

UPDATE REPORT - PREVIOUS REPORT DATE 12-19-81

U.S. NUCLEAR REGULATORY COMMISSION

## LICENSEE EVENT REPORT

CONTROL BLOCK: 1

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 V A S P S 2 0 0 - 0 0 0 0 0 - 0 0 3 4 1 1 1 1 4 5  
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60  
LICENSEE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 31 CAT 56 57

CON'T  
0 1 REPORT SOURCE L 6 0 5 0 0 0 2 8 1 7 1 1 2 0 8 1 8 0 1 3 1 8 3 5  
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60  
DOCKET NUMBER 65 66 EVENT DATE 74 75 REPORT DATE 80

## EVENT DESCRIPTION AND PROBABLE CONSEQUENCES 10

0 2 With the unit at Refueling Shutdown, higher than normal activity was detected in  
0 3 the storm drain system. The increase in the storm drain activity was attributed  
0 4 to leaks from the stripper feed steam heater (1-BR-E-10A). This unsampled release  
0 5 is contrary to T.S.3.11.A.4 and reportable per T.S.6.6.2.b.(4). The activity of  
0 6 the storm drain water released was within T.S. limits (.00748% of T.S.). There-  
0 7 fore, the health and safety of the public were not affected.  
0 8  
0 9

SYSTEM CODE CAUSE CODE CAUSE SUBCODE COMPONENT CODE COMP. SUBCODE VALVE SUBCODE  
M A 11 E 12 C 13 H T E X C H 14 A 15 Z 16  
8 1 0 7 4 0 3 X 1  
17 LER/RO REPORT NUMBER 21 22 23 24 25 26 27 28 29 30 31 32  
ACTION TAKEN FUTURE ACTION EFFECT ON PLANT SHUTDOWN METHOD HOURS ATTACHMENT SUBMITTED NPRO-4 FORM SUB. PRIME COMP. SUPPLIER COMPONENT MANUFACTURER  
X 18 B 19 Z 20 Z 21 0 0 0 0 Y 23 N 24 A 25 A 5 5 0 26  
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

## CAUSE DESCRIPTION AND CORRECTIVE ACTIONS 27

1 0 The release was caused by the leaking of five tubes in the heat exchanger bundle  
1 1 of 1-BR-E-10A and the failure of heater drain receiver (2-HS-T-3) pumps and  
1 2 check valves to prevent the receiver from overflowing. The leaking tubes were  
1 3 plugged and the heat exchanger returned to service. The heater drain receiver's  
1 4 pumps were repaired.  
1 5  
1 6  
1 7  
1 8  
1 9  
2 0

FACILITY STATUS % POWER OTHER STATUS 30 METHOD OF DISCOVERY DISCOVERY DESCRIPTION 32  
H 28 0 0 0 29 N/A A 31 Routine Inspection  
1 5 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60  
ACTIVITY CONTENT RELEASED OF RELEASE AMOUNT OF ACTIVITY 35 LOCATION OF RELEASE 36  
L 33 M 34 .0013 ci Storm Drain  
1 6 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

PERSONNEL EXPOSURES NUMBER TYPE DESCRIPTION 39  
0 0 0 37 Z 38 N/A  
1 7 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

PERSONNEL INJURIES NUMBER DESCRIPTION 41  
0 0 0 40 N/A  
1 8 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

LOSS OF OR DAMAGE TO FACILITY TYPE DESCRIPTION 43  
2 42 N/A  
1 9 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

PUBLICITY ISSUED DESCRIPTION 45  
N 44 N/A  
2 0 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

NAME OF PREPARED J. L. Wilson

PHONE (804) 357-3184

NRC USE ONLY

UPDATE REPORT - PREVIOUS REPORT DATE 12-19-81

ATTACHMENT 1

SURRY POWER STATION, UNIT NO. 2

DOCKET NO: 50-281

REPORT NO: 81-074/03X-1

EVENT DATE: 11-20-81

TITLE OF THE EVENT: UNCONTROLLED RELEASE

1. Description of the Event

With the unit at Refueling Shutdown, higher than normal activity was detected in the storm drain. A plant inspection ensued and the increase in the storm drain activity was attributed to leaks from stripper feed steam heater 1-BR-E-10A. Leaks from heater 1-BR-E-10A drained into the auxiliary steam drain receiver where pumps, taking suction, discharged contaminants into the makeup water header.

Contaminants from the makeup header then filled the unit no. 2 safeguards heating system drain receiver. The heating steam drain receiver overflowed, via the receiver's vent, into the storm drain system. This uncontrolled release is contrary to Tech. Spec. 3.11.A.4 and is reportable per Tech. Spec. 6.6.2.b.(4).

2. Probable Consequences and Status of Redundant Equipment

The activity of the water that entered the storm drain was within Technical Specification Limits (.00748% of T.S.). Therefore, the health and safety of the public were not affected.

3. Cause

The unplanned release was due to a leaking check valve for the safeguards heating steam drain receiver pumps. In addition, the above drain receiver pumps were inoperable. (One due to a pump failure and one due to a planned electrical bus outage). The source of the radioactivity was a leaking stripper feed steam heater, 1-BR-E-10A.

4. Immediate Corrective Action

The immediate corrective action was to locate and isolate the source of inleakage to the storm drain. This was accomplished by isolating the heating drain receiver located (in Unit No. 2 Safeguards Building) from the discharge of the auxiliary steam drain receiver pumps.

5. Subsequent Corrective Action

The source of contamination leakage was identified as heat exchanger 1-BR-E-10A. The heat exchanger was isolated and the leaking tubes plugged. The heater drain receiver pumps were repaired.

6. Action Taken to Prevent Recurrence

An Engineering Study 82-52 to investigate the problem of contaminated leakage entering the auxiliary steam system has been completed. The study does not recommend any modifications to the heater drain receiver vent in Unit #2 Safeguards Building. However, Health Physics sampling of the

auxiliary steam drain receiver LAW PT-38.43 will continue to provide for detection of activity and recommendations for diverting the drains.

7. Generic Implications

None.