



State of South Carolina

Office of the Governor

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June 24, 1983

The Honorable Nunzio J. Palladino
Chairman
United States Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Chairman Palladino:

Enclosed are the comments prepared by my staff on the Commission's Proposed Rule 10 CFR Part 53.

I wish to underscore the concern expressed by the South Carolina Away-From-Reactor Storage Consultation Committee that the Commission should promulgate a strongly worded rule that makes it clear that Federal facilities for the storage of commercial spent fuel under the provisions of the Nuclear Waste Policy Act of 1982 will be provided only as a last resort.

If you have any questions about these comments, please contact Dr. John J. Stucker of my staff (803/758-3208). I would appreciate it if you would let me know what you do with these and other comments submitted by the states.

Yours sincerely,

A handwritten signature in dark ink, appearing to read "Dick Riley", written over the typed name "Richard W. Riley".

Richard W. Riley

RWR:mc

60-570

Comments by the State of South Carolina on Proposed
Criteria and Procedures for Determining the Adequacy
of Available Spent Nuclear Fuel Storage Capacity,
48 Fed. Reg. 19382 (April 29, 1983)

I. CONGRESSIONAL INTENT - General

The intent of Congress in establishing a Federal program for interim storage of commercial spent fuel is cited in the last paragraph of the "Background" section of Proposed 10 CFR Part 53 (p. 19383).

DISCUSSION

The Proposed Rule itself does not contain reference to this Congressional intent (a) that the program be of very limited scale, offering a "last resort" means of storage to utilities that have conscientiously sought other solutions, and (b) that the NRC's primary responsibility under the Nuclear Waste Policy Act of 1982 (NWP) is to "encourage and expedite the effective use of available storage and necessary additional storage, at the site of each civilian nuclear power reactor," as stated in Section 132 and elsewhere in the NWP (emphasis added).

RECOMMENDED CHANGES

Congressional intent as indicated in the NWP should be clearly stated in one or more of the following sections: 53.2, 53.12, 53.13, 53.30 of the Proposed Rule.

CONGRESSIONAL INTENT - "Immediate Need"

The "Proposed Action" Section of Proposed 10 CFR Part 53 (p. 19383) and Item #6 of the Regulatory Analysis to accompany Proposed 10 CFR Part 53 define a class of utilities with "Immediate Need" which are invited to "submit a request" immediately.

DISCUSSION

No explanation is given for the need for this procedure. This invitation is inconsistent with Section 132 of the NWP ("to encourage and expedite..available storage..at the site of each..reactor"). Such a procedure presumes that the review and comment period for the Proposed Rule are unnecessary, i.e., that there will be no changes in the Final Rule which would guide utilities in preparing applications. Commission priority at present should be to develop procedures and criteria which will support a rigorous decision-making process when the Rule is finalized.

RECOMMENDED CHANGES

1. Commission staff should not "begin consideration" of any submissions; rather, efforts should be directed to refining criteria and procedures.
2. Commission staff should notify any utility making a submission based on "Immediate Need" that the Commission will not consider these preliminary requests, and that resubmissions will be necessary when the Final Rule is established.

CONGRESSIONAL INTENT - On-Site Storage

Sections 132 of the NWPA directs that "The Commission...shall take actions..to encourage and expedite the effective use of available storage, and necessary additional storage, at the site of each civilian nuclear power reactor.." Section 135(a)(3) of the NWPA directs the Secretary to "seek to minimize the transportation of spent nuclear fuel, the public health and safety impacts..."

DISCUSSION

Section 53 of the Proposed Rule does not contain any guidance to utilities to give preference to on-site storage at the reactor which generates the fuel. While technical and economic considerations may dictate the use of transshipment of spent fuel for storage at another location within a utility's system, the Proposed 10 CFR Part 53 should indicate that transshipment should be considered as a secondary option because it does not involve storage "at the site."

Although most states do not have laws prohibiting transshipment, many - like South Carolina - have a policy for minimizing transshipment to reduce the necessary risks to the public from routine and accidental exposure. Such state policy is consistent with the intent and language of the NWPA (Section 132 and 135(a)(3)) and should not be used as a basis for granting a determination of need thereby circumventing legitimate state and Federal policy.

RECOMMENDED CHANGES

Sections 53.1(a), 53.13(c), and 53.27(a) of the Proposed Rule should be modified to indicate the management priority of on-site storage.

II. DECISION-MAKING PROCESS

Subpart C of Proposed 10 CFR Part 53, "Issuance of A Commission Determination," describes the proposed procedure for making determinations required under Section 135(b) Contracts, (c) Environmental Review, (d) Review of Sites and State Participation, and (g) Criteria for Determining Adequacy of Available Storage.

DISCUSSION

Processes for allowing input from interested states and other parties are not provided in the spirit of the consultation and concurrence established throughout the NWPA. In general, the Proposed Rule and accompanying documents on their face do not provide adequate due process for making the determinations described by the rule.

