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NUCLEAR REGULATORY COMMISSION

10 CFR Part 50

DOCKE N 2

Emergency Planning and Preparedness Requirements for Nuclear Power Plant Fuel Loading and Low-Power Testing

AGENCY: Nuclear Regulatory Commission

ACTION: Final Rule

SUMMARY: The Nuclear Regulatory Commission is amending its regulations to establish more clearly what emergency planning and preparedness requirements are needed for fuel loading and low power testing of nuclear power plants. The rule itself will now require NRC findings on the licensee's emergency plans for dealing with accidents that could affect persons on site. The Commission's prior practice of considering certain offsi* . lements of licensee's plans has been modified and codified in this regard to provide that NRC findings will be required before fuel loading or low power testing in coordination with offsite personnel and agencies so that necessary resources can be applied on site for mitigating and containing accidents, and so that offsite agencies may be kept informed of plant events. The rule will also change the prior practice, never included in the prior rule itself, of reviewing plans for prompt public notification in the event of an accident. This practice of reviewing an offsite element of licensee emergency plans that has no onsite application is being discontinued as not necessary for public safety. The rule does not change the emergency planning requirements that

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must be satisfied before full power operation can be authorized. No new requirements are being imposed by the rule beyond those that have been previously required by rule and by prior NRC practice. The rule makes clear that no offsite elements of the applicant's emergency plan, other than those set forth in this revised rule, need be considered in connection with low power licensing.

EFFECTIVE DATE: October 24, 1988.

FOR FURTHER INFORMATION CONTACT: Carole F. Kagan, Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555; Telephone (301) 492-1632, or Michael T. Jamgochian, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555; Telephone (301) 492-3918.

SUPPLEMENTARY INFORMATION:

I. Background

On May 9, 1988, the Commission published in the Federal Register (53 FR 16435) a notice of proposed rulemaking which would establish more clearly what emergency planning and preparedness requirements are needed for fuel loading and low power testing of nuclear power plants. As detailed in the notice of proposed rulemaking, 10 CFR 50.47(d) as promulgated on July 13, 1982 (47 FR 30232) provided that only a finding as to the adequacy of an applicant's onsite emergency planning and preparedness is required for low power. However, the provision in the Statement of Considerations that systems for

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prompt notice to the public in the event of an accident would also be reviewed before low power focused on protection of persons <u>off site</u>. The Statement of Considerations for the 1982 rule change gave no clear and consistent rationale for why the particular element dealing with public notification should be included. The foundation for that rulemaking was the Commission's determination, described in more detail below, that the degree of emergency planning and preparedness necessary to provide adequate protection of the public health and safety is significantly less than that required for full power operation in light of the significantly lower risks associated with even low likelihood accidents at that stage (47 FR 30233 and note 1). Thus, the stated rationale for the 1982 rule would seem to undercut the need for any prompt public notification requirement.

The Commission indicated in 1982 that, although at low power plant operators typically have less experience and there is a greater potential for undiscovered defects, the risk to public health and safety at low power is significantly lower than at full power as a result of several factors. Those reasons were stated by the Commission as follows: First, the fission product inventory during low power testing is much less than during higher power operation due to the low level of reactor power and short period of operation. Second, at low power there is a significant reduction in the required capacity of systems designed to mitigate the consequences of accidents compared to the required capacities under full power operation.

Third, the time available for taking actions to identify accident causes and mitigate accident consequences is much longer than - full power. This means that operators should have sufficient time to prevent, radioactive release

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from occurring. In the worst case, the additional time available (at least 10 hours), even for a postulated low likelihood sequence which could eventually result in release of the fission products accumulated at low power into the containment, would allow adequate precautionary actions to be taken to protect the public near the site (47 FR 30232).

