

UNITED STATES OF AMERICA '82 AGO -4 P1:03
NUCLEAR REGULATORY COMMISSION *Emp*
*OFFICE OF SECRETARY
PRESIDENT & SERV.*BEFORE THE ATOMIC SAFETY AND LICENSING BOARDGlenn O. Bright
Dr. James H. Carpenter
James L. Kelley, Chairman

In the Matter of	}	Dockets 50-400 OL
CAROLINA POWER AND LIGHT CO. <u>et al.</u>	}	50-401 OL
(Shearon Harris Nuclear Power Plant,	}	
Units 1 and 2)	}	
)	August 4, 1982

BRIEF CONCERNING SPENT FUEL TRANSSHIPMENTIntroduction: The Contentions

In Contention Number 9 (at p. 6) of its "Supplement to Petition for Leave to Intervene," May 14, 1982, Chapel Hill Anti-Nuclear Group Effort (CHANGE)/Environmental Law Project (ELP) contends "Applicants' Environmental Report is inadequate," because "the values set forth in Summary Table S-4 do not apply" to shipments of spent fuel to SHNPP, which would occur as a result of Applicants' proposal to store such spent fuel from Brunswick and Robinson at SHNPP. Similarly, the Conservation Council of North Carolina (CCNC) in Contention Number 4 (at p. 5) of its "Supplement to Petition to Intervene," May 14, 1982, contends "Applicants' request for authorization to store...material irradiated [at Brunswick and Robinson] should be denied," because of Applicants' misplaced reliance on Table S-4, and consequent lack of analysis as required by 10 C.F.R. 51.20(g)(1)(ii). At the special pre-hearing conference on July 13 and 14, 1982, both CHANGE/ELP

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and CCNC agreed to submit briefs explaining these contentions and the legal arguments behind them in greater detail, and were ordered to do so no later than August 10, 1982. This brief is submitted pursuant to that order.

The Environmental Report

In their ER, Applicants discuss "Radioactive Material Movement" at Section 3.8 and "Transportation Accidents Involving Radioactivity" at Section 7.2. Section 3.8 notes that new fuel transport to SHNPP and waste and spent fuel transport from SHNPP will be within the scope of 10 C.F.R. 51.20(g). It then admits that additional environmental impact will occur when spent fuel is transported from Applicants' other nuclear plants to SHNPP, but asserts that "the total environmental impact of radioactive material movement to and from the SHNPP will not exceed that set forth in Summary Table S-4." A basis for this statement, or analysis leading up to it, is not provided (Section 3.8, like Section 7.2, is only a short paragraph). Section 7.2 does not even mention shipments of spent fuel to SHNPP, but simply states that transportation is within the scope of 51.20(g) and therefore no further analysis is required beyond that represented by Summary Table S-4. Section 8, which discusses costs and benefits of SHNPP operation, does not include any mention of the environmental costs of fuel or waste transportation.

Discussion

1. The application necessarily includes transportation of spent fuel from Robinson and Brunswick to SHNPP, the environmental costs of which are properly to be considered by this Board as required by NEPA.

Apparently, Applicants believe that environmental effects of the transportation of spent fuel from Robinson and Brunswick (to an unspecified site) have already been taken into account in the licensing process for those plants, and that therefore the only matter for consideration in this proceeding is the storage of this additional spent fuel at SHNPP and subsequent transportation away from SHNPP. However, without the proposed storage of Brunswick and Robinson fuel at SHNPP, the extra transportation of fuel entailed would not take place, with the attendant extra handling, unloading, routing, and exposure of the public to risks of accident and/or sabotage. Without the storage at SHNPP, the public would only be exposed to one shipment of the Brunswick fuel and only one more of the Robinson fuel, as anticipated by Table S-4; with the SHNPP storage, an extra shipment of spent fuel will necessarily take place with the attendant risks.

