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UNITED STATES OF AMERICA

ATOMIC ENERGY COMMISSION

In the Matter of	)	
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NORTHERN STATES POWER COMPANY	)	Docket No. 50-263
	)	
Monticello Nuclear Generating Plant, Unit 1	)	

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APPLICANT'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW IN THE FORM OF A PROPOSED INITIAL DECISION, PART I, ORDERING THE ISSUANCE OF A PROVISIONAL OPERATING LICENSE AUTHORIZING FUEL LOADING AND LOW POWER STARTUP TESTING

June 19, 1970

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PRELIMINARY STATEMENT

1. On August 1, 1966, Northern States Power Company (applicant) filed with the Commission an application for a license to construct and operate the Monticello Nuclear Generating Plant with a boiling water nuclear reactor designed to operate at power levels of up to 1670 megawatts thermal. Following a review of the application, including eight amendments thereto, by the Commission's regulatory staff and the Advisory Committee on Reactor Safeguards (ACRS), a public hearing was held before an Atomic Safety and Licensing Board to consider whether a provisional construction permit should be issued by the Commission. There were no intervenors and the hearing was an uncontested proceeding. Pursuant to an order by that Board in its Initial Decision dated June 19, 1967, the Commission's Director of

Regulation issued a provisional construction permit authorizing the construction of the Monticello Nuclear Generating Plant, Unit 1, on the Mississippi River in Wright County, Minnesota.

2. The applicant has proceeded to construct the plant and expects it to be complete and ready for fuel loading about four weeks following the return of the sheetmetal workers to the site following settlement of their strike.[1/] In support of the applicant's request for a license to load the fuel and operate the reactor at its rated power level of 1670 megawatts thermal, the applicant has submitted Amendments No. 9 through 27 to the application during the period of November 7, 1968, to May 19, 1970.

3. Pursuant to a notice of hearing published by the Commission in the Federal Register on March 11, 1970 (35 Fed. Reg. 4344) this Atomic Safety and Licensing Board (Board) held a prehearing conference at the Wright County Courthouse, Buffalo, Minnesota on April 7, 1970. In response to expected public interest in this proceeding the public hearing was removed to the United States Federal Courthouse in St. Paul, Minnesota. The published notice of hearing specified seven issues for this Board to

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1/ Tr. 1334

consider at the hearing in determining whether a provisional operating license should be issued to the applicant.[2/]

2/ The Commission's notice of hearing published on March 11, 1970, at 35 Fed. Reg. 4344, specified the following issues to be considered at the hearing:

1. Whether the applicant has submitted to the Commission all technical information required by Provisional Construction Permit No. CPPR-31, the Act, and the rules and regulations of the Commission to complete the application for the provisional operating license;

2. Whether construction of Unit 1 has proceeded and there is reasonable assurance that it will be completed in conformity with Provisional Construction Permit No. CPPR-31, the application, as amended, the provisions of the Act and the rules and regulations of the Commission;

3. Whether there is reasonable assurance (i) that the activities authorized by the provisional operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with rules and regulations of the Commission;

4 Whether the applicant is technically and financially qualified to engage in the activities authorized by the provisional operating license in accordance with the rules and regulations of the Commission;

5. Whether the applicant has furnished to the Commission proof of financial protection in accordance with 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements", of the Commission's regulations;

6. Whether there is reasonable assurance that Unit 1 will be ready for initial loading with nuclear fuel within 90 days from the date of issuance of the provisional operating license; and

7. Whether issuance of the provisional operating license under the terms and conditions proposed will be inimical to the common defense and security or to the health and safety of the public.

4. Petitions for leave to intervene in the proceeding were received from, and granted to:

a. Minnesota Environmental Control Citizens Association (MECCA);

b. Mr. Michael Donahue, a resident of Elk River, Minnesota (prior to the reconvening of the hearing on June 19, 1970, Mr. Donahue advised the regulatory staff that he was withdrawing as an intervenor from the proceeding);

c. Messrs. Kenneth Dzugan, Theodore Popin, and George B. Burnette III, graduate students at the University of Minnesota.

