



Consumers
Power
Company

COPY

General Offices: 212 West Michigan Avenue, Jackson, Michigan 49201 • Area Code 517 788-0550

March 12, 1974



860

Mr. John F. O'Leary, Director
Directorate of Licensing
United States Atomic Energy Commission
Washington, DC 20545

Re: Docket No 50-155
License No DPR-6
Big Rock Point

Dear Mr. O'Leary:

This letter is written to report an abnormal occurrence (AO-1-74) which occurred at the Big Rock Point Plant on March 1, 1974. This abnormal occurrence involved the failure of the Channel 3 neutron flux level instrumentation.

At the time this instrument failure occurred, the plant was operating at a steady power level of 166 MW_t. The Channel 3 neutron flux level dropped to zero and immediately returned to a slightly higher indication, 101 percent. (The present 100 percent setting corresponds to 180 MW_t.)

Troubleshooting revealed that the instrument channel would not respond to either high-voltage changes on the chamber or to input changes. The spare picoammeter was installed, tested and the instrument channel was returned to service. The instrument channel was out of service for a total of one hour and eleven minutes.

The failure of this instrument channel did not result in a loss of any protective function in the reactor protection system. Three neutron flux instrument channels provide a reactor protection system tripping function with two out of three logic. With Channel 3 failed, the other two channels were still capable of performing the required protective function.

This is the first known nonfail-safe failure of the amplifier's function of the picoammeters at Big Rock Point. As bench testing of the faulty unit has failed to detect the cause, the manufacturer has been requested to analyze and provide corrective measures in an effort

2115

Mr. John F. O'Leary, Director
Docket No 50-155
License No DPR-6
Big Rock Point
March 12, 1974

2

860

to prevent recurrence. In addition, instructions have been issued to plant operations personnel explaining how to put the monitor in a trip condition if the problem recurs.

Yours very truly,

Ralph B. Sewell (Signed)

RBS/smm

Ralph B. Sewell
Nuclear Licensing Administrator

CC: JOKeppler, USAEC

ABNORMAL OCCURRENCE REPORT

CONTROL BLOCK: 000860

FACILITY:

CATEGORY: REPORT

TYPE:

SOURCE:

DOCKET #:

EVENT DATE:

REPORT DATE:

01 BRP1

02 T

03 L

04 050-0155

05 030174

06 031274

07 DESCRIPTION OF EVENT:

08 CHANNEL 3 NEUTRON FLUX LEVEL

09 WAS OBSERVED TO DROP TO ZERO, THEN

10 RISE TO 101% WHILE 100% EQUALS 180

11 MW(t). THE PWR STAYED AT 160 MW(t).

12 (A0-1-74)

13 SYSTEM NO.:

14 PROXIMATE CAUSE CODE:

15 A-PERSONNEL ERROR D-PROCEDURES DEFECTIVE
16 B-DESIGN ERROR E-COMPONENT FAILURE
17 C-EXTERNAL CAUSE F-OTHER

18 COMPONENT NUMBER:

19 10

20 E

21 10

22 DESCRIPTION OF CAUSE:

23 THE FAILED AMPLIFIER HAD A DEFECTIVE SERIES

24 REGULATOR TUBE AND THAT RESULTED IN COMPLETE

25 LOSS OF MINUS 150 VOLT D.C. PWR SUPPLY.

26 STATUS OF REACTOR CODE:

27 A-CONSTRUCTION F-LOAD CHANGES DURING
28 B-PREOPERATIONAL, INITIAL ROUTINE POWER OPERATION
29 STARTUP AND POWER ASCENSION G-SHUTDOWN (HOT OR COLD,
30 TESTS EXCEPT REFUELLING)
31 C-ROUTINE STARTUP OPERATION H-REFUELLING
32 D-ROUTINE SHUTTING DOWN OPERATION I-OTHER, INCLUDING SPECIAL
33 E-STEADY STATE OPERATION AT _____% TESTS (DESCRIBE)
34 POWER

35 METHOD OF DISCOVERY (DESC.):

36 A-OPERATIONAL EVENT
37 B-ROUTINE TEST/INSPEC.
38 C-SPECIAL TEST/INSPEC.
39 D-EXTERNAL SOURCE

40 STATUS:

41 % POWER:

42 OTHER STATUS:

43 DISC.:

44 DESCRIPTION:

45 FORM OF ACTIVITY RELEASED:

46 L: LIQUID
47 S: SOLID
48 G: GAS

49 CONTENT OF RELEASE:

50 N: NOBLE GAS
51 H: HALOGEN
52 P: PARTICULATE

53 AMOUNT OF ACTIVITY:

54 LOCATION OF RELEASE:

55 PERSONNEL EXPOSURES:

56 NUMBER:

57 DESCRIPTION:

58 PERSONNEL INJURIES:

59 NUMBER:

60 DESCRIPTION:

61 OFFSITE CONSEQUENCES:

62 DAMAGE TO FACILITY:

63 PUBLICITY:

64 ADDITIONAL FACTORS:

65 ADDITIONAL INFO PROVIDED IN MARCH 14 LETTER,
66 SAME SUBJECT

0 0 0 8 6 0