The safety basis for the 1982 rule was reviewed as a necessary part of the instant proposed rulemaking. The Commission reexamined the need at low power to review those aspects of applicants' onsite plans that seem relevant only to offsite protective measures that might be needed if there were an accident with offsite dose effects (53 FR 16436-7). The proposed rule indicated that the Commission saw no need to review those aspects of applicants' plans that did not have a direct relationship to onsite dose effects in light of the significantly less risk to offsite persons presented by fuel loading and low power testing as contrasted with full power operation. Cn reexamination in light of public comment, the Commission has reaffirmed the safety conclusion that the safety risk to the public from low power testing is significantly less than the risk to the public from full power operation. Accordingly, the rule is being issued in final form substantially as proposed. However, a number of changes have been made in the rule in response to public comments.

II. Analysis of Public Comments

Nearly 1700 comments were received on the proposed rulemaking. The overwhelming majority were from private citizens, mostly in the New England area. Comments also came from utilities, industry groups, State and local

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government agencies and officials, members of Congress, one Federal agency and several local and national environmental groups. The comments ran approximately two to one in favor of promulgation of the proposed rule. Of those opposed, approximately 500 were form letters from residents of the area surrounding the Seabrook nuclear power plant. The remaining 60 to 70 comments in opposition were from private citizens, State and local government officials and environmental groups. The comments in favor came primarily from private citizens, with a sprinkling from utilities, nuclear industry organizations, one local government official and one Federal agency.

Because of the large volume of comments received, it would be impractical to discuss each individually. The great majority of comments, both for and against the proposed rule, turned on the commenter's opinion on the impact of the rule on licensing the Seabrook facility. Most of the individuals who wrote in support of the rule expressed the opinion that the facility was ready to be licensed, that the power the facility would generate was needed, and that licensing should not be allowed to be held up by political forces. Most commenters in favor of the rule also expressed the opinion that the risks to the public from low power testing were considerably less than those from full power operation, and that prompt emergency notification to the general public should not be necessary at low power.

The significant comments against the rule fall within the scope of fifteen separate major comments. These major comments and the Commission's response to them are set forth below.

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<u>Comment 1</u>. The risk assessments upon which the rule is based are based on operation over a short time frame. However, there is no time limit for low power testing.

Response. For many years, Commission policy has been to issue separate "low power" licenses which allow a plant to load fuel and perform testing and operator training at power levels up to 5 percent whenever to do so would expedite the licensing process without prejudicing the rights of any intervening parties. The purpose of the low power test program is to demonstrate that the overall plant performance conforms to the established design criteria and to confirm the operability of plant systems and design features that could not be completely tested during the preoperational test phase. Tests that are performed during the program are specific to the type of light-water reactor (boiling water reactor versus pressurized water reactor), but typically include determination of in-core flux distribution. moderator temperature coefficients, control rod worths and adequacy of neutron instrumentation and associated protective functions. Also, during this time operators obtain some valuable additional training manipulating the controls of the reactor at low power levels. In practice, many of these tests and manipulations are performed with the reactor at less than 1 percent of rated power, and those tests and manipulations which are performed with the reactor at "peak" low power (typically 3 percent to 4 percent of rated power) are completed within a day or two. Based on experience with U.S. commercial power plant startup test programs, the period over which a reactor would actually operate at or near 5 percent power during the low power test program is expected to be at most a few weeks; likewise, operation at 5 percent power

beyond these few weeks would not be economically feasible. The safety evaluation supporting this rule assumes that operation under the rule would be consistent with this prior history and practice. To further clarify this point, low power licenses issued under this rule will be for purposes of fuel loading and low power testing and operator training only: steady-state operation at or near 5 percent for the full license term would not be authorized.

<u>Comment 2</u>. The technical basis for both the current rule and the 1982 rule is flawed in that, at 5 percent power, substantial inventories of biologically significant fission products will be developed in from eight to forty days. Thus, while the inventory of all radionuclides developed during low power testing is reduced compared to full power operation, the inventory of radionuclides with public health significance still poses a substantial prompt public health hazard. In addition, the inexperience of the operators during low power testing and the newness of the system create a greater potential for undiscovered defects and incidents.