Electrical generation is an issue traditionally managed through the states' police power. Therefore, any facts or determinations which might affect the provision of such power should involve the affected state(s). Congress clearly recognizes the interests of states in spent fuel storage decisions, and provides a substantial state role in decisions to site Federal storage facilities. States have a similar interest in Commission decisions which would lead to the determination of need for Federal storage.

Furthermore, contrary to the statement in the Background section (p. 19385) and in the Regulatory Analysis (3.2), the Commission determination will not rest primarily on technical findings best understood by the Commission staff, or even on other findings best understood by the Commission staff. Therefore, interested states should have an opportunity to review and comment on utility requests for determination and on the Commission's "initial determination."

Also, the Proposed Rule is unclear on the issue of state opportunity to request an administrative or judicial review of the "initial determination" to be made by the Executive Director of Operations or his designee. The "initial determination" should be sent to interested states, and states should have an opportunity to request a review. Although a Commission review may not be required upon request, the final rule should make it clear that interested states can request such a review. If it is expected that other laws and procedures are available to provide review by a neutral fact finder, then such other laws and procedures should be referenced specifically in the proposed regulations.

In some instances, the Proposed Rule would require license amendments after a determination of need for Federal Storage; in other instances, the utility operating license may be such that a license amendment is not necessary to transfer possession after the determination from the NRC. These variations in licensing requirements should be subject to state review to ensure that a public review and opportunity for a hearing on the facts is available when appropriate.

It is not clear that the considerations and values described in Table S-4 will be protected in the Proposed Rule. Assuming that Table S-4 will apply, in no event should shipments exceed the parameters of Table S-4 without opportunity for a hearing to consider impacts of such shipments.

RECOMMENDED CHANGES

1. Section 53.11(c) of the Proposed Rule should be changed to provide for publication in the Federal Register of the utility request for consideration of determination of need, to provide that a copy of the request be sent to interested states; and to provide for a 30-day comment period as suggested by Commissioner Asselstein.

2. Section 53.28 should be changed to allow interested states and parties to request Commission review of the "initial determination."

III. FULL CORE RESERVE

Section 53.30(b) of the Proposed Rule provides a generic determination that full core reserve (FCR) is to be preserved. Section 53.30(c) states that the "person requesting the determination" can request an exception to the provision in Section 53.30(b)."

DISCUSSION

There are three principal reasons the Commission should not have made the FCR generic determination: the legislative direction was for a case-by-case determination; Commissioner Ahearne's apt description of the lack of available information upon which to base a generic determination; and the data which suggests that FCR is not always necessary in a mature reactor.

The analysis of the legislative history (Proposed Action, p. 19384) appears to turn Congressional intent on its head. Congress changed the language of the Senate version of the NWPA to provide for a case-by-case determination by the Commission. Sections 135(b) and 135(g) of the NWPA clearly refer to assessing the need for FCR "at such reactor" and "at such site" on a case-by-case basis, rather than in the generic finding which the Proposed Rule presents.

Studies on spent nuclear fuel storage¹ suggest that the history of full core discharges is closely tied to the age of the reactor. The studies suggest that the probability that FCR is required for a mature reactor is relatively low. Furthermore, the cost of replacement power (one of the factors considered in determining the need for full core reserve to reduce the risk of excessive costs in the event of the need for full core discharge) appears to be exaggerated and unsupported. Because only occasional shutdown costs would be lessened through the preservation of a full core reserve capability, the cost of replacement power should not be treated generally but as one of the factors to be evaluated by the NRC when determining the appropriateness of a full core reserve capability.

The need for and definition of a full core reserve (one reserve, or one and one-third), should be analyzed by the staff in making individual determinations. 2

RECOMMENDED CHANGES

1. The Proposed Action references to the generic determination (p. 19384, middle column) should be removed from the Final Rule beginning "Section 135(g)" and ending "consistent with Congressional intent". The Proposed Action should describe criteria to be considered by the Commission in its case-by-case review of the need for FCR.

2. The generic determination that FCR is required (Section 53.30(b)) should be removed.

3. Criteria for evaluating a utility request for Federal storage and the need for FCR should be inserted into the Section 53.30 of the Final Rule and should provide for a case-by-case determination of need. Criteria should indicate the age and operating experience of the reactor, the experience of similar reactors, the cost of replacement power, and the anticipated life of the reactor.

IV. CONTENTS OF REQUEST

Sections 53.12 and 53.13 describe the information to be provided by the utility seeking a Commission determination that Federal storage is appropriate.

DISCUSSION

The language in the Proposed Rule appears to place general utility plans on the same level as "timely" and "diligent" utility actions to resolve spent fuel storage problems. Furthermore, the format for utility requests specified in the Proposed Rule appears to first ask the question: "How much fuel does the utility wish to transfer to federal storage?" (Section 53.12) and then ask the question "What measures might reduce the need for Federal storage?" (Section 53.13). Title I, Subtitle B of the NHPA clearly places the emphasis on the second of these two questions. South Carolina Governor Richard W. Riley stated to the NRC witness at the February 17, 1983, hearing of the South Carolina Away-From-Reactor Storage Consultation Committee, that the NRC rule should make it clear that a heavy burden of proof rests on the utility making a request for Federal storage.

