Regulatory File Cy.

1. Report No.: 50-3/4-1-25

2a. Report Date: November 1, 1974

Received w/Ltr Dated 11-1-74

2b. Occurrence Date: October 23, 1974

3. Facility: Indian Point Unit No. 1

4. Identification of Occurrence:

This occurrence is the type defined by Technical Specification 6.3.A.1.b(5) and relates to an unplanned release of radioactive material.

5. Conditions Prior to Occurrence:

—Steady-State Power. The reactor was operating at 94% of rated power with an output of 270 MWe.

6. Description of Occurrence:

At approximately 5:00 p.m., having previously shutdown the Chemical Process Purification System, the operator commenced stripping NSG water into the No. 13 clean water storage tank in order to reduce the boron concentration in that tank.

At approximately 5:15 p.m., radiogas and particulate activity was noted on the plant exhaust monitor and on local monitors in the Chemical Systems Building.

The stripping operation was immediately discontinued and all non-essential personnel were evacuated from the area as a precautionary measure. Activity levels began to decrease immediately and were returned to normal by approximately 6:55 p.m.

7. Designation of Apparent Cause of Occurrence:

—Component Failure. Investigation disclosed that the release was caused by through-leakage on Valves RS152 and CD29, which are diaphragm-type drain valves on the purification outlet filters of the Chemical Process Purification System.

Since these two valves had not been manipulated during the system changeover operation, it is postulated that normal wear of their diaphragms with usage, coupled with the shock loading due to repressurization during system startup, resulted in the leakage of gas-laden water through the valves to the liquid waste sump tank. This tank is vented to the Chemical Systems Building ventilation exhaust, which in turn is exhausted via the plant vent.

8. Analysis of Occurrence:

Total release consisted of approximately 0.5 curies of gaseous and negligible particulate activity. Major constituents of the release were Xenon-133 and 135; total radioiodine released amounted to approximately 7.0 microcuries. All release rates were well below 1% of the Technical Specification maximum allowable release rates and the release, therefore, is not considered safety significant.

9. Corrective Action:

Immediate corrective action taken was to shutdown the stripper and the Chemical Process Purification System in order to depressurize the affected valves and terminate the release.

The valve diaphragms were then replaced with new diaphragms in order to prevent recurrence. The system was then placed back in operation and the valves in question were verified to be functioning properly.

10. Failure Data:

A review of plant records indicates that the valves and diaphragms in question had been in service since the initial operation of the plant with no previous malfunctions or failures.

The valves are one-inch, Schedule 40 stainless steel, sealed bonnet diaphragm valves, designed for extension stem operation, and are manufactured by Grinnel-Saunders.