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5/ See, e.g., Columbia Basin Land Protection Ass'n v. Schlesinger, 643 F.2d 585 (9th Cir. 1981); Matsumoto v. Brinegar, 568 F.2d 1289, 1290-91 (9th Cir. 1978). But see Maine Yankee Atomic Power Company (Maine Yankee Atomic Power Sta.), CLI-74-2, 7 AEC 2 (1974)(cost-benefit analysis required by NEPA).

6/ See Detroit Edison Co. (Greenwood Energy Center, Units 2 & 3), ALAB-321, 8 AEC 936, 944 (1974)("Nor is the Commission's authority restricted, as the applicant would have it, to voting the license up or down depending on whether the overall "cost-benefit ratio" is tilted against the facility....On the contrary, under NEPA, an agency is also obliged to minimize to the extent reasonably practicable the environmental aftermath of its actions")(citations omitted).

See also Maine Yankee, ALAB-175, 7 AEC 62,64 (1974), in which the Appeal Board noted with approval that the Licensing Board had factored the narrative conclusions of the EIS into the cost-benefit analysis.

to append such an analysis to the environmental report submitted with the construction permit application.[7] This, of course, remains the rule today, as discussed below. With regard to the cost-benefit analysis, the policy statement said this:

> The cost-benefit analysis shall, to the fullest extent practicable, quantify the various factors considered.[8]

The goal of quantification of environmental effects, for purposes of cost-benefit analysis, soon spawned Tables S-3 and S-4.

After the Appeal Board ruled, in ALAB-56,[9] that fuel cycle impacts needed not be considered in individual licensing decisions, the Commission proposed a rule (the Table S-3 rule) which would quantify such considerations and inject them into the cost-benefit analyses appended to environmental reports for CP applications. The proposal noted that "[t]his regulation further provides that the cost-benefit analysis will, to the fullest extent practicable, quantify the various factors considered."[10]

Similarly, Table S-4 was intended to quantify the environmental effects of fuel and waste transportation so that they could be injected into the cost-benefit analyses within environ-

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7/ 36 Fed. Reg. at 18072 col. 2.

8/ Id. See also 36 Fed. Reg. 18073 col. 3.

9/ Public Service Co. of New Hampshire (Seabrook Sta., Units 1 & 2), ALAB-56, 4 AEC 930, 939 (1972).

10/ 37 Fed. Reg. 24191 col. 3 (November 15, 1972).

mental impact statements for construction permit applications. See, for example, the notice of proposed rulemaking:

> Notice is hereby given that the Atomic Energy Commission is considering the amendment of its regulations ... to deal specifically with consideration of environmental effects associated with the transportation of fuel and waste in the individual cost-benefit analyses for [power] reactors....
>
> This regulation further provides that the cost-benefit analysis will, to the fullest extent practicable, quantify the various factors considered.11/

The preamble to the final rule also made it clear that Table S-4 was aimed at "implementation of NEPA's requirement for cost-benefit analyses in impact studies."12/

In sum, the regulatory history of Table S-4 shows the following:

- Cost-benefit analyses are designed to supplement the analysis of environmental factors within environmental impact statements;

- Table S-4 was intended to be used within the cost-benefit analyses within environmental reports and environmental impact statements for construction permits;

Below we will show that Table S-4 applies neither to environmental impact assessments, nor to OL amendments.

11/ 38 Fed. Reg. 3334, 3335 col. 1; 3334 col. 3 (Feb. 5, 1973).

12/ 40 Fed. Reg. 10005 col. 2 (January 6, 1975). See also SECY-R-75-166 (1974), at 1, noting that purpose of Table S-4 is "to allow applicants in their environmental reports, and the Commission in its detailed statements, to account for the environmental effects of transportation of fuel and waste..."

III. Table S-4 as Applied

The Commission's current rules retain virtually all of the elements of the regulatory framework established in the 1971 policy statement. 10 C.F.R. § 51.50 provides that when a utility submits an application for a construction permit it must append to it an "Environmental Report - Construction Permit Stage." This document must contain, among other things, "the information specified in § ...51.52", i.e., Table S-4. In its EISs at the CP stage the NRC Staff customarily invokes Table S-4, as do licensing boards on review of the record in a CP proceeding.