As past licensing hearings demonstrate, particularly the Duke Power case, Duke Power Company (Oconee-McGuire, Amendment to Materials License SNM-1773), LBP-80-28, 12 N.R.C. 459 (1980), the NRC has considered such transhipment to be of sufficient environmental concern to require full evidentiary hearings with the attendant consideration of effects of

and alternatives to transshipment. In fact, in Duke Power the Licensing Board found that the application for a licensing amendment should be denied (insufficient consideration of effects and alternatives), before being reversed by the Appeal Board, Duke Power Company (Oconee-McGuire, Amendment to Materials License SNM-1773), ALAB-651, 14 N.R.C. 307 (1981). To brush this transshipment aside as environmentally insignificant on the Applicants' mere assertion overlooks this record, and circumvents the requirements of NEPA, 42 U.S.C.A. 4332, which are embodied in the Commission's regulations, 10 C.F.R. 51.20(a). NEPA requires that the agency "consider every significant aspect of the environmental impact of a proposed action," Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, 435 U.S. 519, 553, 98 S.Ct. 1197, 1216, 55 L.Ed.2d 460 (1978) (emphasis added). This consideration must be more than a pro forma ritual, Calvert Cliffs' Coordinating Committee v. A.E.C., 449 F.2d 1027 (D.C. Cir. 1971); "pro forma compliance with the substantive guidelines of NEPA will not be sufficient--responsible federal officials must give full consideration to the environmental consequences of major federal actions," Scherr v. Volpe, 466 F.2d 1027 (8th Cir. 1972) (emphasis added). There is no question that issuance of an operating license for SHNPP is a major federal action, and issuance of the license as applied for would have as one significant aspect the storage and transportation to SHNPP of Brunswick and Robinson fuel, requiring full consideration. That consideration will occur in the environmental impact statement process,

which is however triggered by and based on the Applicants' ER, 10 C.F.R. 51.22. Therefore, adequate consideration in the ER is essential; that is lacking here.

Additionally, acceptance of the Applicants' position would preclude the consideration of alternatives to transhipment as required by NEPA, 42 U.S.C.A. 4332(2)(C)(iii). Although under Vermont Yankee consideration of highly speculative alternatives is not required, there are clearly other alternatives to transshipment, as was discussed in the Duke Power case, such as reracking, construction of an independent spent fuel storage installation (ISFSI) on site, or reactor shutdown. To allow Applicants' assertion as to impact to stand would be to give them a virtual blank check to transport spent fuel to SHNPP without NEPA consideration, although at this time number and mode of shipments, routing, and other factors bearing on environmental impact have not been specified.

2. Table S-4 does not apply to the transportation of spent fuel from Brunswick and Robinson to SHNPP.

By its "Notice of Proposed Rulemaking," Federal Register, Vol. 38, No. 23, February 5, 1973, the AEC proposed a rule governing consideration of environmental effects of fuel transportation. This rule was adopted as part of Part 51 of C.F.R. Title 10 in Federal Register, Vol. 40, No. 3, January 6, 1975, including Summary Table S-4. Aside from a minor correction and the updating of the availability of the support

documents, 10 C.F.R. 51.20 paragraph (g), including Table S-4, has remained unchanged since then.

Although the title of the table, "Environmental Impact of Transportation of Fuel and Waste To and From One Light-Water-Cooled Nuclear Power Reactor," might suggest that the table's scope is extensive enough to include transport of spent fuel to the reactor as well as away from the reactor, a closer reading of the "legislative history" and of 10 C.F.R. 51.20(g) indicates that this is in fact not the purport of the rule.

