

47 FR 50591
Published 11/8/82

**Licensing and Regulatory Policy and
Procedures for Environmental
Protection; Uranium Fuel Cycle
Impacts**

AGENCY: Nuclear Regulatory
Commission.

ACTION: Statement of policy.

Earlier this year a decision of the
United States Court of Appeals for the
District of Columbia Circuit vacated
three Commission rules which govern
the treatment of uranium fuel cycle

¹The licensee's authorization under license DFR-
73 has been modified through the order issued
February 11, 1980, the modification of order issued
August 11, 1980, and the amendment of order issued
November 14, 1980.

environmental impacts in individual nuclear power reactor licensing proceedings. *Natural Resources Defense Council, et al. v. NRC*, No. 74-1586 and consolidated cases (decided April 27, 1982).¹ By its order of September 1, 1982, the D.C. Circuit stayed its mandate pending the filing of application for review of the decision by the Supreme Court. The Solicitor General, on behalf of the Nuclear Regulatory Commission, on September 27, 1982, filed with the Supreme Court a petition for a writ of *certiorari*. Other parties to the case have also filed petitions for Supreme Court review. In this Statement of Policy the Commission provides guidance to the Commission's staff and licensing boards and the interested public regarding ongoing licensing proceedings and the status of licenses already issued, pending final action by the Supreme Court.²

1. Background of the Decision in NRDC v. NRC

The rules in question form part of the Commission's procedures for compliance with the National Environmental Policy Act of 1969 (NEPA). 10 CFR Part 51. The Commission has interpreted NEPA as requiring that the environmental impacts of the uranium fuel cycle be considered in environmental impact statements for individual light water nuclear power reactors.³ The Commission determined some time ago that a generic rule would be the most effective means for considering such impacts in individual reactor licensing proceedings. The most recent version of the Commission's fuel cycle rule, the "Final" fuel cycle rule, was promulgated in 1979. 44 FR 45362 (August 2, 1979). 10 CFR 51.20, 51.23. The rule is frequently referred to as "Table S-3," after the table of impacts which the rule prescribes for use in evaluating the fuel cycle contribution to the environmental costs of licensing an individual nuclear power reactor. In issuing reactor construction permits and operating licenses the Commission has relied on this fuel cycle rule or its

predecessors (the "Original" and "Interim" rules) since adoption of the Original rule in 1974. 39 FR 14188 (April 22, 1974).

Litigation involving the fuel cycle rules began with the Original S-3 rule. In a decision issued July 21, 1978 the United States Court of Appeals for the District of Columbia Circuit set aside those portions of the Original rule pertaining to waste management and spent fuel reprocessing. *Natural Resources Defense Council v. NRC*, 547 F.2d 633, rev'd sub nom. *Vermont Yankee Nuclear Power Corp. v. NRC*, 435 U.S. 519 (1978), but the court stayed its mandate pending review on a petition for *certiorari* to the United States Supreme Court. The Supreme Court reversed the Court of Appeals and remanded for further proceedings. The Court of Appeals consolidated the remanded case with challenges to the Commission's Interim and Final fuel cycle rules and issued a decision on April 27, 1982: *NRDC v. NRC*, No. 74-1486 and consolidated cases.

2. The Holding by the Court of Appeals

In the D.C. Circuit's decision in *NRDC v. NRC*, Judge Bazelon, speaking for the majority, held the Commission's Original, Interim and Final Table S-3 rules invalid "due to their failure to allow for proper consideration of the uncertainties that underlie the assumption that solidified high-level and transuranic wastes will not affect the environment once they are sealed in a permanent repository." Slip Op. at 69. The court's opinion acknowledged that in promulgating the Final rule the Commission considered and disclosed uncertainties concerning permanent disposal of spent fuel and high-level wastes from power reactors. See the Commission's notice of final rulemaking, 44 FR 45362 (August 2, 1979). The court did not suggest that the evidentiary record for the Commission's final rulemaking omitted any substantial body of material regarding waste disposal uncertainties which might have been available at the time of the rulemaking. Nevertheless, the court held it to be a violation of NEPA that the rule binds Licensing Boards to evaluate fuel cycle impacts on the basis of waste disposal impacts in Table S-3, which does not explicitly include uncertainties.⁴