<u>Response</u>. Yes, there are some biologically significant fission products generated in the reactor core during the low power operation contemplated by this rule. But, although during low power testing plant operators typically have less experience and there is a greater potential for undiscovered defects, the risk at low power is still sufficiently low to provide reasonable assurance that public health and safety is protected even in the absence of the requirement for a prompt notification system and other purely offsite elements of emergency plans. This is a result of three factors, which were

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stated earlier by the Commission and which the Commission reaffirms in this rulemaking as follows: First, the fission product inventory during initial low power testing is much less than during higher power operation due to the low level of reactor power and short period of operation at this power level. The available inventory of fission products that are significant contributors to public health consequences would be reduced by about a factor of 20 for continuous operation at 5 percent power compared to continuous full power operation. However, as explained above, based on experience with commercial nuclear power plant startup test programs, operation at or near 5 percent power is only expected for a maximum of a few weeks. This would result in a further reduction in available fission product inventory. Second, at low power there is a significant reduction in the required capacity of systems designed to mitigate the consequences of accidents compared to the required capacities under full power operation. For example, the coolant flow required to dissipate Jecay heat at 10 hours following a loss of coolant accident in a typical pressurized water reactor would be less than 10 gallons per minute. which is well within the capacity of normal make-up systems. Most of the regulatory requirements for safety systems during reactor power operation, including containment integrity, emergency cree cooling, and redundant power supplies, are the same for 5 percent power operation as they are for 100 percent power. Third, the time available for taking actions to identify accident causes and mitigate accident consequences is much longer than at full power. This means the operators should have sufficient time to prevent a radioactive release from occurring.

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The above safety evaluation makes no assumptions about the time that would be needed to notify the public off site and to implement an offsite

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emergency response if one would assume hypothetically that an offsite release would occur: it is based solely on an analysis of the likelihood that an offsite release could occur and of the possible magnitude of that release. However, as an additional, separate consideration, the Commission also believes that, in the worst case, the additional time available (at least 10 hours), even for a postulated low likelihood sequence which could eventually result in release of the fission products accumulated at low power into the containment, would allow notification of both onsite and offsite emergency response organizations. These organizations would likely have adequate time to implement some offsite response should that be necessary. Without a prompt public notification system in place and an approved and tested offsite emergency plan, there obviously cannot be the same kind of reasonable assurance of offsite protective measures that there would be with a fully reviewed and tested offsite emergency plan should there be an offsite release at low power. However, given the extremely low likelihood of any accident resulting in significant offsite releases, the requirements for procedures to notify emergency response organizations and the additional time that will likely be available would provide sufficient time for the emergency response organizations to implement some form of public notification and to carry out some reasonably effective offsite emergency response, even if such a release were to eventually occur.

<u>Comment 3</u>. Testing at low power is riskier than full power operation because it involves deliberately defeating safety systems.

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<u>Response</u>. While some selected safety systems may be disabled during low power testing, the heat load and fission product inventory are significantly less than at full power. There are a number of methods available to remove this very low heat load generated at low power. In addition, special procedures are developed and followed for these tests, which are closely monitored by plant personnel. Therefore, because of the reduced heat load, small fission product inventory and special attention by plant operators, testing at low power does not place the plant at greater risk and presents a significantly lesser risk than does full power operation.

<u>Comment 4</u>. The Chernobyl accident occurred while the reactor was at low power. Why does the NRC still say that the risk of low power testing is low?

