

**SNC000060**

**Early Site Permits; Standard Design  
Certifications; and Combined Licenses  
for Nuclear Power Reactors,  
54 Fed. Reg. 15372 (1989)**

**FOR FURTHER INFORMATION CONTACT:** Steven Crockett, Attorney, Office of the General Counsel, telephone (301) 492-1600, on procedural matters, or Jerry Wilson, Office of Nuclear Regulatory Research, telephone (301) 492-3729, on technical matters, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

**SUPPLEMENTARY INFORMATION:**

**I. Background**

The Commission has long sought nuclear power plant standardization and the enhanced safety and licensing reform which standardization could make possible. For more than a decade, the Commission has been adding provisions to 10 CFR Part 50 and Part 2 that allow for limited degrees of standardization, and for as many years, the Commission has been proposing legislation to Congress on the subject. The Commission was frequently asked by Members of Congress to what extent legislation on the subject was necessary, and in doing the analysis necessary to reply to these questions, the Commission came to believe that much of what it sought could be accomplished within its current statutory authority. Thus the Commission embarked on standardization rulemaking.

The rulemaking process has been lengthy and highly public. A year and a half ago, the Commission announced its intent to pursue standardization rulemaking in its Policy Statement on Nuclear Power Plant Standardization (52 FR 34884; September 15, 1987). The Policy Statement set forth the principles that would guide the rulemaking and provided for a forty-five-day comment period on the Policy Statement. On October 20, 1987, about mid-way through the comment period the NRC staff held a public workshop on the Policy Statement. During the Workshop, the staff presented a detailed outline of the proposed rule and answered preliminary questions about it. A transcript of the workshop may be found in the Commission's public document room, Gelman Building, 2120 L Street, NW, Washington, DC. After a lengthy internal consideration of the comments received on the Policy Statement and the outline of the rule presented at the Workshop, and after public briefings of the Commission and the Advisory Committee on Reactor Safeguards (ACRS), the Commission issued a proposed rule (53 FR 32060; August 23, 1988) and provided for a sixty-day comment period. The comment period was extended to 75 days on October 24, 1988 (53 FR 41609). Mid-way through that period the NRC staff again held a

public workshop, this time on the text of the proposed rule.<sup>1</sup>

During the second, 75-day comment period, the Commission received over 70 sets of comments, ranging from one-page letters to multi-paged documents, one of which included an annotated rewrite of the whole rule. The commenters included the Department of Energy (DOE), agencies and offices in the states of Connecticut, Indiana, New York, and North Carolina, the Nuclear Utility Management and Resources Council (NUMARC), the American Nuclear Energy Council, Westinghouse, General Electric, Combustion Engineering, Stone & Webster, the U.S. Chamber of Commerce, the Union of Concerned Scientists (UCS), the Nuclear Information and Resource Service (NIRS), the Ohio Citizens for Responsible Energy (OCRE), the Maryland Nuclear Safety Coalition, and several utilities, corporations, public interest groups, and individuals. All the comments may be viewed in the agency's public document room.

The Commission has carefully considered all the comments and wishes to express its sincere appreciation of the often considerable efforts of the commenters. While the broad outlines, and even many of the details, of the proposed rule remained unchanged in the final rule, few sections of the proposed rule have escaped revision in light of the comments, and some have been thoroughly revised. In the remainder of this section of this final rule preamble, the Commission makes two general responses to comments and then summarizes both the comments and its responses to them. In Section II of this final rule preamble, the Commission responds to comments on the chief issues raised by the comments. While Section II often touches on the broad policies which lie behind the rule, readers wishing to know more about those broad policies may consult the statement of considerations which was published with the proposed rule. In Section III, which proceeds section-by-section through the final rule, the Commission notes minor changes and offers some minor clarifications of the meaning of some provisions. For a complete record of the differences

<sup>1</sup> Given this lengthy and public process, the Commission is unpersuaded by commenters on the proposed rule who claim that the public was not given enough time to consider the rule. For example, the Nuclear Information Resource Service (NIRS) says that given the importance of the rule, one "would think that the NRC would encourage the widest possible public participation on this rule, perhaps even by making special efforts to solicit comment." That is, of course, precisely what the Commission did.

**NUCLEAR REGULATORY COMMISSION**

10 CFR Parts 2, 50, 51, 52, and 170

RIN 3150-AC61

**Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Reactors**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Final rule.

**SUMMARY:** The Nuclear Regulatory Commission is now adding a new part to its regulations which provides for issuance of early site permits, standard design certifications, and combined construction permits and operating licenses with conditions for nuclear power reactors. The new part sets out the review procedures and licensing requirements for applications for these new licenses and certifications. The final action is intended to achieve the early resolution of licensing issues and enhance the safety and reliability of nuclear power plants.

**EFFECTIVE DATE:** May 18, 1989.

**ADDRESS:** Documents relative to this final rule may be examined and copied for a fee at the NRC Public Document Room, 2120 L Street NW, Washington, DC.

between the proposed rule and the final rule, readers may consult the comparative text of the final rule, which is available in the agency's public document room.

#### *Two General Responses to Comments*

Before summing up the comments and the Commission's responses to them, the Commission wishes to make clear what it has not tried to do in this rulemaking. First, although this is an important rulemaking, it does not resolve all the safety, environmental, and political issues facing nuclear power. The Commission received urgings to undertake deep reforms before issuing this final rule. The Commission was, for instance, urged to streamline the hearing procedures in 10 CFR Part 2, Subpart G, restructure the utilities' liabilities under the Price-Anderson Act, decide once and for all what safety criteria shall be applied to all future plants, solve the problem of nuclear waste, turn all health and safety regulation—not just the NRC's—over to the states, reconsider whether economic considerations should ever enter into safety decisions, conduct local running referenda on whether a given nuclear power plant should be built, and have Congress directly review designs. In sum, the Commission was urged to do everything before it did anything.

However, the Commission has stuck to the simple aim in this rulemaking of providing procedures for the standardization of nuclear power plants and more generally for the early resolution of safety and environmental issues in licensing proceedings. The Commission has declined to tie the fate of this rulemaking to the progress of the agency's many other ongoing efforts, such as revision of the agency's hearing procedures, implementation of the Policy Statement on Safety Goals (51 FR 30028; August 21, 1986), development of techniques of analysis of risk and cost, and preparation for the licensing of a high-level waste repository. The final rule necessarily touches on substance whenever it sets forth requirements for the technical content of applications for early site permits, design certifications, or combined licenses, or discusses the applicability of existing standards to new designs and new situations. But even here, the Commission has avoided establishing new safety or environmental standards, although the Commission may choose to adopt additional safety standards applicable to new designs prior to the advent of design certifications.

Second, many saw this rule as the occasion for arguments over the future viability of nuclear power in the United

States. On the one hand, the Commission is vigorously accused of promoting the nuclear industry and shutting local governments and individual citizens out of the licensing process. On the other hand, the Commission is told that the licensing process is "the reason" for "the loss of the nuclear option", and that reform of that process is the "sine qua non" of the viability of that option.

Certainly, the Commission hopes that this rule will have a beneficial effect on the licensing process. In other words, the Commission hopes that effort has not been wasted on a rule which will never be used. But the Commission is not out to secure, single-handedly, the viability of the industry or to shut the general public out. The future of nuclear power depends not only on the licensing process but also on economic trends and events, the safety and reliability of the plants, political fortunes, and much else. The Commission's intent with this rulemaking is only to have a sensible and stable procedural framework in place for the consideration of future designs, and to make it possible to resolve safety and environmental issues before plants are built, rather than after.

#### *Summary of the Comments and the Commission's Responses*

The comments on the proposed rule are characterized both by their broad agreement that standardization and early resolution of licensing issues are desirable, and by their often deep differences on what kinds of designs should be certified, how they should be certified, and what consequences certification should have for the licensing process.

As to what kinds of designs should be certified, except for the very few who opposed any licensing of any nuclear power plant, no commenter opposes the certification of designs which differ significantly from the designs which have been built thus far; but some, UCS, for instance, say that only "advanced" designs should be certified, and many, including UCS, DOE, and Westinghouse, say that only designs for whole plants should be certified.

While not withholding certification from incomplete designs or designs which are not advanced, the final rule has moved a long way from the position the Commission took in the legislative proposal it made shortly before this rulemaking began. There, certification was held out only for evolutionary light water designs, but was permitted for the design of any "major portion" of a plant. The final rule provides for certification of advanced designs and permits certification of designs of less than full

scope only in highly restricted circumstances.

As to how designs should be certified, most commenters think the Commission has authority to certify either by rule or by license. However, some commenters see advantages in certification by license. OCRE, for instance, says that certification by license is more appropriate, and some industry commenters think that more protections are available to the holder of a design license than are available to the "holder" of a design rule. Some commenters prefer certification by license because they believe that a hearing on a license has to be a formal adjudication.

The final rule reflects the Commission's long-standing preference for certification by rulemaking (see the old 10 CFR Part 50, Appendix O, paragraph 7), and for certification hearing procedures which, while they permit formal procedures when needed, do not assume that formal procedures are the best means for resolving every safety issue.

Finally, the deepest differences among the commenters concern the consequences of standardization and other devices for early resolution of licensing issues for the licensing process. One commenter believes that, once a plant is built under a combined license, there need be no hearing at all before operation begins. Several of these commenters characterize the proposed rule's provision for an opportunity for a hearing just before operation as the old two-step licensing process under a different name. Others believe not only that there should be such a hearing but also that resolution of issues in earlier proceedings does not entail any restriction on the issues which may be raised in the hearing after construction. Many of these commenters attribute to the Commission an intent to do away with public participation in the licensing process.

The Commission has given more consideration to this issue than to any other procedural question raised by the proposed rule. As a result, the proposed rule's provisions on hearings just before operation have been revised in the final rule (the revised provisions are discussed in more detail below). However, the final rule still provides for an opportunity for a hearing on limited issues before operation under a combined license. But the mere fact of this opportunity does not mean that the rule is hiding the old two-step process under a different name. By far the greater part of the issues which in the past have been considered in operating

license hearings would, under the new rule, be considered at the combined license stage or in a certification proceeding, including the bulk of emergency planning issues. Similarly, the mere fact that any hearing prior to operation would be limited does not mean that the Commission is attempting to remove the public from the licensing process. The rule does not prevent the public from participating in the resolution of any operating license issue. It simply moves the bulk of the issues up front in the licensing process to the design certification, early site permit, and combined license parts of the process.

