



ROCHESTER GAS AND ELECTRIC CORPORATION • 89 EAST AVENUE, ROCHESTER, N.Y. 14649-0001



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12/21/84

Dr. Thomas E. Murley, Regional Administrator
U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Subject: I&E Inspection Report No. 50-244/84-23
Notice of Violation - Failure to Adhere to All Necessary
Technical Specification Prerequisites Prior to Handling
Irradiated Fuel Assemblies in the Auxiliary Building.

Dear Dr. Murley:

The Notice of Violation set forth in Inspection Report No.
50-244/84-23 states the following:

"Technical Specification 3.11.1 establishes the required conditions that must be met prior to handling of irradiated fuel assemblies in the auxiliary building. In particular, Technical Specification 3.11.1.c requires that the auxiliary building exhaust fan 1C, which takes its suction from the spent fuel pit area, be operating; and Technical Specification 3.11.1.e requires that charcoal adsorbers be installed in the spent fuel pit area ventilation exhaust, and be operable."

Contrary to the above,

1. On October 4, 1984, 73 fuel assemblies were transferred in the auxiliary building with the fan 1C inoperable in that its exhaust damper was closed because of a mechanical failure of the operating shaft. The condition had existed since at least October 1, 1984, when positive pressure was identified in the auxiliary building, but the cause of the positive pressure was not identified and corrected prior to the fuel handling.

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2. Between August 6 and October 17, irradiated fuel assemblies were transferred in the auxiliary building on eight occasions, and during that time, the charcoal adsorbers were inoperable in that approximately three percent of the exhaust flow was bypassing the adsorbers because the blanking plate used to block the ventilation bypass flow path and ensure flow through the charcoal adsorbers, was improperly installed on August 6, 1984. The charcoal adsorbers are required to provide 99 percent iodine removal in the event of a fuel handling accident, and meeting this operability requirement is not possible with three percent bypass flow.

As stated in the Notice of Violation above, it was discovered on October 1, 1984, that a positive pressure, as indicated by a manometer, existed in the auxiliary building. This manometer reading was discovered during a routine inspection of the auxiliary building, even though this instrument reading is not normally observed or recorded. A maintenance work order was initiated on October 1, 1984 to investigate the cause of the positive manometer reading.

During the period of time from October 1, 1984, until the mispositioned damper was discovered on October 5, 1984, several independent investigations occurred in an attempt to determine the cause for the positive pressure condition. On October 1, 1984 the proper alignment of the ventilation system was verified per procedure, assuring all necessary fans were running and all dampers were correctly positioned. Since it was not known at this time that the exhaust fan discharge damper coupling was broken, the actuator piston indicated that the damper was open. It was noted that the flow into the spent fuel pit roughing filters was degraded but it was concluded that this may have been due to the pressure imbalance between the intermediate and auxiliary buildings.

On October 2, 1984, proper operation of the manometer was verified. On October 3, 1984, the proper alignment of the auxiliary and intermediate building ventilation systems was again verified. The applicable steps in a procedure that ensures the necessary prerequisites are achieved prior to commencing fuel movement were also performed. A ventilation filter pressure drop log was also reviewed and a conclusion was reached that the filters showed indication of plugging but they were not significantly degraded. On October 4, 1984, it was again verified that the necessary prerequisites were established prior to commencing fuel movement.

Even though the positive pressure condition still existed, it was decided that fuel movement could occur concurrent with the continuing investigation. This investigation revealed that the filters for the 1A auxiliary building supply fan were plugged. On the afternoon of October 4, 1984, the filters were replaced with new filters and unexplainably the manometer indicated a negative pressure condition after filter replacement.

With the damper in the closed position, coupled with the three percent bypass flow, the radioactive release resulting from a fuel handling accident would not have the benefit of being adequately filtered with a charcoal adsorber. Charcoal would remove at least 90% of the radioactive iodine, and as such, reduce the potential thyroid dose received by the general public at the exclusion area boundary. The charcoal adsorbers, however, would do nothing to reduce the whole body exposure. Calculations were made of the off-site exposure assuming the total failure of the highest powered design basis fuel assembly in the spent fuel pit. These calculations were performed assuming that the assembly had decayed for a period of 150 days and 210 days since its last irradiation. These times were chosen since they appropriately bound all fuel movements conducted from August through October 5, 1984. After these time periods, the iodine in the assembly would have virtually decayed away. In fact, these calculations show that the two-hour thyroid dose at the exclusion area boundary would be .32 mRem at 150 days and only .002 mRem at 210 days for an unfiltered release. The whole body exposure was calculated to be less than 1 mRem for the same unfiltered fuel handling accident. Thus, the radiological consequences of this event are negligible when considering the decay time from shutdown until the fuel handling occurred in August through October.

As a result of the discovery of the broken discharge damper, the following corrective actions have been taken:

- 1) A formal "stopwork" was issued for all irradiated fuel movement until the discharge damper could be repaired.
- 2) The broken coupling was repaired on October 5, 1984.
- 3) The LC fan flow switch, which was discovered to be inoperable during this event, was adjusted and verified operable.
- 4) Procedural changes were made that would:
 - a) Clarify the need for charcoal filter testing.
 - b) Verify that the low flow alarm on the LC exhaust fan is not actuated prior to moving fuel.
 - c) Require a total fan flow determination within seven days prior to commencing fuel movement.
 - d) Ensure the auxiliary building differential pressure is negative during fuel movement.
- 5) A determination of total fan flow, for the LC exhaust fan, was accomplished and compliance with the applicable Technical Specification was verified.

As a result of the discovery of the increased bypass flow, the following corrective actions have been taken:

- 1) The blanking plates were properly installed.
- 2) A determination of bypass flow was accomplished and compliance with the applicable Technical Specification was verified.

The following long term corrective actions will be taken by the indicated target completion date:

- 1) Rochester Gas and Electric intends to submit a change to the Technical Specifications clarifying the need for charcoal filtration, the appropriate ventilation system alignment and the testing required to demonstrate the operability of the system. This Technical Specification will be submitted prior to March 1, 1985. In the interim, prior to approval of this proposed Technical Specification, Rochester Gas and Electric is currently performing PT-24 (Spent Fuel Pit Filter Bank Mass Air Flow Check) within seven days prior to commencing irradiated fuel movement and will perform PT-24.1 (Spent Fuel Pit Charcoal Filter Bypass Flow) after each repositioning of the blanking plates that allow flow through the charcoal adsorbers.
- 2) Rochester Gas and Electric intends to prepare a maintenance procedure detailing the installation instructions for the blanking plates at the inlet to the charcoal adsorbers. These instructions will include guidance for inspection and test requirements. This procedure will be prepared by March 1, 1985.

In order to assure aggressive action is taken on plant concerns, certain changes have been made in the format of our Morning Priority Action Required (MOPAR) Meetings. These changes include:

- 1) All concerns are identified and a log of unresolved concerns is maintained.
- 2) Priority is assigned to each concern by a consensus of managers from all areas of plant management.
- 3) Action items follow-up is assigned for each concern.
- 4) Target completion dates are assigned to these concerns consistent with the priority identified.
- 5) The need for PORC review of the concern has been added to our log to assure consideration on the items.
- 6) Concern summary sheets are receiving necessary management review and attention.

Roger W. Kober
Roger W. Kober

Subscribed and sworn to me
the 21st day of December, 1984.

Arlene K. Barney

ARLENE K. BARNEY
NOTARY PUBLIC, State of N.Y., Monroe County
My Commission Expires March 30, 1986