5. Limited appearance statements were received from:

a. Mrs. Celeste M. Colson, Cedar, Minnesota.

b. Mrs. Peter Kreisman, Minnesota Committee for Environmental Information.

c. Mr. William Cunningham, Northern Star Chapter, Sierra Club.

d. Mr. DeZiel, St. Paul Trades and Labor Assembly.

e. Mrs. Joseph Waxweiler, Albertville, Minnesota.

f. Mr. Kenneth J. Fitzpatrick, City of St. Paul.

g. Mrs. O. J. Janski, League of Womens Voters, St. Paul, Minnesota.

h. Mr. John Rose, Minnesota Conservation Federation, Hopkins, Minnesota.

i. Mr. Donald W. Andrews, Chairman Minnesota Environmental Defense Council, St. Cloud, Minnesota.

j. Mr. John Pegors, Clear Air-Clear Water Unlimited.

k. Mr. Fred C. Norton, St. Paul Planning Board.

l. Mrs. Paula Davis.

A limited appearance pursuant to 10 CFR 2.715 (c) was entered by the Minnesota Pollution Control Agency.[3/]

6. Public hearings were held on April 28 through May 1, 1970, and June 15 through June 18, 1970, to receive the statements of the limited appearers, all of the direct testimony of the parties to the proceeding and substantially all of the cross examination of the parties. The public hearing was adjourned on June 18 pending disposition of the objections of intervenors MECCA and Dzugan et. al. to certain deletions in regulatory staff inspection reports furnished by the Director of Regulation in response to a Board subpoena. The deleted material was determined by the Director of Regulation, under the provisions of 10 CFR 9.10 (c), to be exempt from production or disclosure. The Director of Regulation found that the production or disclosure of the deleted material would be contrary to the public interest.[4/]

3/ Tr. 333

4/ AEC regulatory staff response to the Atomic Safety and Licensing Board Subpoena, May 8, 1970, p. 4.

7. The information deleted from the inspection reports pursuant to the determination of the Director of Regulation consists of (1) names of persons, other than ABC personnel, who provided information during the inspections; (2) references to ABC internal memoranda, instructions, including inspection techniques and meetings; (3) references to other identified facilities; and (4) information of a proprietary nature. Category (4) deletions constitute the very substantial portion of the deleted material. Applicant, on behalf of its contractors, the owners of the proprietary data, offered to make such data available to intervenors MECCA and Dzugan et. al. for their use in conducting cross examination in the hearing subject to appropriate safeguards to protect the proprietary nature of the material.[5/] MECCA and Dzugan et. al. rejected the offer objecting that the offer did not provide for full disclosure to the public of the proprietary data.[6/] The sole remaining area of cross examination is that which the intervenors MECCA and Dzugan et. al. may wish to conduct on the basis of the inspection reports. After notice by the Board that it would entertain a motion by applicant for authority to load fuel and conduct low power startup testing, both MECCA and Dzugan et. al. rejected the opportunity provided by the Board to conduct any cross examination based on the deleted version of the inspection reports furnished by the regulatory staff without prejudice to any subsequent rights to conduct

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5/ Tr. 1047 - 1050

6/ Tr. 1052 - 1053

such cross examination.7/ The Board announced its intention to certify certain questions with respect to the deletions by the Director of Regulation to the Atomic Safety and Licensing Appeal Board and/or the Commission.8/

8. To avoid the possibility of costly delay in initiating fuel loading and low power startup testing pending the disposition of the objections by the intervenors MECCA and Dzugan et. al. to the deletions in the inspection reports, applicant moved that this Board, without prejudice to the Board's consideration of the issues set forth in the notice of hearing as they relate to the proposed full power provisional operating license, order as promptly as practicable the issuance of a provisional operating license authorizing fuel loading and low power startup testing at a power level not to exceed five megawatts thermal and subject to the following conditions:

(a) The reactor vessel head shall not be in place;

(b) The license, including the technical specifications incorporated therein by reference and attached thereto as Appendix A, shall be in the form of AEC regulatory staff exhibit number 1 except as amended by certain errata to the technical specifications which were introduced into the record,9/ and except that the maximum power level set forth in Sections 3A and 3B of the license shall be five megawatts thermal, and except that