## II. The Principal Issues

### 1. Requirements for Applications for Design Certification

Because design certification is the key procedural device in Part 52 for bringing about enhanced safety and early resolution of licensing issues, the Commission begins its discussion of the principal issues with responses to comments on the proposed rule's requirements for applications for certification.

#### a. "Advanced" Designs

The proposed rule provided for certification both of evolutionary light-water designs, that is, improved versions of the light-water designs now in operation, and of "advanced" designs, that is, designs which differ significantly from the evolutionary light-water designs, or which incorporate, to a greater extent than evolutionary light-water designs do, simplified, inherent, passive, or other innovative means to accomplish their safety functions (the distinction between evolutionary light-water designs and advanced designs is discussed at greater length below). The proposed rule required that some advanced designs could not be certified until full-scale prototypes of them were built and tested. While agreeing with the requirement for prototype testing of some advanced designs, several commenters, UCS prominent among them, say that certification should be held out only to advanced designs. UCS argues that without such a limitation on the designs which could be offered up for certification, the proposed rule would discriminate against the development of advanced designs of greater safety, because, given the choice between seeking certification of a familiar design and seeking certification of a design which the Commission might require to be tested in a full-scale prototype, an applicant would choose to avoid having to build a prototype.

As is noted above, the rule, unlike the legislative proposals which preceded it, provides for certification of advanced designs. However, it also provides for certification of evolutionary light-water designs. The Commission's legislative proposals on standardization have always focused on these designs, on the grounds that the light-water designs now in operation provide a high degree of protection to public health and safety. Moreover, the Commission does not believe that the requirement in some cases for a prototype is such a burden. Whatever burden having to test a prototype may be, the burden may be lessened by agreements of cost-sharing among utilities and other organizations, and by licensing the prototype for commercial operation. It is well to remember also that, under the rule, prototype testing is required only for certification or an unconditional final design approval, if at all. A final design approval under 10 CFR Part 52, Appendix O (formerly in Part 50) can be granted subject to conditions requiring prototype testing. See 10 CFR Part 52, Appendix O, paragraph 5. Moreover, a licensed prototype may be replicated.

#### b. Requirement to Address Unresolved Safety Issues and Safety Goals

Several commenters object to the proposed rule's requirement that applicants for certification propose technical resolutions of Unresolved Safety Issues and high- and medium-priority Generic Safety Issues. This requirement, and similar ones relating to probabilistic risk assessments and the Commission's Three Mile Island requirements for new plants, 10 CFR 50.34(f), were announced in the Commission's Severe Accident Policy Statement (50 FR 32138; August 8, 1985) and in the Commission's Policy Statement on Standardization (52 FR 34884; September 15, 1987). Some commenters call it "inappropriate" to impose this burden on applicants. Others say that no resolution of one of these issues should be imposed on a design unless the resolution had passed a cost-benefit test.

The Commission believes that it is not inappropriate to require that an applicant for certification show either that a particular issue is not relevant to the design proffered in the application, or that the applicant has in hand a design-specific resolution of the issue (the applicant is of course not required to propose a generic resolution of the issue). As to cost-benefit tests, the Commission will of course apply them to the resolution of safety issues where the resolutions are being imposed on existing plants and adequate protection

is already secured. See 10 CFR 50.109 and *UCS v. NRC*, 824 F.2d 108 (D.C. Cir. 1987). However, initial certification does not involve backfitting. Designers will, of course, strive for a cost-effective design, but the Commission declines to incorporate a cost-benefit test in the standards for certification.

#### c. Requirements on Scope of Design and on Prototypes

In the statement of considerations accompanying the proposed rule, the Commission noted that the proposed rule permitted certification of incomplete designs only in limited cases, while the legislation the Commission had proposed to the 100th Congress had been less stringent about scope of design. The Commission invited comment on whether the final rule should return to the policy reflected in the proposed legislation. DOE, Westinghouse, and UCS, among others, argue that only designs of complete power plants—excluding site-specific elements of course—should be certified. NUMARC, however, advocates a return to the policy of the legislation proposed to the 100th Congress. One engineering firm argues that requiring complete designs would limit market forces that could contribute to standardization.

The final rule is even more stringent about completeness of design than the proposed rule was. The final rule's provisions on scope, see § 52.47, reflect a policy that certain designs, especially designs which are evolutions of light-water designs now in operation, should not be certified unless they include all of a plant which can affect safe operation of the plant except its site-specific elements. See § 52.47(b). Examples of designs which are evolutions of currently operating light-water designs are General Electric's ABWR, Westinghouse's SP/90, and Combustion Engineering's System 80+. Full-scope may also be required of certain advanced designs, namely, the "passive" light-water designs such as General Electric's SBWR and Westinghouse's AP600. Considerations of safety, not market forces, constitute the basis for the final rule's requirement that these designs be full-scope designs. Long experience with operating light-water designs more than adequately demonstrates the adverse safety impact which portions of the balance of plant can have on the nuclear island. Given this experience, certification of these designs must be based on a consideration of the whole plant, or else the certifications of those designs will lack that degree of finality which should be the mark of certification.

However, the Commission has not adopted UCS's position that no design of incomplete scope could ever be certified. There is no reason to conclude that there could never be a design which protects the nuclear island against adverse effects caused by events in the balance of plant. The final rule therefore provides the opportunity for certification of designs of less than complete scope, if they belong to the class of advanced designs. See § 52.47(b). Examples of designs in this class include the passive light-water designs mentioned above and non-light-water designs such as General Electric's PRISM, Rockwell's SAFR, and General Atomic's MHTGR. But here too the rule sets a high standard: Certification of an advanced design of incomplete scope will be given only after a showing, using a full-scale prototype, that the balance of plant cannot significantly affect the safe operation of the plant.

Standardization along these lines may indeed limit some market forces, particularly those which encourage a highly differentiated range of products. However, the final rule's requirements on scope in no way limit innovative arrangements among vendors and architect-engineers for bringing new designs before the Commission.

The final rule is clearer than the proposed rule was in identifying those designs which cannot be certified without a program of testing. For purposes of determining which designs must undergo a testing program to be certified, the rule distinguishes between all advanced designs—be they passive light-water or non-light water—and evolutionary light-water designs. Some testing may be required of all advanced designs. Passive light-water designs are to some extent also evolutions of the light-water designs now licensed, but they have design features which are not present on plants licensed and operating in the United States. Therefore the rule requires that the maturity of the passive light-water designs be demonstrated through a combination of experience, appropriate tests, or analyses, but most likely not through prototype testing. See § 52.47(b)(2). While analyses may be relied upon by the staff to demonstrate the acceptability of a particular safety feature which evolved from previous experience or to justify the acceptability of a scale model test, it is very unlikely that an advanced design would be certified solely on the basis of analyses. Prototype testing is likely to be required for certification of advanced non-light-water designs because these revolutionary designs use innovative means to accomplish their safety

functions, such as passive decay heat removal and reactivity control, which have not been licensed and operated in the United States. See id.

#### d. Certification by Rulemaking

The proposed rule provided for design certification by rulemaking. Here the proposed rule was in accord with the old 10 CFR Part 50, Appendix O, paragraph 7 (this paragraph is now being replaced by Subpart B of Part 52). However, in the notice of proposed rulemaking, the Commission invited comments on whether certification should be by license rather than rule. Although the Commission expressed some doubts on the matter, commenters generally agree that the Commission has the authority to license designs. Some industry commenters and some public interest groups alike go further and argue that certification by license is preferable. Industry commenters arguing this position believe that the rights and obligations which attach to a license are clearer than those which attach to a rule. For instance, a license is possessed by some entity and, under Commission law, cannot be transferred without that entity's consent. Some public interest groups prefer certification by license because they believe that the hearing on a license would have to be a formal adjudication.

The Commission continues to believe that certification by rule is preferable to certification by license. As DOE says, a design certification will, like a rule, have generic application. Moreover, certification by rulemaking leaves the Commission free to adapt hearing procedures to the requirements of the subject matter, rather than rely exclusively on formal adjudicatory devices even when they are not useful (hearing procedures are more fully discussed below). Finally, certification by rulemaking permits the Commission to consider reactor designs submitted by foreign corporations. However, the Commission will give priority to designs for which there is a demonstrated interest in the United States. The Commission will review other designs as resources permit.

For the reasons just given, the final rule retains provisions for certification by rulemaking. Westinghouse suggests also adding provisions for certification by license, leaving it to the applicant to choose between certification by license and certification by rulemaking. The Commission, however, prefers rulemaking and sees no advantage to providing such an option.

NUMARC, while supporting certification by rule, suggests adding provisions analogous to existing

provisions in 10 CFR Part 50 for transfer or revocation of a license. See 10 CFR 50.80 and 50.100. However, a rule certifying a design does not, strictly speaking, belong to the designer. Therefore, such a rule cannot be transferred or revoked by adjudicatory enforcement. Applying § 50.80, in particular, to a rule certifying a design would be akin to giving the vendor of the design a patent, but the Commission has no authority to issue patents.

Nonetheless, the vendor whose design is certified by rule is not without protection. Section 52.63(a), the Administrative Procedure Act, and, ultimately, judicial review protect the vendor against arbitrary amendment or rescission of the certification rule, and the law of patents and trade secrets protects the vendor against unlawful use of the design. In order to give the vendor more opportunity to treat elements of the design as trade secrets, the final rule provides that proprietary information contained in an application for design certification shall be given the same treatment that such information would be given in a proceeding on an application for a construction permit or an operating license under 10 CFR Part 50. See § 52.51. Moreover, an applicant referencing a design certification and seeking to use a designer other than the designer which achieved the certification would have to comply with §§ 52.63(c) and 52.73, and the other designer would have to pay a portion of the cost of review of the application for certification. See 10 CFR 170.12 (d) and (e), as amended in this document.

#### e. Applicability of Existing Standards

With one exception, the proposed rule did not say what safety standards would be applied to a design proffered for certification, or even precisely what existing information requirements applicants would have to meet.<sup>2</sup> In its lengthy and highly detailed comments, NUMARC proposes adding to the rule a large number of highly specific cross-references to Part 50, and a statement that no other portions of Part 50 apply.

