NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION (7 - 77)LICENSEE EVENT REPORT EXHIBIT A CONTROL BLOCK: 1______ 11 (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION) 1011 15
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I</t 0 1 1 EVENT DESCRIPTION AND PROBABLE CONSEQUENCES 10 10121 [During a design review by the Architect Engineer of HVAC installation and documentation, it was identified Ithat 11 fire dampers had not been seism cally qualified as required by NRC General Design Criterion 3. 10131 10141 [Inadvertent closure of the dampers after a DBA occurrence would disable the cooling system for four areas 10151 [containing safety related equipment. No similar occurrences. Reportable per Technical Specification 10161 |6.9.1.8(1)10171 0 8 1 80 SYSTEM CAUSE CAUSE COMP VALVE SODE CODE SUBCODE COMPONENT CODE SUBCODE SUBCODE IA 1 5 11 0 191 | B |12 C |13 VIAILIVIEIX 114 | D |16 |<u>X</u>|15 10 19 13 18 SEQUENTIAL OCCURRENCE REPORT REVISION LER/RO | EVENT YLAR REPORT NO. CODE TYPE NO 17 REPORT $| \frac{1}{21} \frac{7}{21} \frac{9}{22} |$ $\frac{1}{32}$ 1----1 01215 31 0 | 1 XI NUMBER 30 ACTION FUTURE EFFECT SHUTDOWN ATTACHMENT NPRD-4 PRIME COMP. COMPONENT TAKEN ACTION ON FLANT METHOD HOURS 1<u>0</u>101010122 SUBMITTED FORM SUB 1 Z 120 SUPPLIER MANUFACTURER | <u>X</u> |18 33 I_Z_119 | Z |21 1<u>Y</u>123 IN 124 |_A_|25 <u>| A | 3 | 4 | 0 | 26</u> 40 42 43 CAUSE DESCRIPTION AND CORRECTIVE ACTIONS 27 [Cause due to installation Quality Assurance. Instructions were promulgated to the operators to immediately 11101 Iverify the fire dampers were reset following a seismic event to insure adequate cooling. Eight of the 1111 Idampers were replaced with qualified dampers, and three of the dampers were upgraded to the required seismic 11121 1131 Iqualifications 1141 80 FACILITY METHOD OF STATUS % POWER OTHER STATUS DISCOVERY DISCOVERY DESCRIPTION 1 <u>B</u> 28 1 <u>0</u> 1 <u>0</u> 1 <u>0</u> 129 1 <u>NA</u> 9 10 12 13 1 | 5 | 130 1 0 131 1 A/E Notification 4 45 46 132 12 13 44 80 ACTIVITY CONTENT RELEASED OF RELEASE AMOUNT OF ACTIVITY LOCATION OF RELEASE 1161 $\frac{|Z|33}{9}$ $\frac{|Z|34}{10}$ $\frac{|Z|14}{10}$ $\frac{|Z|14}{10}$ NA 135 NA 134 iī 80 PERSONNEL EXPOSURES NUMBER TYPE DESCRIPTION 9 11 12 13 10 1 0 1 0 137 1 Z 138 1 NA 11 12 13 139 80 PERSONNEL INJURIES NUMBER DESCRIPTION 9 10 10 10 140 1 NA 9 11 12 1 8 141 80 LOSS OF OR DAMAGE TO FACILITY TYPE DESCRIPTION 1 Z 142 1 NA 1 9 1 _ |43 PUBLICITY ISSUED DESCRIPTION 1 N 144 1 NA NRC USE ONLY 2101 145 1 68 NAME OF PREPARER: Patrick Rogers PHONE: (501) 964-3100 8406120284 840607 PDR ADOCK 05000348 PDR IE22

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ARKANSAS POWER & LIGHT COMPANY POST OFFICE BOX 551 LITTLE ROCK, ARKANSAS 72203 (501) 371-4000

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 Division of Resident Reactor Projects and Engineering Programs U. S. Nuclear Regulatory Commission Region IV 611 Ryan Plaza Drive, Suite 1000 Arlington, TX 76011

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MEMBER MIDDLE SOUTH UTILITIES SYSTEM

- <u>Reportable Occurrence Report No.</u> 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:

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

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