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7/ Tr. 1322 - 1324

8/ Tr. 1289

9/ Tr. 1329

the reference to Amendments 9 through 25 in section 1 of the license shall be modified to read "Amendment Numbers 9 through 27"; and

(c) Such license shall be issued upon verification by the Division of Compliance, that the Monticello Nuclear Generating Plant, Unit 1, is complete and ready for initial fuel loading as described in the testimony introduced in support of the motion;[10]

Applicant also moved that the initial decision authorizing the issuance of the license to load fuel and conduct low power startup testing shall become effective pursuant to Section 50.57 (e) of 10 CFR Part 50, ten days after its issuance subject to:

(a) The review thereof and further decision by the Atomic Safety and Licensing Appeal Board, upon exceptions, if any, filed by any party, and

(b) Such order as the Atomic Safety and Licensing Appeal Board may enter upon any such exceptions, or upon its own motion within 45 days after the issuance of such initial decision.[11]

9. The authority requested by the applicant is for initial fuel loading and low power startup testing only. Both the fuel loading and the low power startup testing will be done in accordance with detailed written procedures and under the technical direction of General Electric, the manufacturer of the reactor.[12]

10/ Tr. 1334 - 1337; Tr. 1433 - 1437

11/ Tr. 1331 - 1333

12/ FSAR, Appendix D, §§ 1.2.2 and 5.2

10. The low power startup testing program is conducted during and after fuel loading at atmospheric pressure without the reactor vessel head in place, and at power levels less than five megawatts thermal. This phase of the startup program includes: control rod drive control and withdrawal sequence tests, initial critical and shutdown margin verifications, radiation measurements, source range monitor performance checks, and installation of neutron sources.12/

11. This Initial Decision, designated for clarification as Part I, is concerned solely with the applicant's request for a provisional operating license authorizing fuel loading and low power startup testing. This Board's Initial Decision, Part II, concerning the application for a full power provisional operating license, will not be developed until after the conclusion of these proceedings.

CONTENTS OF APPLICATION AND RECORD OF PROCEEDING

12. Following issuance of the construction permit, the applicant submitted Amendment No. 9 to the application which superseded in their entirety the application for a construction permit and the previous eight amendments. Amendment No. 9 included the applicant's Final Safety Analysis Report (FSAR) which was thereafter supplemented by Amendments 10 through 27

12/ FSAR, Appendix I, § 5.3

to the application. The application and the record of the proceeding contain much detailed information about the plant, including data and information about the site and the basis of its suitability, the design and construction of the plant, quality assurance and quality control programs, engineered safeguards, design features not fully developed and evaluated at the time construction was authorized, proposed technical specifications governing operation of the plant, emergency plans, the applicant's technical and financial qualifications, and the plant's bearing upon the common defense and security.

Features of the Plant

13. The site of the Monticello Nuclear Generating Plant, Unit 1, consists of 1325 acres located partially in Sherburne County (on the east bank of the Mississippi River) and partially in Wright County (on the west bank of the River). The plant is located in Wright County. The site is about 22 miles southeast of St. Cloud (1960 population 33,815) and 30 miles northwest of Minneapolis. The nearest residence is off-site, approximately 2750 feet from the plant. The area surrounding the site is primarily agricultural. A low population zone with a radius of one mile includes a population of about 25. The minimum exclusion zone radius is 1600 feet.[14/] The plant design takes into account meteorological, hydrological, ground water, and soil conditions, as well as the possibility of credible earthquakes, wind storms, tornadoes, and floods.[15/]

14/ Applicant's Summary of the Application for the Provisional Operating License for the Monticello Nuclear Generating Plant (Applicant's Summary), p. 3; Staff Safety Evaluation, p. 5.

15/ Applicant's Summary, pp. 3-4; Staff Safety Evaluation, pp. 5-9.

