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US NRC

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March 12, 1992

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Secretary of the Commission  
US Nuclear Regulatory Commission  
Washington DC 20555

Attention: Docketing and Services Branch

Comments on the 10 CFR Part 51 Proposed Amendment  
and the Supporting Documents for License Renewal

Written comments were invited to be submitted on a proposed amendment to 10 CFR Part 51 regulations as noticed in the Federal Register, Volume 56, Number 180, dated September 17, 1991. These comments are to be submitted by March 16, 1992. This regulation amendment will establish new requirements for environmental review of applications to renew operating licenses for nuclear plants. This letter forwards our comments.

The Nuclear Management and Resources Council (NUMARC) put together adhoc committees, of which we took part, to develop industry comments on the proposed amendment to 10 CFR Part 51 regulations and the Generic Environmental Impact Statement, NUREG-1437, including the supporting documents. We fully endorse the comments submitted by NUMARC and have not repeated those comments with our submittal.

Attachments 1 and 2 to this letter are memorandums put together for us by the law firm of Shaw, Pittman, Potts and Trowbridge. Attachment 1 discusses the use of average-bounding versus upper-bounding analysis in the Generic Environmental Impact Statement for generically evaluating individual effects when site-specific information is not available. The second attachment discusses our position on the requirement to demonstrate the cost-benefit of operating a nuclear plant rather than a coal-fired plant, that contradicts existing NRC and federal case law.

Attachment 3 includes comments on information contained in the Generic Environmental Impact Statement that is specific to our Monticello and Prairie Island Nuclear Plants. There are also comments on the draft Regulatory Guide DG-4002 and the draft Standard Review Plan, NUREG-1429. These remarks are in response to questions that arose when we used these documents during the writing of Monticello's Environmental Report Supplement for License Renewal.

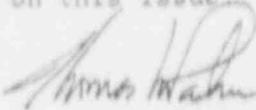
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Secretary of the Commission  
March 12, 1992  
Page 2 of 2

Northern States Power Company

Please contact us if you have any questions or further information is required on this issue.



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SHAW, PITTMAN, POTTS & TROWBRIDGE  
A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

MEMORANDUM

February 14, 1992

Comments to be Submitted on License Renewal GEIS  
Concerning Economic Evaluation of Alternatives  
to Renewal of Nuclear Plant Operati . License

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These comments are intended to be submitted on the proposed revisions to Part 51 addressing the requirement that a nuclear plant license renewal applicant demonstrate that it is cost-beneficial to operate a nuclear plant rather than a coal-powered plant.

The proposed rule sets forth the requirements for complying with NEPA in connection with consideration of operating license renewal of a nuclear power plant. The proposed amendment at issue is § 51.53(c)(3)(ii)(J), which would require the license renewal applicant to demonstrate that "[t]he replacement of equivalent generating capacity by a coal-fired plant has no demonstrated cost advantage over the individual nuclear power plant license renewal." Such a requirement would force a license renewal applicant to engage in an economic cost-benefit analysis of an alternative to the proposed action.

Under federal case law, "[a]n alternative which would result in similar or greater [environmental] harm need not be discussed." Sierra Club v. Morton, 510 F.2d 813, 825 (5th Cir.

1975). See also Massachusetts v. Andrus, 594 F.2d 872, 885 (1st Cir. 1979); Natural Resources Defense Council v. SEC, 606 F.2d 1031, 1054 (D.C. Cir. 1979); Citizens' Committee Against Interstate Route 675 v. Lewis, 542 F. Supp. 496, 540 (S.D. Ohio 1982); Trinity Episcopal School Corp. v. Harris, 445 F. Supp. 204, 221 (S.D.N.Y. 1978). A coal-fired plant is not environmentally preferable to a nuclear plant; therefore, a proposed rule which would force a license renewal applicant to engage in an economic cost-benefit analysis of an environmentally inferior alternative clearly contradicts federal case law.

