

UNITED STATES NUCLEAR REGULATORY COMMISSION

NORTHERN STATES POWER COMPANY

MONTICELLO NUCLEAR GENERATING PLANT

Docket No. 50-263

REQUEST FOR AMENDMENT TO
OPERATING LICENSE NO. DPR-22

License Amendment Request Dated May 12, 1986

Northern States Power Company, a Minnesota corporation, requests authorization for changes to the Technical Specifications as shown on the attachments labeled Exhibit A and Exhibit B. Exhibit A describes the proposed changes along with reasons for the change. Exhibit B is a set of Technical Specification pages incorporating the proposed changes.

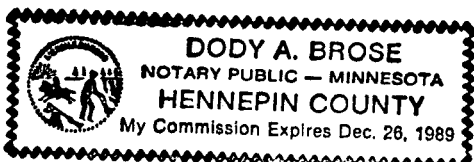
This letter contains no restricted or other defense information.

NORTHERN STATES POWER COMPANY

By David Musolf
David Musolf
Manager - Nuclear Support Services

On this 12th day of May, 1986 before me a notary public in and for said County, personally appeared David Musolf, Manager - Nuclear Support Services, and being first duly sworn acknowledged that he is authorized to execute this document on behalf of Northern States Power Company, that he knows the contents thereof and that to the best of his knowledge, information and belief, the statements made in it are true and that it is not interposed for delay.

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Exhibit A

Monticello Nuclear Generating Plant

License Amendment Request Dated May 12, 1986

Proposed changes to the Technical Specifications
Appendix A of Operating License DPR-22.

Pursuant to 10 CFR 50, Section 50.59 and 50.90, the holders of Operating License DPR-22 hereby propose the following changes to Appendix A Technical Specifications:

1. Offgas System Trip

Proposed Change

Relocate the hydrogen monitor trip function from the recombiner train trip to the offgas compressor trip, as shown in Exhibit B pages, 198c and 198y.

Reason for Change

Removing the hydrogen analyzer trip from the recombiner train trip logic and installing it in the compressor trip logic will increase plant reliability by providing more time for operators to respond to hydrogen monitor trips.

Both recombiner trains contain outlet hydrogen analyzers that monitor post recombination gas for hydrogen content. Should the concentration of hydrogen reach four percent by volume as sensed by 2 out of 3 analyzers, a recombiner shutdown now occurs. In order to avert a reactor scram on loss of condenser vacuum, the operators have 10-20 minutes to investigate the trip and restart a recombiner train. Many spurious hydrogen analyzer trips have occurred. These were caused by the sensitivity of the analyzers to small amounts of moisture in the sample stream. Several modifications to the analyzers have reduced, but not eliminated, the problem.

The Offgas System, as originally installed, consisted of a 42-inch delay line, high efficiency filters, dilution fans and plant stack. The Offgas System was modified in 1974 to add two additional

subsystems. The recombiner subsystem functions to recombine the hydrogen and oxygen normally present in the offgas, thus reducing the offgas volume and rendering it non-combustible and safe for compressed storage. The compressed storage subsystem functions to provide additional delay time and removal of additional radioactive particulates and iodine from the gas (Figure I).

The proposed logic modification would allow offgas flow to continue through the recombiner subsystem to the large 42-inch holdup pipe and stack while investigating hydrogen monitor trips. This reduces the potential of a reactor scram on low condenser vacuum by providing more time for operator action (Figure II).

Safety Evaluation and Basis for No Significant Hazards Determination

The proposed amendment of Specification 3.8.B.4.d would authorize a change in the offgas system hydrogen analyzer trip logic. This proposed amendment will allow offgas flow to continue to flow in those portions of the system able to withstand a hydrogen detonation while investigating hydrogen monitor trips.

10CFR50.91 requires that at the time a licensee requests an amendment, it must provide to the Commission its analysis using the standards in 10CFR50.92, about the issue of no significant hazards considerations. Therefore, in accordance with 10CFR50.91 and 10CFR50.92, the following analysis has been performed.

1. The proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed Technical Specification change will transfer the high hydrogen monitor trip from recombiner inlet valve closure to compressor trip. This change will have no adverse safety significance. It will allow operators greater flexibility in dealing with spurious hydrogen monitor trips.

The offgas system is designed to withstand the pressure encountered from a hydrogen detonation from an initial operating pressure of 20 psia assuming a stoichiometric hydrogen and oxygen mixture. The Standard Review Plan, Section 11.3, "Gaseous Waste Management System," provides guidance for systems being designed to withstand a hydrogen explosion. It's recommendation is that piping be designed to 350 psia. As a minimum, all piping in the offgas system meets this recommendation except the compressed gas storage tanks. The compressed gas storage tanks are designed for a maximum pressure of 330 psig. The system upstream of the compressors normally operates at 12 psia. On sensing high hydrogen, the compressors would isolate and pressure would slowly build up in the 42-inch delay line (approximate volume of 4650 cubic feet). Up to several hours would be available for an operator to investigate and correct the source of the monitor trip. Prior to reaching 17 psia, the manual bypass valve to the stack could be opened providing additional time to resolve the problem without resulting in a

scram from loss of condenser vacuum. Bypassing the holdup system is permitted for a period of up to seven days by the existing Technical Specifications. 10 CFR Part 20 and Appendix I guidelines would still be satisfied at the site boundary.

