



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, D.C. 20410

PROPOSED RULE 50, 51, 100
45 FR 79820

OFFICE OF THE ASSISTANT SECRETARY
FOR COMMUNITY PLANNING AND DEVELOPMENT

IN REPLY REFER TO:



Honorable Samuel J. Chilk
Secretary
U. S. Nuclear Regulatory Commission
1717 H Street, N. W., H-1137
Washington, D. C. 20555

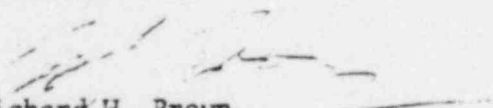
Attention: Docketing and Servicing Branch

Subject: Intent to Prepare an Environmental Impact Statement for Revision
of the Regulations Governing the Siting of Nuclear Power Plants

Dear Secretary Chilk:

Enclosed is HUD's response to the items identified in the Advance Notice of Rulemaking previously distributed by the Nuclear Regulatory Commission. Our comments were particularly directed to items 1, 2, 5, 6 and 8, which the Department desires to be thoroughly examined. We anticipate receiving the Draft Environmental Impact Statement.

Sincerely,


Richard H. Broun
Director
Office of Environmental Quality

Enclosures

ACKNOWLEDGED BY 1/22/81

2-11-81 50

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Honorable Samuel J. Chilk
Secretary
Nuclear Regulatory Commission
1717 H Street, N. W., H-1137
Washington, D. C. 20555

Dear Secretary Chilk:

The Department of Housing and Urban Development staff has studied and reviewed the "Modification of the Policy and Regulatory Practice Governing the Siting of Nuclear Power Reactors"; the recommendations contained in the Report of the Siting Policy Task Force (NUREG-0625, August 1979), and the comments on each of the recommendations by the Advisory Committee on Reactor Safeguards (ACRS).

The recommendations indicate the commission's concern with conceptions and misconceptions related to nuclear power plants and public apprehensions of the dangers associated with hazards related to nuclear energy.

The Department of Housing and Urban Development has particular interest in the protection of the environment and the welfare of the occupants of HUD assisted housing and other projects in areas near existing nuclear power plants or those where the plants are to be constructed. We welcome the opportunity to participate in any early discussions and our suggestions have been made to assist the Nuclear Regulatory Commission meet its legal requirements and mandates.

Our comment pertaining to the recommendations are enclosed.

Sincerely,

/s/ Robert C. Embry, Jr.

Robert C. Embry, Jr.
Assistant Secretary

Enclosure

General Comments

In the cover letter, HUD has indicated its concern with the protection of the environment and the effects of nuclear power plants on the occupants of HUD assisted housing and subdivisions.

The Nuclear Regulatory Commission has established requirements for plant siting and for adjacent areas prior to plant construction and operations. HUD is concerned with the development of more durable controls on population and offsite activities after the plant is constructed and during the life time of the plant. They should be established by agreement with state and local jurisdictions which have concomitant authority over the areas.

Decisions of the Nuclear Regulatory Commission on site selection are made after extensive research and numerous meetings with Federal, state, local officials and the public participating in the process. The meetings with personnel from other governmental agencies are conducted through a series of separate bilateral discussions primarily as a result of interagency agreements and understandings. HUD recommends the NRC reduce the number of meetings which are time consuming and conduct a multi-agency meeting involving affected governmental agencies to discuss all of the issues, particularly those having controversial aspects.

A thorough analysis early in the application process acquainting all Federal, state and local officials with sufficient information will provide a suitable atmosphere for judging the merits and problems which plant siting may generate.

While the nuclear power plant operation does not directly cause the development of ancillary services similar to the activities developed adjacent to an airport, for instance, the development of highways and roads to the plant for services, supplies and community evacuation purposes may entice businesses and industries to locate in areas adjacent to the roads, thus compounding the post siting hazard situations. Some method of restricting such uses should be considered.

The emphasis on design safety factors should not be eliminated in favor of remote locations as the ultimate safety measure, but should be modified to enable each proposed plant to be considered on a case by case basis.

The environmental concerns of the Department of Housing and Urban Development are not fully addressed in the task force discussion. We have other program interests in addition to responding to EISs and assisting land use planning by state and local agencies in areas which may affect site selection (NUREG-0625, page 37). Since the number of new power plant applications will be limited in the near future, activities and locations of operating plants and those in the construction pipeline should be emphasized at this time. The impact of these plants needs intensive study to control the activities and population densities now. The Task Force Report description does not provide opportunities for the analysis of problems which may occur after the power plants are in operation.