<u>Response</u>. The reactor physics characteristics of U.S. light-water reactors are very different from those of the graphite-moderated RBMK type of reactor at Chernobyl. Positive void (and moderator temperature) coefficients, which played a central role in the accident at Chernobyl, are generally absent in U.S. reactors. Where they are present, they have a limited reactivity insertion potential, which precludes their causing any significant reactivity transient and power level increase. Substantial required shutdown reactivity margins in conjunction with fast automatic insertion of control rods on signals indicative of unsafe conditions provide protection against the occurrence of reactivity excursions, such as that which took place at Chernobyl, in commercial U.S. reactors. U.S. light-water reactors do not have the inherent potential to rapidly elevate their reactor power to levels at which plant risk becomes significant. Additionally, the Chernobyl reactor

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operated at full power prior to its accident. Therefore, the buildup of fission product inventory was much higher than the buildup of fission product inventory at U.S. reactor operating under a fuel loading or low power testing license.

<u>Comment 5</u>. Low power licensing fails the cost-benefit analysis required by NEPA.

<u>Response</u>. This issue falls outside the scope of this rulemaking, which is only designed to address the requirements under the Atomic Energy Act for emergency planning at fuel loading and low power. The establishment of these safety requirements does not have a significant environmental impact under NEPA. The question of the correct NEPA analysis to be done in support of a low power license for any specific facility is made by case-by-case determination, and is not the subject of this rulemaking.

<u>Comment 6</u>. A low power license should not be issued where it is not certain that a full power license will ever be granted. The Shoreham reactor was irradiated unnecessarily.

<u>Response</u>. This again is an issue that 13 not the subject of this concric rulemaking. In the past the Commission has addressed this issue in individual adjudicatory opinions, <u>e.g.</u>, <u>Long Island Lighting Company</u> (Shoreham Nuclear Power Station), CLI-85-12, 21 NRC 1587 (1985), and does not believe that the issue warrants resolution generically by rulemaking. <u>Comment 7</u>. The proposed rule states that the safety analysis performed in 1982 is still valid. After performing that analysis, the NRC decided to require that certain offsite aspects of emergency plans be in place prior to low power licensing. The NRC has given no rationale for changing the rule, while admitting that the previous analysis is valid.

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<u>Response</u>. One reason for this rule change is to clarify language in the rule itself that can easily be read to suggest that <u>no</u> offsite emergency planning elements need to be reviewed prior to fuel loading or low power testing. The 1982 safety analysis supported the proposition that those offsite aspects of emergency planning which are pertinent to protecting persons on site need be considered prior to low power. This rule charge will incorporate this important safety consideration.

The provision in the 1982 rulemaking which is being reconsidered is the provision in the Supplemental Information that systems for prompt notification of the public in the event of an accident should be in place and reviewed at low power. However, this change is consistent with the 1982 safety analysis. Plans will still be required for notification of offsite planning and response agencies so that these agencies and licensees may, as appropriate, keep the media and the public informed. But given the relatively low risk to the public from low power operation, a requirement for prompt notification of the public is far in excess of what is reasonably needed. Nothing in the 1982 rulemaking logically supports the contrary.

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<u>Comment 8</u>. The NRC has previously stated that review of the licensee's onsite response mechanism will necessarily include aspects of some offsite elements. Why is the NRC changing this position?

<u>Response</u>. See the Response to Concern 7. The NRC is not changing its expert conclusion as to the lower level of risk from low power operation. However, this rulemaking is a more logical result of this expert conclusion than the positions stated in the 1982 Supplemental Information.

<u>Comment 9</u>. The new rule does not address the risk of a terrorist attack or sabotage at low power.

<u>Response</u>. Prior to receiving a low power license, a licensee must fully meet the requirements of 10 CFR Section 73.55. These requirements assure the implementation of an acceptable security plan around a nuclear power plant. These are the same security requirements that a licensee must meet prior to receiving a full power license. While the risk from terrorism or sabotage cannot be quantified, it is the Commission's judgment that compliance with section 73.55 will reasonably assure that the risk from terrorism or sabotage at low power is sufficiently low so as not to undercut the conclusion that low power safety risks to the offsite public are relatively low.

