FROM:
GULF GENERAL ATOMIC COMPANY
P.O. BOX - 08
SAN DIEGO, CALIFORNIA

DATE OF DOCUMENT: 10 10 71
DATE RECEIVED: 11 12 71
NO.: 5

LTR. X | MEMO: | REPORT: | OTHER:

TO:
DIVISION OF REACTOR LICENSING

ORIG.: X | CC: | OTHER:

ACTION NECESSARY ☐ | NO ACTION NECESSARY ☐
CONCURRENCE ☐ | COMMENT ☐
DATE ANSWERED:
BY:

CLASSIF: PROPRIETARY
POST OFFICE
REG. NO:

FILE CODE:

DESCRIPTION: (Must Be Unclassified)
LTR. TRANS. XXX CYS OF PSID SUP.. 6, "ENDURANCE OF SURFACE ROUGHENING" & 6 CYS OF PSID SUP. 7, REACTIVITY EFFECT OF STEAM ENTRY IN THE GCFR DEMONSTRATION XXX ACTION

ENCLOSURES: PLAN.....

AS ABOVE.....

Copy #3 1/10/72
Novella Murray, OR: DOR/AD

REFERRED TO	DATE	RECEIVED BY	DATE
SHEA, W/6 CYS FA	11/13	J. Skea	
		Cy 2	
		cc 3 - Richter	
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		C. FILES, W/1 CY FA	11/12
		& ORIG LTR	abc

REMARKS:
DOCKET NO: 50-263

U.S. ATOMIC ENERGY COMMISSION
MAIL CONTROL FORM FORM AEC-326S (8-60)

☆ U.S. GOVERNMENT PRINTING OFFICE: 1970-406-979

Docket

Docket No. 50-263

JUN 3 1971

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

Gentlemen:

By letter dated April 1, 1971, you submitted Proposed Change No. 2 to the Technical Specifications of Provisional Operating License No. DPR-22 for the Monticello Nuclear Generating Plant E-5979. The purpose of the change is to modify the gaseous radwaste system and to add several items to the Technical Specifications relative to the operation of the gaseous radwaste system.

As we discussed with your staff on May 11, 1971, we find that we need the additional information described in the enclosure before we can complete our review of your application.

On the basis of our preliminary evaluation we have concluded that the proposed gaseous radwaste system will be an improvement over the existing one. However, it may be that other systems being proposed for BWR's will be found to provide better performance than your proposed system. (In your proposed change you make a comparison only with a charcoal delay system.) If such is the case, we may not be able to conclude that your system will achieve release levels that are "as low as practicable". The Commission has under consideration rule changes regarding effluent releases that may require additional or alternate modifications to the Monticello gaseous radwaste system.

We will discuss the proposed changes to the Technical Specifications with you after we have finished our review of the proposed system.

Please contact us if you desire additional discussion or clarification of the material requested.

Sincerely,

Original signed by
F. Schroeder

Peter A. Morris, Director
Division of Reactor Licensing

OFFICE

cc: Gerald Charnoff, Esq.
Shaw, Pittman, Potts, Trowbridge
and Madden
910 17th Street, N. W.
Washington, D. C. 20006

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Form AEC-318 (Rev. 9-53) U.S. GOVERNMENT PRINTING OFFICE : 1969— O-364-598

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

June 3, 1971

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ATTN: Mr. Arthur V. Dienhart
Vice President
414 Nicollet Mall
Minneapolis, Minnesota 55401

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Please contact us if you desire additional discussion or clarification of the material requested.

