NRC FORM 366
(7-77)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

EXHIBIT A

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

|0|1| |A|R|A|N|0|2|2 |0|0|-|0|0|0|0|0|-|0|0|3 |4|1|1|1|1|4 | | |5
LICENSEE CODE 9–14; LICENSE NUMBER 15–25; LICENSE TYPE 26–30; CAT 57–58

|0|1| REPORT SOURCE |L|6 |0|5|0|0|0|3|6|8|7 |0|3|3|0|7|9|8 |0|6|0|7|8|4|9
DOCKET NUMBER 61–68; EVENT DATE 69–74; REPORT DATE 75–80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES 10

|0|2| During a design review by the Architect Engineer of HVAC installation and documentation, it was identified

|0|3| that 11 fire dampers had not been seismically qualified as required by NRC General Design Criterion 3.

|0|4| Inadvertent closure of the dampers after a DBA occurrence would disable the cooling system for four areas

|0|5| containing safety related equipment. No similar occurrences. Reportable per Technical Specification

|0|6| 6.9.1.8(1).

|0|7|

|0|8|

|0|9| SYSTEM CODE |A|B|11 CAUSE CODE |B|12 CAUSE SUBCODE |C|13 COMPONENT CODE |V|A|L|V|E|X|14 COMP SUBCODE |X|15 VALVE SUBCODE |D|16

17 LER/RO REPORT NUMBER: EVENT YEAR |7|9| |---| SEQUENTIAL REPORT NO. |0|2|5| |/| OCCURRENCE CODE |0|1| REPORT TYPE |X| |---| REVISION NO |1|

ACTION TAKEN |X|18 FUTURE ACTION |Z|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 |A|25 COMPONENT MANUFACTURER |A|3|4|0|26

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS 27

|1|0| Cause due to installation Quality Assurance. Instructions were promulgated to the operators to immediately

|1|1| verify the fire dampers were reset following a seismic event to insure adequate cooling. Eight of the

|1|2| dampers were replaced with qualified dampers, and three of the dampers were upgraded to the required seismic

|1|3| qualifications.

|1|4|

|1|5| FACILITY STATUS |B|28 % POWER |0|0|0|29 OTHER STATUS |NA|30 METHOD OF DISCOVERY |D|31 DISCOVERY DESCRIPTION |A/E Notification|32

|1|6| ACTIVITY RELEASED |Z|33 CONTENT OF RELEASE |Z|34 AMOUNT OF ACTIVITY |NA|35 LOCATION OF RELEASE |NA|36

PERSONNEL EXPOSURES
|1|7| NUMBER |0|0|0|37 TYPE |Z|38 DESCRIPTION |NA|39

PERSONNEL INJURIES
|1|8| NUMBER |0|0|0|40 DESCRIPTION |NA|41

LOSS OF OR DAMAGE TO FACILITY
|1|9| TYPE |Z|42 DESCRIPTION |NA|43

PUBLICITY
|2|0| ISSUED |N|44 DESCRIPTION |NA|45 NRC USE ONLY | | | | | | | | | | | | |

NAME OF PREPARER: Patrick Rogers PHONE: (501) 964-3100

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IE22

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June 7, 1984

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

Subject: Arkansas Nuclear One - Unit 2
Docket No. 50-368
License No. NPF-6
Licensee Event Report
No. 79-025/01X-1

Gentlemen:

In accordance with Arkansas Nuclear One - Unit 2 Technical Specification 6.9.1.8(i), attached is the subject report concerning the identification that 11 fire dampers had not been seismically qualified. This is a revision to a previous submittal dated April 13, 1979.

Very truly yours,

John R. Marshall
Manager, Licensing

JRM:RJS:ac

Attachment

cc: Mr. Richard P. Denise, Director
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and Engineering Programs
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

IE22
1/1

1. Reportable Occurrence Report No.

   50-368/79-025/01X-1

2. Report Date:

3. Occurrence Date:

   3/30/79

4. Facility:

   Arkansas Nuclear One - Unit
   Russellville, Arkansas

5. Identification of Occurrence:

   Eleven HVAC fire dampers not seismically qualified.

6. Condition Prior to Occurrence:

   Hot Standby

   Reactor Power 0 MWth
   Net Output 0 MWe

7. Description of Occurrence:

   Review of the ANO-2 HVAC installation and documentation has revealed that eleven fire dampers had not been seismically qualified as required by the design/installation specification and NRC General Design Criterion 3 (Fire Protection).

   A listing of the eleven fire dampers which have been installed in Seismic Category I emergency room air cooling systems and which have not received the required seismic qualification is contained in the attached Table II-1. As shown in this table, inadvertent closure of these dampers during a seismic event would disable the individual emergency cooling air supply systems provided for the following spaces containing safety-related systems:

   Room 2100 - South Electrical Switchgear Room

   Room 2101 - North Electrical Switchgear Room

   Room 2099 - DC Equipment Room

   Room 2091 - Electrical Equipment Room

8. Designation of Apparent Cause of Occurrence:

Installation/Construction

9. Analysis of Occurrence:

Electrical Switchgear Rooms 2100 and 2101

The dampers (Items 1, 2, 3, 4 of Table II-1) are part of the emergency ventilating systems for these rooms. In the event of a DBA, a rise in the service water temperature is anticipated. As the water temperature increases to 105°F, the room temperature will rise to 120°F. At this temperature, the ventilation fans 2VEF-56A and B will start to provide cooling to maintain the rooms below 120°F. Failure of the fire dampers in the closed position will prevent the operation of the ventilation system. Analysis has shown that it will take approximately three (3) hours for service water temperature to reach 105°F after the DBA occurrence. Thus, sufficient time is available to take corrective action.

DC Equipment Room 2099

The cooling system for this room is considered to be safety-related in that this room contains two of the four 120 volt vital A-C inverters, 2Y11 and 2Y13, which are designed to operate in a maximum temperature of 125°F. The ventilation system for this room relies on redundant exhaust fans. On failure of the fire doors, no ventilation will be available. In this event, the temperature of the room will rise from 95°F to 123°F in one hour and to 128°F in two hours. Therefore, approximately one hour is available to take corrective action.

Electrical Equipment Room 2091

This room contains the remaining two of the four 120 volt A-C inverters. The means of cooling this room is similar to the switchgear rooms. Redundant Q unit coolers are available to cool the room until the service water temperature increases to 105°F. Therefore, approximately three hours is available before corrective action must be taken.

10. Corrective Action:

Immediate corrective action: instructions were promulgated to the operators to immediately verify the fire dampers are reset following a seismic event to provide adequate cooling for the affected rooms. Items 1, 4, 5, 6, 7, 8, 9 and 10 of Table II-1 were replaced with seismically qualified dampers manufactured by Ruskin. Items 2, 3 and 11 of Table II-1 which were manufactured by American Warming and Ventilating Company were modified to upgrade the dampers to the required seismic qualifications.

11. Failure Data:

There have been no similar occurrences. The dampers were manufactured by American Warming and Ventilating Company.