<u>Comment 10</u>. The risks of an accident at low power are not confined to those onsite. If an accident were to occur at low power, public panic could ensue.

<u>Response</u>. The Commission responded to a similar comment in promulgating the 1982 rule. <u>See</u> Issue 6, 47 FR at 30234. The Commission is not unmindful that, regardless of the objective lack of danger, members of the public may be made uneasy and could panic unnecessarily if an accident were to occur at low power. It was in response to this comment that the Commission agreed to review, and will continue to review, certain offsite notification elements of emergency plans prior to low power testing. In particular, prior to low power, means to keep state and 1 cal response organizations informed in the event of an onsite accident will be reviewed and approved. These organizations, through normal communication mechanisms, have the capability to inform the public, if needed, in order to avert unic. However, the Commission has found that the immediate direct notification of the public called for by the language in the 1982 rule preamble is far in excess of what is necessary to keep the public informed.

<u>Comment 11</u>. The change in proposed Section 50.47(d)(5) to modify the requirement for provisions for monitoring offsite consequences from "in use" to "available" will create unacceptable delay in the identification of an actual or potential hazard to the public stemming from a radiological emergency.

<u>Response</u>. The final rule will retain the phrase "in use". The wording change in the proposed rule was not intended to change current NRC staff practice of reviewing licensee onsite plans to assure they meet the intent of 50.47(b)(9) and Planning Standard I of NUREG-0654 prior to issuance of an operating license limited to fuel loading and low power testing. While the

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safety evaluation which supports the elimination of the prompt public notification requirement for low power suggests that an offsite release is extremely unlikely, the Commission still considers it prudent to have release monitoring equipment in use on site so that, at a minimum, the licensee is in a position to verify objectively that no release has occurred.

<u>Comment 12</u>. The original rule justified retention of emergency planning for research reactors, but not for commercial reactors, since research reactors were perceived to be located in areas of high population density. This contradicts the Commission's rurrent posture that the relatively lower risks of low power testing justify elimination of offsite safety measures, since it concedes that there is an accident risk at low power serious enough that a research reactor (much smaller than a power reactor) needs a full emergency plan.

Response. The premise for the comment that research reactors with power levels approximating those of commercial nuclear power plants operating at 5 percent of full power are required to have approved offsite emergency plans is incorrect. Rather than requiring a "full emergency plan" for research reactors, the Commission's regulations (10 CFR Part 50, Appendix E, 10 CFR 50.47(c), 10 CFR 50.54(q)) provide that emergency plan requirements will be determined on a case-by-case basis. In making this determination the guidance of NRC Regulatory Guide 2.6 and American National Standards Institute/American "uclear Society 15.16 is used. In accordance with this guidance, and based on the relatively small risks posed by typical research reactors, (i.e., less than 50 megawatts) emergency planning involving offsite state and local plans

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and public notification has not been required. The guidance does, however, provide for consideration of more extensive planning, including all or a portion of the requirements listed in Section IV of 10 CFR Part 50, Appendix E for research reactors with power levels greater than 50 megawatts. This graded approach to required emergency planning is consistent with the current rule.

<u>Comment 13</u>. The Atomic Energy Act prohibits authorization of low power testing prior to completion of public hearings on all issues material to full power licensing.

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<u>Response</u>. This commant is more properly addressed to Section 50.57(c), which provides for low power licenses and which is not being amended here. That section provides that a hearing is required prior to low power on those contentions "relevant to the sectivity to be authorized" -- that is, low power testing, as opposed to full power operation.

<u>Comment 14</u>. The proposed rule was designed to allow the Seabrook facility to receive its low power license. The Commission should promulgate a rule to promote the public health and safety and not one designed to license a specific facility. The issue should be addressed in the pending Seabrook adjudication, not in a culemaking.

