



August 22, 1994
LD-94-059

Docket No. 52-002

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Draft System 80+™ Environmental Assessment

Dear Sirs:

We are informed that NRC staff is in the process of producing a draft Environmental Assessment for the proposed System 80+ design certification rulemaking. Knowing that you are still in the review process, we have prepared, and are enclosing, a draft "Notice of Issuance of Environmental Assessment and Draft Finding of No Significant Impact," together with a supporting draft proposed Environmental Assessment for your consideration. These documents present what we believe are some of the more important points that warrant inclusion in NRC's environmental review of the System 80+ rulemaking.

Please note that the attached text differs in some modest, but we believe significant, ways from the proposed text previously submitted by General Electric for the ABWR.

Please let me know if you have any questions on the enclosed document or on ABB-CE's Technical Support Document (TSD).

Very truly yours,

COMBUSTION ENGINEERING, INC.

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Director
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gdh/lw

Enclosures: As Stated

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August 1994

UNITED STATES NUCLEAR REGULATORY COMMISSION
APPLICATION OF ABB-COMBUSTION ENGINEERING FOR ISSUANCE
OF A DESIGN CERTIFICATION RULE FOR AN
ADVANCED LIGHT WATER REACTOR
SYSTEM 80+ STANDARD NUCLEAR PLANT
DOCKET NO. 52-002
NOTICE OF ISSUANCE OF ENVIRONMENTAL ASSESSMENT
AND DRAFT FINDING OF NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC or Commission) is considering whether to issue a design certification for an Advanced Light Water Reactor (ALWR) design, ABB-Combustion Engineering's (ABB-CE's) System 80+ Standard Nuclear Plant (System 80+) in the form of a rule amending 10 CFR Parts 51 and 52. An Environmental Assessment (EA) of this proposed rule has been prepared pursuant to the National Environmental Policy Act (NEPA) and NRC's regulations in 10 CFR Part 51. Under NEPA and 10 CFR Part 51, the NRC must consider, as an integral part of its decision-making process on a proposed action, the expected environmental impacts of promulgating a rule and reasonable alternatives to the action. The Commission has preliminarily determined that this rule is not a major Federal action significantly affecting the quality of human environment. The Commission has therefore preliminarily determined not to prepare an Environmental Impact Statement (EIS) for this action.

IDENTIFICATION OF PROPOSED ACTION

The proposed action would amend Part 52 to certify the System 80+ standard design in the form of a rule. This amendment would enable future applicants for a combined license (COL) under Part 52 or for a construction permit (CP) or operating license (OL) under 10 CFR Part 50 to reference the System 80+ design without the need for further regulatory review or approval of the System 80+ Standard Nuclear Plant design. In addition, the amendment to Part 52 would codify the Commission's conclusions that all reasonable design features have been considered to reduce the radiological impacts from normal operations and severe accidents involving plants that reference the System 80+ design, and that further consideration of such matters (including alternative design features) shall not be performed for licensing of such plants.

SUMMARY OF ENVIRONMENTAL ASSESSMENT

No environmental impacts would result from issuance of the proposed amendment to Part 52 certifying the System 80+ design. The amendment, if adopted, would codify the results of both the extensive review and approval of the System 80+ design by the NRC that have preceded issuance of the proposed rule, and the results of the ensuing rulemaking proceeding, thus permitting later license applicants to reference the approved design in their applications. The System 80+ Standard Nuclear Plant design may

not be changed without compliance with the change requirements specified in Part 52 and in the final rule certifying the System 80+ design, which amends Part 52.

Nothing in the amendment to Part 52, however, would authorize the construction or operation of plants of System 80+ design, or the issuance of a CP, OL, or COL. Without separate NRC authorization to construct and operate a plant of System 80+ design -- itself a major federal action for which an EIS must be prepared -- no environmental impacts could be generated.