Comments on Specific Recommendations

Recommendation 1

Revise Part 100 to change the way protection is provided for accidents by incorporating a fixed exclusion and protection action distance and population density and distribution criteria.

1. Specify a fixed minimum exclusion distance based on limiting the individual risk from design basis accidents. Furthermore, the regulations should clarify the required control by the utility over activities taking place in land and water portions of the exclusion area.
2. Specify a fixed minimum emergency planning distance of 10 miles. The physical characteristics of the emergency planning zone should provide reasonable assurance that evacuation of persons, including transients, would be feasible if needed to mitigate the consequences of accidents.
3. Incorporate specific population density and distribution limits outside the exclusion area that are dependent on the average population of the region.
4. Remove the requirement to calculate radiation doses as a means of establishing minimum exclusion distances and low population zones.

HUD AGREES WITH THE BASIC CONCEPT OF RETAINING MINIMUM EXCLUSION DISTANCES BUT RECOMMENDS THAT THEY BE ADJUSTED ON A CASE BY CASE BASIS AND THE DISTANCES SHOULD BE BASED UPON ANY ACCIDENT AS DEMONSTRATED BY THE THREE MILE ISLAND EXPERIENCE, RATHER THAN ONLY THOSE DESIGN RELATED. POPULATION RESTRICTIONS SHOULD BE CONSIDERED NOT ONLY IN THE SITE PLANNING AND LOCATION STAGES, BUT FOR THE LIFE OF THE FACILITY, AND RELATED TO ESTABLISHED EVACUATION AND RELOCATION CAPABILITIES OF THE STATE AND LOCAL AUTHORITIES.

Recommendation 2

Revised Part 100 to require consideration of the potential hazards posed by man-made activities and natural characteristics of sites by establishing minimum standoff distances for:

- | | |
|---|------------|
| 1. Major or commercial airports | 5 miles |
| 2. LNG terminals | 5 miles |
| 3. Large propane pipelines | 1.5 miles |
| 4. Large natural gas pipelines | 0.5 miles |
| 5. Large quantities of explosive or toxic materials | 5 miles |
| 6. Major dams, and | |
| 7. Capable faults | 12.5 miles |

Discussion

Certain human activities, natural phenomena, and characteristics of a site can present hazards to a nuclear power plant that could cause an accident. Currently, 10 CFR 100 provides no specific guidance on how to treat such external hazards in siting or plant design.

Staff practice has relied on a combination of (a) calculated probabilities of triggering events, which include site characteristics such as distance or topography; and (b) the ability of plant design to accommodate the hazard. There is no uniform staff practice regarding the relative importance to be given to these two evaluational components by which the overall adequacy of the combination is measured.

Over a period of time, there has been an increased reliance on design features with a corresponding decreased reliance on the inherent safety of the distance factor. Consequently, much staff time has been devoted to prolonged negotiations with the applicants as they demonstrate the adequacy of engineering to accommodate the hazard.

The Task Force believes that there is merit to maintaining the safety factor inherent in physical distance and that the distance factor should not be traded off for design features of the plant.

HUD AGREES WITH THE STATEMENTS AND CONCEPTS DEALING WITH THE REVISION, INCLUDING THE NEED FOR FURTHER STUDY NOT ONLY THE IMPACT OF THE LOCATION OF MAN-MADE HAZARDS ON NUCLEAR PLANTS BUT ALSO THE IMPACT OF A NUCLEAR POWER PLANT ACCIDENT ON THESE HAZARDOUS MATERIALS AREAS. WE SUGGEST INCLUDING MILITARY AIRPORT AND AIR CARRIER FACILITIES IN ITEM (1), AND THE DISTANCES SHOULD BE RECONSIDERED.

Recommendation 3

Revise Part 100 by requiring a reasonable assurance that interdictive measures are possible to limit groundwater contamination resulting from Class 9 accidents within the immediate vicinity of the site.

The Task Force believes the current regulation regarding liquid pathway in 10 CFR 100.10 to be basically adequate as a siting tool. It should be supplemented, however, to reflect conclusions of the LPGS by requiring a reasonable

assurance that interdictive measures can be taken to effectively isolate radioactive releases into the groundwater from any accident within the immediate vicinity of the site. Based on the licensing experience, the Task Force further believes that although, as a matter of prudence, sites should be avoided where offsite groundwater transport of radioactive materials would be so rapid as to preclude implementing reasonable interdiction measures to substantially reduce radiological impacts from the liquid pathway, such avoidance would not preclude reasonable siting options in any region of the country.