Although the court concluded that uncertainties could be dealt with generically, rather than on a case-by-case basis, the court held that the Table S-3 rule in question "does not allow the uncertainties concerning permanent storage to play a role in the ultimate licensing decision. That omission, and hence, the Rule, which causes it, constitutes a blatant violation of NEPA."⁵

⁴ Concerning the choice not to include uncertainties explicitly in Table S-3, the Commission stated in promulgating the rule: In view of the uncertainties noted regarding waste disposal, the question then arises whether these

Slip Op. at 46. The dissenting opinion by Judge Wilkey rejected the majority's analysis and would have upheld the Final rule on the grounds that in dealing with uncertainties the Commission had considered the relevant factors and arrived at a reasonable policy judgment.

An additional challenge had been raised on the Original and Interim rules that they improperly precluded Licensing Boards from considering health effects that might result from radioactive effluents set out in Table S-3 and also precluded consideration of socioeconomic and possible cumulative impacts of the fuel cycle.⁶ No such preclusion appeared explicitly in the rules, and the Commission had maintained before the court that no preclusion had been implicitly intended or ever actually applied. Nevertheless, the majority held that the Original rule and the Interim rule, prior to an amendment in 1978, "effectively eliminated the consideration and disclosure of the health, socioeconomic and cumulative impacts of fuel-cycle activities." Slip Op. at 57. Accordingly, the majority held that the Original and Interim rules, in addition to their failure to provide for proper consideration of uncertainties, also failed to allow for proper consideration of health, socioeconomic and cumulative fuel cycle effects.

On the issue whether the waste management and reprocessing models underlying the entries in Table S-3 would be economically feasible, a majority of the panel (Judge Bazelon and Judge Wilkey) upheld the Commission's finding of feasibility.

3. Effect on the Power Reactor Licensing Program

The D.C. Circuit's decision does not call into question the Commission's awareness of waste disposal

uncertainties can or should be reflected explicitly in the fuel cycle rule. The Commission has concluded that the rule should not be so modified. On the individual reactor licensing level, where the proceedings deal with fuel cycle issues only peripherally, the Commission sees no advantage in having licensing boards repeatedly weigh for themselves the effect of uncertainties on the selection of fuel cycle impacts for use in cost-benefit balancing. This is a generic question properly dealt with in this rulemaking as part of choosing what impact values should go into the fuel cycle rule. The Commission concludes, having noted that uncertainties exist, that for the limited purpose of the fuel cycle rule it is reasonable to base impacts on the assumption which the Commission believes the probabilities favor, i.e., that bedded-salt repository sites can be found which will provide effective isolation of radioactive waste from the biosphere.

⁶ 44 FR 45369 (footnote omitted).

⁵ This challenge was not raised against the Final rule, which specifically requires that environmental impact statements "shall take account of dose commitments and health effects from fuel cycle effluents set forth in Table S-3 and shall in addition take account of economic, socioeconomic, and possible cumulative impacts and such other fuel cycle impacts as may reasonably appear significant." 10 CFR 51.23(c). Since ongoing licensing proceedings depend on the Final rule, this aspect of the court's decision does not bear on the Commission's decision whether to continue licensing.

¹ On June 30, 1982 the D.C. Circuit denied the Commission's petitions for rehearing and rehearing en banc.

² The Commission dealt with a previous invalidation of a fuel cycle rule by the D.C. Circuit in 1979 by issuance of a policy statement. *Natural Resources Defense Council v. NRC*, 547 F.2d 633, rev'd sub nom. *Vermont Yankee Nuclear Power Corp. v. NRC*, 435 U.S. 519 (1978). See General Statement of Policy, 41 Fed. Reg. 54707 (August 16, 1976), and Supplemental General Statement of Policy, 41 Fed. Reg. 49006 (November 11, 1976). For reasons discussed in the text below, the Commission does not believe that the major, though temporary, disruption in licensing announced by the policy statement of August 1976 is a necessary or appropriate response to the D.C. Circuit's latest decision.