The final rule provides that the standards set out in 10 CFR Part 20, Part 50 and its appendices, and Parts 73 and 100 will apply to the new designs where those standards are technically relevant to the design proposed for the facility. See new § 52.48. Application of Parts 20, 50, 73, and 100 to the certification of new

<sup>2</sup> The proposed rule did state that an application for certification would have to demonstrate that the design complied with the technically relevant portions of the Commission's Three Mile Island requirements set forth in 10 CFR 50.34(f). See § 52.47(a), 53 FR 32073 (proposed rule).

designs, as reflected in § 52.48, should go a long way toward establishing the regulatory standard that new designs must meet, and thereby provide the regulatory stability that is an essential prerequisite to realizing the benefits of standardization. The Commission recognizes that new designs may incorporate new features not addressed by the current standards in Parts 20, 50, 73 or 100 and that, accordingly, new standards may be required to address any such new design features. Therefore, the NRC staff shall, as soon as practicable, advise the Commission of the need for criteria for judging the safety of designs offered for certification that are different from or supplementary to current standards in 10 CFR Parts 20, 50, 73, and 100. The Commission shall consider the NRC staff's views and determine whether additional rulemaking is needed or appropriate to resolve generic questions that are applicable to multiple designs. The objective of such rulemaking would be to incorporate any new standards in Part 50 or Part 100, as appropriate, rather than to develop such standards in the context of the Commission's review and approval of individual applications for design certifications. On the other hand, new design features that are unique to a particular design would be addressed in the context of a rulemaking proceeding for that particular design.

#### f. Hearings on Applications for Design Certifications

Like the proposed rule, the final rule provides for notice and comment rulemaking on an application for a design certification, together with an opportunity for an informal hearing on an application for a design certification. The rule also permits the use of more formal procedures where they are the only procedures available for resolving a given issue properly. See § 52.51. UCS and others argue that any hearing on certification should be a formal adjudication. In particular, UCS argues that the certification proceeding will be dealing with adjudicative, as opposed to legislative, facts and therefore should be fully adjudicatory. UCS characterizes adjudicative facts as "uniquely related to activities of the parties that are at issue" and legislative facts as "facts about industry practices, economic impact, scientific data, and other information about which the parties have no special information."

UCS' argument proves too much. If the facts to be considered in a certification proceeding are wholly adjudicative, then, because those facts are like the facts considered in any rulemaking on safety issues, every such rulemaking

must be a formal adjudication. However, this conclusion is clearly not the law; therefore, the facts in a certification proceeding are not wholly adjudicatory. Moreover, if such facts must be categorized at all, they are more "legislative" than "adjudicative", as UCS defines those terms, for while they are "related to activities of the parties", they are not uniquely so, and they are facts about "industry practices, scientific data", engineering principles, and the like.

Several commenters also argue that the certification proceeding should be a formal adjudication because cross-examination is an unsurpassed means for discovering the truth. Again, the argument proves too much, namely, that every rulemaking, indeed every species of lawmaking, should be formal adjudication. Part 52 does not assume the superiority, or even the usefulness, of formal procedures for resolving every issue; but it does provide for their use where they are the only means available for resolving an issue properly.

#### g. Fees for Review of Applications

The final rule adheres to the fee policy embodied in the proposed rule. An applicant for design certification does not have to pay an application fee, but the applicant will have to pay the full cost of the NRC review of the application, although not until the certification is referenced in an application for a construction permit or combined license, or, failing that, not until the certification expires. The details of the scheme of deferral of the fees appear in conforming amendments to the recently amended 10 CFR Part 170 (53 FR 52632; December 29, 1988).

UCS asserts that the provision for deferral of fees for NRC review is "unconscionable". To the contrary, the Commission believes that there is nothing "unconscionable" about deferral of fees for a program whose aim is to enhance safety.

Some industry commenters assert that the requirement for payment of the full cost of NRC review presents an "insurmountable disincentive" to the development of certified designs. Some industry commenters propose putting a ceiling on fees for certification review, in order to help vendors better estimate the costs of developing and certifying a design. The Commission fully recognizes that it will be difficult for a vendor to estimate the costs of taking a design through to certification. However, a ceiling on fees only displaces the burden of that uncertainty from the vendor to the public. In recent years, the NRC has been obliged by statute to charge fees which return to the Federal Treasury a

portion of the costs incurred in regulation. Deferral of fees is more in line with the policies behind those statutes than is putting the burden of uncertainty on the public.

#### h. Finality

Standardization has the double aim of enhancing safety and making it possible to resolve design issues before construction. Of these two aims, enhanced safety is the chief, because pre-construction resolution of design issues could be achieved simply through combined construction permits and operating licenses with conditions. Achievement of the enhanced safety which standardization makes possible will be frustrated if too frequent changes to either a certified design or the plants referencing it are permitted.

The proposed rule put forward principally three means of preventing a continual regression from standardization. First, the proposed rule required that any amendment proffered by the "holder" of a certification be considered in a notice and comment rulemaking and granted if the amendment complied with the Atomic Energy Act and the Commission's regulations. Second, the proposed rule prohibited the licensee of a plant built according to a certified design from making any change to any part of the plant which was described in the certification unless the licensee had been granted an exemption under 10 CFR 50.12 from the rule certifying the design. Third, the proposed rule stated that the Commission would not backfit a certified design or the plants built according to it unless a backfit were necessary to assure compliance with the applicable regulations or to assure adequate protection of public health and safety. See § 52.63 of the proposed rule, 53 FR 32074, col. 3, to 32075, col. 2. The Commission invited comment on whether the amendment and exemption standards were stringent enough, and on whether the backfitting standard gave certifications a reasonable degree of finality. See 53 FR 32067, col. 2.

The comments focus on the standard of amending the certification, one group of comments wanting to make it harder for the "holder" of a certification to get an amendment, and another group wanting to make it easier. Several commenters say that the proposed rule wrongly makes it easier for the designer to amend the certified design than it is for the Commission to backfit the design. To correct this perceived imbalance, UCS, among others, proposes that no amendment be granted unless it constitutes a safety enhancement, and

that any amendment granted be backfitted on all plants built according to the design being amended. OCRE proposes that, at a minimum, no amendment should be granted which would entail a decrease in safety. On the other side, NUMARC proposes virtually the same standard as a maximum: Any amendment which has no safety impact should be granted. DOE in effect argues that the Commission does not have authority to ask for more than OCRE's minimum, because this type of amendment would be proposed for economic, plant efficiency, or other business reasons and the NRC has no expertise or authority in areas involving business judgments. The law firm of Bishop, Cook, Purcell, and Reynolds, representing several utilities, proposes a backfitting standard more stringent than the one in the proposed rule: The Commission should not impose backfits on a design for the sake of compliance with applicable regulations unless the lack of compliance has an adverse impact on safety. Going even further in the same vein, the U.S. Chamber of Commerce proposes that even where the lack of compliance has an adverse impact on safety, the backfit should have to pass muster under a cross-benefit analysis.

The final rule places a designer on the same footing as the Commission or any other interested member of the public. No matter who proposes it, a change will not be made to a design certification while it is in effect unless the change is necessary to bring the certification into compliance with Commission regulations applicable and in effect when the certification was issued, or to assure adequate protection of public health and safety. See § 52.63(a)(1). Thus, the final rule cannot be said to make it easier for a designer to amend a certification than for the Commission to backfit the design. But more important, the final rule thus provides greater assurance that standardization and the concomitant safety benefits will be preserved.

The Commission is not adopting Bishop, Cook's suggestion that compliance be required only when non-compliance would have an adverse impact on safety. Licensees seeking relief from a design certification, who believe that non-compliance would have no adverse impact on safety, should request an exemption under 10 CFR 50.12. Neither is the Commission adopting the suggestion of the U.S. Chamber of Commerce that cost-benefit analysis be used to determine whether to impose backfits on designs to bring them into compliance with applicable

regulations. The Atomic Energy Act allows the Commission to consider costs only in deciding whether to establish or whether to enforce through backfitting safety requirements that are not necessary to provide adequate protection. See *UCS v. NRC*, 824 F.2d 108, 120 (1987).

The final rule, like the proposed rule, permits applicants for combined licenses issued under the rule, and licensees of a plant built according to a certified design, to request an exemption under 10 CFR 50.12 from a rule certifying a design. Among the comments on the appropriateness of using § 50.12 in the standardization context were NIRS' comment that § 50.12 permitted exemptions at a "whim" and DOE's suggestion that no exemptions should be granted at all. Out of respect for the unforeseen, the Commission has decided to adhere to § 50.12, but the final rule does require that, before an exemption can be granted, the effect which the exemption might have on standardization and its safety benefits must be considered.

As a further guard against a loss of standardization, the final rule, again like the proposed rule, also prohibits a licensee of a plant built according to a certified design from making any change to any part of the plant which is described in the certification unless the licensee has been granted an exemption under 10 CFR 50.12 from the rule certifying the design. Because the certification is a rule, 10 CFR 50.12, not 50.59, is the standard for determining whether the licensee may make changes to the certified portion of the design of the plant without prior approval from the NRC. NUMARC says that, given the practicalities of construction and the limited resources of the NRC staff, licensees need the flexibility afforded by § 50.59. However, the Commission believes that the certifications themselves and § 50.12 will provide the necessary flexibility with respect to the certified portion of the plant (or at least as much flexibility as is consistent with achieving the safety benefits of standardization), while § 50.59 will continue to apply to the uncertified portion. How much flexibility § 50.12 will provide depends in large part on how much detail is present in a design certification, and just how much is present will be an issue which will have to be resolved in each certification rulemaking. The Commission does expect, however, that there will be less detail in a certification than in an application for certification, and that a rule certifying a design is likely to encompass roughly the same design

features that § 50.59 prohibits changing without prior NRC approval. Moreover, the level of design detail in certifications should afford licensees an opportunity to take advantage of improvements in equipment.

The comments on the proposed rule raise two other important finality issues, both connected with backfitting. The first bears on the criteria for renewal of a design certification. The proposed rule provided that the Commission would grant a request for renewal of a design certification if the design complied with regulations in effect at renewal and any more stringent safety requirements which would bring about a substantial increase in safety at a cost justified by the increase (strictly speaking, the backfit rule would not apply at renewal, but the proposal nonetheless incorporated the backfit rule's cost-benefit standards). See § 52.59(a), 53 FR 32074, col. 3. Bishop, Cook, among others, proposes that the standard for renewal be compliance with regulations in effect not at renewal but rather at the time the certification was originally issued, together with any other more stringent requirements which are justified under the backfit rule. The proposed rule's criteria were in fact equivalent to Bishop, Cook's in their impact on a given design certification, but they differed in their impact on the timing of some backfit analyses, the proposed rule providing that some would be done in rulemakings while the given certification was in effect. However, the final rule adopts Bishop, Cook's proposal because it more clearly says that imposition of more stringent requirements on a design during a renewal proceeding will be governed by backfit standards.