HUD CONCURS.

Recommendation 4

Revise Appendix A to 10 CFR 100 to better reflect the evolving technology in assessing seismic hazards.

The Task Force established that Appendix A contains concepts based on the state-of-the-art existing at the time the appendix was prepared that are not clearly defined and lack a clear statement of intent of the regulation.

The Task Force recommends that Appendix A to 10 CFR 100 be revised to better reflect evolving technology in assessing seismic hazards and to be more specific with respect to the definition of the terms and concepts it contains. In addition, the Task Force recommends that specific guidance material be removed from Appendix A and be placed in Regulatory Guides.

HUD CONCURS.

Recommendation 5

Revise Part 100 to include consideration post-licensing changes in offsite activities:

1. The NRC staff shall inform local authorities (planning commission, county commissions, etc.) that control activities within the emergency planning zone (EPZ) of the basis for determining the acceptability of a site.
2. The NRC staff shall notify those federal agencies as in Item 1 above that may reasonably initiate a future federal action that may influence the nuclear power plant.
3. The NRC staff shall require applicants to monitor and report potentially adverse offsite developments.

4. If, in spite of the actions described in Items 1 through 3, there are offsite developments that have the potential for significantly increasing the risk to the public, the NRC staff will consider restrictions on a case-by-case basis.

In considering this issue, the Task Force recognized that a new hazardous activity or a significant change in population density in the vicinity of the plant could result in an increased risk to the public. However, specific occurrence of this nature has not yet occurred to the degree that changes in plant design or operation have been required. Nevertheless, there have been two instances that bear on this issue and that have influenced the Task Force toward making this recommendation:

1. Plans for a housing development in the immediate proximity of the proposed Newbold Island site influenced the staff toward recommending that the utility move the plant to a new site (Hope Creek). Although, fortuitously, these development plans were discovered during the CP review stage, the Task Force questioned what would have been the staff's options had the plans been discovered later.
2. The Cove Point LNG facility is in close proximity to the Calvert Cliffs plants. Fortuitously, again, administrative actions are possible such that the public risk is not significantly changed due to this new offsite activity.

Although in both of these instances the issue was readily resolved, it is the Task Force judgment that offsite activities in the vicinity of other nuclear plants will likely change so as to increase the public risk. In this case, some form of control or early notification would be useful.

HUD ADVOCATES A COMPREHENSIVE STUDY OF THE PROBLEM OF POST-LICENSING ACTIVITIES. THE DYNAMICS OF ANY COMMUNITY INCLUDE CHANGES IN INDUSTRIAL LOCATIONS AND RESIDENTIAL AREAS. THE STUDY SHOULD INCLUDE POTENTIAL LONG RANGE EFFECTS OF THESE CHANGES ON THE NUCLEAR POWER PLANTS AND THE EFFECTS OF THE ACTIVITIES ASSOCIATED WITH THE POWER PLANT ON THE GROWTH OF SUPPORT ACTIVITIES IN THE AREA ADJACENT TO THE PLANT, AND SOME PREPARATION TO MEET SUCH EXIGENCIES SHOULD BE MADE.

Recommendation 6

Continue the current approach relative to site selection from a safety viewpoint, but select sites so that there are no unfavorable characteristics requiring unique or unusual design to compensate for site inadequacies.

HUD CONCURS. IT WOULD BE DIFFICULT TO EXCLUDE SITES WHICH COULD BE COMPENSATED BY GOOD DESIGN IMPROVEMENTS, PARTICULARLY IN AREAS IN THE NORTHEAST WHERE POPULATION DENSITIES INDICATE A NEED FOR MORE POWER AND REMOTENESS IS UNATTAINABLE. WE RECOMMEND FURTHER STUDY.

Recommendation 7

Revise Part 100 to specify that site approval be established at the earliest decision point in the review and to provide criteria that would have to be satisfied for this approach to be subsequently reopened in the licensing process.

HUD CONCURS.

Recommendation 8

Revise Part 51 to provide that a final decision disapproving a proposed site by a state agency whose approval is fundamental to the project would be a sufficient basis for NRC to terminate review. Such termination of a review would then be reviewed by the Commission.