The proposed logic modification will continue to isolate the most probable ignition source, the offgas compressors, before a flammable mixture of hydrogen and oxygen is reached. A flammable mixture will not be allowed to reach the compressed gas storage tanks.

The lower limit of flammability is four percent hydrogen by volume. Because of mixing in the 42-inch delay line downstream of the recombiners, the volumetric concentration of hydrogen will not exceed 2.5 percent at the compressors' suction prior to isolation (assuming a catastrophic failure of the recombiners).

Therefore, the proposed amendment will not result in a significant increase in the probability or consequences of an accident previously evaluated.

2. The proposed amendment will not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed amendment involves a logic modification and procedural changes only. No safety analyses are affected. No new or different accident type is created. The proposed amendment will not create the possibility of a new or different kind of accident from any previously evaluated.

3. The proposed amendment will not involve a significant reduction in the margin of safety.

For the past 10 years the recombiners have performed reliably. Hydrogen analyzer trips have occurred periodically, however. These were spurious and caused by analyzer sensitivity to moisture in the sample stream. Prior to the installation of the modified Offgas System, potentially explosive hydrogen and oxygen mixtures were safely handled without incident. In the event a detonation should occur, the system with the compressed storage subsystem isolated is designed for the pressures encountered and thus will maintain its design integrity. Therefore, the proposed amendment will not involve a significant reduction in the margin of safety.

As determined by the analysis above, this proposed amendment has been found not to involve a significant hazards consideration.

