

ATTACHMENT 1
SURREY POWER STATION, UNIT NO. 1
DOCKET NO: 50-280
REPORT NO: 82-047/01T-0
EVENT DATE: 04-18-82

TITLE OF THE EVENT: Instantaneous Gaseous Release Rate Exceeded

1. DESCRIPTION OF EVENT:

On April 18, 1982, 1-BR-79 was opened to initiate the transfer of gaseous waste from the Gas Stripper Surge Tank (1-BR-TK-6) to the Waste Gas Surge Drum (1-GW-TK-2). A relief valve (KV-GW-107), located in the piping between the tanks; lifted thereby causing an unplanned gaseous release to the process vent system.

During the investigation of this event it was discovered that a previously reported event, "Process Vent Flow Transmitter Unreliable" (LER 82-022/03L-0) also involved an unplanned release which appears to be similar in cause to the April 18th event.

February 9, 1982

Based on strip chart interpretation the duration of the release was estimated to be 2 minutes and the amount of activity released was 8.57 curies of Xe-133 equivalent. The instantaneous release rate was 1.19 times the allowable Tech. Spec. limit.

April 18, 1982

The duration of the release was estimated to be 5 minutes and a sample from 1-BR-TK-6 showed that the amount of activity released was 52.4 curies of Xe-133 equivalent. The instantaneous release rate was 2.58 times the allowable Tech. Spec. limit.

Both events are contrary to Technical Specification 3.11.B.1 and reportable pursuant to Technical Specification 6.6.2.1(2).

2. CONSEQUENCES OF THE EVENT:

The process vent system is monitored by gaseous and particulate radiation monitors, RM-GW-102 and RM-GW-101 respectively. In addition, a Health Physics Accountability Sampler provides a cumulative sample of particulates and halogens.

February 9, 1982

Using the radiation monitor strip chart, the actual process vent system flow rate and weather conditions, the maximum dose rate and the integrated whole body dose at the site boundary (excursion boundary) were calculated to be .37 mrem/hr and .009 mrem respectively.

April 18, 1982

The gas stripper surge tank was sampled and an isotopic analysis was performed. Using the results of this analysis, the calculated volume of gas released from 1-BR-TK-6, and the actual weather conditions, the maximum dose rate and the integrated whole body dose at the site boundary were calculated to be 1.39 mrem/hr and .085 mrem respectively.

An evaluation of the TLD's located at the site boundary confirmed that the integrated site boundary dose was not of sufficient magnitude to be distinguished from ambient background.

3. CAUSE:

The cause of the events is the premature lifting of relief valve RE-GW-107. Specifications require this relief valve to open at 15 psig. Subsequent testing indicated that it lifted at less than 2 psig.

4. IMMEDIATE CORRECTIVE ACTION:

The immediate corrective action, for both events, was to terminate the release by closing 1-BR-79. In addition, the immediate action of AP-5.1 was performed. On February 9th the HP Accountability Sample was retrieved and an isotopic analysis was performed. On April 18th the HP Accountability Sample was retrieved but due to excessive moisture an isotopic analysis could not be performed.

5. SUBSEQUENT CORRECTIVE ACTIONS:

Following the event on April 18, 1982, RV-GW-107 was disassembled, inspected, cleaned and reset to lift at 15 psig. The relief valve has been returned to service. The operation of the upstream pressure control valve (PCV-GW-107) was verified. Testing indicated that PCV-GW-107 was controlling pressure at a value substantially below the specified setpoint of RV-GW-107.

6. ACTION TAKEN TO PREVENT RECURRENCE:

A review of relief valves has been completed and as a result the gaseous waste relief valves will be incorporated in the inservice inspection program. Proposed process vent modification as described in the December 31, 1982 letter to Region II will improve overall reliability of the process vent system. Health Physics and Abnormal Procedures will be changed to insure that the classification and evaluation of process vent system transients will be performed in a timely manner.