³ In addition to the operation of the nuclear power reactor itself, the uranium fuel cycle includes uranium mining and milling, the production of uranium hexafluoride, isotopic enrichment, fuel fabrication, spent fuel storage and disposal, possible reprocessing of irradiated fuel, transportation of radioactive materials and management of low- and high-level wastes.

uncertainties or the adequacy of the evidence regarding uncertainties in the record on which the Commission relied. * The state of the Final rulemaking record does not suggest that supplementary studies of uncertainties are likely to produce evidence that would change licensing decisions. The Commission continues to address the uncertainty over whether and when a permanent repository, or equivalent system of disposal, will be developed. Slip Op. at 45. The Commission has stated that it would not license plants without reasonable confidence that safe waste disposal will be available when needed, and has found that it has such reasonable confidence. 42 FR 34391 (July 5, 1977). *NRDC v. NRC*, 561 F.2d 166 (2d Cir. 1978). The Commission is now entering the final stages of the so-called "waste confidence" proceeding, a proceeding designed to reassess whether there is reasonable assurance that safe waste disposal will be available when needed. 44 FR 61372 (1979). The Court of Appeals has made clear that licensing need not be suspended pending the outcome of this reassessment. See *Potomac Alliance v. NRC*, ___ F.2d ___ (D.C. Cir. No. 80-1862, decided July 20, 1982). In view of these considerations and the high cost of delaying the issuance of licenses for qualified facilities, the Commission concludes that power reactor licensing may continue. Should the "waste confidence" proceeding arrive at an outcome inconsistent with this policy judgment, the Commission will immediately inform the Congress and will reassess the positions taken in this policy statement.

Next the question arises what role the fuel cycle rules should play in continued licensing. As the Commission interprets the D.C. Circuit and Supreme Court decisions which bear on environmental analysis of fuel cycle impacts, the Commission could conduct individual licensing proceedings by addressing fuel cycle impacts on a case-by-case basis without a generic rule. The Commission already deals with the matter partly in this fashion. In application of the Commission's Final rule a number of significant generic fuel cycle issues, including health effects associated with the effluents given in Table S-3, are presently treated on a case-by-case basis, pending further progress toward an expanded generic rule. To move further toward case-by-case litigation would reintroduce the significant

*The Commission thus views the present decision by the D.C. Circuit not as a finding of fault with the evidentiary record on waste management impacts and uncertainties but rather as a rejection of the Commission's policy judgments regarding the weight and effect which those impacts and uncertainties should exert in reactor licensing. By way of contrast, after the D.C. Circuit issued its 1976 decision the Commission suspended licensing pending the outcome of a supplementary environmental survey of waste management and reprocessing impacts to remedy what the Commission perceived as gaps in the record identified by the court. 41 FR 43707, 43708, col. 2.

burdens the rule was intended to relieve. Use of the S-3 rule has served the important purpose of providing the underlying basis for consideration of fuel cycle impacts, and the Commission believes that an attempt to proceed without the rule would probably prove unworkable. In principle, and quite possibly in practice, contested licensing cases could rapidly evolve into replays of the S-3 rulemaking. * The resulting delay and drain on staff resources would be substantial, and would not only delay licensing of qualified facilities, but would also substantially disrupt the Commission's regulatory program, including its program to develop safety standards for high-level waste disposal facilities.

