NRC FORM 366 (12-81)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

APPROVED BY OMB 3150-0011 EXPIRES 4-30-82

CONTROL BLOCK: (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01 LICENSEE CODE: S C V C S 1 (2) LICENSE NUMBER: 0 0 - 0 0 0 0 0 - 0 0 (3) LICENSE TYPE: 4 1 0 0 0 (4) CAT (5)

CON'T 01 REPORT SOURCE: L (6) DOCKET NUMBER: 0 5 0 0 0 3 9 5 (7) EVENT DATE: 0 5 1 9 8 3 (8) REPORT DATE: 0 6 0 2 8 3 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 At 0656 hours, with the Plant in Mode 3, the Intermediate Building Preaction
03 Sprinkler System deluge valve was tripped open when a steam leak activated a smoke
04 detector. An operator made the system inoperable at 0730 hours when he closed the
05 manual isolation valve. The Shift Supervisor was not aware until 0930 hours that
06 the system was isolated. There were no adverse consequences from this event. A
07 fire watch patrol in the general area and operable smoke detectors would have
08 detected any fires.

09 SYSTEM CODE: A B (11) CAUSE CODE: A (12) CAUSE SUBCODE: B (13) COMPONENT CODE: Z Z Z Z Z Z (14) COMP. SUBCODE: Z (15) VALVE SUBCODE: Z (16)

(17) LER/RO REPORT NUMBER: EVENT YEAR: 8 3 — SEQUENTIAL REPORT NO.: 0 4 2 / OCCURRENCE CODE: 0 1 REPORT TYPE: T — REVISION NO.: 0

ACTION TAKEN: H (18) FUTURE ACTION: H (19) EFFECT ON PLANT: Z (20) SHUTDOWN METHOD: Z (21) HOURS: 0 0 0 0 (22) ATTACHMENT SUBMITTED: Y (23) NPRD-4 FORM SUB.: N (24) PRIME COMP. SUPPLIER: Z (25) COMPONENT MANUFACTURER: Z 9 9 9 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 Cause is attributed to personnel error and lack of system knowledge. The deluge
11 valve was reset, and the sprinkler system returned to operable status by 1030
12 hours on May 19, 1983. In order to prevent a recurrence of the event, the
13 operator has been counselled, training on system operation has been initiated,
14 and a change to display information on system status is to be performed.

15 FACILITY STATUS: C (28) % POWER: 0 0 0 (29) OTHER STATUS (30): N/A METHOD OF DISCOVERY: A (31) DISCOVERY DESCRIPTION (32): Fire Watch Observation

16 ACTIVITY RELEASED: Z (33) CONTENT OF RELEASE: Z (34) AMOUNT OF ACTIVITY (35): N/A LOCATION OF RELEASE (36): N/A

17 PERSONNEL EXPOSURES NUMBER: 0 0 0 (37) TYPE: Z (38) DESCRIPTION (39): N/A

18 PERSONNEL INJURIES NUMBER: 0 0 0 (40) DESCRIPTION (41): N/A

19 LOSS OF OR DAMAGE TO FACILITY TYPE: Z (42) DESCRIPTION (43): N/A

8306100213 830602
PDR ADOCK 05000395
S PDR

20 PUBLICITY ISSUED: N (44) DESCRIPTION (45): N/A

NRC USE ONLY

NAME OF PREPARER: C.J. McKinney (signature) C.J. McKinney

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O. W. DIXON, JR.
VICE PRESIDENT
NUCLEAR OPERATIONS

June 2, 1983

Mr. James P. O'Reilly
Regional Administrator
U.S. Nuclear Regulatory Commission
Region II, Suite 2900
101 Marietta Street, N.W.
Atlanta, Georgia 30303

SUBJECT: Virgil C. Summer Nuclear Station
Docket No. 50/395
Operating License No. NPF-12
Fourteen Day Written Report
LER 83-042

Dear Mr. O'Reilly:

Please find attached Licensee Event Report #83-042 for Virgil C. Summer Nuclear Station. This Fourteen Day Report is required by Technical Specification 6.9.1.12.(b) as a result of entry into Action Statement (a) of Technical Specifications 3.7.9.2.(g), "Spray and/or Sprinkler Systems," and 3.3.3.7, "Fire Detection Instrumentation," on May 19, 1983.

Should there be any questions, please call us at your convenience.

