

# REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 FACIL: 50-244 Robert Emmet Ginna Nuclear Plant, Unit 1, Rochester G. 05000244  
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 CRUTCHFIELD, D. Operating Reactors Branch 5

SUBJECT: Describes status of fire protection mods. Requests NRC approval of changes to fire suppression sys, as result of inadvertent water discharge while completing installation & startup testing of 811114.

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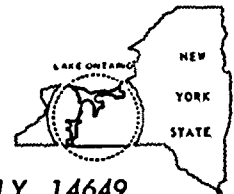
IN WITNESS WHEREOF, I have hereunto set my hand and the seal of the United States of America  
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this [Date] day of [Month], 19[Year].

By [Signature] Secretary of the United States of America

THE UNITED STATES OF AMERICA  
DO hereby certify that  
[Name] is a citizen of the United States of America  
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JOHN E. MAIER  
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November 19, 1981

Director of Nuclear Reactor Regulation  
Attention: Mr. Dennis M. Crutchfield, Chief  
Operating Reactors Branch No. 5  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Subject: Fire Protection  
R. E. Ginna Nuclear Power Plant  
Docket No. 50-244



Dear Mr. Crutchfield:

The purpose of this letter is to describe the status of our fire protection modifications and to request NRC approval of several changes to the fire suppression system which we have identified as being desirable. Fire protection modifications have been completed as required by the NRC Safety Evaluation and its Supplements, by Appendix R to 10CFR50 and by an NRC letter dated June 30, 1981 which granted extensions until November 17, 1981. Extensions were granted for several fire protection features including fire detection systems.

While completing installation and startup testing on November 14, 1981, fire suppression systems were inadvertently actuated in several areas of the plant. Water spray in the intermediate building resulted in water entering the control rod drive power switchgear cabinet. In response to control room indication of two dropped RCCAs, the operators tripped the plant. Appropriate corrective action was taken, including drying wetted components and the plant was returned to service the following day.

This event has led to a review of the likelihood of future inadvertent water discharges, potential consequences, and possible additional actions which could be taken. During the initial design efforts, features were provided to minimize the likelihood of actuation including requiring multiple detector indications prior to system actuation. The consequences were minimized by installation of spray shields on selected critical equipment such as switchgear, motor control centers, and rod drive cabinets. Further, it was shown that the plant could be brought to a safe shutdown even if the switchgear, motor control centers or rod drive cabinets were to be sprayed. However, because we believe

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DATE November 19, 1981  
TO Mr. Dennis M. Crutchfield

2

it prudent to minimize the challenge to the systems and to minimize the likelihood that the plant operators will be faced with bringing the plant to a shutdown condition with potentially malfunctioning equipment, we have identified desirable changes in the suppression systems. These changes will also further extend the time available for water suppression without the possibility of flooding safety related equipment by limiting suppression to only the affected area.

During the initial NRC review of the Ginna fire suppression systems design, a preaction system was approved for use in the diesel generator rooms with open heads or sprinklers (in one area) approved for all other areas. It is proposed that a supervised preaction system with closed spray heads be provided for four suppression systems in the plant. All other suppression systems will remain as previously approved and installed. The four areas are the intermediate building basement cable tray concentration area (zone S-15), the auxiliary building bus 16 cable tray concentration area (zone S-03), the auxiliary building intermediate level east cable tray concentration area (zone S-04), and the auxiliary building basement cable tray area (zone S-01).

Equipment in the intermediate building basement area includes the control rod drive control cabinets, control rod drive power switchgear cabinets, and motor generator sets. The auxiliary building is subject to flooding of safety related equipment should suppression activities continue for an extended period of time. Further, the bus 16 area includes bus 16 and two motor control centers. The auxiliary building basement area includes the safety injection pumps and the radwaste control panel.

Preaction systems will be installed in each of these areas by adding the appropriate trim to the existing deluge valves and replacing the existing open heads and nozzles with closed heads and nozzles. The detection and actuation of the deluge valve will remain unchanged, however, each head/nozzle will have to be opened by heat. The replacement heads/nozzles will have the same spray pattern as the existing heads. The system hydraulics have been reviewed and there is still ample margin of both pressure and water flow to provide the required water flow and spray pattern even if all heads on a system were actuated. Actuation of the fusible links in the closed heads will result in only a slight delay in water flow; recent EPRI tests have shown that this delay is only a matter of seconds. Such delays will not affect system effectiveness. We believe that implementation of this proposal will provide for effective fire suppression while minimizing plant challenges. We request your prompt attention to this matter.

ROCHESTER GAS AND ELECTRIC CORP.

SHEET NO.

DATE November 19, 1981

TO Mr. Dennis M. Crutchfield

3

Presently, we have isolated three water suppression systems: one system in the intermediate building basement (Zone S-15) and two systems on the auxiliary building mezzanine floor (Zone S-03 and S-04). Isolation in the intermediate building is due to the presence of the rod drive system. Isolation in the auxiliary building is due to the presence of safety related bus 16 and two motor control centers and to extend the time available for suppression activities without the potential for flooding. As required by the plant Technical Specifications where system is inoperable, fire watches have been posted. Should suppression be required, the suppression systems can be actuated manually. Although not inoperable in the normal sense, we believe our current course of action to be prudent and do not believe the level of protection against fires has been reduced. We have discussed our current configuration with members of your staff. Within 14 days, we will establish whether additional changes are desirable and whether any continued system isolation of the open head system should be used until the preaction systems are installed.

Very truly yours,

  
J. E. Maier

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