Section 10 C.F.R. 51.20(g)(1)(i) specifically requires use of table S-4, see Union Electric Company (Callaway Plant, Units 1 and 2), LBP-75-47, 2 N.R.C. 319, 355 (1975), for "transportation of cold fuel to the reactor and irradiated fuel from the reactor to a fuel reprocessing plant..." which is "within the scope of this paragraph." The scope of the rule contemplates use of Table S-4 only for normal once-through operation of a reactor, not for use of the reactor as an AFR storage site, comprehending only transportation of unirradiated fuel elements to the plant. This is clear from a look at the background of the rule. In Vermont Yankee Nuclear Power Corporation, (Vermont Yankee Nuclear Power Station), Docket 50-271, June 6, 1972, the ASLAB held that environmental impact statements must consider the environmental effects of irradiated fuel and waste transport. In considering a general rule to implement this requirement, the AEC wrote

...it should be noted that in conjunction with the revision of Appendix D of 10 C.F.R. Part 50 on September 9, 1971 [now 10 C.F.R. Part 51], there was transmitted by the Director of Regula-

tion to applicants for licenses to construct or operate Nuclear Power Plants, and made available to the public, a document dated September 1, 1971. This document, among other things, indicated that applicants' environmental reports should describe the environmental effects of the transportation of fuel elements from the fuel fabrication plant to the reactor as well as the transportation of spent fuel elements from the reactor to the fuel reprocessing plant and the transportation of packaged radioactive material from the reactor to low-level waste burial grounds.

As a result, each applicant in an Environmental Report and the Commission in each environmental statement issued for a Nuclear Power Plant, have presented a cost-benefit analysis of the environmental impact of the transportation of unirradiated fuel to the plant and unirradiated fuel and solid radioactive wastes from the plant. "Notice of Proposed Rulemaking," 38 F.R. 3334, February 5, 1973 (em dashes added).

This language makes clear that consideration of transportation to the reactor was added only in response to concern over shipment of cold fuel to the reactor, not shipment of spent fuel to the reactor.

In response to concerns of the Staff subparagraph (g)(2), explicitly clarifying the scope of situations in which Table S-4 is to be used, was added in the final rule, 40 F.R. 1007. Only transport of irradiated fuel from the reactor is mentioned therein, 10 C.F.R. 51.20(g)(2)(v); transshipment of irradiated fuel is not covered. Therefore, a reactor which would both receive and send out irradiated fuel is not within the scope of Table S-4 and paragraph (g). The exclusive nature of the use of Table S-4 is indicated by "only if," 10 C.F.R. 51.20(g)(2). In adopting the rule, the Commission expressly recognized its limited scope:

The document [WASH-1238] was not intended to serve...as a detailed analysis of alternatives and costs and benefits as they relate to the transportation aspects of the uranium fuel cycle. Nor was the purpose of this [rulemaking] proceeding to undertake a full environmental review of transportation of fuel and waste. The purpose of this proceeding was to determine certain elements to be factored into environmental statements in particular licensing proceedings. 40 F.R. 1005, January 6, 1975 (emphasis added).

Clearly, the Commission recognized that the rule's scope was to extend to normal operating practice only, and not to serve as a catch-all to end NEPA consideration of all spent fuel transportation. It further recognized that independent analysis would be necessary for transportation outside the scope of the rule:

Any assessment will be subject to separate consideration in individual licensing cases if it covers transportation of a type which is outside the scope of the rule. 40 F.R. 1007, January 6, 1975.

This concern is embodied in 10 C.F.R. 51.20(g)(1)(ii), which requires that the ER shall contain

...if such transportation does not fall within the scope of this paragraph, a full description and detailed analysis of the environmental effects of such transportation and, as the contribution of such effects to the environmental costs of licensing the nuclear power reactor, the values determined by such analyses for the environmental impact under normal conditions of transport and the environmental risk from accidents in transport (emphasis added).

Since the Applicants propose to ship irradiated fuel to and from SHNPP, as well as cold fuel to and wastes from SHNPP, their transportation plan falls outside the carefully defined scope of 10 C.F.R. 51.20(g), and a "full description and complete analysis of the environmental effects" is auto-

matically required. Sections 3.8 and 7.2 of the ER are therefore clearly inadequate.

3. The Applicants' analysis is inadequate because it does not consider the effects of sabotage and/or diversion of spent fuel shipments.