14. The applicant initiated in June, 1968, an environmental radiation monitoring program to determine and evaluate the effects of the plant's operation on the environment. The program will continue through plant startup and operation, and includes the collection and analyses of samples of air, water, soil, vegetation, milk and aquatic life. Studies to date have been conducted in cooperation with the Minnesota Department of Health, and the applicant has taken into account the recommendations of the Fish and Wildlife Service, U. S. Department of the Interior.16/

15. The nuclear steam supply system is a General Electric boiling water reactor design which is identical in most features to Commonwealth Edison Company's Dresden Unit 2, recently licensed by AEC for operation, and is similar to other operating boiling water reactors.17/ The reactor is a single-cycle, forced circulation, boiling water reactor producing steam for direct use in the steam turbine. The reactor will be fueled with slightly enriched uranium dioxide pellets sealed in Zircaloy fuel rods. Reactivity control is provided by movable control rods and variable recirculation flow.18/ The primary containment system consisting of a steel drywell and a steel pressure suppression chamber is designed to accommodate the pressures and temperatures which would result from, or occur subsequent to, a failure equivalent to a double-ended, circumferential rupture of a reactor coolant recirculation system line resulting

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16/ Applicant's Summary, p. 3; Staff Safety Evaluation, p. 10; Tr. 506 - 509; Tr. 830 - 836.

17/ Applicant's Summary, p. 7; Staff Safety Evaluation, p. 11.

18/ Applicant's Summary, pp. 7-9; Staff Safety Evaluation, pp. 12-14.

in the loss of reactor water at the maximum rate. The primary safeguards functions of the secondary containment, consisting of the reactor building and the standby gas treatment system, are to minimize ground level release of airborne radioactive materials, and to provide for controlled, filtered, elevated release of the reactor building atmosphere under postulated design basis accident conditions. The reactor building provides secondary containment during periods when the primary containment system is in service, and primary containment during periods when the primary containment is open.[19/]

16. In addition to the primary and secondary containment systems, the plant has a number of safety features designed for limiting the consequences of accidents, including the highly unlikely loss-of-coolant accident. The principal safety features include the emergency core cooling systems,[20/] the reactor standby gas treatment system,[21/] a reactor protection system designed to automatically shut down the reactor when preestablished limits are reached,[22/] and a standby liquid control system which provides backup reactivity shutdown capability in the unlikely event that shutdown cannot be accomplished by control rods alone.[23/]

19/ Applicant's Summary, pp. 9-12; Staff Safety Evaluation, pp. 22-25.

20/ Applicant's Summary, pp. 12-14; Staff Safety Evaluation, pp. 25-28.

21/ Applicant's Summary, pp. 11-12; Staff Safety Evaluation, pp. 24-25.

22/ Applicant's Summary, pp. 15-16; Staff Safety Evaluation, p. 28.

23/ Applicant's Summary, p. 8; Staff Safety Evaluation, p. 13.

17. At the time the construction permit was issued for the plant a number of design features were identified by the staff and the ACRS as areas requiring further information to be developed and submitted. These areas are covered in the applicant's FSAR and the regulatory staff has concluded that the applicant has submitted all technical information required.24/

CONSTRUCTION IN ACCORDANCE WITH APPLICANT'S CONSTRUCTION PERMIT AND APPLICATION

18. The Commission's Division of Compliance has followed closely the progress of the construction by means of a series of on-site inspections and conferences with the applicant's construction personnel. As a result of these inspections and conferences, the regulatory staff has concluded that there is reasonable assurance that Unit 1 will be completed in conformance with Provisional Construction Permit No. CPPR-51, the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.25/

19. The Division of Compliance also presented testimony concluding that, with certain specified exceptions, all items identified in the inspection reports as items requiring further resolution at the time of the associated inspection have since been resolved. The applicant will

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24/ Applicant's Summary, pp. 21-22; Staff Safety Evaluation, p. 37.