Alternatives to use of a unitary design certification rulemaking proceeding such as that being proposed were considered by NRC. Those alternatives, which are also explained in the Statements of Consideration accompanying both the proposed and the final Part 52 rule (see 53 Fed. Reg. 32,060 (Aug. 23, 1988) and 54 Fed. Reg. 15,372 (Apr. 18, 1989), respectively) included resolution of environmental and safety issues in separate rulemaking proceedings, and the use of licensing proceedings rather than a rulemaking proceeding to certify the design. Adoption of these alternatives would not result in a reduction in the environmental impacts attributable to the System 80+ standard design. This choice of the regulatory process used for review and approval of a new design does not affect the environmental impacts resulting from subsequent use of that approved design.

On July 26, 1994, the System 80+ design received a Final Design Approval (FDA) from the NRC after extensive NRC staff review beginning in the late 1980s, coupled with independent

review of the design by NRC's Advisory Committee on Reactor Safeguards (ACRS). The System 80+ Standard Safety Analysis Report (CESSAR-DC) prepared for the design is represented by some 26 volumes of design information, each of which underwent numerous amendments in consultation with NRC Staff. NRC Staff has concluded that the design represents a substantial improvement in safety relative to designs previously approved by NRC prior to the application submitted by ABB-CE.

Nevertheless, evaluations were performed by the applicant and NRC Staff of further design alternatives to reduce the radiological impacts from normal operation and severe accidents involving plants of System 80+ design as described in the documents referenced herein. NRC has concluded that there are no reasonable additional design alternatives for reducing these impacts.

Non-radiological impacts of operation are largely dependent upon site-specific characteristics and design features that are outside the scope of System 80+ Standard Nuclear Plant design. These non-radiological impacts, and alternatives for reducing these impacts, will be evaluated as part of the review of applications for a CP, OL, or COL for individual plants of System 80+ design.

REQUEST FOR COMMENTS

The Commission is requesting comments on this draft Finding of No Significant Impact and the associated Environmental Assessment. Any comments should be submitted in accordance with the procedures described in the proposed rule for design certification of the System 80+ design. See 59 Fed. Reg. ____ (____, 1994).

For further details with respect to this action, see (1) System 80+ Standard Safety Analysis Report (CESSAR-DC); (2) System 80+ Final Safety Evaluation Report (FSER) (NUREG ____); (3) letter dated May 10, 1994, from C. B. Brinkman (ABB-CE) to NRC, attaching "Technical Support Document for Amendment to 10 CFR Part 51 Considering Severe Accidents under NEPA for Plants of System 80+ design; and (4) [NRC's Environmental Assessment]. These documents are available for public inspection at the Commission's Public Document Room, 2120 L Street, N.W., Washington, D.C. 20037.

Environmental Assessment
By the Office of Nuclear Reactor Regulation
of the Nuclear Regulatory Commission
Relating to Issuance of a Design Certification Rule
for the System 33+ Applicant: ABB-Combustion Engineering

Docket No. 52-002

1.0 Introduction

1.1 Purpose and Organization

ABB-Combustion Engineering (ABB-CE) has applied to the Nuclear Regulatory Commission (the Commission or NRC) for certification of an evolutionary Advanced Light Water Reactor (ALWR) design referred to as the System 80+ Standard Nuclear Plant (System 80+). Certification would be accomplished in a rulemaking proceeding that would amend 10 C.F.R. Part 52 to certify the System 80+ design in accordance with the procedures set forth in Part 52, Subpart B.

In fulfillment of its responsibilities under the National Environmental Policy Act (NEPA), as set forth in 10 C.F.R. Part 51, NRC must consider the impacts on the environment of issuing this amendment to its regulations. In particular, pursuant to § 51.21, NRC must prepare an Environmental Assessment (EA) which forms the basis for either a Finding of No Significant Impact (FONSI) or a determination to prepare an Environmental Impact Statement (EIS). Section 51.30 requires an EA to identify: the proposed action, including a brief discussion of the need therefor; the alternatives, as required by section 102(2)(E) of NEPA; the environmental impacts of the proposed action and the alternatives as appropriate; and a list of agencies and persons consulted, with identification of sources used.