Moreover, an economic consideration of an alternative is not required by NEPA. There is no such directive in the Act itself, nor a case which interprets NEPA to require such an analysis of an alternative:

While the consideration of pertinent alternatives requires a weighing of numerous matters, such as economics, foreign relations, national security, the fact remains that, as to the ingredient of possible adverse environmental impact, it is the essence and thrust of NEPA that the pertinent Statement serve to gather in one place a discussion of the relative environmental impact of alternatives.

Natural Resources Defense Council v. Morton, 458 F.2d 827, 834 (D.C. Cir. 1972) (emphasis added). Any economic analysis of an alternative is clearly beyond the scope of the Act and an interference with its objective.

In addition, NRC adjudicatory decisions make clear that NEPA is concerned with environmental alternatives, not economic alternatives: "But if there are no preferable environmental alternatives, such cost-benefit balancing does not take place. Manifestly, nothing in NEPA calls upon us to sift through environmentally inferior alternatives to find a cheaper (but dirtier) way of handling the matter at hand . . . . In short, as far as NEPA is concerned, cost is important only to the extent it results in an environmentally superior alternative." Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-458, 7 NRC 155, 162-63 (1987). See also Dairyland Power Cooperative (La Crosse Boiling Water Reactor), LBP-82-58, 16 NRC 512 (1982); Cincinnati Gas and Electric Company (William H. Zimmer Nuclear Station), LBP-80-24, 12 NRC 231 (1980); Public Service Electric and Gas Company (Salem Nuclear Generating Station, Unit 2), DD-80-17, 11 NRC 596 (1980); Virginia Electric and Power Company (North Anna Nuclear Power Station, Units 1 and 2), ALAB-584, 11 NRC 451 (1980).

This line of NRC cases sets forth in clear, unambiguous terms the Commission's position that NEPA requires a hard look at environmental impacts. If an environmentally superior alternative does not exist, economics should not be discussed. Because a coal plant is not environmentally preferable to a nuclear

plant, the EIS is prohibited from addressing the economic cost-benefits of a coal plant.

In conclusion, a rule which requires a nuclear plant license renewal applicant to demonstrate that it is cost-beneficial to operate a nuclear plant rather than a coal-fired plant directly contradicts existing NRC and federal case law. Furthermore, the requirement of such an economic analysis misconstrues the purpose of NEPA and may very well subvert the objective of the Act itself. We therefore respectfully ask the Commission to reconsider its proposed rule in light of the potential litigation if such a rule is promulgated.

MEMORANDUM

February 6, 1992

Average-bounding vs Upper-bounding Analysis

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SUMMARY AND BACKGROUND

In anticipation of applications from nuclear power plants to renew their operating licenses, the Nuclear Regulatory Commission (NRC) has proposed revisions to its license renewal regulations, 56 Fed. Reg. 47,016 (1991). The proposed rulemaking is supported by a generic environmental impact statement (GEIS) which discusses 104 potential environmental effects of license renewal, covering all known or reported types of impacts related to refurbishment and continued operation of nuclear power plants. Site-specific and plant-specific information is employed where available to form conclusions on each impact and its severity. Where specific information on each plant is not available to the NRC, representative or case study information is evaluated. These comments address whether it is necessary for the NRC to conservatively bound its impact analysis when generically evaluating individual effects for which site-specific information is not available. The upper-bounding methodology employed in the GEIS in several sections goes beyond what is required by the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321-4370 (1988). The GEIS uses conservative, upper-bounded estimates in

its analysis of the impacts of radiation doses to the public and to refurbishment workers, in its selection of case study plants for socioeconomic impacts, in its evaluation of the effects of cooling tower operation on crops and ornamental vegetation, and in several other instances. Instead, estimates based on representative or average-bounded effects should be used to properly reflect the scientific probabilities of the environmental impacts of license renewal.

