

LICENSEE EVENT REPORT

CONTROL BLOCK

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

V A S P S 1 0 0 - 0 0 0 0 0 0 - 0 0 3 4 1 1 1 1 4 5
LICENSEE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 31 CAT SE 32

REPORT
SOURCE

L E 0 5 0 0 0 2 8 0 7 0 7 0 4 8 1 8 0 7 3 1 1 8 1 9
DOCKET NUMBER 50 51 EVENT DATE 64 65 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

With the unit at intermediate shutdown, the Chemical Addition Tank (CAT) was discovered to contain 86% of the volume required by T.S.-3.4.A(4), following recalibration of the level transmitter. This is reportable per T.S.-6.6.2.b(4). The containment spray systems would have functioned to limit out leakage following a DBA, and NaOH would have been available for spray addition during the period of highest containment pressure. The health and safety of the public were not affected.

SYSTEM CODE CAUSE CODE CAUSE SUBCODE COMPONENT CODE COMP SUBCODE VALVE SUBCODE
P C 11 D 12 Z 13 I N S T R U 14 T 15 Z 16
LER/RO REPORT NUMBER EVENT YEAR SEQUENTIAL REPORT NO. OCCURRENCE CODE REPORT TYPE REVISION NO.
8 1 0 2 1 0 3 L 0
ACTION TAKEN FUTURE ACTION EFFECT ON PLANT SHUTDOWN METHOD HOURS ATTACHMENT SUBMITTED NRC FORM SUB. PRIME COMP. SUPPLIER COMPONENT MANUFACTURER
E 18 Z 19 Z 20 Z 21 0 0 0 0 23 N 24 A 25 F 1 2 0 26

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

The incorrect calibration of the transmitter resulted from the use of pure water rather than a NaOH solution in the original calibration procedure, causing the transmitter to indicate 100% with 82% actual level. The CAT was filled to the correct level. The proper tank curve was developed and placed in the operator curve book.

FACILITY STATUS % POWER OTHER STATUS METHOD OF DISCOVERY DISCOVERY DESCRIPTION
B 28 0 0 0 29 N/A B 31 Operator Observation
ACTIVITY CONTENT RELEASED OF RELEASE AMOUNT OF ACTIVITY LOCATION OF RELEASE
Z 33 Z 34 N/A N/A
PERSONNEL EXPOSURES NUMBER TYPE DESCRIPTION
0 0 0 37 Z 38 N/A
PERSONNEL INJURIES NUMBER DESCRIPTION
0 0 0 40 N/A
LOSS OF OR DAMAGE TO FACILITY TYPE DESCRIPTION
Z 42 N/A
PUBLICITY ISSUED DESCRIPTION
N 44 N/A

NRC USE ONLY

NAME OF PREPARED J. L. Wilson

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ATTACHMENT 1
SURRY POWER STATION, UNIT 1
DOCKET NO: 50-280
REPORT NO: 81-021-03L-0
EVENT DATE: 07-04-81

TITLE OF EVENT: CAT LEVEL LOW

1. DESCRIPTION OF EVENT:

With Unit 1 at intermediate shutdown, the Chemical Addition Tank (CAT) was discovered to contain 86% of the required volume, after recalibration of the level transmitter. This is contrary to T.S.3.4.A.(4), and reportable per T.S.-6.6.2.b(4). A review of unit operating records revealed that despite the transmitter having been incorrectly calibrated since the start of plant operations, the CAT volume had been below the TS minimum for only one previous period, about 12 hours in June 1978.

2. PROBABLE CONSEQUENCES:

The CAT would be used to add sodium hydroxide to the Containment Spray, following a Design Basis Accident, in order to facilitate removal of radioactive iodine from the containment atmosphere, thus reducing the concentration of airborne fission products available for leakage. Since the peak pressure inside the containment would occur within one minute following DBA the CAT would have still provided sodium hydroxide to the sprays during the period of greatest potential for leakage to the environment.

Since the CAT volume was adequate during the great majority of the time the unit was in operation and the system was not called upon to mitigate a DBA, the health and safety of the public were not affected.

3. CAUSE:

The incorrect calibration of the level transmitter resulted from the use of pure water rather than a solution of denser 18% NaOH in the original calibration procedure. This error caused the transmitter to indicate approximately 100% level with an actual level of 82%.

4. IMMEDIATE CORRECTIVE ACTION:

The CAT was filled to restore level to above the Technical Specification minimum. Difficulties with the sodium hydroxide addition pump resulted in approximately 7 hours and 10 minutes being required to fully restore level.

5. SUBSEQUENT CORRECTIVE ACTIONS:

None required.

6. ACTION TAKEN TO PREVENT RECURRENCE:

The calibration procedures have been revised to take into account the density difference between NaOH and pure water. The proper tank curve was developed and placed in the operator curve book. The Unit 2 curve was verified to be correct.

7. GENERIC IMPLICATIONS:

None.