The remainder of this EA is organized as follows. Chapter 2 discusses the proposed action; Chapter 3 discusses the

need for the proposed action; Chapter 4 discusses the environmental impacts from the proposed action; Chapter 5 discusses alternatives to the proposed action; and Chapter 6 presents the conclusions. Appendix A identifies the references and sources used in preparing this EA, and Appendix B identifies the agencies and persons consulted.

2.0 Description of Proposed Action

2.1 Introduction

In accordance with 10 CFR § 52.47(b)(1), ABB-CE's application for design certification of System 80+ provided an essentially complete nuclear power plant design, except for the designs of a limited number of structures and systems which are dependent upon site-specific elements, such as the ultimate heat sink and the circulating cooling water system. The application for the System 80+ design certification included both a comprehensive safety assessment (in the form of a Standard Safety Analysis Report numbering 26 volumes (CESSAR-DC) (Ref. 1)) and an environmental evaluation (in the form of a Technical Support Document (TSD) (Ref. 2)) Because non-radiological environmental impacts are heavily dependent upon site-specific characteristics and design features beyond the scope of the proposed design certification, ABB-CE's environmental evaluation was limited to a

consideration of potential radiological impacts of normal operation and severe accidents.¹

Commencing in the late 1980s, NRC has extensively reviewed ABB-CE's application for design certification of System 80+, including the CESSAR-DC and TSD. In addition, the System 80+ application was reviewed and approved by NRC's Advisory Committed on Reactor Safeguards (ACRS). This review culminated in the issuance by NRC of a Final Design Approval (FDA) for the System 80+ design on July 26, 1994. (Ref. 14) The results of the NRC's safety review are documented in the Final Safety Evaluation Report (FSER) for System 80+ (Ref. 3), and the results of the environmental review are documented herein and in supporting documents (Ref. 4). NRC Staff has concluded that the System 80+ design represents a substantial improvement in safety relative to designs approved by NRC prior to the application submitted by ABB-CE. The FSER and this EA provide NRC's conclusions in support of issuance of a design certification rule for System 80+.

The proposed action that is the subject of this EA is issuance of an amendment to Part 52 certifying the System 80+ standard design. This amendment would enable future applicants for a combined license (COL) under Subpart C of Part 52, or for a construction permit (CP) or operating license (OL) under 10

¹ In the context of severe accidents, impacts have been defined in terms of risk (i.e., the probability of a severe accident multiplied by the consequences of the accident).

C.F.R. Part 50, to reference the System 80+ design certification without the need for further regulatory review or approval of the System 80+ design. In addition, the amendment to Part 52 would codify the NRC Staff's conclusions (Ref. 4) that all reasonable design features have been considered to reduce the radiological impacts from normal operations and severe accidents involving plants that reference the System 80+ design, and that further consideration of such matters (including alternative design features) shall not be performed for licensing of such plants.

Certification of the System 80+ design would not constitute authorization for construction or operation of a plant, or for issuance of a CP, OL, or COL. A license applicant will be required to describe the site-specific design of the structures and systems that are outside the scope of the System 80+ design and to provide safety and environmental evaluations for these systems, including an evaluation of non-radiological environmental impacts. These environmental evaluations will take place either in licensing proceedings under Part 50 or Part 52, or in the context of Early Site Permit (ESP) proceedings under Subpart A of Part 52. NRC will conduct an extensive environmental review of such site-specific impacts at that time and issue an EIS on these impacts prior to issuance of a CP, OL, COL, or ESP, as applicable.

2.2 Description of the Design Certification for System 80+

The design certification would consist of two components: the Certified Design Materials (CDM) and the Approved

Design Material (ADM). The CDM would include a description of design features and functions that are most safety-significant for System 80+. The ADM would include a more detailed description of the design of System 80+.

A license applicant referencing System 80+ design certification would not be able to make facility-specific changes to the CDM without an exemption from or amendment to the design certification rule. Such an applicant would not be able to make changes to the ADM except by the foregoing process or, where appropriate, through a process similar to that embodied in the 10 C.F.R. § 50.59 as specified in 10 C.F.R. § 52.63(b).

