

NONROUTINE 10 DAY REPORT 75-08
REPORT OF AN UNPLANNED RELEASE OF RADIOACTIVE MATERIAL
OCCURRING ON NOVEMBER 19, 1975

Description of Occurrence:

On November 19, 1975 between the hours of 0245 and 1830 (15 hours and 45 minutes), an inadvertent release of gaseous radioactive material occurred due to opening MS-V23A/B and MS-V25A/B in accordance with the Operating Procedure 1106-16, Once Through Steam Generator Wet and Dry Layup Procedure. As a result of opening these two (2) valves, the Reactor Coolant Drain Tank was vented to the secondary side of the Once Through Steam Generators. In doing this, the radioactive gas which was in the Reactor Coolant Drain Tank was drawn into the steam generator which was under a vacuum condition at the time, and subsequently drawn into the main condenser in the Turbine Building where it was discharged via the main condenser vacuum pumps to the Turbine Building vent. The release of the radioactive gas was detected immediately by the condenser vacuum pump effluent radiation monitor RM-A5. When this occurred, the operators realized that the radioactive gas was coming from the venting operation and immediately closed the valves MS-V23A/B and MS-V25A/B.

Upon investigation into the nature of the occurrence, it was determined that while the procedures were followed as required, the step requiring the opening of the two (2) valves was inappropriate for the vacuum condition which existed in the steam generator at the time.

A second release occurred on November 19, 1975 between the hours of 1955 and 2151 (1 hour and 56 minutes) when a Reactor Coolant Pump was started as part of the plant heatup evolution. The resultant 10°F temperature increase in the steam generators caused some radioactive gas to come out of solution and be released through the vacuum pump vent.

Cause of the Occurrence:

Procedure inadequacy was the apparent cause of the occurrence in that two (2) valves which were specified to be open in a venting procedure should never have been opened in view of the conditions existing in the Steam Generator and Reactor Coolant Drain Tank at the time of the occurrence.

Analysis of the Occurrence:

For the following reasons it is believed that the release of radioactive material on November 19, 1975, did not endanger either the health or safety of the public.

- a. None of the limits of the TMI Unit 1 Technical Specifications were exceeded.
- b. None of the maximum permissible concentration limits for non-radiation workers as given in 10 CFR 20 were exceeded at the site boundary.
- c. No individual on site at the time of the release received a radiation dose in excess of the limits for radiation workers specified in 10 CFR 20.

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Corrective Action:

Immediate corrective action as described above was taken to terminate the release. Additionally, the operating procedures will be revised to prevent a recurrence of the incident by not venting the Once Through Steam Generators secondary side to the Reactor Coolant Drain Tank.

Failure Data:

Previous failure data - None

Equipment Identification:

Not Applicable.

Release Data:

Note: In no case did any member of the public or any station contractor personnel receive a radiation dose near the applicable limit given in 10 CFR 20.

The initial release consisted of 2.75 curies of predominantly ^{133}Xe (99%). Based on radiation monitoring system strip chart recordings and samples of the affected area during the release, the maximum noble gas release rate during the 15 hour 45 minute period was $8.26 \times 10^2 \text{ M}^3/\text{sec}$ which is below the Technical Specification limit of $1.2 \times 10^5 \text{ M}^3/\text{sec}$. The average release rate during the period was $1.62 \times 10^2 \text{ M}^3/\text{sec}$.

The second release consisted of 2.91×10^{-2} curies of predominantly ^{133}Xe (99%). Similar to the above, the maximum noble gas release rate during the 1 hour and 56 minute period was $3.55 \times 10^1 \text{ M}^3/\text{sec}$ and the average release rate for the period was $1.39 \times 10^1 \text{ M}^3/\text{sec}$.

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