Sincerely,

Frank Schroeder

for Peter A. Morris, Director
Division of Reactor Licensing

Enclosure:
Request for Additional Information

cc: Gerald Charnoff, Esq.
Shaw, Pittman, Potts, Trowbridge
and Madden
910 17th Street, N. W.
Washington, D. C. 20006

REQUEST FOR ADDITIONAL INFORMATION RELATING TO

PROPOSED CHANGE NO. 2 TO MONTICELLO

TECHNICAL SPECIFICATIONS

1. From our meeting on your Change Request No. 2 on May 11, 1971, we understand that:

   a. All the equipment of the proposed waste gas system and the structure in which it will be housed will be designed to withstand the Design Basis Earthquake (seismic Class I), the Probable Maximum Flood (PMF) as defined by the Army Crops of Engineers, and the Design Basis Tornado (300 mph rotational and 60 mph translational winds with a 3 psi pressure drop in 3 sec);

   b. You will provide us with data on the operation of the recombiner using BWR effluents (including trace amounts of iodine);

   c. The equipment from the air ejector to the compressor will be designed to 350 psig;

   d. There will be a particulate filter upstream of the compressors;

   e. You will explain how liquid discharges are handled from dilution stream and from the recombiner;

   f. You will provide us with a list of changes made to the system since Change No. 2 was filed with the AEC;

   g. You will revise the existing drawings in Change Request No. 2 to include all instrumentation; and

   h. You will provide us with information explaining the operation of the unit under normal and abnormal conditions.

   Please document the above listed items, and provide sufficient design details so that we can make an independent evaluation of the adequacy of the design to meet these criteria.

2. In Change Request No. 2 you state that "the shock wave of a hydrogen detonation could conceivably travel through the recombiner and underground holdup pipe up to the compressor suction." Designers of other similar systems have stated that there may be a possibility of a hydrogen explosion propagating throughout the system. It should also be noted that the flammable concentration of hydrogen rises as the mixture is compressed.

a. Explain why a hydrogen explosion throughout the system should not be considered, and

b. Explain your conclusion that the shock wave would not be propagated beyond the compressor suction.

3. Describe the mechanical and/or electrical interlocks that will be installed and explain the precautions that will be taken so that the wrong tank is not vented. Explain how you will reduce the potential for operator errors.

4. You have calculated the radiological consequences at the nearest site boundary of routine and accidental releases. Provide the meteorological parameters and distances that were used to derive the atmospheric dispersion factors for these calculations.

5. Evaluate the expected annual "fence post" doses at the most critical point offsite due to releases from 1) containment purging, 2) steam turbine gland seal leakage, 3) HPCI turbine testing, 4) plant ventilation systems, 5) plant startup, 6) leakage from the proposed pressurized off-gas system, 7) liquid radioactive waste system vents, and 8) direct radiation shine from unenclosed tanks containing radioactive fluids. Present the bases for these doses including assumed source terms, rates and duration of releases and type of release (ground level or elevated stack).

6. Reevaluate the consequences of routine releases and accidental releases from the proposed off-gases system to include the dose contributions from halogens and particulates. Present and justify all assumptions used to make these evaluations. Include an analysis of accident doses that might be received by plant personnel and control room operators.

7. Clarify the statement on page 4 of the report entitled "Gaseous Radwaste System Modification Report" dated March 1971, that "The two remaining processes...were judged essentially identical with regard to environmental effects, based on equal retention times...".

8. Clarify what the 1% carryover refers to in Table 1 (Page 13) of the report mentioned in question 7.

9. Provide the design details of the proposed gas compressors that will provide capability for essentially zero leakage. What type of valves will be used and what is the expected leakage through the stem?

10. Provide design details of the air ejector off gas monitor and the stack monitors to show that representative samples of the noble gases, halogens and particulates can be obtained and that these monitors have sufficient sensitivity to detect plant releases at levels which will allow you to

be confident of remaining within the new plant Technical Specifications limit (which will not allow an instantaneous release in excess of the calculated maximum allowable annual average release of 0.27 Ci/sec noble gases and 2.4 μCi/sec of halogens and particulates with half lives greater than 8 days).

11. Where will the ventilation system for the off-gas system building discharge? What type filtration and radiation monitoring system will be included in the system to limit, monitor, and record the potential releases from this building?

12. The storage room for the waste gas storage building will not be accessible when any of the tanks are pressurized. Discuss the safety implications of this design feature. Include operational situations which would require remedial action to avert an accident or to avert a significant release of radioactivity and provisions (such as interlocks and alarms) that would prevent access of unauthorized personnel.

13. Provide a scaled plot plan indicating the location of the proposed facility relative to the stack, site property boundary, restricted area boundary, the exclusion radius and the nearest residence.