Matters resolved in connection with the issuance of an amendment to Part 52 certifying the System 80+ design would be treated as resolved in future licensing proceedings under Part 50 and Part 52 for applicants and licensees that reference the System 80+ design certification. These matters would include the issues discussed or encompassed by the TSD and this EA, e.g., the reasonableness of measures for reducing the radiological impacts of normal operation and severe accidents.

Issuance of the amendment to Part 52 would codify the results of the extensive review and approval of System 80+ design by the NRC Staff, the ACRS, and the results of the rulemaking proceeding certifying the System 80+ design, thus permitting later license applicants to reference the pre-approved design in their applications. However, nothing in this amendment would authorize the construction or operation of plants of System 80+

design. Without separate NRC authorization to construct and operate -- which would constitute a major federal actions for which an EIS must be prepared -- no environmental impacts will be generated.

2.3 Codification of Environmental Conclusions

2.3.1 Background Concerning NRC Regulations and Policy on Severe Accidents

The term "severe accident" refers to those events "beyond the substantial coverage of design basis events," including those for which there is substantial damage to the reactor core whether or not there are serious off-site consequences. (Ref. 5). NRC's Severe Accident Policy Statement (Ref. 5) describes the Commission's safety requirements related to severe accidents involving designs. The Safety Goal Policy Statement (Ref. 6) sets goals and objectives for determining an acceptance level of radiological risk from severe accidents. For new reactor designs, such as System 80+, the Commission, in satisfaction of its severe accident safety requirements, is requiring, among other things, the evaluation of design alternatives to reduce the radiological risk from a severe accident by preventing substantial core damage (i.e., preventing a severe accident) or by preventing releases from the containment in the event that substantial core damage has occurred (i.e., mitigating the impacts of a severe accident).

NEPA requires the consideration of reasonable alternatives to proposed major Federal actions significantly

affecting the quality of the human environment, including alternatives to mitigate the impacts of the proposed action. In 1989, a Federal Court of Appeals determined in the Limerick case that NEPA requires consideration of certain design alternatives; namely, severe accident mitigation design alternatives (SAMDAs). (Ref. 7). The court indicated that "[SAMDAs] are, as the name suggests, possible plant design modification that are intended not to prevent an accident, but to lessen the severity of the impact of an accident should one occur."

Subsequent to the Limerick decision, NRC issued Supplemental Final Environmental Impact Statements (FES Supplements) for the Limerick and Comanche Peak facilities (Refs. 8 and 9), which considered whether there were any cost-effective SAMDAs that should be added to these facilities. On the basis of the evaluations in the supplements (called "NEPA/SAMDA evaluations"), NRC determined that further modifications would not be cost-effective and were not necessary in order to satisfy the mandates of NEPA.

In recognition of the Limerick decision, the Commission is requiring consideration in each design certification rulemaking proceeding of whether, pursuant to NEPA, there are cost-effective SAMDAs that should be included in a new reactor design to reduce severe accident environmental risk. While this consideration could be done later on a facility-specific basis for each CP, OL, or COL application, the Commission has decided that maintenance of design standardization is enhanced if this is

done on a generic basis for each standard design in conjunction with design certification. (Ref. 10).

The court's decision in Limerick did not pertain to alternatives for preventing severe accidents. Nevertheless, in a recent rulemaking involving license renewal, NRC addressed design alternatives to prevent severe accidents, as well as to mitigate them. (Ref. 11). In doing so, NRC exercised its discretion to make the scope of NRC's environmental review of severe accidents under NEPA co-extensive with the scope of NRC's safety review of severe accidents under the Commission's Severe Accident Policy Statement for the purpose of license renewal. In order to enhance design stability and standardization for the System 80+ design, the NRC has similarly performed an environmental review of preventive and mitigative design alternatives for postulated severe accidents.