The Task Force believes that the decision to terminate review should be reviewed by the Commission after there is assurance that the proposed site has officially and finally been rejected by a State.

THE DEPARTMENT TAKES THE POSITION THAT REFUSAL BY A STATE USUALLY REFLECTS STATE OFFICIAL ATTITUDES, THE POLITICAL IMPLICATIONS OF THE INSTALLATION, AND THE CONCERN OF AREA RESIDENTS AND THESE SHOULD BE WEIGHED CAREFULLY WHEN REVIEWING A STATE REJECTION.

Recommendation 9

Develop common bases for comparing the risks for all external events. The Task Force believes that an interdisciplinary effort should be undertaken with the objective of developing quantitative risk comparisons of all external events and natural phenomena. The disciplines should include seismology, hydrology, meteorology, mechanical and structural design, and accident analysis as well as probabilistic risk analysis. The study should result in the development of a methodology that will permit the conservatism in these varied disciplines to be better managed.

HUD AGREES WITH THE TASK FORCE OPINION ON THE NEED FOR AN INTERDISCIPLINARY EFFORT TO DEVELOP RISK COMPARISONS.

NUCLEAR REGULATORY COMMISSION

[10 CFR Parts 50, 51 and 100]

Environmental Impact Statement for Reactor Siting Criteria

AGENCY: U.S. Nuclear Regulatory Commission

ACTION: Notice of Intent to Prepare an Environmental Impact Statement for Revision of the Regulations Governing the Siting of Nuclear Power Plants.

SUMMARY: On July 29, 1980 the Nuclear Regulatory Commission published for comment "Advance Notice of Rulemaking: Revision of Reactor Siting Criteria" (ANR) in the Federal Register (45 FR 50350). As part of this rulemaking, the NRC intends to prepare an Environmental Impact Statement (EIS). This Notice of Intent requests comment on (1) the range of alternatives which should be evaluated for each of the items identified in the ANR as suitable to be addressed in the regulations, and (2) the issues which should be evaluated in the EIS.

DATES: Comment period expires January 16, 1981.

NOTE: Comments received after the expiration date will be considered if it is practical to do so, but assurance of consideration cannot be given except as to comments filed on or before that date.

ADDRESSES: Written comments should be submitted to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch.

Single copies of the "Advance Notice of Rulemaking: Revision of Reactor Siting Criteria" and the "Report of the Siting Policy Task Force," NUREG-0625, may be obtained without charge by writing to the Director, Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

IAEA Safety Guide 50-SG-54, "Site Selection and Evaluation for Nuclear Power Plants with Respect to Population Distribution," (International Atomic Energy Agency, Vienna, 1980) may be examined at the Commission's Public Document Room at 1717 H Street NW., Washington, DC, or at local public document rooms in the vicinity of nuclear power plant sites or copies may be purchased from UNIPUB, 345 Park Avenue South, New York, NY 10010.

FOR FURTHER INFORMATION: Contact Dr. William R. Ott, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, (301) 443-5966.

SUPPLEMENTARY INFORMATION: This Notice of Intent is part of the scoping process for the EIS which the NRC is planning to prepare in connection with the proposed revision of its regulations governing the siting of nuclear power plants. The purpose of this scoping process is to define both the alternatives (for specifying criteria for identified topics) which will be examined in detail and the issues that will be addressed in comparing the alternatives in the environmental impact statement.

Scope of the Rulemaking and the Environmental Impact Statement

The items under consideration for rulemaking were identified in "Advance Notice of Rulemaking; Revision of Reactor Siting Criteria" (45 FR 50350) (ANR) and are listed in Table 1. This set of items together with the restrictions established in the ANR establishes the presently intended scope of the rulemaking. Additional items identified by commenters will be considered if the NRC staff judges that they are sufficiently important to the overall success of this rulemaking that they require immediate resolution. Specific alternatives for establishing criteria with respect to some of these items were listed in the ANR. In addition, for the purposes of the scoping process for the EIS, the NRC staff will consider alternatives for criteria that may be identified during the comment period on this Notice of Intent.

Although the NRC staff considered a wide range of information in arriving at the recommendations¹ which formed the main thrust of the ANR, additional technical studies will be required to fully document the impacts of the proposed criteria and reasonable alternatives to those criteria. The NRC staff has developed a tentative outline for the EIS to aid in identifying areas in which additional studies will be needed. Appendix A presents this tentative outline with notations after appropriate sections indicating whether the ANR or the NRC FY 1980 Authorization Act is the primary basis for the section. Appendix B presents a more detailed discussion of the technical approach for assessing issues that the NRC staff believes may be important in making informed choices among the alternatives.

