MAR 17 1972

Docket No. 50-263

Northern States Power Company
ATTN: Mr. Arthur V. Dienhart
Vice President, Engineering
414 Nicollet Avenue
Minneapolis, Minnesota 55401

ENVIRON

Gentlemen:

A site visit to the Monticello Nuclear Generating Plant was made on February 24 and 25, 1972, by a team from our Division of Radiological and Environmental Protection (REP) and Battelle Memorial Institute-Pacific Northwest Laboratory to review environmental factors related to the construction and operation of the plant.

As a result of this visit and our continued review of your plant, additional information will be required to complete our review. Accordingly, please submit by March 29, 1972, the information identified in the enclosure to this letter.

Your reply should consist of three signed originals and 297 additional copies as a sequentially numbered supplement to your Environmental Report.

Sincerely,

/s/

Roger S. Boyd, Assistant Director
for Boiling Water Reactors
Division of Reactor Licensing

Enclosure:
Request for Additional Information

cc: See next page

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SURNAME ▶						
DATE ▶						

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cc: Mr. E. C. Ward, Director
Engineering Vice Presidential Staff
Northern States Power Company
414 Nicollet Avenue
Minneapolis, Minnesota 55401

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Docket No. 50-263

REQUEST FOR ADDITIONAL INFORMATION
ENVIRONMENTAL IMPACT REVIEW

A. NEED FOR POWER

1. Summarize the Northern States Power (NSP) legal obligations to provide power.

2. Describe the NSP customer spectrum.

3. Provide a ten-year history and a five-year forecast showing:

   a. Peak loads,

   b. Kilowatt hours delivered,

   c. System capacity when peak load occurred,

   d. Net electricity purchased, and

   e. Minimum system reserve and interruption rate when annual peak load occurred for the following conditions:

      (1) With Monticello, and

      (2) Without Monticello.

      Include in your response a description of the basis used for the peak load forecasting.

4. Provide a list of existing and scheduled power plants in the NSP system showing:

   a. Type,

   b. Location,

   c. Reliable capability, and

   d. Date of first availability.

5. State the minimum desirable reserve requirement and the method or basis for determining this reserve requirement.

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6. Identify the fossil plants being retired as a result of the operation of the Monticello Plant.

7. Specify any special reasons other than simple load growth for the construction of the Monticello Plant.

8. Provide a map showing the NSP transmission system with identification of lines built specifically for the Monticello Plant. State the net length and nominal right-of-way width of each additional transmission line built specifically for the plant.

9. Provide a map or tabulation showing the distribution of electrical consumption in the service area.

B. METEOROLOGY AND ATMOSPHERIC EFFECTS

1. State the environmental effects observed and summarize the complaints that have been raised as a result of cooling tower operation.

2. Provide the periods that the cooling towers have been in operation.

3. Provide the manufacturer's guarantee specification for drift from the cooling towers.

4. Based on the climatology and cooling tower performance characteristics and operating mode, provide quantitative estimates of the following:

   a. Annual frequency distribution of visible plume length,

   b. Annual frequency of occurrences of tower produced ground fog and ice, and

   c. Plume altitude under normal and restricted plume rise conditions.

5. Describe the ambient air conditions that will result in a quantity of icing sufficient to cause a shutdown of the cooling towers.

6. Provide performance curves of the cooling towers for the range of environmental conditions and modes under which the cooling towers will be operated.

7. Provide estimates of the expected occurrences of naturally produced fog and ice and the probable fogging and icing for alternate cooling methods, including natural draft cooling towers, mechanical draft cooling towers as modified for year-round use, cooling ponds and spray ponds. Include the bases for these estimates.

8. Identify the environmental effects that may be attributable to drift.

C. HYDROLOGY AND THERMAL EFFLUENT EFFECTS

1. Describe the NSP requirements for the use of the total river and ground water appropriation listed on Page II-5 of the Environmental Report.

2. Provide measurements, including the most recent, of the thermal distribution in the river during plant operation.

3. Provide the dimensions of the thermal mixing zone for the Monticello Plant as established by the Minnesota Water Quality Authority.

4. Provide results of chemical analyses of river water sampled upstream and downstream of the plant.

5. Describe the seasonal variations in thermal discharge to the river planned using once-through cooling, and cooling towers singly or in combination.

6. Provide the total water appropriation from September, 1971, to January, 1972.

7. Identify the nature of river pollution upstream of the plant.

D. PHYSICAL PLANT

1. State the mesh size of the condenser cooling water intake traveling screens.

2. State the velocity of the water passing through the screens.

3. With respect to the Monticello Plant, state the expenditures or other efforts made by NSP for educating the public relative to all effects of the plant.

4. Provide the date of start of construction of the plant.

5. Give the total man-hours of construction labor.

6. Provide the size of the peak construction force.

7. Describe where the construction workers lived.

8. Summarize the effect of the presence of the construction force on local housing, schools, and municipal services.

9. State the manner in which spoil and rubbish was disposed.

10. Identify any special measures employed to prevent undesirable environmental impacts.

11. Describe the area of the temporary construction facilities.

12. Describe any planned modifications to the area.

13. Describe any measures taken to reduce erosion of the bluffs at the site caused by the river.

14. Identify the kind and quantity of pollutants released to the air from the heating boiler and emergency diesel plants.

15. Provide the cost of adding the cooling towers and associated equipment.

16. Provide a breakdown of construction cost as to labor, site, materials, factory equipment, and other.

17. State the applicable return on capital and plant depreciation period.

18. Give the annual tax payment for the plant and to whom it is paid.

19. Describe the land use prior to construction.

20. Provide the average crop value per acre for the land.

21. Provide the current average purchase cost for the type of land used for the plant.

22. Describe the significant nearby land uses besides agriculture.

23. Identify the amounts and concentrations of chemicals that are added to sewage for partial treatment before release to the septic tank and soil absorption system.

24. Itemize the amounts and concentrations of chemicals released to the river from plant operation. Provide this information for evaluation of helper, recirculation, and closed cycle operations of the cooling towers. Chemicals used for condenser cooling system maintenance are to be included.

25. State the annual production of electricity.

26. Provide the average consumer cost of electricity.