The second of the other important finality issues raised by the comments concerns the finality of 10 CFR Part 52, Appendix O (formerly in Part 50) final design approvals (FDAs) already in effect on the effective date of this rule. Section 52.47(a)(2) of the proposed rule stated that holders of FDAs in effect on the effective date of the rule might have to submit more information to the staff in connection with the review for certification. NUMARC proposes adding a "grandfather" clause which would prohibit the Commission from imposing, during the certification proceeding, any change on that part of the design which is covered by an already effective FDA unless the change meets the criteria of the backfit rule.

Adoption of NUMARC's proposal would not only entail a significant change in the force of an FDA, it would also extend the range of application of

the backfit rule. Under existing NRC regulations, an FDA binds the staff in a licensing proceeding but not in a certification proceeding; and even in a licensing proceeding, the staff may, on the grounds of significant new information or other good cause, reconsider an earlier determination. See 10 CFR Part 52, Appendix O, paragraph 5. Moreover, the FDA does not bind the Commission or the Commission's adjudicatory panels. *Id.* at paragraph 6. The backfit rule applies to any proposal which would require the holder of an FDA to meet a new standard in order to remain in possession of the FDA, see 10 CFR 50.109(a)(1), but the backfit rule does not change the force an FDA has in a licensing proceeding or certification proceeding.

NUMARC's proposal, however, would bind both the staff and the Commission in a certification proceeding and would add a cost-benefit test to the tests which must be met before a determination made in an FDA could be reconsidered. NUMARC's proposal thus would effectively amend both the backfit rule and the cited paragraphs of Appendix O: It would, in effect, turn any existing FDA into a partial certification. Here the Commission would rather adhere to the finality provisions in the existing regulations, including Appendix O and the backfit rule. The Commission believes that, in this situation, these provisions adequately balance the need for finality with the need for flexibility to deal with unforeseen safety advances or risks.

## 2. Early Site Permits

What design certification is to the early resolution of design issues, the early site permit is to the early resolution of site-related issues. Both the certification and the permit make it possible to resolve important licensing issues before a construction permit proceeding. They in effect make possible the banking of designs and sites, thereby making the licensing of a given plant more efficient. However, some commenters question whether the Commission should issue early site permits. The Attorney General of New York, for instance, sees no need for early site permits and questions whether there could be grounds adequate to support approval of a site for twenty years, the term of early site permits under the proposed rule (the final rule provides that permits will have terms of between ten and twenty years). He points out that under the NRC's current regulations, NRC early decisions on site suitability issues raised in connection with a construction permit generally remain effective for only five years. See

10 CFR 2.606 and 10 CFR Part 52, Appendix Q (formerly in Part 50), paragraph 5. The Connecticut Siting Council strongly suggests that the State of Connecticut would be unable to participate in an NRC hearing on an application for an early site permit unless the application proposed a "specific" nuclear power plant. Finally, one commenter is concerned that land approved under an early site permit might never be used for a nuclear power plant, and thus development of the land for a non-nuclear use would have been needlessly delayed.

The Commission believes that early site permits can usefully serve as vehicles for resolving most site issues before large commitments of resources are made. Moreover, the Commission believes that a term of ten to twenty years for early site permits will make early site permits more useful for early resolution of site issues than would the five-year term in 10 CFR 2.606 and 10 CFR Part 52, App. Q, because the longer term will require less frequent reassessments of issues than would the shorter term. The five-year term is a function not of the reliability of the information available to make the decisions, but rather of the fact that the decisions made under those provisions may only resolve isolated site issues<sup>3</sup> and anticipate site utilization in the very near term. The Commission is confident that there will be information adequate to support site approvals lasting up to 20 years. After all, the Commission licenses plants and their sites for operation for periods of up to twice twenty years. Where adequate information is not available, early site permits will not be issued.

The Commission is also confident that enough information on reactor design will be available in an early site permit proceeding to permit sound judgments about environmental impacts and thus to enable state and local agencies such as the Connecticut Siting Council to participate effectively in an early site permit proceeding. The Council says that for it to meaningfully participate in a decision on an application for an early site permit, the application would have to contain "projected emission, discharges, site impacts, safety factors, and exact operational parameters \* \* \* proposed for a site". It is just such information which both the proposed rule and the final rule would require of

<sup>3</sup> Thus, the Commission declines to follow the suggestion of the engineering firm of Stone & Webster that partial early site permits be issued. It is not likely that resolutions of isolated site issues could have the degree of finality which a permit lasting ten to twenty years must have.

applicants for early site permits. See § 52.17(a).

Last, although the Commission acknowledges the possibility that non-nuclear development of a site would be postponed when a site is reserved for a nuclear plant and then a plant never built there, the Commission believes that such a possibility does not loom very large. Persons are not likely to go to the expense of applying for an early site permit unless there is a good prospect that the site will be used for a nuclear power plant. Moreover, it may be that many of the sites for which early site permits might be sought are already set aside for use by utilities; thus, even though non-nuclear development of the site might be postponed, non-utility uses of the site would not be. Last, even during the period in which an early site permit is in effect, non-nuclear uses of the site are not prohibited altogether. See § 52.35.

The comments on the proposed rule raise two other important issues concerning the rule's provisions on early site permits. The first issue concerns the division of authority between the Federal government and local governments over the siting of nuclear power facilities. The New York State Energy Office is concerned that the proposed rule leaves the impression that only an early site permit from the NRC is necessary to set aside land for a nuclear power plant. To the contrary, the rule does not, indeed, could not, change the division of authority between the Federal government and the states over the siting of nuclear plants. An early site permit constitutes approval of a site only under the Federal statutes and regulations administered by the Commission, not under any other applicable laws.

The last important issue raised by the comments on early site permits concerns the proposed rule's requirement that the application contain a plan for redress of the site in the event that the site preparation work and similar work and similar work allowed by 10 CFR 50.10(e)(1) is performed and the site permit expires before it is referenced in an application for a construction permit or combined license issued under the rule. The proposed rule required that the plan provide reasonable assurance that redress carried out under the plan would achieve a "self-maintaining, environmentally stable, and aesthetically acceptable site" which conformed to local zoning laws. The only important difference between the proposed and final rules on this subject is that the final rule requires such a plan only of applicants who wish to perform



the activities allowed by 10 CFR 50.10(e)(1). NUMARC says that this requirement is "inherently unworkable" and would involve the Commission in matching redress against a variety of local zoning laws.

To the contrary, the rule's provisions on site redress, including the provision on zoning, are modeled on the redress requirements imposed on the Clinch River Breeder Reactor project. See In the Matter of the U.S. Department of Energy, et al. (Clinch River Breeder Reactor Plant), LBP-85-7, 21 NRC 507 (1985). Moreover, the Commission has long required that applicants' environmental reports discuss compliance with local laws, including zoning laws. See 10 CFR 51.45(d). Apparently, NUMARC is not opposed to redress per se, for NUMARC's proposed revision of § 52.25 of the proposed rule speaks of the possibility that redress of adverse environmental impacts might be necessary. The Commission is only requiring that such redress follow the precedent established at Clinch River and proceed according to a plan incorporated in the early site permit. Containing a redress plan, the permit itself will constitute assurance that, if site preparation activities are carried out but the site never used for a nuclear power plant, the site will not be left in an unacceptable condition.

### 3. Combined Licenses

#### a. The Commission's Authority to Issue Combined Licenses

There are two important questions in connection with the proposed rule's provisions on combined construction permits and operating licenses with conditions. The first is whether the Commission has the authority to issue combined licenses. The second is whether, in cases where all design issues are resolved before construction begins, there should be a hearing after construction is complete, and if so, what issues should be considered at the hearing.

Comments on whether the Commission has the authority to issue combined licenses tend to mirror the commenters' views on what kind of hearing should be held after construction is complete. In other words, the discussion of this issue tends to be result-oriented. Thus, many who believe that there should be a hearing after construction, and that it should be as full a hearing as operating license hearings often are, argue that the Commission has no authority to issue combined licenses. They claim that section 185 of the Atomic Energy Act mandates a two-step licensing process

(for the text of section 185, see below). They often cite *Power Reactor Development Co. v. International Union of Electrical Workers*, 387 U.S. 396 (1961) as support for this interpretation of section 185. To these arguments, those who believe that there should be no hearing, or else only a highly restricted hearing, after construction is complete reply that section 161h of the Atomic Energy Act gives the Commission authority to combine a construction permit and an operating license in a single license (for the text of section 161h, see below).

A closer look at section 161h and 185 shows that section 161h clearly gives the Commission authority to combine a construction permit and operating license in a single license and that section 185 is not inconsistent with section 161h. Section 161h says, in pertinent part, that the Commission has the authority to "consider in a single application one or more of the activities for which a license is required by this Act [and] combine in a single license one or more of such activities . . ." 42 U.S.C. 2201. The plain language of this section clearly applies to the combining of construction permits and operating licenses, for both construction and operation of nuclear power facilities are "activities for which a license is required by this Act", namely by sections 101 and 185 of the Act, see 42 U.S.C. 2231 and 2235, and section 103a of the Act makes any license to operate a commercial nuclear power facility "subject to such conditions as the Commission may by rule or regulation establish . . ." See 42 U.S.C. 2233. Had Congress intended that construction permits and operating licenses for commercial nuclear power plants be excluded from the language of section 161h, surely Congress would have said so right in that section, for the plain language of that section invites their inclusion, and they are the most important licenses issued under the Act.

Section 185 is not to the contrary. Section 185 says, in pertinent part,

**CONSTRUCTION PERMITS.**—All applicants for licenses to construct . . . utilization facilities shall . . . be initially granted a construction permit. . . . Upon the completion of the construction . . . of the facility, upon the filing of any additional information needed to bring the original application up to date, and upon finding that the facility authorized has been constructed and will operate in conformity with the application as amended and in conformity with the provisions of this Act and of the rules and regulations of the Commission, and in the absence of any good cause being shown to the Commission why the granting of a license would not be in accordance with the provisions of this Act, the Commission

shall thereupon issue a license to the applicant. . . .