The NRC is not required by the case law to use conservative and extreme impact analysis methods in environmental impact statements it prepares. NEPA requires that federal agencies prepare a detailed statement disclosing the environmental and other impacts of a proposed action. 42 U.S.C. § 4332 (1988). The preparation of this environmental impact statement (EIS) is a procedural requirement; NEPA does not mandate particular results, merely that an agency take a "hard look" at the effects on the environment that will be caused by the proposed action. Kleppe v. Sierra Club, 427 U.S. 390, 410, 96 S. Ct. 2718, 2730 (1976). Agencies need not discuss every conceivable alternative to a proposed action, but should be guided by a "rule of reason," and they are not required to probe remote or speculative consequences of a proposed action. Vermont Yankee v. Natural Resources Defense Council, 435 U.S. 519, 551, 98 S. Ct. 1197, 1216 (1978)

(citing Natural Resources Defense Council v. Morton, 458 F.2d 827, 837 (D.C. Cir. 1972)). Similarly, NEPA does not require that an EIS evaluate "worst-case" scenarios, but simply the reasonably foreseeable significant adverse effects of the proposed action. Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 354-355, 109 S. Ct. 1835, 1848 (1989).

Neither the NRC's regulations implementing NEPA,<sup>1/</sup> nor the regulations of the Council on Environmental Quality (CEQ) implementing NEPA,<sup>2/</sup> require the NRC to use conservatively bounded impact analysis.<sup>3/</sup> CEQ regulations require agencies to include sufficient detail in an EIS to allow a decisionmaker to make an informed decision. 40 C.F.R. § 1502.1 (1991). In the face of incomplete or unavailable information, however, agencies are required only to evaluate reasonably foreseeable significant adverse effects, bounded by a rule of reason and supported by credible scientific evidence. 51 Fed. Reg. 15,620 (1986)

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<sup>1/</sup> 10 C.F.R. § 51 (1991).

<sup>2/</sup> 40 C.F.R. §§ 1500-1507 (1991).

<sup>3/</sup> The NRC's policy is to be voluntarily guided by CEQ's regulations, subject to certain conditions. 10 C.F.R. § 51.10. (1991). CEQ regulations have been adopted in part or in whole by many other agencies and courts have held that CEQ's regulations are entitled to substantial deference. Andrus v. Sierra Club, 442 U.S. 347, 358; 99 S. Ct. 2235, 2341 (1979).

(codified at 40 C.F.R. §1502.22 (1991)). Similarly, NRC regulations impose no additional requirements justifying more conservative analysis. NRC regulations require consideration of major points of view concerning the environmental impacts of a proposed action. 10 C.F.R. § 51.71(b) (1991). Neither set of regulations requires the type of analysis performed in several instances in the GEIS. 10 C.F.R. § 51.71(b) (1991).

The NRC's approach in the GEIS does not follow established NEPA case law or regulations. The NRC, when it lacks site-specific information for each plant for each impact may under the law choose a sample of plants that represent average values for each impact and form its conclusions on that basis, rather than choosing extreme examples. In some instances the NRC has followed these strictures. In evaluating groundwater impacts, the GEIS employs four representative subsets of settings where groundwater is an issue and evaluates only plants where potential groundwater problems have been identified. GEIS at 4-11. In evaluating the socioeconomic impacts of license renewal on the work force, the NRC developed tables with mean (average) employment statistics to guide its determinations of the degree of impact. Tables 2-3, 2-4, GEIS at 2-25. In several instances, however, the NRC employs an upper-bounded, conservative analysis of the impact of license renewal on a particular environmental

feature. For example, the GEIS conservatively bounds the activities that would be required at a majority of plants to complete refurbishment. GEIS at 2-27. Likewise, the NRC uses a conservative, admittedly overestimating formula to calculate the average radiation dose to the public and to refurbishment workers. GEIS at 2-22, 3-41. Such an approach is not required by NEPA. The implementing regulations and NEPA case law suggest a more sensible and efficient approach.

THE NRC IS AUTHORIZED TO USE GENERIC RULEMAKING  
TO DETERMINE THAT SOME SPECIFIC RISKS NEED NOT  
BE ASSESSED IN INDIVIDUAL PROCEEDINGS

The NRC has made use of generic rulemaking before, and these procedures have been endorsed by the courts. CEQ authorize this practice in its regulations.<sup>4/</sup> Such an approach saves agency time and resources and allows both officials and the public to focus on the important aspects of the decision at the appropriate time in logical, manageable pieces. The NRC has, in the case of new regulations for license renewals, chosen to evaluate the effects of regulatory change generically. Several factors make this possible: the effects of continued operation are discernible from historic data, the same time frame and regulatory safeguards

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<sup>4/</sup> 40 C.F.R. § 1502.4(c) (1991).

apply to all license renewals, and many of the circumstances and consequences of renewal are amenable to generic analysis.