Finally, the NRC has had longstanding requirements to consider the radiological impacts from normal nuclear plant operation. These include requirements related to safety (e.g., 10 C.F.R. Part 50, Appendix I) and requirements related to environmental protection under NEPA (e.g., NUREG-0099, §§ 10.7 and 10.8 (Ref. 12)). The principle of standardization also supports a decision to resolve, as part of design certification, environmental issues that relate to the radiological impacts of normal operation.

2.3.2 Environmental Reviews and Conclusions for System 80+

Chapter 19 of the System 80+ CESSAR-DC demonstrates how the System 80+ design satisfies the Commission's severe accident safety requirements and associated guidance. It also addresses the Commission's safety goals and objectives. In particular, Chapter 19 of CESSAR-DC (1) identifies the dominant severe accident sequences for the System 80+ design and the associated source terms; (2) describes design features that have been applied to the System 80+ design, based on the results of the System 80+ Probabilistic Risk Assessment (PRA), to prevent or mitigate severe accidents and thereby reduce the risk of a severe accident; and (3) provides the bases for concluding that all reasonable steps have been taken to reduce the chances of occurrences of a severe accident involving substantial damage to the reactor core and to mitigate the consequences of such an accident should one occur, and consequently, that further modifications to System 80+ design to reduce severe accident risk are not warranted. Similarly, Chapter 12 of CESSAR-DC documents how the System 80+ design complies with 10 C.F.R. Part 50, Appendix I, which requires design provisions to keep radiological releases due to normal operation as low as is reasonably achievable (ALARA).

ABB-CE has also prepared and submitted to NRC a Technical Support Document (TSD) for plants of the System 80+ design. The TSD draws heavily from Chapters 12 and 19 of the System 80+ CESSAR-DC, and follows the format of the Limerick and

Comanche Peak FES Supplements. The analysis in the TSD provides the basis for concluding that there are no reasonable measures for further reducing the radiological impacts from normal operation and severe accidents for plants of the System 80+ design.

NRC has extensively reviewed CESSAR-DC and the TSD for the System 80+ design, and the results of its review of radiological issues under NEPA are documented in the FSER and in NRC's review of ABB-CE's TSD. (Ref. 4) The proposed amendment to Part 52 certifying the System 80+ design would codify resolution of these radiological issues under NEPA for plants of System 80+ design and would make clear that no further NEPA consideration need be given to these radiological issues (either related to normal operation or severe accidents) in licensing a plant of the System 80+ design. Specifically, the proposed amendment to Part 52 would codify the results of a NEPA evaluation of radiological issues, and would provide that:

(1) For the System 80+ design, all reasonable steps have been considered to reduce the probability of occurrence of a severe accident involving substantial damage to the core and to mitigate the consequences of such an accident, should one occur;

(2) No cost-effective severe accident design features for the System 80+ design have been identified that would further prevent or mitigate the consequences of a severe accident involving substantial damage to the core;

(3) No further evaluation of severe accidents for the System 80+ design, including alternatives for preventing or mitigating the consequences of severe accidents, shall be performed in any environmental report, environmental assessment, environmental impact statement or other environmental analysis prepared in connection with issuance of a COL for a nuclear power plant referencing a System 80+ design certification; and

(4) All reasonable steps have been take to reduce the radiological environmental impacts from normal reactor operation of System 80+, including expected operational occurrences, to as low as reasonably achievable, and that further evaluation of alternatives for reducing such impacts is not required in any environmental report, environmental assessment, environmental impact statement or other environmental analysis prepared in connection with issuance of a license for a nuclear power plant referencing the System 80+ design certification rule.

The proposed amendment to Part 52 would be applicable to all plants referencing the System 80+ design certification. Consequently, any applicant for a CP or OL under 10 CFR Part 50, or COL under 10 CFR Part 52, to build or operate a plant of System 80+ design, in preparing its environmental report in support of its application -- and the NRC Staff in preparing an EIS in connection with issuance of CP, OL, or COL therefore -- would not give further NEPA consideration to reducing the radiological impacts of normal operation or severe accidents.

