

DCS-MS-016

JUL 29 1982

Docket Nos. 50-282  
and 50-306

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Mr. D. M. Musolf  
Nuclear Support Services Department  
Northern States Power Company  
414 Nicollet Mail - 8th Floor  
Minneapolis, Minnesota 55401

Dear Mr. Musolf:

Enclosed is a formal request for additional information related to the Equipment Environmental Qualification Review for the Prairie Island Nuclear Generating Plant Unit Nos. 1 and 2. This information is needed by the staff to perform calculations related to the issue of pipe breaks outside containment. If some or all of this information has been submitted by Northern State Power Company, you need only reference the date of your submittal.

We request the information be provided within 30 days from the date of your receiving this letter.

The information requested in this letter affects fewer than 10 respondents; therefore OMB clearance is not required under P.L. 96-511.

Sincerely,

Original signed by:

Robert A. Clark, Chief  
Operating Reactors Branch #3  
Division of Licensing

Enclosure:  
As stated

cc: See next page

8208110088 820729  
PDR ADOCK 05000282  
P PDR

OFFICE	ORB#3:DL	ORAB <i>nk</i>	ORB#3:DL <i>ep</i>	ORB#3:DL <i>Clark</i>		
SURNAME	<i>PMKreutzer</i>	J. Calvo	DiIanni/ep	RAClark		
DATE	7/28/82	7/28/82	7/28/82	7/29/82		

Northern States Power Company

cc:

Gerald Charnoff, Esquire  
Shaw, Pittman, Potts and Trowbridge  
1800 M Street, N.W.  
Washington, D. C. 20036

Mr. Louis J. Breimhurst  
Executive Director  
Minnesota Pollution Control Agency  
1935 W. County Road B2  
Roseville, Minnesota 55113

The Environmental Conservation Library  
Minneapolis Public Library  
300 Nicollet Mall  
Minneapolis, Minnesota 55401

Mr. E. L. Watzl, Plant Manager  
Prairie Island Nuclear Generating Plant  
Northern States Power Company  
Route 2  
Welch, Minnesota 55089

Jocelyn F. Olson, Esquire  
Special Assistant Attorney General  
Minnesota Pollution Control Agency  
1935 W. County Road B2  
Roseville, Minnesota 55113

U.S. Nuclear Regulatory Commission  
Resident Inspectors Office  
Route #2, Box 500A  
Welch, Minnesota 55089

Regional Administrator  
Nuclear Regulatory Commission, Region III  
Office of Executive Director for Operations  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

Mr. R. L. Tanner  
County Auditor  
Red Wing, Minnesota 55066

U. S. Environmental Protection Agency  
Federal Activities Branch  
Region V Office  
ATTN: Regional Radiation  
Representative  
230 South Dearborn Street  
Chicago, Illinois 60604

REQUEST FOR INFORMATION  
FOR PRESSURE AND TEMPERATURE PROFILES OUTSIDE CONTAINMENT  
FOR  
PRAIRIE ISLAND UNIT NOS. 1 & 2

Provide the basis, assumptions and an analysis of a typical pipe break location (for example, auxiliary feedwater pump room for PWRs) that includes the following information:

1. With respect to the pipe to be broken, provide the following:
  - a. Type of fluid (water or steam);
  - b. Temperature;
  - c. Pressure;
  - d. Source of the fluid;
  - e. Flow rate (or assumed flow rate);
  - f. Pipe internal diameter;
  - g. Wetted perimeter of the break (feet);
  - h. Total pipe internal diameter;
  - i. Exit flow area, if the break was not in the pipe, just described above;
  - j. Area of flow restriction, if any;
  - k. Differential elevation from the source to the pipe break;
  - l. Total flow resistance (only if the fluid is water);
  - m. Means to stop fluid flow (none, gate valve, globe valve, etc.); and
  - n. If item l.m above is a valve, then the valve's open throat area, full open flow coefficient, valve closure time, and delay time until initiation of valve closure.

2. With respect to the compartments being analyzed, provide the following:
  - a. Number of compartment analyzed; and
  - b. For each compartment:
    - i. initial temperature
    - ii. initial pressure
    - iii. initial humidity
    - iv. free air volume (cubic feet)
    - v. number of vents and vent areas (square feet) for each vent; and
    - vi. minimum pressure to initiate flow to the next compartment (psia).
  
3. Provide all assumptions used, including but not limited to the:
  - a. Orifice coefficient for the "end effects" for the discharged fluid; and
  - b. Fluid expansion factor.