25/ Supplement No. 1 to Staff Safety Evaluation, p. 19.

be required to take appropriate action with respect to each of the specified exceptions prior to obtaining authorization to operate at any power level with respect to which such item may be required.26/

APPLICANT'S TECHNICAL QUALIFICATIONS

20. The applicant has gained considerable nuclear experience in the construction and operation of the Pathfinder Atomic Power Plant. The supervisory staff chosen to manage operations at the Monticello Plant is composed of formerly licensed reactor operators at the Pathfinder Plant and the qualifications of the key supervisory and professional personnel meet the "Proposed Standard for Selection and Training of Personnel for Nuclear Power Plants", Draft No. 9, July 3, 1969, prepared by the American Nuclear Society Standards Committee.27/

APPLICANT'S FINANCIAL QUALIFICATIONS

21. The applicant estimates an average annual cost of $8.8 million for each of the first five years of operation. The record indicates that the applicant's operating revenues will be ample to cover these costs.28/

26/ Tr. 1269 - 1270.

27/ Applicant's Summary, pp. 30-32; Staff Safety Evaluation, pp. 51-52.

28/ Financial Qualifications of Northern States Power Company - Testimony of G. F. Johnson; Staff Safety Evaluation, pp. 56-57.

FINANCIAL PROTECTION AND INDEMNITY REQUIREMENTS

22. The applicant has satisfied its present financial protection requirements under 10 CFR Part 140 of the Commission's regulations by furnishing to the Commission proof of financial protection in the amount of $1,000,000, as needed for the period fuel is stored unused on the site, in the form of a Nuclear Energy Liability Insurance Association policy No. NF-174, and by entering into Indemnity Agreement No. B-42 with the Commission applicable to fuel storage. Part 140 also requires that, for a limited authorization such as that requested by applicant for initial fuel loading and low power startup testing at power levels not exceeding five megawatts thermal, applicant must have and maintain financial protection in an amount equal to $4,500,000. The applicant has obtained letters from the Nuclear Energy Liability Insurance Association and Mutual Atomic Energy Liability Underwriters committing to provide an aggregate financial protection of up to $82 million, the maximum amount required by the Commission's regulations for a full power license for a facility of this size.29/

COMMON DEFENSE AND SECURITY

23. The activities to be conducted under the provisional operating license will be within the jurisdiction of the United States, and all of the directors and principal officers of the applicant are United States citizens. The applicant is not owned, controlled, or dominated

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29/ Financial Qualifications of Northern States Power Company - Testimony of O. F. Johnson; Staff Safety Evaluation, pp. 56-57.

by an alien, a foreign corporation or a foreign government. The activities to be conducted do not involve any restricted data, but the applicant has agreed to safeguard any such data which might become involved in accordance with the Commission's regulations. Special nuclear material for use as fuel in the proposed facility will be subject to Commission regulations and will be obtained from sources of supply available for civilian purposes.30/

REVIEW OF APPLICATION BY REGULATORY STAFF AND ACRS

24. Since the filing in November, 1968, the application consisting of Amendments 9 through 27 has been under constant and thorough review and evaluation by the regulatory staff. During the evaluation, which was conducted in accordance with current Commission regulatory criteria and policies, the regulatory staff has held numerous meetings with the applicant to discuss and clarify the information submitted in the amendments.31/ The regulatory staff made use of studies by independent experts in its evaluation of such plant safety aspects as air dispersion of gaseous effluents (Air Resources Environmental Laboratory, Environmental Science Services Administration),32/ site hydrology (Geological Survey, U. S. Department of the Interior),33/ ecological effects (Fish and Wildlife Service, U. S. Department of the Interior),34/ reactor vessel stress analysis (Teledyne Materials Research),35/

30/ Applicant's Summary, p. 35; Staff Safety Evaluation, p. 56.

31/ Staff Safety Evaluation, p. 2.

32/ Staff Safety Evaluation, Appendix B.

33/ Staff Safety Evaluation, Appendix C.

34/ Staff Safety Evaluation, Appendix D.