3.0 Need for Proposed Action

Since the early 1970s, the NRC and its predecessor, the Atomic Energy Commission (AEC), have sought nuclear power plant standardization. (Ref. 13). Certification of the System 80+ design furthers the Commission's goal. Certification would codify the resolution of all design safety issues and certain environmental issues generic to all System 80+ plants built in accordance with the System 80+ design certification.

The U.S nuclear industry also believes standardization is necessary to achieve safety and operational benefits from ALWRs. It has documented its future reliance on standardized ALWR designs in the Electric Power Research Institute's Utility Requirements Document and in the Nuclear Power Oversight Committee's (NPOC's) Strategic Plan for Building a New Nuclear Power Plant which lays out industry goals for the revitalization of the nuclear power industry.

Certification is a critical element in achieving the standardization benefits that the Commission and the industry are seeking. For the NRC, standardization would conserve safety resources, facilitate the application of safety experience to multiple plants, and enable the NRC to deal rapidly and more uniformly with technical problems disclosed during facility operations. For industry, design standardization holds the prospect of significant cost and efficiency benefits, as well as reliability and safety advantages. All parties would benefit from the early resolution of technical and environmental issues

and the regulatory stability provided by design certification. Finally, the design certification for System 80+ incorporates a number of significant improvements, relative to previously licensed nuclear plant designs, which will be of benefit to the public health and safety and the environment.

Resolution of environmental issues related to the radiological impacts of normal operation and severe accidents would further the goals and benefits of standardization. Deferral of resolution of these issues to subsequent licensing proceedings for individual plants would be inconsistent with standardization, because such deferral could possibly and would likely result in different design resolutions from proceeding to proceeding.

4.0 Environmental Impacts of Proposed Action

No environmental impacts would result from issuance of the proposed amendment to Part 52 certifying the System 80+ design. The amendment, if adopted, would codify the results of the extensive review and approval of the System 80+ design by NRC that will have preceded issuance of the proposed rule, and the results of the ensuing rulemaking proceeding, thus permitting later license applicants to reference the design in their applications. Nothing in the amendments, however, would authorize the construction or operation of plants of the System 80+ design. Without separate NRC authorization to construct and operate a plant of the System 80+ design -- itself a major

federal action for which an EIS must be prepared -- no environmental impacts could be generated.

5.0 Alternatives

5.1 Alternatives to this Rulemaking Proceeding

As alternatives to the proposed amendment to Part 52, NRC has evaluated two alternatives:

- custom plant environmental review as part of a CP, OL, or COL proceeding (custom licensing proceedings);
- certification of System 80+ design in one rulemaking and closure of radiological issues under NEPA for System 80+ design in a separate rulemaking proceeding (bifurcated rulemaking).

In particular, NRC has considered whether the environmental impacts of a System 80+ plant would be greater under either of the two alternatives than from a unitary rulemaking proceeding that would resolve both safety and environmental issues at the same time. These alternatives were considered as well in the promulgation of Part 52, as documented in the accompanying Statement of Considerations for the proposed and final Part 52 rulemaking. (Ref. 13).

NRC finds that there are no differences in the environmental impacts of a plant of System 80+ design caused by utilization of a unitary rulemaking proceeding rather than a custom licensing proceeding or bifurcated rulemaking. Regardless of whether a nuclear power plant design undergoes review as part of design certification or in a licensing proceeding or

bifurcated rulemaking proceeding, the same regulatory requirements regarding protection of the public health and safety and the environment must be met. Because the technical requirements for a design are the same regardless of the process utilized for review and approval of that design, the process itself does not affect the impacts resulting from subsequent use of the approved design.