Very truly yours,

O. W. Dixon, Jr.

CJM:OWD/dwf
Attachment

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EVENT DESCRIPTION AND PROBABLE CONSEQUENCES

At 0656 hours on May 19, 1983, with the Plant in Mode 3, a steam leak developed on the exhaust manifold of the steam driven emergency feedwater pump. The steam was detected by a smoke detector, which then caused the Intermediate Building (IB) Preaction Sprinkler System deluge valve to trip open. The 412' elevation of the IB protected by this sprinkler system contains all of the component cooling water pumps, emergency feedwater pumps, chilled water cooling pumps/heat exchangers, and the service water booster pumps. The system status was subsequently identified by an alarm on the Integrated Fire and Security System (IF&S) CRT in the Control Room. An Auxiliary Operator (AO) was dispatched to reset the system after the alarm was received. This task is usually a two (2) man operation which requires approximately 30 to 40 minutes to accomplish. The system must be manually isolated and the piping system drained prior to actually resetting the deluge valve.

The Shift Supervisor countermanded the task assigned to the AO at approximately 0730 hours because the system was still considered operable with the deluge valve tripped and a shift change was about to commence. The AO had just completed the closure of the manual isolation valve, which rendered the system inoperable, when he received this countermand. He failed to report that the system was isolated to either the Shift Supervisor or Control Room Foreman.

At 0919 hours, the system was observed to be in alarm by a Fire Watch conducting a routine fire alarm summary on the IF&S. This alarm can be caused by either the deluge valve being tripped, manual isolation valve closed, or low air pressure in the trip actuating circuit. The Fire Watch investigated the alarm and discovered that the manual isolation valve was closed. He returned to the Control Room and notified the Shift Supervisor of the inoperable condition of the system at approximately 0930 hours. The Shift Supervisor then implemented Action Statement (a) of Technical Specification 3.7.9.2.(g), which requires that a continuous fire watch with backup fire suppression equipment be established within one (1) hour for those areas in which redundant systems or components could be damaged and that an hourly fire watch patrol be established for other areas.

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES Continued

A review of the occurrence performed after May 19, 1983, revealed that Action Statement (a) of Technical Specification 3.3.3.7 also applied for Zone BB of the IB. Operations personnel were not aware that they had entered the Action Statement when the alarms were received at 0656 hours for the smoke detector and sprinkler system. The smoke detector circuitry, which activated the sprinkler system, must be acknowledged at the IB Preaction Sprinkler System remote panel in order to receive any future alarms from that zone.

There were no adverse consequences from this event. The deluge valve was reset, and the sprinkler system returned to operable status by 1030 hours on May 19, 1983. Additionally, during the affected time period, an hourly fire watch patrol was already inspecting all areas of Fire Detection Zone BB with the exception of Room 12-10, which contains the steam driven emergency feedwater pumps. There is also a high degree of confidence that this patrol and the smoke detectors in Zones AA and CC would have detected any fires that might have developed in other areas protected by the inoperable sprinkler system.

CAUSE AND CORRECTIVE ACTIONS

The cause of the occurrence is as follows:

1) The IB Preaction Sprinkler System was inoperable between the hours of 0730 and 1030 on May 19, 1983, because of personnel error. The AO assigned the task of resetting the sprinkler system failed to inform the Shift Supervisor and/or the Control Room Foreman that the manual isolation valve was closed. This failure to communicate the system status is a violation of Station Administrative Procedure (SAP-200), "Conduct of Operations".

2) The failure of Operations personnel to recognize the applicability of Technical Specification 3.3.3.7 in reference to the inoperable Smoke Detection Zone BB is attributed to a lack of system knowledge.

CAUSE AND CORRECTIVE ACTIONS Continued

Upon notification at 0930 hours of the inoperability of the sprinkler system, the Shift Supervisor directed his personnel to reset the deluge valve. At approximately 1000 hours, the plant Fire Protection Coordinator arrived at the Control Room. He was prepared to implement the continuous fire watch and also to supply assistance in resetting the deluge valve. The deluge valve was reset, and the IB Preaction Sprinkler System returned to operable status by 1030 hours on May 19, 1983. Action Statement (a) of Technical Specification 3.7.9.2.(g) was exited without establishing the continuous fire watch.

The following actions have been initiated to prevent a future recurrence:

1. A lack of clear communication between the plant operators and Control Room personnel contributed to the failure to make the Shift Supervisor aware of plant conditions. This problem has been addressed with Operations personnel during a series of conferences completed on May 27, 1983.

2. The operator who closed the isolation valve and failed to inform either the Shift Supervisor or Control Room Foreman was individually counseled on May 26, 1983.

3. An update to the computer software for the IF&S display in the Control Room was initiated in October 1982. This change to the software is expected to be completed by October 1, 1983, and will provide more meaningful information to the plant operators.

4. A Special Instruction was issued to Operations personnel on May 27, 1983, which provides additional guidelines on operator response to IF&S alarm conditions.

5. The fire brigade requalification training presently being given to Operations personnel is currently covering operator response to IF&S alarms. The lesson plans are being revised to specifically address the interface with the sprinkler systems and corresponding Technical Specifications. This training is expected to be complete for all fire brigade personnel by September 30, 1983.