Nothing in the regulations or case law require an agency to use upper-bounded estimates in its impact analysis when it determines that generic assessment is meaningful and efficient. Rather, disclosure of the impacts of the action based on an average value is sufficient for NEPA, even under generic rulemaking authority.

Provided that generic analysis is appropriate, the methods chosen in specific instances by the NRC must be given deference by the courts; the NRC is not required to exceed these standards to win approval of its EIS. The Supreme Court upheld the NRC's generic rule-making ability in Baltimore Gas & Electric Co. v. Natural Resources Defense Council, 462 U.S. 87, 103 S. Ct. 2246 (1983). In that case, the NRC had determined that uncertainties about the disposal of nuclear waste were not sufficient to affect a licensing decision for any plant and promulgated Table S-3 containing this generic determination. In reaching its generic conclusion, the NRC enveloped all plants into a single category and evaluated the generic effects of the fuel cycle and disposal of nuclear waste. The Supreme Court reversed the Court of Appeals, holding that the rulemaking is permissible because it is

reasonable and not arbitrary and capricious for the NRC to assume that zero releases would occur from, and that all political and technical problems would be resolved in the search for, a permanent federal repository for nuclear waste. The case thus upholds the NRC's determination that although uncertainties exist, for these limited purposes it is permissible to base its evaluation of impacts on the assumptions the Commission believes the probabilities favor. 462 U.S. at 95; 103 S. Ct. at 2251 (citing 44 Fed. Reg. 45,369 (1979)).<sup>5/</sup>

NEPA's disclosure requirements do not dictate the form or methodology of an agency's environmental statements. Rather, those decisions remain firmly with the agency. In Vermont Yankee v. Natural Resources Defense Council, 435 U.S. 519, 98 S. Ct. 1197 (1978), the Supreme Court - overruling the Court of Appeals - held that the identification of generic safety concerns in a technical advisory committee report used by the Licensing Board did not require further elucidation to satisfy NEPA. Rather, the

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<sup>5/</sup> Important in the Court's decision were considerations that the NRC carefully considered and acknowledged the uncertainties involved, but used its expertise to determine that they could be resolved. Further, the NRC took a generally conservative approach balancing over-pessimistic conclusions in the Table with the possibly over-optimistic zero release conclusion and used the Table for the strictly limited purpose of precluding review of fuel cycle effects during the operating license stage.

Court discussed the limited role of judicial review and the high degree of deference appropriately given to agencies when making decisions about technical matters within the realm of their special expertise. The Court made clear that reviewing courts are not free to impose additional procedural requirements on the rulemaking process if the lead agency involved does not choose to do so. Vermont Yankee, 435 U.S. at 545-546, 98 S. Ct. at 1212-1213. See also Baltimore Gas, 462 U.S. 87, 103, 103 S. Ct. 2246, 2255 (1983) ("[A] reviewing court must remember that the Commission is making predictions, within its area of special expertise, at the frontiers of science. When examining this kind of scientific determination, as opposed to simple findings of fact, a reviewing court must generally be at its most deferential.")

In individual instances in the GEIS the NRC may rely on the reasoning of Baltimore Gas and Vermont Yankee and evaluate the risks that the NRC believes the probabilities and the best scientific evidence indicate are likely impacts, according to its own procedures. The GEIS is already a conservative document overall. Its purpose is to evaluate the impacts of refurbishment and a twenty-year period of renewed operation for nuclear power plants that have been in operation for years or decades. The NRC has available to it extensive representative information and

operating histories that make it possible to reliably predict which scenarios are likely to occur and the extent of the environmental impact of each. All of the plants that may apply for license renewal - with a sole exception - were the subject of complete environmental impact statements before they were licensed.