5.2 Design Alternatives

Both ABB-CE and NRC have evaluated design alternatives for reducing the radiological impacts from normal operation and severe accidents involving plants of the System 80+ design. These evaluations are documented in ABB-CE's TSD and in NRC's review of that TSD. (Refs. 2 and 4) As is discussed more fully in these documents, for the System 80+ design: (1) all reasonable steps have been considered to reduce the probability of occurrence of a severe accident involving substantial damage to the core and to mitigate the consequences of such an accident should one occur; (2) no cost-effective severe accident design features have been identified that would further prevent or mitigate the consequences of a severe accident involving substantial damage to the core; and (3) all reasonable steps have been taken to reduce the radiological environmental impacts from normal reactor operation, including expected operational occurrences, to as low as reasonably achievable.

Non-radiological impacts of operation are largely dependent upon site-specific characteristics and design features

that are outside the scope of the System 80+ standard design. These impacts, and alternatives for reducing these impacts, will be evaluated as part of the review of applications for a CP, OL or COL for individual plants of the System 80+ design. Such applications must be supported at that time by an EIS.

6.0 Finding of No Significant Impact

From the foregoing environmental assessment, the NRC has concluded that no radiological or non-radiological impacts will result from issuance of the proposed amendment to Part 52 certifying the System 80+ design, because design certification itself will not authorize design or construction of a nuclear plant. Alternatives to use of a unitary rulemaking proceeding to resolve System 80+ issues would not result in any reduction in the environmental impacts of plants of System 80+ design, because the technical requirements applicable to the System 80+ design are the same regardless of the process utilized for review and approval of that design. Finally, there are no reasonable design alternatives for reducing the radiological impacts of normal operation and severe accidents involving System 80+, and non-radiological impacts and alternatives for reducing these impacts will be considered in individual licensing proceedings for plants of the System 80+ design. Therefore, NRC has determined, pursuant to 10 CFR 51.31, not to prepare an EIS for the proposed amendment certifying the System 80+ design.

APPENDIX A

References

1. System 80+ Standard Safety Analysis Report (CESSAR-DC), as amended.
2. Letter dated May 10, 1994, from C. B. Brinkman (ABB-CE) to NRC attaching the "Technical Support Document for Amendment to 10 CFR Part 51 Considering Severe Accidents under NEPA for Plants of System 80+ Design."
3. Final Safety Evaluation Report Related to the Certification of the System 80+ Design (NUREG-_____), U.S. NRC (July 1994).
4. [Documentation of NRC's review of ABB-CE's TSD for System 80+].
5. Policy Statement on Severe Reactor Accidents Regarding Future Designs and Existing Plants (50 Fed. Reg. 32,138 (August 8, 1985)).
6. Safety Goals for the Operations of Nuclear Power Plants; Policy Statement (51 Fed. Reg. 30,028 (August 21, 1986)).
7. Limerick Ecology Action v. NRC, 869 F.2d 719 (3rd Cir. 1989).
8. Supplement to NUREG-0974, "Final Environmental Statement Related to the Operation of Limerick Generating Station, Units 1 and 2," NRC Staff Evaluation of Severe Accident Mitigation Design Alternatives for Limerick (August 1989).
9. Supplement to NUREG-0775, "Final Environmental Statement Related to the Operation of Comanche Peak Steam Electric Station, Units 1 and 2;" NRC Staff Evaluation of Severe Accident Mitigation Design Alternatives for Comanche Peak (October 1989).
10. SECY-91-229, "Severe Accident Mitigation Design Alternatives for Certified Standard Designs" (July 31, 1991); Staff Requirements Memorandum dated October 25, 1991 on SECY-91-229.
11. NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (August 1991).
12. NUREG-0099, "Preparation of Environmental Reports for Nuclear Power Stations" (July 1976).

13. 10 C.F.R. Part 52, "Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Reactors;" Statements of Consideration for Proposed and Final Rules, published in 53 Fed. Reg. 32,060 (Aug. 23, 1988) and 54 Fed. Reg. 15,372 (Apr. 18, 1989), respectively.
14. Letter from William T. Russell, Director, Office of Nuclear Reactor Regulation, to Robert E. Newman, President, Nuclear Systems, ABB Combustion Engineering, transmitting Final Design Approval for System 80+ (July 26, 1994).

APPENDIX B

List of Agencies and Persons Contacted

[To Be Provided By NRC]