¹"Report of the Siting Policy Task Force," NUREG-0625, August 1979.

TABLE 1
ITEMS UNDER CONSIDERATION FOR RULEMAKING

Demographic criteria

Fixed exclusion distance
Fixed protective action distance
Population density
Population distribution

Minimum standoff distance from external hazards

Airports
LNG and LPG terminals and pipelines
Large quantities of explosive or toxic materials
Major dams
Navigable waterways which are transportation routes for hazardous materials
Other nuclear power plants

Interdiction of contaminated groundwater

Consideration of post-licensing changes in off-site activities

Prohibition of sites requiring unique or unusual design to compensate for site inadequacies

Site approval at earliest decision point; criteria for reopening

NRC review termination upon State agency disapproval

Relative to the issues identified in the appendices, comments will be most useful which:

1. Suggest other realistic alternatives to those presented in Appendix A, Chapter III (e.g., a specific approach or combination of approaches for establishing demographic criteria together with

a technical justification of the approach²). Indicate why any identified alternatives are not worthy of further consideration.

2. Address the relevancy of the issues identified in Appendix B and the staff's planned approach to analysis of these issues.
3. Identify and justify any other issues which should be considered in this rulemaking.

Scoping Process for the EIS

The scoping process for the EIS will consist of publication of the ANR and this Notice of Intent and consideration of the comments on each in preparation of the Scoping Summary Report. No public scoping meeting is planned; participation in the scoping process will be limited to written responses to this Notice of Intent. A special mailing of this Notice will be made to persons, organizations and agencies who have indicated an interest in this subject area. Federal agencies identified by the Council on Environmental Quality as having special expertise in this area will be included in this mailing. Other agencies which have jurisdiction by law or special expertise with respect to any environmental impact involved, or which are authorized to develop and enforce

²To help the public provide informed comment on the range of alternatives for setting demographic criteria which may be appropriate for consideration in the EIS, copies of IAEA Safety Guide 50-SG-54 "Site Selection and Evaluation for Nuclear Power Plants with Respect to Population Distribution" are available for examination at the Commission's Public Document Room at 1717 H Street NW., and at all local Public Document Rooms. This guide presents a survey of procedures used by regulatory authorities in IAEA member nations for considering population in reactor reviews. There is no special significance given to any of these approaches by the NRC staff but this summary does present most of the alternatives which may be reasonable to consider in establishing demographic criteria.

relevant standards are invited to participate in this scoping effort. Affected State and local agencies or any affected Indian tribes that wish to participate by commenting are invited to do so. At the conclusion of the comment period for this Notice of Intent, the NRC staff will assess the comments on both this Notice and the ANR; and will define the alternative criteria which will be considered in detail in the EIS. Since there will likely be considerable overlap and redundancy amongst various suggested alternative criteria, the staff will utilize its judgment and experience to establish a reasonable number of alternatives (which may differ from those tentatively listed in Appendix A) that have significant differences but have a good chance of equitably establishing appropriate siting restrictions for future nuclear power plants. The issues to be examined for each of the criteria will also be defined (see Appendix B).

The scoping process will be completed by the preparation and publication of a Scoping Summary Report. This report will include a final statement of the items that will be covered in this rulemaking, the reasons for deleting any of the items included in the ANR and a revised and more detailed outline for the EIS. A brief description of the reasons for including alternative criteria not presently identified, eliminating alternatives presently under consideration or combining similar alternatives will be presented. The report will also identify any issues with respect to these alternatives which have been included for detailed examination or have been dismissed from further consideration as peripheral, insignificant or adequately covered elsewhere. The report will also provide information on (1) the schedule for completion of the rulemaking, (2) related environmental studies, and (3) arrangements for others to prepare background information for the EIS. Copies of this report will

be distributed to those who participated in the scoping process by commenting on the ANR or Notice of Intent.

