

# LICENSEE EVENT REPORT

50-285/76-13

CONTROL BLO

[PLEASE PRINT ALL REQUIRED INFORMATION]

LICENSEE NAME 01 N E F C S 1														LICENSE NUMBER 00-000000-00														LICENSE TYPE 41111										EVENT TYPE 03													
CATEGORY 01 CONT														REPORT TYPE L				REPORT SOURCE L				DOCKET NUMBER 050-0285										EVENT DATE 041376										REPORT DATE 050576									

## EVENT DESCRIPTION

02 Positive APD limit setpoint went out of specification in the non-conservative direc-																																																																															
03 tion on Channel A, April 13, 1976; Channel B, April 14, 19, 21, 24, 26, 1976. The																																																																															
04 three remaining redundant APD channels were operable when the above single channel																																																																															
05 setpoint was out of specification (LER 50-285/76-13).																																																																															
06																																																																															

SYSTEM CODE 07 I A										CAUSE CODE E		COMPONENT CODE I N S T R U										PRIME COMPONENT SUPPLIER N		COMPONENT MANUFACTURER B 1 6 5										VIOLATION Y	
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## CAUSE DESCRIPTION

08 Random noise signals caused the Bell & Howell 19-301-A module to oscillate. A minor																																																																															
09 circuit modification has been implemented to prevent this oscillation from reoccurring																																																																															
10																																																																															

FACILITY STATUS 11 E										% POWER 099										OTHER STATUS NA										METHOD OF DISCOVERY B										DISCOVERY DESCRIPTION Operational Surveillance									
FORM OF ACTIVITY RELEASED 12 Z										CONTENT OF RELEASE Z										AMOUNT OF ACTIVITY NA										LOCATION OF RELEASE NA																			

## PERSONNEL EXPOSURES

NUMBER 13 000										TYPE Z		DESCRIPTION NA									
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## PERSONNEL INJURIES

NUMBER 14 000										DESCRIPTION NA									
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## OFFSITE CONSEQUENCES

15 NA																																																																															
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## LOSS OR DAMAGE TO FACILITY

TYPE 16 Z										DESCRIPTION NA									
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## PUBLICITY

17 NA																																																																															
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## ADDITIONAL FACTORS

18 See Attachments 1, 2 and 3.																																																																															
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19																																																																															
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NAME: John Nagl/Bob Mehaffey

PHONE: 402-426-4011

Attachment No. 1

Safety Analysis

The Reactor Protective System is so designed that the failure of any single Axial Power Distribution Calculator would not have prevented a reactor trip if the axial shape index had exceeded the trip setpoint limits. Under normal operating conditions the Reactor Protective System is in a two-out-of-four logic to trip. The failures of the individual APD calculators effectively placed the RPS-APD reactor trip in a two-out-of-three logic which exceeds the minimum requirements for safe reactor operation as stated in Table 2-2 of the Technical Specifications.

Attachment No. 2

Corrective Action

The oscillation/saturation problem of the positive limit of the Axial Power Distribution is a result of a transient (noise) on input X1 of the positive limit generation module (a Bell and Howell 19-301-A adder-subtractor module).

Investigation of the problem showed that the installation of a capacitor from point X1 to RPS common would prevent the transient from driving the positive limit into oscillation. DCR No. 76-48 CQE was issued and a 0.022 microfarad capacitor was installed. The oscillation then could no longer be introduced into the positive limit and the Bell and Howell module now remains stable for all actual and simulated operating conditions.

Attachment No. 3

Failure Data

See Abnormal Occurrence 50-285/75-12  
50-285/75-15

LER 50-285/76-6  
50-285/76-7  
50-285/76-12



## Omaha Public Power District

1623 HARNEY ■ OMAHA, NEBRASKA 68102 ■ TELEPHONE 536-4000 AREA CODE 402

May 5, 1976  
FC-159-76



Mr. E. Morris Howard  
U. S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive  
Suite 1000  
Arlington, TX 76012

Dear Mr. Howard:

Reference: Fort Calhoun Station Unit No. 1  
Docket No. 50-285

In accordance with the Fort Calhoun Station's Technical Specifications, the Omaha Public Power District, as holder of facility operating license DPR-40, submits three copies of the following licensee event report 50-285/76-13 to satisfy the requirements of Regulatory Guide 1.16.

Sincerely,

W. C. Jones  
Section Manager  
Operations

WCJ/WDD:rge

Enclosure

cc: Director, Office of Management  
Information and Program Control  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555 (3)

Director, Office of Inspection and  
Enforcement  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555 (30)

Mr. L. C. Shalla  
SARC Chairman  
PRC Chairman  
Fort Calhoun File (2)

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