So long as an agency complies with the rulemaking provisions of the Administrative Procedure Act, 5 U.S.C. § 553 (1988), and its statutory duties, courts may not require the agency to institute additional procedural requirements, such as the use of overly cautious analysis methodologies. Generic rulemaking is an efficient, responsible, and appropriate methodology well within the purview of the NRC. When a generic rulemaking discusses individual impacts it need only discuss those reasonably foreseeable significant adverse impacts or the major points of view on the issue. It is not required to dwell on extreme or remote potentialities.

THE NRC SHOULD EVALUATE THE MAJOR POINTS OF VIEW OR REASONABLY FORESEEABLE SIGNIFICANT ADVERSE IMPACTS OF LICENSE RENEWAL; "WORST-CASE" ANALYSIS IS NOT REQUIRED

The NRC's approach in several instances in the GEIS is to employ worst-case analysis in its discussions of particular impacts. By employing extreme rather than average values the NRC

focuses on unlikely and unrepresentative possible impacts, which are not applicable to most plants and which according to credible scientific evidence are not likely to occur at all. This is in effect supplying worst-case analysis and this is not required. The NRC, for example, in evaluating socioeconomic impacts through seven case study plants chooses Indian Point to represent the upper bounds because: "Of all U.S. nuclear power plants, Indian Point has the highest combination of population density and proximity to urban centers . . . ." GEIS at 3-6. Wolf Creek was similarly chosen because it is one of the lowest such combinations. A more reasonable selection would draw case study plants with values in the middle range, that better represent the bulk of nuclear plants subject to license renewal. Similarly, in evaluating impacts of cooling tower operation on surface water use, the GEIS provides detailed information on Limerick Generating Station and the Palo Verde Nuclear Generating Station because they, almost uniquely, offer worst-case analysis of competing water use conflicts. The NRC dwells on the potential effects of these unique situations despite its conclusion that existing state or federal water use permits are adequate to deal with the issue. GEIS at 4-24, 4-25.

Worst-case analysis, formerly required in CEQ regulations, was withdrawn by CEQ in 1986 and the withdrawal upheld by the

U.S. Supreme Court. 51 Fed. Reg. 15,619 (1986), as codified in 40 C.F.R. § 1502.22 (1991); Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 109 S. Ct. 1835 (1989). The NRC did not adopt this requirement into its regulations implementing NEPA and has never been bound by it. Limerick Ecology Action v. U.S. Nuclear Regulatory Commission, 869 F.2d 719, 743 (3d Cir. 1989).

In retracting the worst-case analysis requirement from its regulations, CEQ stated that worst-case analysis is "an unproductive and ineffective method of achieving those goals; one which can breed endless hypothesis and speculation." 51 Fed. Reg. at 15,620. The Supreme Court in upholding CEQ's amendment to its regulations noted that substantial deference was appropriate because there appeared to have been good reason for the changes in the regulations. Robertson v. Methow Valley, 490 U.S. at 355-356, 109 S. Ct. at 1848. The worst-case requirement had been seriously criticized, the amendment was designed to better serve the functions of an EIS, and the old rule appeared to distort the decisionmaking process by overemphasizing highly speculative harms. The Court agreed that CEQ had sufficient reason to amend the provision. Id.

Instead of worst-case analysis, CEQ regulations now provide that agencies must disclose the fact of incomplete or unavailable

information, acquire that information if reasonably possible, and evaluate reasonably foreseeable significant adverse impacts even in the absence of complete information.<sup>6/</sup> The agency is required to do this evaluation "based upon theoretical approaches or research methods generally accepted in the scientific community." 40 C.F.R. § 1502.22(b) (1991). CEQ believed this approach provided a "wiser and more manageable approach" and would better inform both the public and agency decisionmakers. 51 Fed. Reg. at 15,620. Even if CEQ regulations were binding upon the NRC, they do not require overly conservative or pessimistic or remote possibilities to be analyzed; in fact, the regulations intentionally disavow this type of analysis and suggest more reasonable and productive means. The NRC's regulations require consideration of major points of view about the potential effects of the proposed action.<sup>7/</sup> "Major" is not synonymous with "every conceivable" or "remote."