> As for the consequences of the release of radioactivity resulting from a transportation accident, the Board notes that such releases are taken into account in [Table S-4]. The Board is required to apply the values in that table in analyzing the costs and benefits for this application for construction permits.13/

While some boards may use Table S-4 merely as a supplement to a lengthy and detailed review of transportation-related environmental concerns,14/ others have relied solely on Table S-4.15/

13/ Arizona Public Service Co.(Palo Verde Nuclear Generating Sta., Units 4 & 5),Docket No. 50-592,593 (Memorandum and Order, 5/13/79, at 3).

14/ See Northern States Power Co. (Tyrone Energy Park, Unit 1), LBP-77-71, 6 NRC 1232 (1977).

15/ See, e.g., Delaware Power & Light Co. (Summit Power Sta., Units 1 & 2), LBP-75-43, 2 NRC 215 (1975)

Is it ever appropriate, then, to use Table S-4 in conjunction with the review of an OL application? As a general rule, the answer is no.[16] 10 C.F.R. § 51.52, of which Table S-4 is a part, refers only to Environmental Reports prepared in connection with CPs. It does not suggest in any way that it applies to the OL stage. Section 51.53 provides that an "Environmental Report - Operating License Stage" should be submitted with an OL application, but it specifies that this ER should not address any environmental matters that were addressed in the ER for the CP stage. Thus, if the regulations were complied with for the CP stage, i.e., if Table S-4 was incorporated in the ER and the environmental impact statement, then it has no application to any facet of the OL stage.[17]

16/ Indeed, the general rule is that once a plant has been built the cost-benefit analysis may not be resurrected and recalculated. Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1 & 2), LBP-81-24, 14 NRC 175, 198 (1981).

17/ See Philadelphia Electric Co. (Limerick Generating Sta., Units 1 & 2), LBP-82-43A, 15 NRC 1423, 1459 (1982):

> The Commission's regulations provide that the Environmental Report submitted by the Applicant with its application for an operating license will include the same matters discussed in the Environmental Report for a construction permit, "but only to the extent that they differ from those discussed...in connection with the construction permit." In turn, the scope of the Staff's Draft and Final Environmental Statements at the operating license stage is defined by matters which 10 C.F.R. § 51.21 mandates for the Applicant's Environmental Report....Thus it is clear that NEPA does not mandate that environmental issues be considered again in the operating license hearing, absent new information.

Therein lies an important exception to the general rule. If, for any reason, the environmental impact statement for a given CP proceeding did not include consideration of Table S-4, then the Table may be appropriate for use in the EIS for the OL phase.

It is through this exception that several licensing boards have seen fit to apply Table S-4 at the operating license stage. For example, in Catawba and Limerick, Table S-4 was invoked at the OL stage.[18] This is explained by the fact that in each case the EIS for the CP phase had been completed prior to promulgation of Table S-4.[19] It was therefore appropriate, when preparing EISs for the OL stage, to incorporate and rely on Table S-4.[20] Otherwise, however, the application of Table S-4 is expressly limited to CP proceedings.

18/ Duke Power Co. (Catawba Nuclear Sta., Units 1 & 2), LBP-82-16, 15 NRC 566 (1982); Philadelphia Electric Co. (Limerick Generating Sta., Units 1 & 2), LBP-82-43A, 15 NRC 1423, 1501, 1511 (1982).

19/ The EISs - CP stage - were completed for each plant on the following dates - Catawba - December 7, 1973; Limerick - November 12, 1973.

20/ See Catawba EIS - OL stage (NUREG-0921, January 7, 1983) at 5-18 and Table 5.5; Limerick EIS - OL stage (NUREG-0974, April 17, 1984) at 5-45, Table 5.7.

IV. Table S-4 is Therefore Inapplicable to this Proceeding

As shown above, Table S-4 is a tool used for considering, within Environmental Reports and environmental impact statements, the environmental effects of shipments of nuclear fuel and waste. 10 C.F.R. § 51.52. In this case, however, we have yet to see either an Environmental Report or an EIS - VEPCO and the Staff insist that an environmental impact assessment is all that is required. But there is no legal authority for using Table S-4 within an environmental impact assessment. The Commission's rule relating to environmental assessments, 10 C.F.R. § 51.30, says nothing, either directly or indirectly, about the incorporation of Table S-4. Moreover, research reveals no reported cases in which Table S-4 was applied either by the Staff or a licensing board in connection with an environmental assessment.