The most straightforward way of proceeding is to continue using the S-3 rule in licensing, pending possible supplementation to be discussed later in this statement, insofar as such use is permissible. The Commission notes that after the *NRDC v. NRC* decision of 1976 invalidating the Original S-3 rule, 547 F.2d 633, the court, by staying its mandate, in effect permitted the continuation of licensing pursuant to the rule pending further judicial proceedings provided that future licenses be conditioned on the outcome of those proceedings. See Supplemental General Statement of Policy, 41 FR 49396 (November 11, 1976). The D.C. Circuit's current stay of mandate and the filing of petitions for Supreme Court review place the present case in a similar posture. Indeed the NRC advised the D.C. Circuit that it would proceed in reliance on the rule should the court grant its request to stay the mandate. The Commission anticipates that the mandate will not issue until the Supreme Court has either declined review or taken review and addressed the merits of the lower court's decision. Accordingly, the Commission directs its Licensing and Appeal Boards to proceed in continued reliance on the Final S-3 rule until further order from the Commission, provided that any license authorizations or other decisions issued in reliance on the rule are conditioned on the final outcome of the judicial proceedings.

With regard to licensing proceedings now closed in which there was reliance on any of the fuel cycle rules, the Commission has concluded that for the present, at least, show-cause proceedings based on issues raised by the D.C. Circuit's decision should not be initiated. The Court of Appeals specifically noted that it expressed no view as to the validity of licenses already issued pursuant to the rules and that the matter of the validity of each would be addressed in subsequent

*The same result could follow if the Commission amended the rule to allow Licensing Boards to take evidence on uncertainties in the Table S-3 entries. Such a proceeding could readily lead to complete reexamination of the Table by each board.

judicial proceedings. Slip Op. at 60. Several cases which have been held in abeyance pending disposition of the main case challenge the validity of licenses and permits issued for specific facilities. * The Commission believes these cases should remain in abeyance, pending final Supreme Court action and has advised the courts of this position. The Commission does not intend to initiate show-cause proceedings *suo sponte* for these or other licenses, pending further direction by the courts. The Commission directs that any petitions for such proceedings filed pursuant to 10 CFR 2.206, insofar as they raise issues associated with validity of the S-3 rules, be held in abeyance pending a further order from the Commission.

4. Supplementation of the Record

As the Commission noted in promulgating the Final rule, events which might lead to major releases from the bedded-salt repository used as the model for the S-3 rule appear remote in probability while any releases which might reasonably be expected eventually to occur appear very small. Accordingly, the Commission found that the staff's assumption that the integrity of the repository would be maintained after sealing was a reasonable description of the performance of a properly selected repository and, when taken together with the staff's highly conservative assumption that all volatile fission products in reactor spent fuel would be released to the atmosphere prior to repository sealing, left Table S-3 overall a conservative description of fuel cycle impacts. See 44 FR 45399, col. 2. Considering the rule's limited purpose and taking into account the Commission's "waste confidence" proceeding, the Commission continues to believe that the record of the final S-3 rulemaking contains adequate information on waste disposal uncertainties to support continued use of the fuel cycle rule.

The Commission notes that over the past few years considerable effort has been devoted to the development of the national standards for a repository by the Environmental Protection Agency. These draft standards are essentially complete and should be issued soon as formal proposals. The NRC staff has informed the Commission that the release limits contained in the EPA standards and the studies done in support of the standards may provide

*The court cited five cases now before the D.C. Circuit in which individual licenses granted under the Original or Interim rules have been challenged on that ground. These include *Lloyd Harbor Study Group, Inc. v. NRC*, No. 78-3266; *Aeschliman v. NRC*, No. 73-1776; *Saginaw Valley Study Group v. NRC*, No. 73-1867; *NRDC v. NRC*, No. 74-1986; *Coalition for the Environmental v. NRC*, No. 77-1806. Also, there is pending in the First Circuit a challenge to a reactor construction permit involving an issue the validity of the fuel cycle rule. *New England Coalition vs Nuclear Pollution v. NRC*, No. 78-1525.

additional information on releases associated with waste disposal. The Chairman of the NRC has urged early issuance of these important standards and the supporting documents.

The NRC staff has been directed to examine the EPA standard when published for comment and supporting documentation as it becomes available to determine the degree to which it could be used in Table S-3. This examination will include releases under both normal and abnormal conditions. The NRC staff should be prepared to provide recommendations on possible revisions within 60 days of publication of the EPA standards for comment.

Dated at Washington, D.C. this 29th day of October, 1982.

Samuel J. Chilk,
Secretary of the Commission.