APPENDIX A

Tentative Table of Contents for Siting EIS

- I. Summary
 - I.1 Introduction
 - I.2 Description of Proposed Action
 - I.3 Description of Alternatives
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- II. Purpose and Need for the Action
 - II.1 Purpose of Promulgation of Reactor Siting Criteria
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- III. Identification of Alternatives
 - III.1 Introduction
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 - III.1.b Long Term Goals for Revision of Siting Criteria; Rationale for Selection of Criteria (ANR, Item A)
 - III.1.b.1 Separation of siting from design (LWR specific?)
 - III.1.b.2 Desired degree of remoteness; regionalization
 - III.1.b.3 Consideration of accidents beyond the design basis
 - III.1.b.4 Attainable risk for nuclear compared to risks from other power generation sources (Individual vs. Societal Risk)
 - III.2 Demographic Criteria (ANR, Item B; NRC FY 80 Authorization Act)
 - III.2.a Exclusion distance (ANR, Item B)

- III.2.b. Specification of population density limit (ANR, Item B)
 - III.2.b.1 Siting Policy Task Force recommendation (ANR, Item B, Alternative A)
 - III.2.b.2 Three tier approach (ANR, Item B, Alternative B)
 - III.2.b.3 Single limit (ANR, Item B, Question 2)
 - III.2.b.4 Incorporation of meteorological and topographical constraints (ANR, Item B, ACRS comments)
- III.2.c. Specification of population distribution limit (ANR, Item B)
 - ~~III.2.c.1 Siting Policy Task Force~~ recommendation (ANR, Item B, Alternative A)
 - III.2.c.2 Three tier approach (ANR, Item B, Alternative B)
 - III.2.c.3 Single value, uniform limit (ANR, Item B, Question 2)
 - III.2.c.4 Incorporation of meteorological and topographical constraints (ANR, Item B, ACRS comments)
- III.3 Restrictions on Proximity to External Hazards (ANR, Item C)
 - III.3.a. Practicality of proximity limitation (i.e. standoff distance) for each type of hazard (ANR, Item C, Alternative A)
 - III.3.b. Feasibility of design performance requirements (ANR, Item C, ACRS comments with regard to other nuclear plants)
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 - III.5.b. Generic responses restricting plant operation; criteria for action (ANR, Item F4, Questions 2 and 3)
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- III.6 No site characteristics requiring unique or unproven compensating design features. (Alternative is case-by-case design review.) (ANR, Item G)
- III.7 Site approval at earliest decision point. (Alternative is no action.) (ANR, Item H)
- III.8 Termination of Review Upon Disapproval by State Agency Whose Approval is Necessary (ANR, Item I)
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- IV.4 Socioeconomic Impacts
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- V.6 Unique or Unusual Design Prohibition
- V.7 Early Site Approval
- V.8 Deferral to State Agency Disapproval

VI. List of Preparers

VII. Appendices

APPENDIX B

Technical Approach to Detailed AnalysesI. Issue: Radiological consequences of accidentsProposed Analytical Approach: (EIS Section IV.1)

Proposed criteria will be compared with realistic alternatives on the basis of impacts on public health and safety. For demographic criteria this means that variation in doses to the maximally exposed individual and the population from a full range of accident releases must be examined for alternative ways of specifying constraints on population density and distribution. The consequences will be evaluated with an updated version of the Reactor Safety Study Consequences Model (CRAC) computer code. Existing sites and a hypothetical site will be evaluated. Consequences considered will include early fatalities, injuries, latent fatalities, and property damage. Both individual and societal risk will be evaluated but may differ in relative importance for establishing different criteria. (Comment on the role of societal versus individual risk as determinants of exclusion distance and population density and distribution limits would be useful.)

II. Issue: Feasibility of Protective ActionsProposed Analytical Approach: (EIS Section IV.2)

The topics under consideration for rulemaking with respect to demographic criteria and external hazards will be examined to determine

whether the capability to take protective action in the vicinity of a site under accident conditions might be impaired or enhanced by various choices of alternative criteria.

III. Issue: Definition of region

Proposed Analytical Approach: (EIS Section IV.3.a)

Alternative schemes of regionalization will be examined to determine a proper basis for establishing regional criteria. Socioeconomic and physiographic units will be examined to establish potential regional breakdowns. Effects of uniformity of population distribution, water resource restrictions and any other appropriate regional concerns will be considered when deciding on the proper regionalization scheme. (Comment would be useful with regard to appropriate determinants of region.)

