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TECHNICAL EVALUATION OF THE LICENSEE'S RESPONSE TO I&E BULLETIN 80-06 CONCERNING ESF RESET CONTROLS FOR THE R. E. GINNA NUCLEAR POWER PLANT, UNIT 1

(DOCKET NO. 50-244)

by

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INTRODUCTION

On March 13, 1980, the USNRC Office of Inspection and Enforcement (I&E), issued I&E Bulletin 80-06, entitled "Engineered Safety Feature (ESF) Reset Controls," to all PWR and BWR facilities with operating licenses. I&E Bulletin 80-06 requested that the following actions be taken by the licensees:

(1) Review the drawings for all systems serving safety-related functions at the schematic/elementary diagram level to determine whether or not upon the reset of an ESF actuation signal all associated safety-related equipment remains in its emergency mode.

(2) Verify that the actual installed instrumentation and controls at the facility are consistent with the schematics reviewed in Item 1 above by conducting a test to demonstrate that all equipment remains in its emergency mode upon removal of the actuating signal and/or manual resetting of the various isolating or actuation signals. Provide a schedule for the performance of the testing in your response to this bulletin.

(3) If any safety-related equipment does not remain in its emergency mode upon reset of an ESF signal at your facility, describe proposed system modification, design change, or other corrective action planned to resolve the problem.

(4) Report in writing within 90 days the results of your review, include a list of all devices which respond as discussed in Item 3 above, actions taken or planned to assure adequate equipment control, and a schedule for implementation of corrective action.

This technical evaluation addresses the licensee's response to I&E Bulletin 80-06 and the licensee's proposed system modification, design change, and/or other corrective action planned to resolve the problem. In evaluating the licensee's response to the four Action Item requirements of the bulletin, the following NRC staff guidance is also used:

> Upon the reset of ESF signals, all safety-related equipment shall remain in its emergency mode. Multiple reset sequencing shall not cause the affected equipment to deviate from its emergency mode. Justification should be provided for any exceptions.

EVALUATION AND CONCLUSIONS

In a letter dated June 3, 1980 [Ref. 1], Rochester Gas and Electric Corporation, the licensee for R. E. Ginna Nuclear Power Plant, Unit 1, replied to I&E Bulletin 80-06. In a telephone conference call conducted on March 3, 1981 [Ref. 2], the licensee provided additional information and clarification to their written response.

The licensee reported [Ref. 1] that a drawing review has been completed at Ginna station for all systems serving safety-related functions. This review was conducted at the schematic level to determine whether all associated safety-related equipment would remain in its emergency mode upon the reset of an engineered safety feature actuation signal. The licensee identified [Ref. 1] the following equipment as not remaining in the emergency mode upon ESF reset:

1. Containment Spray additive tank discharge valves.
2. Main Feedwater isolation and bypass valves.

We conclude that the licensee has complied with the requirements of Action Items 1 and 4 of I&E Bulletin 80-06 by completing the drawing review of all systems serving safety-related functions and by identifying the devices that do not remain in their emergency mode upon ESF reset.

The licensee reported [Ref. 1] that testing to verify that actual installed instrumentation and controls were consistent with the schematics reviewed was completed during the May 1980 refueling outage. We conclude that the licensee has complied with the requirements of Action Item 2 of I&E Bulletin 80-06 by providing a schedule and completion date for the performance of testing.

The licensee indicated [Ref. 1] that no modifications or design changes were planned for the Containment Spray additive tank discharge valves nor for the Main Feeedwater isolation and bypass valves. The licensee offered justification [Ref. 1] for not modifying these devices and also provided [Ref. 2] a verbal explanation to enhance the justification offered in reference 1.

The licensee offered [Ref. 1] the following justification for not modifying the Containment Spray additive tank discharge valves:

> The Containment Spray circuit has a reset switch which gives the operator the means of resetting containment spray. Once the reset switch has been actuated, the spray additive tank discharge valves will return automatically to the position called for by their controllers. The containment spray pumps and their discharge valves would require operator action to change state. This capability is necessary so the operator has the flexibility in dealing with post-accident conditions within containment (i.e., LOCA or steam line break).

The licensee offered [Ref. 2] the following additional justification for not modifying the Containment Spray additive tank discharge valves:

> The valves associated with the spray additive tank will be opened automatically two minutes after the containment spray signal is actuated. The sodium hydroxide will flow due to the suction of the spray pumps and mix with refueling water prior to being discharged through the spray nozzle into the containment. After the containment spray signal is actuated, the operator has the capability to stop the timer if it has been detemined that actuation of the sodium hydroxide addition is not warranted. The operator also has the capability to reinstate the sodium hydroxide addition, if required. Emergency procedures set forth guidelines for this action based on one or more of the following:
>
> (1) High containment pressure in combination with a total loss of RCS pressure.
>
> (2) High radiation levels in combination with elevated containment pressure.
>
> (3) Pressure signals indicative of accumulator discharge into the RCS.

The licensee offered [Ref. 1] the following justification for not modifying the Main Feedwater isolation and bypass valves:

> The Feedwater Isolation circuit has a reset switch which gives the operator the means of resetting the isolation signal to the feedwater bypass valves. Once the reset switch is actuated, the feedwater bypass valves will assume the position called for by their controllers. The main feedwater valves will remain closed until the isolation logic clears, and then they will automatically assume the position called for by their controllers. It should be noted that a safety injection signal also causes the main feedwater pumps to be tripped and their discharge valves to automatically close; therefore, closing the main feedwater valves on a safety injection signal is redundant.

The licensee offered [Ref. 2] the following additional justification for not modifying the Main Feedwater isolation and bypass valves:

> While reset will result in the feedwater isolation valves returning to their demand position, reset does not affect the status of the feedwater pumps or the pump discharge valves. Thus, re-opening of the feedwater isolation (and bypass) valves would not result in the addition of feedwater to the steam generator via the feedwater lines.

The above justifications were offered by the licensee in lieu of any system modification, design change, or other corrective action. We have reviewed the justifications submitted by the licensee to insure that sufficient information is provided as a basis for the NRC staff to prepare a Safety Evaluation Report.

FINDINGS

Based on our review of the information and documents provided by the licensee, we find that the ESF reset controls for R. E. Ginna Nuclear Power Plant, Unit 1, satisfy the requirements of Action Items 1, 2, and 4 of I&E Bulletin 80-06.

In response to Action Item 3 of I&E Bulletin 80-06, the licensee identified several valves as not remaining in their emergency mode upon ESF reset and offered justification in lieu of any system modification, design change, or other corrective action.

REFERENCES

1. Rochester Gas and Electric Corporation letter (L.D. White, Jr.) to NRC I&E (B.H. Grier), "Response to I&E Bulletin 80-06," dated June 3, 1980.

2. Telephone conference call, NRC (P. Bender); Rochester Gas and Electric Corporation (R. McCready, G. Daniels); EG&G San Ramon (D. Hackett, D. Laudenbach), March 3, 1981.