South Carolina has already undertaken an in-state survey of the need for away-from-reactor storage as part of a state planning effort. South Carolina believes that the format for utility requests outlined in the Proposed Rule should be redesigned. Although most of the information needed for a determination is properly specified in these two sections, the format does not reflect the Congressional intent for a very limited program of Federal storage as an option of last resort. The burden of proof is on the utility companies to establish that their past actions have been diligent and timely so that the Commission can determine the minimum amounts of spent fuel which would qualify for Federal storage under the NHPA.

RECOMMENDED CHANGES

The format and contents of the utility request required by the Proposed Rule should be revised to require the following type of information from any utility seeking a determination of need from the Commission:

1. The reactor and/or reactor site for which the request is being made.
2. A complete history of fueling/refueling cycle for the reactor(s) from beginning of operation to date of request.
3. A projected refueling cycle for reactor(s) from date of request through operating life of plant, including anticipated maintenance schedules, innovative fuel cycles which can be implemented, and relevant management plans.
4. A schedule of all actions taken to provide storage for spent fuel generated by the reactor(s) from the beginning of operation to date of request, with a projection of the amount of available capacity still available (measured in MTU of spent fuel and years until loss of power).
5. A schedule of all actions currently being undertaken by the utility to provide additional storage, with a projection of the amount of additional capacity which will be provided by these actions.
6. An assessment of the options available to the utility to provide further capacity for the life of the plant, if actions being taken under (5) do not provide life-time storage.
7. A specification of the segment of the projected refueling cycle for which storage capacity cannot be provided and the amount of fuel to be generated during that period.
8. An explanation of the specific factors which will prevent the utility from providing adequate storage during the segment of the projected refueling cycle specified in (7).
9. An explanation of why FCR would be needed to ensure "orderly operation," including the anticipated cost of replacement power and creative use of fuel pools for temporary fuel storage under certain conditions.
10. Any other general information concerning factors the Commission should consider, which would provide a full examination of all alternatives explored including the reasons alternatives were not workable.

V. CRITERIA

Section 53.30 describes criteria for Commission determination under the Proposed Rule.

DISCUSSION

Section 53.30 should be amended to reflect Section 135(g) of the NWA. References to the generic decision to require full core reserve should be removed. Unique laws or circumstances beyond the utility's control which make Federal storage necessary should be described fully. Under the Atomic Energy Act of 1954 (42 USC Section 2201 et seq.) and the NWA, there is a presumption of Federal pre-emption of state and local laws limiting on-site and within-system storage. Transportation should be minimized to minimize risk and maximize public safety. Only undamaged fuel of five years of age or older should be accepted into Federal storage to minimize economic and health considerations.

Utility efforts to implement plans and purchase casks and related equipment should be evaluated. The law required the Secretary to use private contractors to transport or store spent fuel; if the casks are available to the Federal government, the casks should also be available to the utilities. Lack of action in this regard is not reason for Federal storage.

RECOMMENDED CHANGES

The criteria specified in Section 53.30 of the Proposed rule should be changed as follows:

1. Commission criteria should favor on-site storage (per Sections 131, 132, 135(a)(3) of the NWA) as opposed to transshipment.
2. Criteria should ensure that only undamaged fuel of five years of age or greater should be received into Federal storage.
3. Clarification should be made regarding whether the site referred to in Section 53.30(a)(1) is a utility site or a Federal site.
4. Criteria should analyze utility leadership and cooperation in utility ownership or pooled ownership of casks for transporting and storing spent fuel.
5. Subsection (a)(7) should be clarified to describe state or local laws which might make Federal takeover of spent fuel necessary.
6. Section 53.30(b) should be altered to: "the Commission shall consider the maintenance of a full core reserve..."
7. Section 53.30(b) should require that the sources and costs of replacement power be part of the Commission consideration of the need for full core reserve.
8. Section 53.30(c) should be deleted.
9. Only unique local economic considerations or unique orderly operations scenarios which require Federal takeover of utility fuel, including reasons for Federal assumptions of costs should receive Commission attention.

10. The innovative use of fuel cycles and other creative, responsible management practices which minimize the need for spent fuel storage should be examined.

11. Section 53.30(d)(3) of the Proposed Rule should be changed to read as follows: "The timely implementation of a spent nuclear fuel storage program which has utilized all available options for storage of spent fuel at the reactor, or within the utility, if necessary, taking into account technical, economic, regulatory, and public health and safety factors, and the includes the prompt development of feasible alternatives to Federal storage."

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1. S.M. Stoller Corporation, "Full Core Reserve Study" (1979); U.S. DOE/RL-82-1 "Spent Fuel Storage Requirements" (1982); Pickard, Lowe, and Garrick, "Full Core Removal Study" (1979).
 2. Stoller, page 12.