In adopting its final rule on environmental effects of fuel and waste transportation, the Commission stated that

[S]abotage and diversion of shipments of fuel and waste to and from reactors are not covered in the Environmental Survey [WASH-1238] 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 reactor licensing proceedings. 40 F.R. 1007, January 6, 1975.

The statement of considerations accompanying the formal adoption of 10 C.F.R. 51.20 is regarded as equally effective as the scope of the regulations, Kansas Gas and Electric Company et al. (Wolf Creek Generating Station, Unit 1), LBP-75-33, 1 N.R.C. 618, 620 n. 3 (1975). The statement was made despite the prior adoption of 10 C.F.R. 50.13 (32 F.R. 13445, September 26, 1967), see Siegel v. A.E.C., 400 F.2d 778 (D.C. Cir. 1968) (validating Commission rulemaking), and the repeated application of 50.13 in licensing hearings, e.g. Florida Power and Light Company (Turkey Point, Units 3 and 4), Dockets 50-250, -251, 4 A.E.C. 787 (1972), and Potomac Electric Power Company (Douglas Point Nuclear Generating Station), ALAB-218, 8 A.E.C. 79, 81 n. 7 (1974). The juris-

diction of Licensing Boards over the issue of sabotage and diversion of spent fuel transport has been explicitly recognized:

[T]he environmental effects of criminal acts and sabotage during transportation of radioactive wastes are beyond the scope of Section 51.20(g) and are subject to consideration in individual reactor licensing proceedings, Union Electric Company (Callaway Plant, Units 1 and 2), LBP-75-47, 2 N.R.C. 319, 354 (1975).

Therefore the environmental effects of sabotage and diversion of spent fuel in transit from Brunswick and Robinson to SHNPP, which necessarily would follow from the issuance of the license as requested, are properly a subject of inquiry in this proceeding. However, Applicants have not presented any such analysis, nor have they indicated number of shipments, mode of shipment, possible routings, or any other information which would make such analysis possible.

This is not a subject of inquiry that can be brushed aside by an easy reference to Table S-4. In adopting its interim transportation regulations, 10 C.F.R. Part 73, the Commission recognized that this was area fraught with uncertainty:

The Commission found that the likelihood of successful sabotage is uncertain as the existence of a credible adversary organization cannot be ruled out and the response of spent fuel and spent fuel casks to credible explosive sabotage is subject to large uncertainty. With respect to consequences, it appears that the release of a small fraction of the inventory of a spent fuel casks [sic] as respirable particles could produce serious consequences in a heavily populated area. "Physical Protection of Irradiated Reactor Fuel in Transit," 45 Federal Register, No. 108, June 3, 1980, pp. 37402-3.

Nor can Applicants rely on cask design alone:

In view of the uncertainties in predicting the response of spent fuel and spent fuel casks to explosives, the Commission believes that it is no longer prudent [sic] to depend on cask design alone to protect against sabotage in heavily populated areas. Id., 45 F.R. 37403.

The Applicants have not indicated whether rail shipments (the likely mode of transshipment) will pass through heavily populated areas, but an examination of rail lines indicates that they will pass either through Fayetteville or Raleigh.

Because of these admitted uncertainties, and the fact that this is a proper subject of inquiry for this Board, a detailed analysis of these environmental effects is necessary to a complete environmental impact analysis; therefore Sections 3.8 and 7.2 of the Applicants' ER are clearly inadequate.

4. The Applicants have failed to show that transportation of spent fuel to SHNPP from Brunswick and Robinson will maintain radiation exposures and releases "as low as is reasonably achievable" (ALARA).

Under 10 C.F.R. 20.1(c), Applicants, as license holders (DPR-23, DPR-66, DPR-71--Robinson and Brunswick) and as prospective license holders for SHNPP, have an affirmative duty to keep radiation exposures and releases from their license activities "as low as is reasonably achievable." As defined by the regulation, ALARA

means as low as is reasonably achievable taking into account the state of technology, and the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to the utilization of atomic energy in the public interest. 10 C.F.R. 20.1(c).

