

1. Report No: 50-244/74-3
- 2a. Report Date: February 22, 1974
- 2b. Occurrence Date: February 14, 1974
3. Facility: R. E. Ginna Nuclear Power Plant, Unit No. 1
4. Identification of Occurrence:

This abnormal occurrence is defined by Technical Specifications Article 1.9d: Failure of one or more components of an engineered safety feature or plant protection system that causes or threatens to cause the feature or system to be incapable of performing its intended function.

5. Conditions Prior to Occurrence:

At the time of the occurrence, the plant was in cold shutdown for turbine repair and refueling.

6. Description of Occurrence:

On February 14, 1974 the purge supply and exhaust valves of the containment were being given leakage tests by pressurizing the space between each inside and outside pair of valves. Each pair indicated a leakage rate of approximately 79,000 cc/min. for a total rate of approximately 158,000 cc/min. The majority of the air loss from each test volume was from the test void into containment and therefore this leakage did not provide a direct and sizable air flow path between the containment volume and the outside atmosphere. Technical Specifications allow total local leakage to be $0.45 L_p$, which is equivalent to a volumetric rate for both pair of valves of 17,200 cc/min. at 60 psig. Technical Specifications Article 4.4.1.2c defines L_p as the maximum allowable leakage rate that would be measured if containment were pressurized with air to the designed pressure.

7. Designation of Apparent Cause of Occurrence:

In an examination of the valves some paint and dirt debris were located on the disc edges of the purge valves and in the test voids. This foreign matter evidently had not been dislodged previously to cause valve leakage problems. The voids, disc edges and the ethylene-propylene seats of all valves were cleaned. All edges and seats appeared to be in good condition from visual inspections. The adjusting segments for the valves were adjusted to provide tight seating after the surfaces were cleaned.

8. Analysis of Occurrence:

It is believed that accumulation of foreign debris on the discs and seats of the valves was responsible for the excessive leakage. These valves have operated several times since the outage commenced on January 1, 1974 due to the radiographic inspection sources setting off radiation alarms causing the valves to close.

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Abnormal Occurrence 74-3 cont'd.

9. Corrective Action:

All edges and seats were cleaned and adjusting segments tightened. Both valves were retested and the leakage rates were 1298 cc/min. for the purge supply valves and 161 cc/min. for the purge exhaust valves, for a total leakage rate of 1459 cc/min.

After the forthcoming refueling operation is completed, the containment purge system will be retested and leakage reduced as low as possible. Procedures will be prepared to ensure that these valves are tested near the end of each refueling period and any extended outage when significant work has been accomplished in containment.

10. Failure Data:

Tests conducted on May 19, 1972, September 28, 1972 and June 14, 1973 indicated total leakage rates in the range of 100 to 300 cc/min.

These valves are 48 inch pneumatically-operated rubber-seated butterfly valves manufactured by the Henry Pratt Company.

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