Table S-4 is a means for injecting transportation-related environmental values into the cost-benefit analysis for a given licensing decision. But in this case, no cost-benefit analysis has been, nor, we submit, will be attempted. One reason - it isn't required. Unlike Environmental Reports and EISs, environmental assessments are not supposed to contain cost-benefit analyses. 10 C.F.R. § 51.30. Another reason - it would make no sense. The cost-benefit analyses for Surry and North Anna have already been struck, and we have nothing further to subject to a cost-benefit analysis.

Further, Table S-4 is inapplicable to this proceeding because this is an operating license amendment proceeding. It was shown above that Table S-4 is intended primarily to be used at the CP stage, and that in cases where it was not made a part of the cost-benefit analysis at that stage, 10 C.F.R. § 51.53 permits it to be invoked at the OL stage. But neither the Commission nor any other authority has ever said that Table S-4 applies to OL amendment proceedings, and there is no rule that calls for its application in an amendment proceeding if it was not invoked at either the CP or OL stages. And with good reason: Table S-4 is a cost-benefit tool, and it would be absurd to rethink the cost-benefit analysis every time the OL is amended. Just as Environmental Reports are not a part of the OL amendment process, neither is the use of Table S-4.

In this proceeding, therefore, the Staff has broken new ground and would have this Board make new (and, we submit, bad) law by relying on S-4. Apparently, the Staff and VEPCO see Table S-4 not as means for considering the environmental effects of transshipment, but as a means for ignoring them. The Board should not sanction this distorted and unprecedented use of Table S-4. It was not intended, and has never been used, as a carte blanche that can be waived over an environmental assessment in lieu of taking a serious look at the environmental effects of a license amendment.

It is important to understand just how Table S-4 has been

used to preclude the raising of transportation-related contentions in other proceedings. In a handful of cases, the Table has been invoked by the Staff, in its EIS, and a licensing board, in its review of a given application, with a side effect being the exclusion of transportation-related contentions. These proceedings fall into two categories: (1) CP proceedings in which the EIS for the CP post-dates the promulgation of Table S-4, and thus the Table is invoked pursuant to 10 C.F.R. § 51.52,[21] and (2) OL proceedings in which the EIS for the CP pre-dates the promulgation of Table S-4, therefore requiring the use of Table S-4 at the OL stage pursuant to 10 C.F.R. § 51.53.[22]

For the most part, these cases reflect a proper application of Table S-4. Table S-4, in proceedings where properly invoked, precludes litigation of matters covered by it, on the theory that

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21/ See Arizona Public Service Co. (Palo Verde Nuclear Generating Sta., Units 4 & 5), Docket No. STN 50-592,593, ASLB Memorandum and Order, May 13, 1979; Houston Lighting and Power Co. (South Texas Project Nuclear Generating Sta., Units 1 & 2), LBP-75-46, 2 NRC 271, (1975); Kansas Gas & Electric Co. (Wolf Creek Generating Sta.), LBP-75-33, 1 NRC 618 (1975).

22 See Philadelphia Electric Co. (Limerick Generating Sta., Units 1 & 2), LBP-82-43A, 15 NRC 1423, 1501, 1511 (1982); Duke Power Co. (Catawba Nuclear Sta., Units 1 & 2), LBP-82-16, 15 NRC 566, 579 (1972); Pennsylvania Power & Light Co. (Susquehanna Steam Electric Sta., Units 1 & 2), LBP-79-6, 9 NRC 291, 315 (1979).

such issues were thoroughly examined on a generic basis within the "Environmental Survey" on which the Table is based. 23/

But Table S-4 was not intended, and does not preclude all future litigation of spent fuel transportation. The Table would not bar transportation-related contentions, for example, in a case where the applicant and Staff had decided not to use it, and opted instead to conduct an independent review of transportation-related impacts.24/ In this case, Table S-4 is inapplicable and wrongly invoked by the Staff. Therefore it does not bar litigation of transportation-related contentions. To repeat, Table S-4 is an analytical tool to be used at specific points in the licensing process, and it bars litigation of transportation-related contentions only at the same specific points.

There has been one licensing proceeding that for present purposes is analogous to this one: that which concerned Duke Power Co.'s application for authority to ship spent fuel from Oconee to McGuire. This required an amendment to Duke's materials license. It is instructive that in that case there was extensive litigation of transportation-related contentions.

23/ Environmental Survey of Transportation of Radioactive Materials to and from Nuclear Power Plants, WASH-1238 (1974).

24/ The use of Table S-4 is not mandatory in CP proceedings. See 10 C.F.R. § 51.52.