42 U.S.C. 2235. To be sure, the section speaks in terms of a construction permit's being issued first, and then a license (presumably an operating license). However, the contrast between the two licenses is not fundamental to the section. The substance of the section is clearly indicated by the title of the section and by the list of findings the Commission must make. The section may be paraphrased thus: A construction permit is not a grant of authority to operate once construction is complete; before operation begins, the original application must be brought up to date, and the Commission must make certain affirmative findings. Thus the critical matter is not the separation of the two licenses, but the need for specific findings before operation. With this substance, both the proposed rule and the final rule are entirely in accord (the pertinent provisions of the final rule will be described in more detail below).

Moreover, in differentiating between a "construction permit" and a later "license", section 185 is not taking exception to section 161h. Section 185 does not say, for instance, "Notwithstanding anything in section 161h to the contrary, applicants shall be granted initially only a construction permit." By speaking of a separate issuance of a license after completion of construction, section 185 simply conforms itself to the simplest case, in which the licenses are in their elementary, uncombined states, and avoids having to make an already long section longer in order to acknowledge the case which section 161h makes possible. Moreover, section 185 acknowledges section 161h implicitly when it speaks not of a separate application for an operating license but simply of an updating of the original application. Therefore, neither the proposed rule nor the final rule can be faulted for not providing for a separate issuance of an operating license.

This interpretation of section 185 is confirmed by the legislative history of the section. In 1954, when Congress was considering proposed amendments to the Atomic Energy Act of 1946, representatives of the industry complained that the proposed section 185 required that construction of a facility be completed "under a mere construction permit, without any assurance at that stage that there will be issued any license to . . . operate it after it has met all the specifications of the construction permit." Atomic Energy Act of 1954: Hearings on S. 3323 and H.R. 8862 before the Joint Committee on

Atomic Energy, 83rd Congress, 2d Session, 113 (May 10, 1954). These representatives proposed instead that power facility applicants should be able to obtain a single license covering all aspects of their activities—construction, possession of fuel, and operation—and that the license should contain the conditions the applicant would have to meet before operation of a constructed facility could begin. *Id.* at 113 and 118. On this proposal, the following colloquy took place:

Representative HINSHAW. That seems to me to be reasonable, that you should put all the conditions into 1 license that can be put into 1 license. That would be fair enough.

Chairman COLE. Would you mind my interruption? Why cannot that be done under the terms of the bill as it is now?

Mr. McQUILLEN [representing Detroit Edison]. I think it undoubtedly would be so operated.

Chairman COLE. Of course it would.

*Id.* at 119. Chairman Cole said this even though neither of the draft bills before the Committee contained the text of what is now section 161h. Twelve days later, as if to put the matter beyond all doubt, the Committee incorporated the present text of section 161h into both bills. The final rule provides for just such a single license, with conditions, as was discussed in this colloquy.

*Power Reactor Development Co. v. Electrical Workers*, 367 U.S. 396 (1961), is not to the contrary. The issue in that case was not whether the Commission had the authority to combine a construction permit with an operating license with conditions, but whether the Commission could postpone the ultimate safety findings until construction was complete. The Court ruled that the Commission could, and found support for its conclusion in section 185, which showed, the Court said, that "Congress contemplated a step-by-step procedure." 367 U.S. at 405. But the Court did not say, "section 185 mandates a separate issuance of an operating license, notwithstanding section 161h." The interpretation of section 161h of the Act was not at issue.

#### b. Hearings After Construction Is Complete

The first issue concerning hearings after completion of construction under a combined license is whether there should be such hearings at all. Most commenters, whatever their affiliation, believe that there should be the opportunity for such hearings. They disagree only over how limited the hearings should be. DOE argues that there should be no such hearings at all. As the principal support for its argument, DOE cites the section of the

Administrative Procedure Act (APA) which says, in effect, that adjudication is not required in cases in which the agency decision rests "solely on inspections, tests, or elections". See 5 U.S.C. 554(a)(3). Under Part 52's provisions of combined licenses, a combined license will contain the tests, inspection, and analyses, and acceptance criteria therefor, which are necessary and sufficient to provide reasonable assurance that the facility has been constructed and will operate in conformity with the license and the Act. See § 52.97. DOE's argument amounts to the claim that the kind of tests and inspections spoken of in Part 52 is the same as the kind of tests and inspections spoken of in the APA.

The Commission agrees that findings which rest solely on the results of tests and inspections should not be adjudicated, and the final rule so provides. See § 52.103. However, not every finding the Commission must make before operation begins under a combined license will necessarily always be based on wholly self-implementing acceptance criteria and therefore encompassed within the APA exception. The Commission does not believe that it is prudent to decide now, before the Commission has even once gone through the process of judging whether a plant built under a combined license is ready to operate, that every finding the Commission will have to make at that point will be cut-and-dried—proceeding according to highly detailed "objective criteria" entailing little judgment and discretion in their application, and not involving questions of "credibility, conflicts, and sufficiency", questions which the Court in *UCS v. NRC*, 735 F.2d 1437 (D.C. Cir. 1984), held were marks of issues which should be litigated at least under the facts of that case. Indeed, trying to assure that the tests, inspections, and related acceptance criteria in the combined license are wholly self-implementing may well only succeed in introducing inordinate delay into the hearing on the application for a combined license.

Thus, the question becomes whether the rule should provide an opportunity for a post-construction hearing on the issues which are not excepted from adjudication by the APA. Whether the Commission could or should go further under its governing statutes we leave to future consideration and experience; this rule adopts an approach within the bounds of our legal authority which sets reasonable limits on any post-construction hearing. In this regard, every commenter who believes there should be such an opportunity for

hearing also believes that an issue in the hearing should be whether construction has been completed in accord with the terms of the combined license, and the final rule so provides. Also, under section 185 of the Atomic Energy Act, the Commission must find, prior to facility operation, that the facility has been constructed and will operate in conformity with the application and the rules and regulations of the Commission. This statutory finding, in the context of Subpart C of this rule, translates into two separate but related regulatory findings: that compliance with the acceptance criteria in the combined license will provide reasonable assurance that the facility has been constructed and will operate in accordance with the Commission's requirements, and that the acceptance criteria have in fact been satisfied. The former finding will be made prior to issuance of the combined license, and will necessarily be the subject of any combined license hearing under section 189a of the Act. The latter finding cannot by its nature be made until later, after construction is substantially complete, and therefore cannot by its nature be the subject of any hearing prior to issuance of the combined license. Thus, to the extent that an opportunity for hearing should be afforded prior to operation, it should be confined to the single issue that cannot have been litigated earlier—whether the acceptance criteria are satisfied. No commenter has offered any legal argument to the contrary.<sup>4</sup>

Commenters disagree greatly on whether any other issue should be considered in a hearing. The proposed rule provided that intervenors could contend that significant new information showed that some modification to the site or the design was necessary to assure adequate protection. To this, NUMARC responds that "no one could seriously consider ordering a new plant with the licensing uncertainties it would face." NUMARC proposes a complete rewrite of § 52.103, elements of which are discussed below. Several industry commenters point to the "added burdens" that applicants would be assuming under the proposed rule as grounds for severely limiting the issues for hearing. Rockwell International, for instance, claims that, with the hearing

<sup>4</sup> Section 185 also says that, prior to operation, there must be an "absence of good cause being shown to the Commission why the granting of the license would not be in accordance with the provisions of the Act." We think that this implicit opportunity to show "good cause" is satisfied by affording an opportunity for hearing on all findings that will be made prior to facility operation.

under § 52.103, there will be four public hearings for each plant.

Public interest groups also take a dim view of the proposed rule's limitations on the hearing, though their reasons are not the industry's. UCS says that a licensing proceeding without uncertainty is a sham. OCRE goes further and asserts that the uncertainty should be distributed equally: "In a perfectly fair proceeding, [the] chance [of winning] would be 50%." The Maryland Nuclear Safety Coalition counts only two hearings for each plant. NIRS says that many problems with the current generation of reactors were cured under the full two-step licensing process.

This latter group of commenters appears to be opposed to any limitation on the post-construction hearing, for not one of them proposes a concrete alternative to the proposed rule's provisions on the hearing. UCS does say that the hearing should encompass "all issues that are material to the NRC's approval of an operating license for the plant", but that statement is either so general as to be just another way to put the question of what issues should be encompassed, or it is the claim that, when it comes time to determine whether the plant has been built in conformity with the terms of the combined license, all the operating license issues resolved before construction should be treated as if they had never been resolved. Many commenters do in fact seem to be making such a claim, for they contend against any limits on the post-construction hearing at the same time that they support the idea that design issues should be resolved before construction.

There have to be substantial limits on the issues that can be raised after construction. A licensing proceeding without any uncertainty in result may be a sham, but the bulk of the uncertainty should be addressed and resolved prior to, not after, construction. Part 52 does not remove uncertainty, it simply reallocates it to the beginning of the licensing process. The alternative apparently offered by opponents of limits on the post-construction hearing is, in effect, to double the uncertainty by considering every design issue twice.<sup>5</sup>

<sup>5</sup> Even according to OCRE's notion of a "perfectly fair" proceeding, in which perfect fairness could be achieved by replacing judges with tosses of coins, design issues should not be resolved twice. If they were, intervenors would have two 50% chances to win—that is, to prevent operation of the plant—on design issues. But two even chances are equivalent to a 75% chance overall (e.g., the chance of coming up heads once in two tosses of a coin is 3 out of 4), and a proceeding in which one party has a 75% chance of winning is not, according to OCRE, "perfectly fair".

To the extent that these commenters offer any practical arguments in favor of this approach, they are not persuasive. Rockwell International may engage in some double-counting when it asserts that there are four public hearings for each plant, but when the Maryland Nuclear Safety Coalition says that the public can debate licensing issues only in an early site permit hearing and after construction, and therefore needs another hearing on design issues, it inexplicably simply ignores the mandatory public hearing on the application for the combined license and the opportunity for a public hearing on an application for a design certification. Moreover, contrary to NIRS, shortcomings in certain plants were not discovered because the licensing proceedings consisted of two steps but rather because design issues had to be resolved and construction made to conform to design before operation began. Part 52 provides for no less.

