Docket

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Docket No. 50-263

Mr. Arthur V. Dienhart
Manager of Engineering
Northern States Power Company
414 Nicollet Mall
Minneapolis, Minnesota 55401

Dear Mr. Dienhart:

In connection with the preparation of our Environmental Statement for Monticello Nuclear Generating Unit 1, we have established a program for estimating the type and quantities of nuclides to be released annually from this facility. Personnel from the Oak Ridge National Laboratory are assisting us in this part of the environmental review. For this program we need basic data for a source term calculation and for a gaseous and liquid effluent analysis that specifically relate to Monticello. Much of this information may already be in your application or Environmental Report, but to expedite the review we require a tabulation of this information as indicated in the enclosed list. Any data that is inconsistent with information in your SAR or Environmental Report should be identified. Separate answers should be submitted for (1) the facility as presently designed, and (2) any projected design changes.

This information should be provided by March 24, 1972. If it is impossible to meet this schedule please let us know. We would like to meet with you and representatives of Oak Ridge at the Monticello site on March 28 and 29, 1972, to discuss the use of this information in our environmental analysis.

Sincerely,

Original Signed by
Roger S. Boyd

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

Enclosure:
List of Questions

OFFICE ▶	DRL	DRL	DRL	DRL	DRL	
SURNAME ▶	VBenaroya	HDenton	JOwsley	WButler	RBoyd	
DATE ▶	3/3/72	3/6/72	3/3/72	3/3/72	3/6/72	

Form AEC-318 (Rev. 9-53) AECM 0240 ☆ U.S. GOVERNMENT PRINTING OFFICE 1970—407-758

BOILING WATER REACTORS

Basic Data for Source Term Calculation

1. Operating power (Mwt) at which impact is to be analyzed.

2. Weight of U loaded (first loading and equilibrium cycle).

3. Isotopic ratio in fresh fuel (first loading and equilibrium cycle).

4. Expected offgas rate after 30 minutes delay.

5. Escape rate coefficients used (or reference).

6. Mass of primary coolant in system (lb).

   a. Mass of primary coolant in reactor; mass water, mass steam (lb).
   b. Mass of primary coolant in recirculating system (lb).

7. Steam conditions at turbine (temp °F, press. psi, Flow lb/hr.)

8. Normal reciruclation flow rate (lb/hr).

9. Normal clean-up system flow rate (lb/hr). What type of resins are used? What decontamination factors are expected for each principal nuclide?

10. What is the expected performance of the expanded gaseous radwaste system from the main condenser air ejector? Give the design air inleakage. Is the condenser ejector one stage or two stage? Where is it discharged? How many condenser shells? (if applicable--Pounds of charcoal and operating temperature of)

11. What is the expected leak rate of primary coolant to the dry well? (lb/hr) How frequently is the dry well purged? What treatment is given to this purge?

12. What is the expected leak rate of primary coolant to the reactor building? What is the ventilation air flow through the reactor building? (CFM) Where is it discharged? Is the air filtered or otherwise treated before discharge? If so provide expected performance.

13. What is the expected leak rate of steam to the turbine building? What is the ventilation air flow through the turbine building? (CFM) Where is it discharged? Is the air filtered or treated before discharge? If so, provide expected performance.

14. Describe the treatment of the exhaust stream from the turbine seal glands.

    a. What is the origin of the steam used in the gland seals? (i.e., is it primary steam, condensate, or demineralized water from a separate source, etc.?)

b. How is the effluent stream from the gland seals treated and disposed of?

15. Provide average gallons/day and uCi/cc for following categories of liquid waste. Use currently observed data in the industry where different from the SAR or Environmental Report (indicate which is used).

a. High-level wastes (for example, "clean" or low conductivity waste and equipment drains);
b. "Dirty" wasts (for example, floor drain wastes, high-conductivity wastes, and laboratory wastes);
c. Chemical wastes;
d. Laundry, decontamination, and wash-down wastes.

For these wastes (a-d) provide:

1. Number and capacity of collector tanks.
2. Fraction of water to be recycled or factors controlling decision.
3. Treatment steps - include number, capacity, and process D.F. for each principal nuclide for each step. If step is optional, state factors controlling decision.
4. Decay time from primary loop to discharge.
5. How is waste concentrate (filter cake, demineralizer resin, evaporator bottoms) handled? Give total volume or weight and curies per day or year.

16. For the condensate demineralizers provide the flow rate lb/hr, type of resin used, expected backwash and regeneration frequency, and expected D.F. for each principal nuclide.

17. Dilution flow rate for liquid effluents, normal gpm and total gallons per year.