There the Staff never claimed that Table S-4 applied, and indeed prepared an extensive environmental assessment of the proposal. Further, the Licensing Board never suggested that S-4 had any application.[25] Nor did the Appeal Board, which observed:

> This does not mean that an application for a license amendment to all, e.g., transportation between facilities must invariably be granted. In common with any other proposal for handling spent fuel beyond the existing capacity of the on-site pool, it must, inter alia, undergo and survive an environmental analysis.[26]

Further, none of the parties to that proceeding argued that Table S-4 barred litigation of transportation-related contentions.[27] Indeed, after the Licensing Board denied the application an industry group filed a brief amicus curiae with the Appeal Board, and it argued that Table S-4 deprived the Licensing Board of jurisdiction to hear the contentions.[28] But the Appeal never so much as acknowledged the argument.

25/ Duke Power Co. (Amendment to Materials License SNM-1773), LBP-80-28, 12 NRC 459 (1980).

26/ Duke Power Co. (Amendment to Materials License SNM-1773), ALAB-651, 14 NRC 307, 315 (1981).

27/ See Applicant's Brief in Support of Exceptions, December 10, 1980, at 118 (citing Table S-4 for proposition that spent fuel transportation presents few risks); NRC Staff Brief on Exceptions, December 22, 1980, at 5-6 ("Summary Table S-4 ... is a part of the Commision's regulations").

28/ See Brief Amicus Curiae on Behalf of Members of the Electric Util Co. Nuclear Transport Group, December 22, 1980, at 20.

Citizens submits that the Catawba proceeding discussed above is on all fours with the instant proceeding, and that the Appeal Board's disregard of the Table S-4 arguments is controlling here. In contrast to every other decision in which Table S-4 has been applied to strike transportation-related contentions, both cases involve license amendments, and in neither did the Staff prepare an EIS (which triggered the application of Table S-4 elsewhere). In this case, as in that one, the Intervenors have a right to seek a full environmental analysis of the proposed license amendment.

V. Notwithstanding the Above Arguments, Table S-4 Remains Inapplicable

Table S-4 does not pretend to deal comprehensively with the impacts of nuclear waste transportation. In fact, the rule has several limitations on the scope of its application. See 10 C.F.R. § 51.52(a). For example, it does not apply to highly enriched spent fuel. Similarly, it does not apply to fuel with an average irradiation level of more than 33,000 MWd/MTu. Citizens contends that the average irradiation level of the fuel in question exceeds this level. This is indicated in the Staff's Environmental Assessment at p.23. Though a factual dispute over this issue may arise in the future, for present purposes Citizens has a sufficient basis for its claim that Table S-4 is by its own

terms inapplicable to this proceeding.

Further, the values in Table S-4 were calculated without reference to the risk of sabotage or diversion of spent fuel shipments.

> It should also be noted that sabotage and diversion of shipments of fuel and waste to and from reactors are not covered in the Environmental Survey and are not accounted for in the values contained in the Summary Table. The environmental effects of sabotage and diversion, therefore, are beyond the scope of the rule and are subject to appropriate separate consideration in individual licensing proceedings.29/

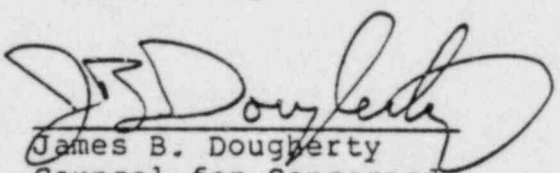
Thus, there can be no argument that Citizens is precluded from asserting that an EIS is required because sabotage, diversion, and other environmental risks pose a threat of significant environmental damage. Such contentions are "beyond the scope of the rule," and not affected in any way by Table S-4.

29/ SECY-R-75-166, at 14 (1974).

VI. Conclusion

For the reasons stated above, Citizens asserts that Table S-4 is irrelevant to the instant OL amendment proceedings. The objections that VEPCO and the NRC Staff have posed to Citizens' transportation-related contentions are incorrect to the extent that they rely on Table S-4, and all of Citizens' pending contentions should be admitted by the Board.

Respectfully submitted,



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CERTIFICATE OF SERVICE

I certify that copies of the foregoing BRIEF OF CONCERNED CITIZENS OF LOUISA COUNTY ON TABLE S-4 ISSUES were served, this 21st day of September, 1984, by deposit in the United States Mail, First Class, upon the following:

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