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<sup>6/</sup> CEQ defines "reasonably foreseeable" to include potential impacts that have a low probability of occurring, but catastrophic consequences, provided that analysis of these impacts is supported by credible scientific evidence, not based on pure conjecture, and within the rule of reason. 40 C.F.R. §1502.22(b) (1991).

<sup>7/</sup> "To the extent sufficient information is available the draft environmental impact statement will include consideration of major points of view concerning the environmental impacts of the proposed action and the alternatives, and contain an analysis of significant problems and objections raised...." 10 C.F.R. § 51.71(b) (1991).

Neither should analysis of remote and speculative consequences be required in an EIS. Case law makes it quite clear that agencies should be guided by a rule of reason in performing all aspects of EIS analysis. Vermont Yankee v. Natural Resources Defense Council, 435 U.S. 519, 555, 98 S. Ct. 1197, 1215 (1978) ("To make an impact statement something more than an exercise in frivolous boilerplate the concept of alternatives must be bounded by some noting of feasibility." San Luis Obispo Mothers For Peace v. Nuclear Regulatory Commission, 751 F.2d 1287, 1300 (D.C. Cir. 1984); vacated in part on other grounds, 789 F.2d. 26 (D.C. Cir. 1986); cert. denied, 479 U.S. 923, 107 S. Ct. 330 (1986). ("As a number of courts have held, Environmental Impact Statements need not address 'remote and highly speculative consequences.' Under this well-established 'rule of reason,' agencies need not discuss in detail events whose probabilities they believe to be inconsequentially small."); Limerick Ecology Action v. U.S. Nuclear Regulatory Commission, 869 F.2d 719, 739 (3d Cir. 1989) ("It is undisputed that NEPA does not require consideration of remote and speculative risks.").

#### CONCLUSION

As the NRC is aware, for all but one of the plants that may seek license renewal, a complete EIS has been published which

disclosed in detail site-specific impacts that could be anticipated from plant operation. The GEIS is addressing the continuation of these existing operations. Acting conservatively, the NRC has decided that NEPA still requires that full disclosure be made of the potential environmental impacts of the renewal of nuclear power plant operating licenses. Nothing, however, in the statute, the regulations, or case law require the NRC to be extremely conservative both in choosing to reevaluate these impacts and in selecting the worst-case impacts for the details of the EIS.

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COMMENTS TO NRC

DOCUMENT	PAGE	COMMENT	CHANGE
10 CFR Part 51 Proposed Rule Federal Register	Page 47031 Table B-1	Under the category Aquatic Ecology (for plant with once-through head dissipation systems) heat shock, it states an appro. Clean Water Act 316 determination is required which is a typographical error.	A Clean Water Act 316(a) determination is required for heat shock.
Draft Regulatory Guide DG-4002	Page 16	It states that if both 316(a) and 316(b) documents are available, item C may be omitted. This does not agree with the Environmental Standard Review Plan (NUREG-1429) which eliminates the information required by items B, C and D if the 316(a) and 316(b) are available.	Change the sentence in the Draft Regulatory Guide to read, "If the required documents are available, items B, C and D may be omitted."
Draft Regulatory Guide DG-4002  Standard Review Plan NUREG-1429	Page 27  Page C-21	The requirements of the Draft Reg. Guide and the Standard Review Plan do not match. If items A and B of the Regulatory Guide are met, only item C is omitted. The Standard Review Plan omits items C through G. Also, the Draft Regulatory Guide contains item H which the Standard Review Plan does not.	Change Regulatory Guide to read that "If information provided in A and B indicate that the nuclear power plant is in a medium or high population area and not in an area where growth control measures that limit housing development are in effect, items C through H may be omitted." Item H should also be added to the SRP list of items.
Draft Regulatory Guide DG-4002  Standard Review Plan NUREG-1429	Page 30  Page C-45	The Draft Regulatory Guide requires under item I that the magnitude of potential impact on health from shock-hazard be discussed if item A is not met. The SRP has no discussion of review of impact on health.	In the Standard Review Plan, add an item I to the list of items that need to be discussed if a demonstration that the high-voltage transmission lines meet the National Electric Safety Code can't be met.