The final rule adopts a straightforward approach to limiting the issues in any post-construction hearing on a combined license. As a matter of logic, every conceivable contention which could be raised at that stage would necessarily take one of two general forms. It would allege either that construction had not been completed—and the plant would not operate—in conformity with the terms of the combined license, or that those terms were themselves not in conformity with the Atomic Energy Act and pertinent Commission requirements. The final rule makes issues of conformity with the terms of the combined license part of any post-construction hearing, unless those issues are excepted from adjudication by the APA exception for findings which are based solely on the results of tests and inspections. The final rule does not attempt to say in advance what issues might fall under that exception. The comments are nearly unanimous in the opinion that issues of conformity with the combined license are properly encompassed in any post-construction hearing. Moreover, this limited opportunity for hearing is consistent with the Commission's belief that, even if section 185 did not speak at all to the need for a conformity finding, the Commission itself would need to make such a finding prior to operation in order to conclude, in the language of section 103, that operation is not inimical to the health and safety of the public. The final rule also provides that issues of whether the terms of the combined license are themselves inadequate are to be brought before the Commission under the provisions of 10

CFR 2.206. This approach to issues concerning the inadequacy of the combined license is well-founded in the discretion afforded the Commission under section 185 of the Act to determine what constitutes "good cause" for not permitting operation, and in the analogy which this approach has with the way construction permits are treated in operating license proceedings. Contentions alleging inadequacies in a construction permit are not now admissible in an operating license proceeding. Similarly, under the final rule, contentions alleging inadequacies in a combined license are not admissible in a post-construction hearing. Moreover, as we noted, this approach fully satisfies applicable law.

### III. Other Issues

These are taken up section by section. Not discussed are most of the many changes made to the proposed rule for the sake of clarity, brevity, consistency, specificity, and the like. Worth noting, however, is that this Federal Register notice moves Appendices M, N, O, and Q of Part 50 to Part 52, so that, except for Subpart F of 10 CFR Part 2, all of the Commission's regulations on standardization and early resolution of licensing issues will be in one part of 10 CFR Chapter I. Readers are reminded that a comparative text showing all deletions from, and additions to, the proposed rule is available in the NRC's public document room.

#### 1. Early Site Permits

At the suggestion of NUMARC and others, § 52.17 now gives applicants for early site permits the option of submitting partial or complete emergency plans, for final approval. Also, the section requires a redress plan only of applicants who wish to be able to perform the site preparation work and similar work allowed under 10 CFR 50.10(e)(1). Last, incorporating suggestions by UCS and others, the section says what factors should be considered in determining whether the area surrounding the site is "amenable" to emergency planning. To avoid suggesting that the Commission is adopting new emergency planning standards, § 52.17 abandons the proposed language of "amenability to emergency planning" in favor of language drawn from existing regulations on emergency planning.

Section 52.18 now makes clear that need for power is not a consideration at the early site permit stage.

In a number of places—§§ 52.23, 52.53, 52.87, and portions of other sections—the rule provides explicitly for ACRS

review of issues to make clear that, even though the Atomic Energy Act does not, in terms, give the ACRS a role in the granting of early site permits, design certifications, or combined licenses, the ACRS is to have the same role with respect to these devices that it does with respect to construction permits, operating licenses, and the like. Wherever the ACRS is spoken of in Part 52, the intention is that the ACRS review the pertinent issues according to the standards specified therein.

As in the proposed rule, § 52.25 provides that the holder of an early site permit which contains a site redress plan, or the applicant for a construction permit or combined license which references such an early site permit, may perform the activities at the site allowed by 10 CFR 50.10(e)(1) without first obtaining the separate authorization required by § 50.10. The New York State Energy Office appears to take this to mean that the holder of the permit may perform the work without NRC approval. To the contrary, the early site permit which contains a redress plan is itself NRC approval. The law firm of LeBoeuf, Lamb, Leiby & MacRae, representing several utilities, argues that recent case law, especially *NRDC v. EPA*, 859 F.2d 156 (D.C. Cir. 1988), calls into question the Commission's limitations on non-safety related construction before issuance of a permit. LeBoeuf, Lamb concludes that § 52.25 and related portions of Part 52 should be deleted and the limitations in § 50.10 reviewed in the light of the case law. The Office of the General Counsel is undertaking a review and will recommend to the Commission if any changes to these sections are warranted. In the meantime, the Commission has decided to keep Part 52's provisions on site work intact and consistent with the related provisions in Part 50.

Section 52.27 now contains some of the material which appeared in § 52.29 of the proposed rule. OCRE objects to the provision in § 52.27 which treats an early site permit as valid beyond the date of expiration in proceedings based on applications which have referenced the early site permit. OCRE argues that this provision allows clever applicants to avoid new site requirements by referencing an early site permit just before it expires. At bottom, this is really an argument that early site permits should have shorter durations. The Commission is confident that the agency will be able to make site judgments which will retain their validity for the durations provided for in the final rule. However, the final rule does provide that the duration of an

original permit can be fixed at a term shorter than twenty years. See § 52.27(a).

In its comment on § 52.31, LeBoeuf, Lamb suggests that at renewal, the burden should be on the Commission to show why an early site permit should not be renewed, but that a given permit should be renewed only once, and for not more than ten years. The final rule retains the provisions of the proposed rule, because they provide more flexibility to both the Commission and holders of permits.

Much of the discussion in Sections II.1.f. and II.3.b. above on the finality of design certifications and hearings after construction is relevant to the provisions in § 52.39 on the finality of early site permits. Section 52.39 now states that, except in certain limited circumstances, issues resolved in a proceeding on an early site permit shall be treated as resolved in any later proceeding on an application which references the early site permit. One of the circumstances involves petitions under 10 CFR 2.206 that the terms of the early site permit should be modified; § 52.39(a)(2)(iii) assumes that the Commission shall resolve the issues raised by the petition in accordance with the standard in paragraph (a)(1) of the same section.

## 2. Design Certifications

In the proposed rule, § 52.45 contained material on scope of design and testing of prototypes. This material now appears, in modified form, in § 52.47. The phrase "essentially complete nuclear power plant," which is used in 52.45, is defined as a design which includes all structures, systems, and components which can affect safe operation of the plant except for site-specific elements such as the service water intake structure and the ultimate heat sink. Therefore, those portions of the design that are either site specific (such as the service water intake structure or the ultimate heat sink) or include structures, systems and components which do not affect the safe operation of the facility (such as warehouses and sewage treatment facilities) may be excluded from the scope of design. In addition, an essentially complete design is a design that has been finalized to the point that procurement specifications and construction and installation specifications can be completed and made available for audit if it is determined that they are required for Commission review in accordance with the requirements of § 52.47(a). Procurement specifications would have to identify the equipment and material

performance requirements and include the necessary codes, standards, and other acceptance and performance criteria to which the equipment and materials will be fabricated and tested. Construction and installation specifications would have to identify the criteria and methods by which systems, structures and components are erected or installed in the facility and include acceptance, performance, inspection, and testing requirements and criteria.

In § 52.47, the provisions on testing of prototypes have been reworded to avoid suggesting a presumption that designs of the affected class could be certified only after successful testing of a prototype. One individual and the U.S. Metric Association urged that the rule require that technical information in applications be in metric units. The NRC staff believes there is much merit in this proposal, but because the public has not had an opportunity to comment on it, it is not incorporated in the final rule. The NRC staff is considering proposing an amendment to Part 52 on the subject for Commission review.

On §§ 52.53, 52.55, and 52.63, see the remarks in Section III.1. above on §§ 52.23, 52.27, and 52.39, respectively. Also, § 52.55 of the proposed rule set ten years as the duration of certifications. The final rule extends the duration to fifteen years, to permit more operating experience with a given design to accumulate before the certification comes up for renewal or ceases to be available to applicants for combined licenses. In addition, § 52.63(a)(3) now limits Commission-ordered modifications of design-certified elements of a specific plant to situations in which the modification is necessary for adequate protection and special circumstances as defined in 10 CFR 50.12(a) are present. This double requirement does not mean that if a specific plant presents an undue risk but no special circumstances are present the plant will not be modified. Rather, the modification will take place through modification of the certified design itself, as provided for elsewhere in the same section.

Theoretically, it would be possible for an applicant whose application referenced a certified design to select designer(s) other than the designer(s) which had achieved certification of the standard design. Section 52.63(c) makes clear that such an applicant might be required to provide information which is normally contained in procurement specifications and construction and installation specifications and which is consistent with the certified design and available for audit by the NRC staff.

Also, § 52.73 requires a demonstration that the new designer is qualified to supply the design. Last, the new designer would have to pay a portion of the cost of the review of the application for certification. See 10 CFR 170.12(d) and (e), as amended in this document. It is expected, as a practical matter, that applicants referencing a certified design would select the designer which had achieved certification of the standard design.

### 3. Combined Licenses

Section 52.73 now provides that the entity that obtained certification for a design must be the entity that supplies the design to an applicant for a combined license referencing the design, unless it is demonstrated that another entity is qualified to supply the design. This provision was added because an entity supplying the design should be qualified to do so; the entity which obtained the certification will have demonstrated its qualifications by obtaining the certification.

The last sentence of § 52.75 of the proposed rule now appears in § 52.79 of the final rule.

DOE proposes redrafting § 52.79 to require that no application for a combined license be considered unless it references a certified design. The final rule does not contain this restriction because there may be circumstances in which a combined license would properly utilize a non-standard design, and because such a restriction would mean, among other things, that every prototype would have to be licensed in a fully two-step process. In connection with § 52.79's provisions on submission of complete emergency plans, NIRS somehow concludes that Subpart C's provisions on emergency planning "extend", to the detriment of state and local governments, the "realism" doctrine set forth in 10 CFR 50.47 and recently affirmed in *Commonwealth of Massachusetts v. NRC*, 856 F.2d 378 (1st Cir. 1988). Apparently, NIRS believes that to settle emergency planning issues before construction is to "extend" the doctrine. To the contrary, although Subpart C assumes the "realism" doctrine, as it is entitled to do, it does not extend it. The doctrine remains precisely what it is in § 50.47. Moreover, the Commission's aim in drafting Subpart C's provisions on emergency planning has been to follow to the maximum feasible extent the National Governors' Association's Recommendation, at its 79th annual meeting, in 1987, that "... emergency plans should be approved by the NRC before it issues the construction permit for any new nuclear power plant."

Section 52.83 now provides that the initial term of a combined license shall not exceed forty years from the date on which the Commission makes the findings required by § 52.103(c).