<u>Response</u>. In the proposed rule, the Commission stated that its attention was focused on the emergency planning requirements for low power testing because of an Appeal Board decision in the Seabrook operating license

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proceeding, ALAB-883. And, for the near term, the only reasonably foreseeable effect of the rule change will be on the Seabrook low power application. But this does not make the use of rulemaking inappropriate. As the Commission explained, the rule change was proposed to correct a possible discrepancy between the language of the 1982 rule and the language of the Statement of Considerations which potentially affects all license applicants, not just the applicants for Seabrook. Also, the questions involved in the proposed rule are generic safely questions and the Commission preferred to obtain (and, in fact, did obtain) a broad spectrum of public comment, rather than just the comments of the litigants in the Seabrook proceeding.

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The Commission is free to address a generic issue generically, even if the rule change may currently apply only to one facility. <u>See</u>, <u>e.g.</u>, <u>Siegel</u> <u>v. Atomic Energy Commission</u>, 400 F.2d 778 (D.C. Cir. 1968). <u>Also see</u> <u>Securities and Exchange Commission v. Chenery</u>, 332 U.S. 194, 202 (1947) (choice of how to proceed lies within the informed discretion of the agency).

The rule is not intended to overrule <u>Public Service Company of New</u> <u>Hampshire, et al.</u> (Seabrook Station, Units 1 and 2), CLI-87-2, 25 NRC 267 or CLI-87-3, 25 NRC 875 (198).

<u>Comment 15</u>. Members of the public may need immediate medical attention in the event of an accident at low power. The new rule does not provide that arrangements for medical services will be in place for those off site.

<u>Response</u>. The purpose for the requirement in 10 CFR 50.47(b)(12) that arrangements for medical services be made was described in the "Summary" section of the Commission's policy statement on medical services (51 FR 32904) dated September 17, 1986, as follows: "The Nuclear Regulatory Commission ("NRC" or "Commission") believes that 10 CFR 50.47(b)(12) ("planning standard (b)(12)") requires pre-accident arrangements for medical services (beyond the maintenance of a list of treatment facilities) for individuals who might be severely exposed to dangerous levels of offsite radiation following an accident at a nuclear power plant."

However, it is highly unlikely that members of the general public would be exposed to dangerous levels of radiation following an accident at low power. Therefore, the safety premise for the full power requirement that arrangements be made for medical services does not apply to fuel loading or low power testing.

Conclusion

As indicated in the responses to the comments, the Commission has docided to proceed with the proposed rule change with some clarifications and modifications. The rule reconciles a discrepancy between the language of the Commission's 1982 emergency planning rule change and the language of the Supplemental Information and provides an interpretation of that rule which appears to be fully consistent with the Commission's goals and safety conclusions in 1982. The majority of the public, as expressed in the comments, supports the rule. The comments opposing the rule have given no sound reasons for the Commission to alter its basic course.

Finding of No Significant Environmental Impact: Availability

The Commission has determined that under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51, this rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment and therefore an environmental impact statement is not required. The environmental assessment and finding of no significant impact on which this determination is based are available for inspection at the MRC Public Document Room, 2120 L Street, NW., Washington, DC 20555.

Paperwork Reduction Act Statement

This final rule does not contain a new or amended information collection requirement subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). Existing requirements were approved by the Office of Management and Budget, approval number 3150-0011.

Regulatory Analysis

The Commission has prepared a regulatory analysis for this final regulation. The analysis examines the costs and benefits of the alternatives considered by the Commission. The analysis is available for inspection in the NRC Public Document Room, 2120 L Street, NW, Washington, DC. Single copies of the analysis may be obtained from Michael T. Jamgochian, Office of Nuclear Regulatory Research, U. S. Nuclear Regulatory Commission, Washington, D.C. 20555; Telephone (301) 492-3918.