35/ Staff Safety Evaluation, Appendix E.

structural design adequacy (Nathan M. Newmark Consulting Engineers),36/ and site seismology (U. S. Coast and Geodetic Survey).37/

25. The ACRS reviewed the application and, after identifying several items for resolution by the applicant and the staff and making several recommendations, concluded in two reports dated January 10, 1970, and June 16, 1970, that the plant can be operated at power levels of up to 1670 megawatts thermal without undue risk to the health and safety of the public. The items identified by the ACRS have been considered by the regulatory staff in its evaluation of the application and the applicant has agreed to implement the recommendations of the ACRS.38/

26. The results of the regulatory staff's review and evaluation of the application are contained in the regulatory staff's safety evaluation which has been made available to the public and which has been admitted into evidence in this proceeding. The regulatory staff concluded in its safety evaluation39/ that, with respect to a provisional operating license authorizing operation at power levels up to 1670 megawatts thermal,

a. The applicant has submitted to the Commission all technical information required by Provisional Construction Permit No. CPPR-31, the Atomic Energy Act of 1954, as

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36/ Staff Safety Evaluation, Appendix F.

37/ Staff Safety Evaluation, p. 7.

38/ Applicant's Summary, pp. 23-27; Staff Safety Evaluation, pp. 54-55; Tr. 1227.

39/ Staff Safety Evaluation, pp. 60-61.

amended (Act), and the rules and regulations of the Commission to complete the application for the provisional operating license;

b. The construction of Unit 1 has proceeded, and there is reasonable assurance that it will be completed in conformity with Provisional Construction Permit No. CPPR-31, the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;

c. There is reasonable assurance (i) that the activities authorized by the provisional operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;

d. The applicant is technically and financially qualified to engage in the activities authorized by the provisional operating license in accordance with the rules and regulations of the Commission;

e. The applicant has furnished to the Commission proof of financial protection in accordance with 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements" of the Commission's regulations; and

f. The issuance of the provisional operating license under the terms and conditions proposed will not be inimical to the common defense and security or to the health and safety of the public.

The regulatory staff also concluded and testified that there is reasonable assurance that the plant will be ready for initial loading with nuclear fuel within 90 days from the date of issuance of the provisional operating license.[40]

27. In compliance with the National Environmental Policy Act of 1969, the regulatory staff introduced as Staff Exhibit No. 2, a document entitled "Statement on Environmental Considerations Relating to Proposed Operation by Northern States Power Company of the Monticello Nuclear Generating Plant, Unit 1".[41]

TESTIMONY IN SUPPORT OF MOTION
FOR AUTHORIZATION TO LOAD FUEL
AND CONDUCT LOW POWER STARTUP TESTS

28. Completion of the plant has been delayed by a number of labor difficulties. It is very near completion and all those portions of the plant required for fuel loading and low power startup testing will be complete approximately four weeks following the return of one craft union now on strike.[42]

29. Delays due to the regulatory process in the startup of the plant after it is complete and ready for fuel loading will have at least three major adverse effects upon NSP and the public it serves:

40/ Supplement No. 1 to Staff Safety Evaluation, p. 19.

41/ Staff Exhibit No. 2.

42/ Tr. 1334 - 1339

1. Reduced reliability of electric power supply by reduced generating margin and lowering of coal reserves in the Upper Midwest.

2. Increased costs to NSP and its customers in excess of $1,100,000 per month.

3. Increased detrimental effects on environmental quality from electrical generation by older fossil-fueled plants not presently equipped with modern emission controls.

Such delays will also cause the General Electric Company to incur additional costs of $500,000 per month of delay. Authority to load fuel without delay following completion of the Monticello Plant is needed to ameliorate these adverse effects.43/

30. Normal post-hearing procedures, including the filing of proposed findings and conclusions by the parties, the preparation and issuance of an initial decision by the Board, and the minimum period between initial decision and granting of the license, would mean that the applicant could not expect a license, assuming one is ordered by the Board, sooner than about 50 days following reconvening and conclusion of the hearing. With no present schedule for reconvening the hearing and the probability of a near term settlement of the sheet metal workers' strike it is predictable that the present course of the proceeding would delay the startup of the plant if the motion for authority to load fuel and conduct low power startup testing is not granted.