On § 52.87, see the discussion in Section III.1. on § 52.23.

NUMARC proposed removing from § 52.89 any reference to design certifications, on the grounds that environmental impact statements should not be prepared in connection with certification rulemakings. The references in this section to design certifications are not meant to imply that environmental impact statements must be prepared in connection with design certifications.

Section 52.99 has been reworded to reflect more clearly that the inspection carried out during construction under a combined license will be based on the tests, inspections, analyses, and related acceptance criteria proposed by the applicant, approved by the staff, and incorporated in the combined license. Several industry commenters proposed adding to this section a requirement that the staff prepare a review schedule in connection with each combined license. However, such a requirement would be largely duplicative of a long-standing staff practice under which the staff prepares an annual inspection plan which allocates resources according to the priorities among all pending inspection tasks. The annual plan should assure the timeliness of staff review of construction under a combined license. Section 52.99 envisions a "sign-as-you-go" process in which the staff signs off on inspection units and notice of the staff's sign-off is published in the *Federal Register*. UCS says that it is "totally inappropriate" for the Commission, while construction is going on, to sign off on inspections and thus put matters beyond dispute which might otherwise be raised after construction is complete. However, UCS has misunderstood the Commission's role in the inspection process. While construction is going on, only the staff signs off on inspections. The Commission makes no findings with respect to construction until construction is complete. Section 52.99 has been modified to make this point more clearly.

UCS and other commenters object to the section in § 52.103 of the proposed rule which provided interested persons thirty days after notice of proposed authorization of operation in which to request a hearing on the specified grounds. Yet the thirty-day requirement was drawn from section 189a of the Act. Neither the Act nor Part 52 imagines

that it would be acceptable for interested persons to wait until notice is received before they examine the record of construction. These time periods are like the sixty-day limit in the Hobbs Act, 28 U.S.C. 2344, for petitions for direct judicial review of an agency rule. These limits assume that the petitioner is familiar with the fundamentals of the record before the limited period begins. The limited period is then provided for consideration of options, consultation with other interested persons, and drafting of pleadings. In any event, the final rule provides sixty days, in consideration of the pleading standard § 52.103 imposes on petitioners.

Moreover, as noted above, to assist interested persons in becoming familiar with the construction record, § 52.99 now provides that notice of staff approvals of construction will be published periodically in the *Federal Register*. Any hearing held under § 52.103(b)(2)(1) will use informal procedures to the maximum extent practicable and permissible under law. In particular, the Commission intends to make use of the provisions in 5 U.S.C. 554, 556, and 557 which are applicable to determining applications for initial licenses. Under § 52.103(b)(2)(ii), the NRC staff will review the § 2.206 petition and make appropriate recommendations to the Commission concerning the petition. The Commission itself will issue a decision granting or denying the petition in whole or in part.

Finally, Urenco, Inc., is concerned that the last subsection of § 52.103 not be taken to suggest that the Commission would have to make separate findings for each of the numerous "modules" of a gaseous diffusion facility. The issue of how the modules of a gaseous diffusion facility should be licensed is beyond the scope of this rulemaking; § 52.103 therefore cannot suggest that the Commission would have to make separate findings for each of the modules of such a facility.

### IV. Replicate Plant Concept

In the notice of proposed rulemaking, the Commission published a revised policy statement on replication of plants and invited comment on the revised policy. See 53 FR 32067, col. 3, to 32068, col. 1. Several industry commenters remarked that the statement's requirement that the application for replication be submitted within five years of the date of issuance of the staff safety evaluation report for the base plant effectively made replication unavailable for the short term. They recommended removing the restriction,

or at least lengthening it. The Commission has decided to retain this restriction. The five-year figure is in fact already a lengthening of the analogous figure in the immediately preceding version of the policy statement. The restriction is a reflection of the Commission's belief that applications which reach back further than a given number years probably ought to be considered as custom-plant applications.

#### Policy on Replication

The replicate plant concept involves an application by a utility for a license to construct or operate one or more nuclear power plants of essentially the same design as one already licensed.

The design of the plant already licensed (termed the base plant design) may be replicated at both the construction permit and operating license stages, and in applications for combined construction permits and operating licenses in a one-step licensing process. Replication of an approved base plant design at the construction permit stage is a prerequisite for its replication at the operating license stage. Although replication of the base plant design at the operating license stage is not mandatory, that is, the operating license application may be submitted as a custom plant application, it is strongly recommended.

An application for a replicate plant must demonstrate compliance with the four licensing requirements for new plant designs as set forth in the Commission's Severe Accident Policy Statement (50 FR 32138; August 8, 1985).

Each application proposing to replicate a previously licensed plant will be subjected to a qualification review to determine the acceptability of the base plant for replication and to define specific matters that must be addressed in the application for the replicate plant. A further requirement for qualification is that the application for a replicate plant must be submitted within five years of the date of issuance of the staff safety evaluation report for the base plant. The qualification review will consider the following information:

- (1) The arrangement made with the developers of the base plant design for its replication;
- (2) The compatibility of the base plant design with the characteristics of the site proposed for the replicate plant;
- (3) A description of any changes to the base plant design, with justification for the changes;
- (4) The status of any matters identified for the base plant design in the safety evaluation report, or

subsequently identified by the ACRS or during the public hearings on the base plant application as requiring later resolution;

(5) Identification of the major contractors, with justification for the acceptability of any that are different than those used by the base plant applicant; and

(6) A discussion of how the replicate plant design will conform to any changes to the Commission's regulations which have become effective since the issuance of the license for the base plant.

#### Environmental Impact—Categorical Exclusion

The final rule amends the procedures currently found in Part 50 and its appendices for the filing and reviewing of applications for construction permits, operating licenses, early site reviews, and standard design approvals. As such they meet the eligibility criteria for the categorical exclusion set forth in 10 CFR 51.22(c)(3). That section applies to "[a]mendments to . . . Part [ ] 50 . . . which relate to (i) procedures for filing and reviewing applications for licenses or construction permits or other forms of permission. . . ." As the Commission explained in promulgating this exclusion, "[a]lthough amendments of this type affect substantive parts of the Commission's regulations, the amendments themselves relate solely to matters of procedure. [They] . . . do not have an effect on the environment." 49 FR 9352, 9371, col. 3 (March 12, 1984) (final environmental protection regulations).<sup>6</sup> Accordingly, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with these final rules.<sup>7</sup>

<sup>6</sup> It makes no substantive difference for the purpose of the categorical exclusion that the amendments are in a new Part 52 rather than in Part 50. The amendments are, in fact, amendments to the Part 50 procedures and could have been placed in that part.

<sup>7</sup> The requirements concerning testing of full-size prototypes of advanced reactors, see § 52.47, may appear not to fit into the category excluded by § 51.22(c)(3), since to comply with the requirements, an applicant may have to build and test a prototype plant, an act clearly with an environmental impact. Nonetheless, § 52.47 is eligible for exclusion under § 51.22(c)(3). Unlike, for instance, the promulgation of a safety rule which applies to operating plants, the formal action of promulgating § 52.47 has only a potential impact on the environment. That impact becomes actual only if a designer chooses to pursue certification of a certain kind of advanced design. Under the present circumstances, no meaningful environmental assessment or impact statement can be made. Cf. 49 FR at 9372, cols. 2-3 (entering into an agreement with a State under Section 274 of the Atomic Energy Act has no immediate or measurable environmental impact and therefore warrants a categorical exclusion). The issuance of the

#### Paperwork Reduction Act Statement

This final rule amends information collection requirements that are subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*). These requirements have been submitted to the Office of Management and Budget (OMB) for any review appropriate under the Act. The effective date of this rule provides for the ninety days required for OMB review of the information collection requirements contained in the rule.

Public reporting burden for this collection of information is estimated to average 22,000 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing the reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Records and Reports Management Branch, Division of Information Support Services, Office of Information and Resources Management, U.S. Nuclear Regulatory Commission, Washington, DC 20555; and to the Paperwork Reduction Project (3150-0000), Office of Management and Budget, Washington, DC 20503.

#### Regulatory Analysis

As presently constituted, the American population of nuclear power reactors consists largely of one-of-a-kind designs. Experience has shown that the highly individualistic character of this population has consumed enormous resources in the processes of design, construction, and safety review. Because, typically, design of a plant was not complete when construction of it began, many safety questions were not resolved until late in the licensing proceeding for that plant. The late resolution of questions introduced great uncertainty into proceedings, because the process of resolution often entailed lengthy safety reviews, construction delays, and backfits. Moreover, the low incidence of duplication among designs has meant that experience gained in the construction and operation of a given plant has often not been useful in the construction and operation of any other plant, and has made the generic

construction permit and operating license for a prototype plant would, of course, be a major federal action with a significant impact on the environment, and would entail the preparation of an environmental impact statement. Cf. *id.*, col. 3 (the States must prepare detailed environmental analyses before they license certain activities).

resolution of continuing safety issues more complicated.

In the face of this experience with a population of unique plants, there have long been fundamentally only three alternatives for Commission action, the last two of them not mutually exclusive: either make no effort to bring about an increased degree of standardization, or propose legislation on standardization, or enact by rulemaking as much of a scheme for promoting standardization as the Commission's current statutory authority permits. The Commission has for some time concluded against the first alternative, having decided that a substantial increase in standardization would enhance the safety and reliability of nuclear power plants and require fewer resources in safety reviews of plants, and that the Commission should have in place provisions for the review of standardized designs and other devices for assuring early resolution of safety questions. The Commission has therefore pursued standardization both by proposing legislation—without success—and by promulgating rules, in particular Appendices M, N, and O to Part 50 (now Part 52) of 10 CFR. Lacking legislation on standardization, the Commission believes that the most suitable alternative for encouraging further standardization is to fill out and expand the Commission's regulatory scheme for standardization and early resolution of safety issues.

Therefore, the Commission now promulgates a new set of regulations, to be placed in a new part in 10 CFR, Part 52. This new part facilitates the early resolution of safety issues by providing for pre-construction-permit approval of power plant sites, Commission certification of standardized designs, and the issuance of licenses which combine permission to construct a plant with permission to operate it once construction of it has been successfully completed. Ideally, a future applicant will reference an approved site and a certified design in an application for a combined license, thus obviating the need for an extensive review of the application and construction. The provision in Part 52 for Commission certification of designs has the additional objective of encouraging the use of standardized designs, thereby adding to the benefits of early resolution the safety benefits of accumulated experience and the economic benefits of economies of scale and transferable experience.

