RO Inquiry Report No. 50-244/72-11

Subject: Rochester Gas & Electric Corporation

License No.: DPR-18

Facility: Ginna--PWR

Title: Exceed Lic/Tech Spec Requirements - Violation of Containment Integrity Resulting from the Loss of the RHR System

Prepared by: W. H. Baunack, Reactor Inspector — 5/9/72 Date

A. Date & Manner AEC was Informed:

May 4, 1972, by telephone call at 1:45 p.m. from Mr. L. Lang, Assistant Plant Superintendent.

B. Description of Particular Event or Circumstance:

On May 3, 1972, a complete loss of flow in the residual heat removal (RHR) system occurred and this condition lasted for 1 3/4 hours. The decay heat production was calculated to be 6×10^6 Btu/hr. The primary system temperatures increased during this period as follows:

Cold leg from 63° F to 123° F
Hot leg from 73° F to 212° F

The Technical Specifications require containment integrity to be maintained when the primary coolant temperature is greater than 200° F. Containment integrity was not established during this period.

The reactor had been shut down since April 15, 1972 for refueling. With the reactor vessel head still in place and the vent open, the primary system water level was lowered to the center line of the loop piping in order to perform an inspection of the steam generator tube sheet cladding and conduct eddy current testing of the steam generator tubes. The A steam generator manway was open and inflatable plugs had been installed in the loop piping of the open steam generator. The RHR system was in operation, taking suction from the A loop hot leg and discharging to the B loop cold leg.

At 11:15 a.m. on May 3, 1972, the control room operator noted a complete loss of flow in the RHR system and the following immediate actions were taken:

1. The standby pump was started; however, no flow was established.

2. The RHR system valve line up was checked and found to be correct.

3. The RHR flow instrumentation was checked and found to be correct.

4. The RHR pumps were stopped, vented and restarted; however, no flow was established upon restarting a pump.

5. The loop drains were opened to the drain collecting tank and the coolant was returned to the primary system by the reactor coolant drain pumps to establish some flow through the core (approximately 30 - 40 gpm).

6. The inflatable plugs in the open steam generator loop piping were inspected and the open steam generator cleared of personnel.

7. The refueling water storage tank was lined up to the RHR pump suction and flow was immediately established indicating the pumps were still capable of pumping.

8. The RHR system flow was re-established at approximately 1:00 pm.

C. Action Taken by Licensee:

1. The water level in the reactor vessel was raised by one foot.

2. A second means of determining the reactor vessel level was installed.

3. The RHR system flow and hot leg temperature indications were placed on recorders to enable the operators to determine trends.

4. The PORC reviewed the occurrence and attributed the loss of flow to air in the pumps resulting from vortexing in the loop.

5. The occurrence will be reported in writing, within 10 days, to RL in accordance with Section 6.6.2 of the Technical Specifications.