IV. Issue: Site availability

Proposed Analytical Approach: (EIS Sections IV.3.a and IV.3.b)

Consistent with the intent of the NRC FY80 Authorization Act, the new demographic criteria should not preclude further siting of nuclear power plants in any region of the United States. An assessment will be made for each region that identifies the variation in availability of sites for nuclear power plants as a function of the structure of the criteria and the variation in numerical values as well as realistic constraints on siting such as water availability and violation of safety criteria. The benefits of regionally based criteria versus nationwide criteria will be examined. Basic information will be developed from existing siting studies which, taken together, cover large portions of the country.

V. Issue: Socioeconomic Impacts

Proposed Analytical Approach: (EIS Section IV.4)

The socioeconomic impacts of varying degrees of remoteness will be investigated. Economic impacts of increased transmission distances, impacts on land use and other factors will be addressed along with sociological penalties and inequities in distribution of cost and benefits of such siting.

VI. Issue: Severity of External Hazards

Proposed Analytical Approach: (EIS Sections IV.3.c and IV.5)

A literature review will be performed to establish the potential level of hazard associated with the external hazards listed in the ANR and any other appropriate topics. Staff practice for dealing with these hazards will be assessed. Available models for characterizing the effect of a hazardous external event will be evaluated. The feasibility of establishing a meaningful protective distance will be examined. The availability of sites associated with the demographic criteria proposed by the staff will be reexamined to determine whether the standoff criteria will significantly alter site availability.

VII. Issue: Engineering Alternatives to Standoff Distances

Proposed Analytical Approach: (EIS Sections III.3 and IV.5)

The feasibility of design performance requirements as opposed to specific standoff distances will be evaluated.

VIII. Issue: Precluding Siting of Nuclear Reactors in any Region of the United States.

Proposed Analytical Approach: (EIS Section IV.3.d)

Energy generation from any source has its associated risk and risks from some energy sources may be greater than that of the nuclear option. Therefore, it has been suggested that the siting criteria should not be so stringent as to preclude the use of nuclear power from any region of the United States. The implications of not precluding nuclear power from any region of the United States will be examined.

IX. Issue: Effect of Groundwater Intediction Criteria on Site Availability.

Proposed Analytical Approach: (EIS Section IV.3.e)

The effect on site availability of alternative siting criteria that assure the capability for groundwater interdiction would be examined.

X. Issue: Post-Licensing Land Use Control

Proposed Analytical Approach: (EIS Section IV.6)

The feasibility of passive and active controls on post-licensing land use in the vicinity of a nuclear plant would be explored. Alternative controls on population risk (given that criteria are exceeded) such as changes in operating procedures or authorized power level or additional risk reducing engineering systems would be addressed.

XI. Issue: Use of Existing Sites

Proposed Analytical Approach: (EIS Section IV.3.f)

The existing sites would be examined for various levels of criteria to determine which sites were acceptable under each proposal. The feasibility of adding additional units to each of these sites would then be examined and an estimate made by region of remaining siting capacity. Using the characteristics of the selected site, an estimate would be prepared of the availability of multi-unit sites as a modification of the availability information for the various demographic criteria and standoff distances.

XII. Issue: Use of Federal Lands

Proposed Analytical Approach: (EIS Section IV.3.f)

Federal land would be surveyed to establish suitability for location of single unit plants up through many-unit energy centers. The historical availability of Federal land would be explored for uses such as public power supply systems (Bonneville Power Authority, Tennessee Valley Authority, etc.), oil shale lease program, forestry timber management, water supply projects. The possible benefits would be examined regionally from well planned use of Federal lands to supplement areas already available to utilities and implement a multi-unit existing site approach. The degree of improvement in criteria that is possible if the availability associated with the recommended criteria is held constant after Federal lands are added would be assessed.

XIII. Issue: Use of Unusual or Unproven Engineering Design to Compensate for Site Deficiencies

Proposed Analytical Approach: (EIS Section IV.3.q)

An estimate would be made of the effect on site availability of instituting such a requirement, particularly where large areas might have a common deficiency which might preclude siting from a large region.

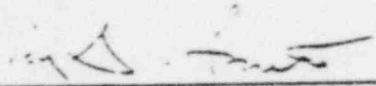
XIV. Issue: Termination of Review After State Disapproval

Proposed Analytical Approach: (EIS Section IV.8)

The implications of establishing automatic review termination with respect to various levels of State disapproval will be examined.

Dated at Bethesda, Maryland, this 17th day of November 1980.

For the Nuclear Regulatory Commission



Ray G. Smith, Acting Director
Office of Standards Development
U.S. Nuclear Regulatory Commission