Regulatory Flexibility Certification

This final rule will not have a significant impact on a substantial number of small entities. The final rule will reduce or at least postpone the burden on NRC licensees by reducing the process required before a low power license may be granted. 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 CFP Part 121, or the Commission's Size Standards published at 50 FR 50241 (Dec. 9, 1985). 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

The NRC has determined that the backfit rule, 10 CFR 50.109, does not apply to this final rule, and therefore, that a backfit analysis is not required for this final rule because these amandments do not involve any provisions which would impose backfits as defined in 10 CFR 50.109(a)(1).

List of Subjects in 10 CFR Part 50

Antitrust, Classified Information, Fire Protection, Intergovernmental Relations, Nuclear Power Plants and Reactors, Penalty, Radiation Protection, Reactor Siting Criteria, Reporting Record Keeping Requirements.

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 adopting the following amendments to Part 50.

PART 50--DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

1. The authority citation for Part 50 continues to read as follows:

Authority: Secs. 102, 103, 104, 105, 161, 182, 183, 186, 189, 68 Stat. 936, 937, 938, 948, 953, 954, 955, 956, as amended, sec. 234, 83 Stat. 1244, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2201, 2232, 2233, 2236, 2239, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

Section 50.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851). Sections 50.10 also issued under secs. 101, 185, 68 Stat. 936, 955, as amended (42 U.S.C. 2131, 2235); sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.23, 50.35, 50.55, and 50.56 also issued under sec. 185, 68 Stat. 955 (42 U.S.C. 2235). Sections 50.33a, 50.55a, and Appendix Q also issued under sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.34 and 50.54 also issued under sec. 204, 88 Stat. 1245 (42 U.S.C. 5844). Sections 50.58, 50.91, and 50.92 also issued under Pub. L. 97-415, 96 Stat. 2073 (42 U.S.C. 2239). Section 50.78 also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Sections 50.80-50.81 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 50.103 also issued under sec. 187, 68 Stat. 939, as amended (42 U.S.C. 2237).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 50.10(a), (b), and (c), 50.44, 50.46, 50.48, 50.54, and 50.80(a) are issued under sec. 151b, 68 Stat. 948, as amended (42 U.S.C. 2201(b); §§ 50.10(b) and (c), and 50.54 are issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and §§ 50.9, 50.55(e), 50.59(b), 50.70, 50.71, 50.72, 50.73, and 50.78 are issued under sec. 1610, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

In § 50.47, paragraph (d) is revised to read as follows:
§ 50.47 Emergency plans.

* * * *

(d) Notwithstanding the requirements of paragraphs (a) and (b) of this section, and except as specified by this paragraph, no NRC or FEMA review, findings, or determinations concerning the state of offsite emergency preparedness or the adequacy of and capability to implement State and local or utility offsite emergency plans are required prior to issuance of an operating license authorizing only fuel loading or low power testing and training (up to 5 percent of the rated power). Insofar as emergency planning and preparedness requirements are concerned, a license authorizing fuel loading and/or low power testing and training may be issued after a finding is made by the NRC that the state of onsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. The NRC will base this finding on its assessment of the applicant's onsite emergency plans against the pertinent standards in paragraph (b) of this section and Appendix E. Review of applicant's emergency plans will include the following standards with offsite aspects:

(1) Arrangements for requesting and effectively using offsite assistance on site have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned onsite response have been identified.

(2) Frocedures have been established for licensee communications with State and local response organizations, including initial notification of the declaration of emergency and periodic provision of plant and response status reports.

(3) Provisions exist for prompt communications among principal response organizations to offsite emergency personnel who would be responding on site.

(4) Adequate emergency facilities and equipment to support the emergency response on site are provided and maintained.

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(5) Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use on site.

(6) Arrangements are made for medical services for contaminated and injured onsite individuals.

(7) Radiological emergency response training has been made available to those offsite who may be called to assist in an emergency on site.

Dated at Rockville, MD, this 20 day of September, 1988.

For the Nuchear Regulatory Commission.

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Secretary of the Commission