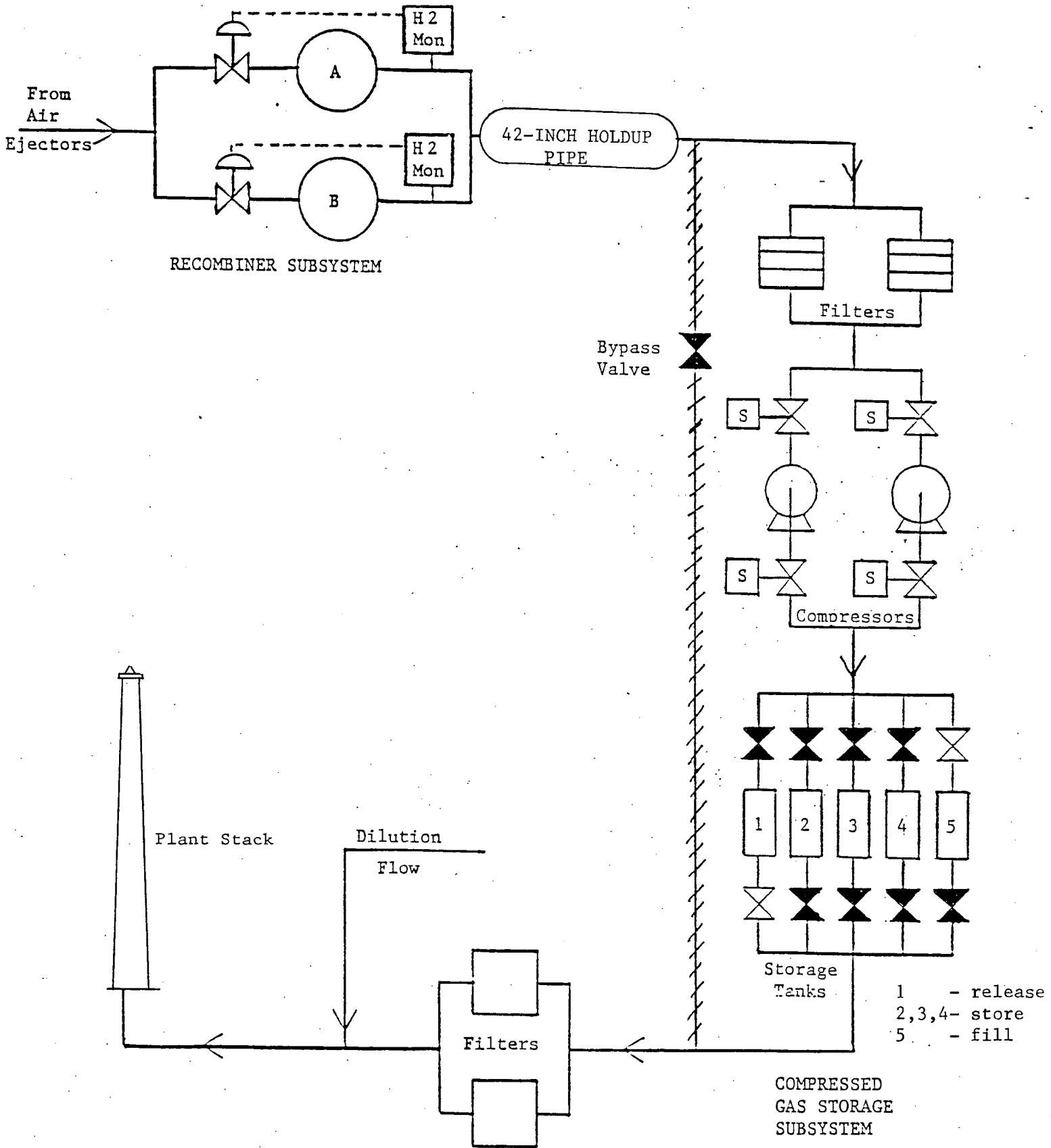


FIGURE I
OFFGAS FLOW

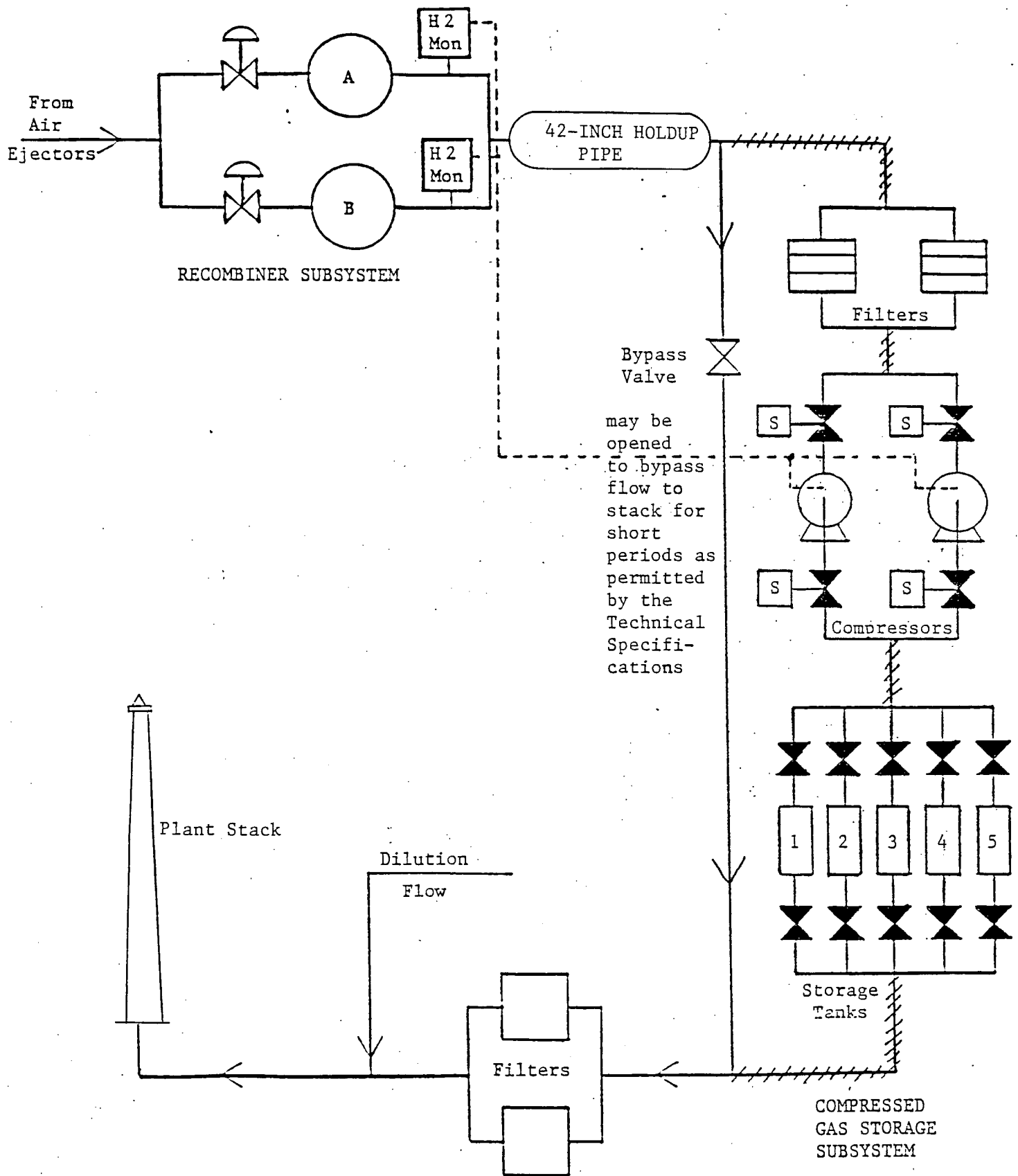


FIGURE II
 PROPOSED OFFGAS MODIFICATION