43/ Tr. 1340 - 1344; Tr. 1377 - 1410

31. Unchallenged testimony was given in regard to the worst conceivable accident that could occur during the fuel loading and low power startup testing program, assuming a 5 MW(t) equilibrium core power level. This is a control rod drop accident. Very conservative assumptions were used relative to fission product release, transport, and behavior within the plant and to the environs by way of the standby gas treatment system filters and off-gas stack. The resultant radiological exposures at the closest site boundary as a result of this accident are less than the permissible annual doses for normal releases specified in 10 CFR 20.[44/] There is also no need to consider the possibility of a 100% core melt, as urged by intervenor MECCA, in association with initial fuel loading and low power startup testing because the core cannot melt during these activities. At decay powers associated with a power level of five megawatts thermal, the core will not melt even in the absence of cooling water around it.[45/]

32. Intervenors' contentions and testimony, as well as the areas of cross examination relate principally to the following areas of concern:

a. Adequacy of plans to cope with on-site emergencies causing off-site harm;

b. The public health and safety as it may be affected by liquid and gaseous radioactive releases from the plant;

c. Nature of provisions relating to the bypass of the ARS system;

44/ Tr. 1345 - 1348

45/ Tr. 1347

d. Conformance of control rods to required control rod scram insertion times;

e. The safety aspects of the storage, handling, and leakage of spent fuel rods;

f. The validity of certain assumptions in the technical specifications;

g. The primary coolant system and expected leaks therefrom;

h. The presence of combustible mixtures of hydrogen and oxygen; and

i. Quality control of materials and workmanship.

The applicant presented unchallenged testimony on the pertinence of these matters to fuel loading and low power startup testing. With respect to such matters, the record is complete and there has been no demonstration that such matters are inadequately accommodated by the design of the facility, the operating plans and procedures, or by the operating license and the appended Technical Specifications; or the record shows the matter not to be in controversy; or the record shows that such matters are not relevant to the activities to be undertaken during fuel loading and low power startup testing.46/

46/ Tr. 1348 - 1358

CONCLUSIONS

33. Without prejudice to this Board's consideration of the issues specified by the Commission in its notice of hearing as they relate to a full power provisional operating license, this Board concludes that, with respect to the issuance of a provisional operating license authorizing fuel loading and low power startup testing at power levels up to a maximum of five megawatts thermal without the reactor vessel head in place:

a. The applicant has submitted to the Commission all technical information required by Provisional Construction Permit No. CPPR-31, the Act, and the rules and regulations of the Commission to complete the application for the provisional operating license;

b. Construction of Unit 1 has proceeded, and there is reasonable assurance that it will be completed, in conformity with Provisional Construction Permit No. CPPR-31, the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;

c. There is reasonable assurance (i) that the activities authorized by the provisional operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with rules and regulations of the Commission;

d. The applicant is technically and financially qualified to engage in the activities authorized by the provisional operating license in accordance with the rules and regulations of the Commission;

e. The applicant has furnished or will timely furnish to the Commission proof of financial protection in accordance with 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements", of the Commission's regulations;

f. There is reasonable assurance that Unit 1 will be ready for initial loading with nuclear fuel within 90 days from the date of issuance of the provisional operating license; and

g. Issuance of the provisional operating license under the terms and conditions proposed will not be inimical to the common defense and security or to the health and safety of the public.

ORDER

34. Pursuant to the Act and the Commission's Regulations, IT IS ORDERED that the Director of Regulation issue to Northern States Power Company a provisional operating license authorizing fuel loading of the Monticello Nuclear Generating Plant, Unit 1, and low power startup testing at power levels up to a maximum of five megawatts thermal and without the

reactor vessel head in place, upon verification by the Commission's Division of Compliance that the Monticello Nuclear Generating Plant, Unit 1, is complete and ready for initial fuel loading as described in the testimony (Tr. 1334 - 1337 and 1433 - 1437). IT IS FURTHER ORDERED in accordance with Section 50.57 (c) of the Commission's Regulations, that this Initial Decision, Part I, shall become effective ten days after its issuance subject to (i) the review thereof and further decision by the Atomic Safety and Licensing Appeal Board, upon exceptions filed by any party, and (ii) such order as the Atomic Safety and Licensing Appeal Board may enter upon such exceptions or upon its own motion within forty-five days after the issuance of this Initial Decision, Part I.

ATOMIC SAFETY AND LICENSING
BOARD

John C. Geyer

Eugene Greuling

Valentine B. Deale, Chairman