

CONTROL BLOCK

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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CONT

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EVENT DESCRIPTION AND PROBABLE CONSEQUENCES

02 On 4/29-30/83, while in Mode 3, fire detection zones EFA 87, 88, and 100 were
03 declared inoperable due to constant invalid alarms. On 5/9/83, while in Mode 3,
04 Zone EFA 177 was declared inoperable due to constant invalid alarm. On 5/13/83,
05 while in Mode 2, Zone EFA 102 was declared inoperable due to an
06 invalid alarm. These violate T.S.3.3.3.7 which is reportable per T.S.6.9.1.11
07 (b). Fire watches and containment temperature monitoring were established as
08 required by the T.S. Action Statement. Health and safety of the public were
09 unaffected.

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CAUSE DESCRIPTION AND CORRECTIVE ACTIONS

10 Zones 87, 88, and 100 alarms were apparently caused by dirt accumulation in the
11 smoke detectors (Firemark Model 9620 ionization type). The detectors were re-
12 placed. Zone 177 alarms originated from a Fenwal 255°F heat detector cable
13 located on the pump. The cable was checked, and the alarm reset. The Zone 102
14 alarm was a result of a high area temperature. The detector was replaced and
15 ventilation louvers redirected.

15 B 0 0 0 0 Modes 1 & 2 A Alarm Indication
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NAME OF PREPARER Phillip B. Nardoci

PHONE (704) 373-7432

8306130316 830527
PDR ADOCK 05000370
S PDR

DUKE POWER COMPANY

P.O. BOX 33189
CHARLOTTE, N.C. 28242

HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4531

May 27, 1983

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

Re: McGuire Nuclear Station Unit 2
Docket No. 50-370

83 JUN 7 9:26
USNRC REGION II
ATLANTA, GEORGIA

Dear Mr. O'Reilly:

Please find attached Reportable Occurrence Report RO-370/83-13. This report concerns T.S. 3.3.3.7, "As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3-11 shall be operable". This incident was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

H.B. Tucker

Hal B. Tucker

PBN:jfw
Attachment

cc: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Records Center
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

Mr. W. T. Orders
NRC Resident Inspector
McGuire Nuclear Station

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DUKE POWER COMPANY
MCGUIRE NUCLEAR STATION
REPORTABLE OCCURRENCE REPORT NO. 370/83-13

REPORT DATE: May 27, 1983

FACILITY: McGuire Unit 2, Cornelius, NC

IDENTIFICATION: Fire Detection Zones EFA 87, 88, 100, 102, and 177
Declared Inoperable

DESCRIPTION: The following Unit 2 fire detection zones, required by Technical Specification 3.3.3.7, were declared inoperable on the date indicated due to invalid alarms:

<u>Zone</u>	<u>Declared Inoperable</u>	<u>Operating Mode</u>
EFA 100	4/29/83	3
EFA 87	4/29/83	3
EFA 88	4/30/83	3
EFA 177	5/09/83	3
EFA 102	5/13/83	2, 0% power

This incident is a result of Component Failure/Malfunction, and Unusual Service Conditions.

Fire watches and containment temperature monitoring were established as required by the Technical Specification 3.3.3.7 Action Statement.

EVALUATION: Zones 87, 88, and 100 were declared inoperable due to constant alarms verified to be invalid. The alarms were apparently caused by dirt accumulation in three Firemark Model 9620 ionization type smoke detectors (one in each zone). The detectors could not be sufficiently cleaned due to physical configuration, so they were replaced. The alarms were then successfully cleared, and the zones declared operable on 4/30/83. These failures are attributed to Component Failure/Malfunctions.

The Zone 177 (2B Reactor Coolant Pump) alarms originated from a Fenwal 255°F heat detector cable located on the pump. The repeated alarms were verified to be invalid by pump temperature measurements. The hottest spot found measured 160°F; the Fenwal cable was designed to short out the center conductor to ground, thus giving an alarm, at 255°F. The cable is composed of three sections, and none were found shorted. After checking the cable, the alarm was reset, and the zone declared operable on 5/16/83. No further alarms have occurred. This failure is attributed to Component Failure/Malfunction.

The Zone 102 alarm was invalid because no fire existed; however, the Walter Kiddie Model E135C rate of rise and heat detector had actuated apparently at either the design temperature (135°F) or rate of rise (15°F/minute). A high area temperature was observed near the detector, so the detector (which can

only be used once) was replaced and the nearby ventilation duct louvers were directed a little more toward the detector environment. Control Room Operators were notified of these findings and actions, and the zone declared operable on 5/14/83. This failure is attributed to Unusual Service Conditions.

CORRECTIVE ACTION: Fire watches were established as necessary. Zones 87, 88, and 100 had one malfunctioning detector in each zone replaced. Zone 177 had several spurious alarms of a Fenwal cable; inspection revealed no problem. A Zone 102 rate of rise/heat detector was replaced. To date, no further alarms in the listed zones have occurred.

SAFETY ANALYSIS: The fire detection instrumentation ensures that adequate warning capability is available for prompt detection of fires, reducing the potential for damage to safety-related equipment. Upon loss of the listed zone alarms, fire watch patrols were established in accordance with the Action Statement of Technical Specifications 3.3.3.7.

The health and safety of the public were unaffected by this incident.