Quantification of the costs and benefits of this rulemaking is probably not possible. Much depends on the extent to which the industry pursues

standardization. Clearly, if the Commission and the industry spend the resources necessary to certify a score of designs and then no applicant references any of them, those resources will have been largely wasted. On the other hand, it is just as clear that if a score of plants uses a single certified design, there will have been a great saving of the resources of the industry, the agency, and the interested public alike. To be added to the uncertainties surrounding the industry's response, there are also uncertainties concerning the costs of the certification process, and the costs of developing the designs themselves, especially the advanced designs, which may require testing of prototypes. However, if the industry finds it in its interest to proceed with the development of nuclear power, there is every reason to expect that the safety and economic benefits of standardization will far outweigh the upfront costs of design and Commission certification: Review time for applications for licenses will be drastically reduced, the public brought into the process before construction, construction times shortened, economies of scale created, reliability of plant performance increased, maintenance made easier, qualified vendor support made easier to maintain, and, most important, safety enhanced.

Thus, the rationale for proceeding with this rulemaking: There is no absolute assurance that certified designs will in fact be used by the utilities; however, it is certain that if the reasonably expected benefits of standardization are to be gained, then the Commission must have the procedural mechanisms in place for review of applications for early site approvals, design certifications, and combined licenses. The most fundamental choice is, of course, the industry's, to proceed or not with standardization, according to its own weighing of costs and benefits. But the Commission must be ready to perform its review responsibilities if the industry chooses standardization.

#### Regulatory Flexibility Act Certification

The final rule will not have a significant impact on a substantial number of small entities. The final rule will reduce the procedural burden on NRC licensees by improving the reactor licensing process. Nuclear power plant licensees do not fall within the definition of small businesses in section 3 of the Small Business Act, 15 U.S.C. 632, the Small Business Size Standards of the Small Business Administration in 13 CFR Part 121, or the Commission's Size Standards published at 50 FR 50241

(Dec. 9, 1985). The impact on intervenors or potential intervenors will be neutral. For the most part, the final rule will affect the timing of hearings rather than the scope of issues to be heard. For example, many site and design issues will be considered earlier, in connection with the issuance of an early site permit or standard design certification, rather than later, in connection with a facility licensing proceeding. Similarly, a combined licensed proceeding will include consideration of many of the issues that would ordinarily be deferred until the operating license proceeding. Thus, the timing rather than the cost of participating in NRC licensing proceedings will be affected. Intervenors may experience some increased preparation costs if they seek to reopen previously decided issues because of the increased showing that will be required. Once a hearing commences, however, an intervenor's costs should be decreased because the issues will be more clearly defined than under existing practice. Therefore, in accordance with the Regulatory Flexibility Act of 1980, 5 U.S.C. 605(b), the Commission hereby certifies that the final rule will not have a significant economic impact on a substantial number of small entities and that, therefore, a regulatory flexibility analysis need not be prepared.

#### Backfit Analysis

This rule does not modify or add to the systems, structures, components, or design of a facility; or the design approval or manufacturing license for a facility; or the procedures or organization required to construct or operate a facility. However, it could be argued that this rule modifies and adds to the procedures or organization required to design a facility, since the rule adds to, or else at least spells out, the requirements for applicants for design certifications. Moreover, the rule, at the very least, substantially modifies the expectations of anyone who had hoped to apply for a design certification under the previously existing section 7 of Appendix O, particularly of any such who presently hold preliminary or final design approvals under that Appendix.

Nonetheless, the Commission believes that the backfit rule does not apply to this rule and, therefore, that no backfit analysis pursuant to 10 CFR 50.109(c) is required for this rule. The backfit rule was not intended to apply to every action which substantially changes settled expectations. Clearly, the backfit rule would not apply to a rule which would impose more stringent requirements on all future applicants for construction permits, even though such a

rule arguably might have an adverse impact on a person who was considering applying for a permit but had not done so yet. In this latter case, the backfit rule protects the construction permit holder, not the prospective applicant, or even the present applicant. The final rule below is of the character of such a hypothetical rule. The final rule arguably imposes more stringent requirements for design certification and thereby may have an adverse impact on some persons. However, the effects of the final rule will be largely prospective, and the rule does not require any present holder of a design approval (no person holds a design certification) to meet new standards in order to remain in possession of such an approval.

#### List of Subjects

##### 10 CFR Part 2

Administrative practice and procedure, Antitrust, Byproduct material, Classified information, Environmental protection, Nuclear Materials, Nuclear power plants and reactors, Penalty, Sex discrimination, Source material, Special nuclear material, Waste treatment and disposal.

##### 10 CFR Part 50

Antitrust, Classified information, Fire protection, Incorporation by reference, Intergovernmental relations, Nuclear power plants and reactors, Penalty, Radiation protection, Reactor siting criteria, Reporting and recordkeeping requirements.

##### 10 CFR Part 51

Administrative practice and procedure, Environmental impact statement, Nuclear materials, Nuclear power plants and reactors, Reporting and recordkeeping requirements.

##### 10 CFR Part 52

Administrative practice and procedure, Antitrust, Backfitting, Combined license, Early site permit, Emergency planning, Fees, Inspection, Limited work authorization, Nuclear power plants and reactors, Probabilistic risk assessment, Prototype, Reactor siting criteria, Redress of site, Reporting and recordkeeping requirements, Standard design, Standard design certification.

##### 10 CFR Part 170

Byproduct material, Nuclear materials, Nuclear power plants and reactors, Penalty, Source material, Special nuclear material.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended,

the Energy Reorganization Act of 1974, as amended, and 5 U.S.C. 552 and 553, the Commission is adding to 10 CFR Chapter I a new Part 52 and adopting amendments to 10 CFR Parts 2, 50, 51, and 170:

1. Part 52 is added to read as follows:

### PART 52—EARLY SITE PERMITS; STANDARD DESIGN CERTIFICATIONS; AND COMBINED LICENSES FOR NUCLEAR POWER PLANTS

#### General Provisions

##### Sec.

- 52.1 Scope.
- 52.3 Definitions.
- 52.5 Interpretations.
- 52.8 Information collection requirements: OMB approval.

#### Subpart A—Early Site Permits

- 52.11 Scope of subpart.
- 52.13 Relationship to Subpart F of 10 CFR Part 2 and Appendix Q of this part.
- 52.15 Filing of applications.
- 52.17 Contents of applications.
- 52.18 Standards for review of applications.
- 52.19 Permit and renewal fees.
- 52.21 Hearings.
- 52.23 Referral to the ACRS.
- 52.24 Issuance of early site permit.
- 52.25 Extent of activities permitted.
- 52.27 Duration of permit.
- 52.29 Application for renewal.
- 52.31 Criteria for renewal.
- 52.33 Duration of renewal.
- 52.35 Use of site for other purposes.
- 52.37 Reporting of defects and noncompliance; revocation, suspension, modification of permits for cause.
- 52.39 Finality of early site permit determinations.

#### Subpart B—Standard Design Certifications

- 52.41 Scope of subpart.
- 52.43 Relationship to Appendices M, N, and O of this part.
- 52.45 Filing of applications.
- 52.47 Contents of applications.
- 52.48 Standards for review of applications.
- 52.49 Fees for review of applications.
- 52.51 Administrative review of applications.
- 52.53 Referral to the ACRS.
- 52.54 Issuance of Standard design certification.
- 52.55 Duration of certification.
- 52.57 Application for renewal.
- 52.59 Criteria for renewal.
- 52.61 Duration of renewal.
- 52.63 Finality of standard design certifications.

#### Subpart C—Combined Licenses

- 52.71 Scope of subpart.
- 52.73 Relationship to Subparts A and B.
- 52.75 Filing of applications.
- 52.77 Contents of applications; general information.
- 52.79 Contents of applications; technical information.
- 52.81 Standards for review of applications.
- 52.83 Applicability of Part 50 provisions.
- 52.85 Administrative review of applications.
- 52.87 Referral to the ACRS.

##### Sec.

- 52.89 Environmental review.
- 52.91 Authorization to conduct site activities.
- 52.93 Exemptions and variances.
- 52.97 Issuance of combined licenses.
- 52.99 Inspection during construction.
- 52.101 Pre-operational antitrust review.
- 52.103 Operation under a combined license.
- Appendices A-L [Reserved]
- Appendix M—Standardization of Design: Manufacture of Nuclear Power Reactors; Construction and Operation of Nuclear Power Reactors Manufactured Pursuant to Commission License
- Appendix N—Standardization of Nuclear Power Plant Designs: Licenses to Construct and Operate Nuclear Power Reactors of Duplicate Design at Multiple Sites

##### Appendix P—[Reserved]

##### Appendix O—Standardization of Design: Staff Review of Standard Designs

##### Appendix Q—Pre-Application Early Review of Site Suitability Issues

Authority: Secs. 103, 104, 161, 182, 183, 186, 189, 68 Stat. 936, 948, 953, 954, 955, 956, as amended, sec. 234, 83 Stat. 1244, as amended (42 U.S.C. 2133, 2201, 2232, 2233, 2236, 2239, 2282); secs. 201, 202, 206, 88 Stat. 1242, 1244, 1246, 1246, as amended (42 U.S.C. 5841, 5842, 5846).

#### General Provisions

##### § 52.1 Scope.

This part governs the issuance of early site permits, standard design certifications, and combined licenses for nuclear power facilities licensed under section 103 or 104b of the Atomic Energy Act of 1954, as amended (68 Stat. 919), and Title II of the Energy Reorganization Act of 1974 (88 Stat. 1242).

##### § 52.3 Definitions.

As used in this part,

(a) "Combined license" means a combined construction permit and operating license with conditions for a nuclear power facility issued pursuant to Subpart C of this part.

(b) "Early site permit" means a Commission approval, issued pursuant to Subpart A of this part, for a site or sites for one or more nuclear power facilities.

(c) "Standard design" means a design which is sufficiently detailed and complete to support certification in accordance with Subpart B of this part, and which is usable for a multiple number of units or at a multiple number of sites without reopening or repeating the review.

(d) "Standard design certification", "design certification", or "certification" means a Commission approval, issued pursuant to Subpart B of this part, of a standard design for a nuclear power facility. A design so approved may be