## COMMENTS TO NRC

DOCUMENT	PAGE	COMMENT	CHANGE
Generic Environmental Impact Statement NUREG-1437	Page 7-7 Section 7.2.3	Northern States Power's Pathfinder plant went through the process of removing and shipping its vessel last summer as part of its decommissioning.	The decommissioning work completed on the Pathfinder plant could be discussed in this section. It will continue to have a byproduct license.
GEIS NUREG-1437	Page 7-8 Table 7.1 line 16	The Pathfinder plant is located by Sioux Falls, South Dakota	Change to read Sioux Falls, S.D.
GEIS NUREG-1437	Page A-41 Line 2	The Monticello Nuclear Plant is located 35 miles from Minneapolis	Change "30 miles" to "35 miles".
GEIS NUREG-1437	Page A-41 Line 26	The amount of land Northern States Power owns at the Monticello site is 2150 acres.	Change "1325 acres" to "2150 acres".
GEIS NUREG-1437	Page A-41 Lines 29 and 40	The 1990 census information is available so it should be used to show populations.	Minneapolis 1990 census found it to have a population of 368,380. The 1990 population within a 50-mile radius of the Monticello Plant is estimated at 2,240,000.
GEIS NUREG-1437	Page A-41 Line 33	The land that the Monticello Nuclear Plant is located on was annexed to the town of Monticello.	Change 'Nearby Features' to read "The business district of Monticello is about 2 miles SE."
GEIS NUREG-1437	Page A-52 Line 30	The 1990 census information is available so it should be used to show populations.	Minneapolis 1990 census found it to have a population of 368,380.
GEIS NUREG-1437	Page A-52 Line 33	The land use within 5 miles of the Prairie Island Plant would be better described as dairy farming and agricultural.	Change the words "vegetable canning" to "agricultural."
GEIS NUREG-1437	Page A-52 Line 34	The Prairie Island Nuclear Plant site was annexed to the town of Red Wing.	Change 'Nearby Features' to read "The business district of the town of Red Wing is about 6 miles SE."

## COMMENTS TO NRC

DOCUMENT	PAGE	COMMENT	CHANGE
GEIS, NUREG-1437	Page H-15 Line 5	The Net MWe given for Monticello Nuclear Plant is not 525 MWe.	Change the 525 MWe to the amount of 536 MWe.
GEIS, NUREG-1437	Page H-15 Line 9	The value of 14,200 hours given for replacement power for Monticello is too large.	It has been estimated that the amount of replacement power required above the 6 weeks needed for refueling will be less than 2000 hours for Monticello.
GEIS, NUREG-1437	Page H-15 Line 6	The value for refurbishment at the Monticello Plant is approximately 4 times larger than found in recent calculations of refurbishment costs.	Re-evaluate the use of the Monticello cost data from the Sandia National Laboratories report, SAND88-7095, "Cost Savings from Extended Life Nuclear Plants".
GEIS, NUREG-1437	Page H-22 Line 19	It is not clear if the value of \$20 per kW(e) for the increased regulatory costs can be used as a standard for the operational cost maximum calculation or if a new value for each plant must be found.	Clarify if the value of \$20 per kW(e) is acceptable for use in calculating the operation cost maximum using the equation on Page H-29. If not, what is that number based on?
GEIS, NUREG-1437	Page H-28 Lines 9 and 11	What is considered to be operations, maintenance and capital costs can vary between utilities.	A description of what goes into the operations and maintenance and capital costs should be included so that it is standardized for users of this table. FERC Form 1 information may be a good source.
GEIS, NUREG-1437	Page H-29 Line 14	It is difficult to assess the source of each of the values in the equation used to calculate the operational cost maximum.	A detailed description of the derivation of this equation should be given to increase the understanding of the factors that are included when this equation is used.