This language implies a sort of balancing test to determine if the method Applicants have chosen to handle their Robinson and Brunswick spent fuel will indeed be ALARA. This was the course adopted by the Licensing Board in the Duke Power case, supra:

[Vermont Yankee Nuclear Power Corporation (Vermont Yankee Nuclear Power Station), ALAB-455, 7 N.R.C. 41 (1978)] does not preclude an ALARA analysis of the viable alternatives here for spent fuel transshipment, namely reracking...or construction of an ISFSI. Rather ALARA contemplates a comparison with other alternatives to determine whether a proposed method of handling spent fuel does indeed maintain radiation exposures "as low as is reasonably achievable." 12 N.R.C. at 501 (emphasis added).

In overturning the Licensing Board on other grounds, the Appeal Board noted this approach, but declined to rule on the propriety of such an analysis, 14 N.R.C. at 323. Thus the Licensing Board's guidance in Duke Power is still apt; it is supported ^{by} A York Committee for a Safe Environment v. U.S.N.R.C., 527 F.2d 812 (D.C. Cir. 1975), in which the Court held that no generic guideline was allowable as a means of complying with 10 C.F.R. 20.1(c). Instead, "individualized consideration" of the costs and benefits of reducing exposures, even below existing guidelines, was

required by the Court. Applicants' attempt to avoid consideration of the environmental effects of transshipment by relying on Table S-4 is clearly inconsistent with Duke Power and York: since Sections 3.8 and 7.2 of the ER do not contain an ALARA analysis, they are clearly inadequate.

Relief Requested

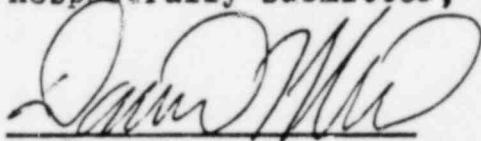
Petitioners CHANGE/ELP and CCNC, based on the foregoing, request that their contentions 9 and 4, respectively, be admitted for litigation. The relief anticipated under these contentions is as follows:

- (1) That the Board order the Applicants to provide a "full description and detailed analysis of the environmental effects" of transportation of spent fuel to and from the SHNPP, as well as transportation of unirradiated fuel to the plant and of packaged wastes away from the plant; or
- (2) That the Board at a minimum order the Applicants to provide a "full description and detailed analysis of the environmental effects" of transportation of spent fuel from Brunswick and Robinson to SHNPP, as well as effects of transportation of this incremental fuel from SHNPP to its next stopping place; and
- (3) That the Board, if it grants (1) or (2) above, allow Petitioners adequate time to consider the analyses provided by Applicants, for the purpose of formulating contentions based on this new information; or
- (4) That the Board deny such portions of the license requested in this proceeding as relate to the storage of spent fuel from Applicants' Robinson and Brunswick plants at SHNPP.

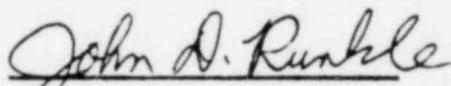
If, based upon the foregoing, the Board prefers to order

the Applicants to prepare the requested analyses as part of its forthcoming order, Petitioners will accept deferral of their contentions, subject to the right to formulate new contentions at such time as the new information which such order would compel was available for review.

Respectfully submitted,



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August 4, 1982

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOKETED
USNRC

In the Matter of CAROLINA POWER & LIGHT CO.
et al., Shearon Harris Nuclear Plant, Units 1 & 2

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Dockets
50-400,
50-461
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CERTIFICATE OF SERVICE

I hereby certify that copies of "Brief Concerning Spent Fuel
Transhipment" were served this 2d day
of August, 1982, by deposit in the U.S. Mail, first-
class postage prepaid, upon all parties whose names appear
below, except those whose names are marked with an asterisk,
for whom service was accomplished by hand delivery.

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