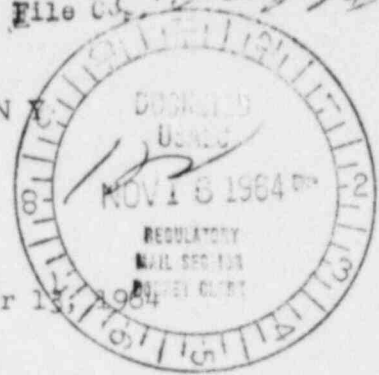


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File No. *C. D. [unclear]*

CONSUMERS POWER COMPANY
General Offices - Jackson, Michigan



November 15, 1964

BIG ROCK POINT NUCLEAR PLANT

Dr. R. L. Doan, Director
Division of Reactor Licensing
U.S. Atomic Energy Commission
Washington, D. C. 20545

J.S. ALLEN
REGULATORY
MAIL SECTION
NOV 16 11 10 45
RECEIVED

Dear Dr. Doan:

Enclosed are one signed and 20 conformed copies of Consumers Power Company's second Report of Changes, Tests or Experiments at the Big Rock Point Nuclear Plant.

In accordance with the provisions of Section 50.59 of 10 CFR, Part 50, the Report, which covers the period from August 31, 1963 through August 30, 1964, contains brief descriptions of (1) changes made in the facility without prior Commission approval, to the extent that such changes constitute changes in the facility as described in the Final Hazards Summary Report, and (2) tests or experiments carried out at the Plant without prior Commission approval. There have been no changes in procedures required to be reported to or approved by the Commission under Section 50.59.

Each change, test or experiment described in the Report was authorized only after a finding by Consumers Power Company that it did not involve a change in the Technical Specifications incorporated in License No. DPR-6, or an unreviewed safety question.

Succeeding Reports of Changes, Tests or Experiments will appear in the periodic reports required under Paragraph 3.D.(3)d. of License No. DPR-6.

Yours very truly,

R. L. Haueter (Signed)

RLH/wf/vl
Enc

R. L. Haueter
Assistant Electric Production
Superintendent - Nuclear

CONSUMERS POWER COMPANY
REPORT OF CHANGES, TESTS OR EXPERIMENTS

Docket No. 50-155



File Copy

This report is submitted in accordance with the requirements of Section 50.59(b) of 10 CFR, Part 50, and Paragraph 3.D.(3)d. of Operating License No. DPR-6, issued to Consumers Power Company on May 1, 1964, and covers the period from August 31, 1963 through August 30, 1964. Part A briefly describes the changes made in the Big Rock Point Nuclear Plant facility during that period without prior Commission approval pursuant to 10 CFR, Section 50.59, to the extent that such changes constitute changes in the facility as described in the Final Hazards Summary Report (dated November 14, 1961, submitted as part of Amendment No. 3, dated December 1, 1961, as amended, to Consumers' Application for Reactor Construction Permit and Operating License). Part B briefly describes the tests or experiments carried out at the Plant during that period without prior Commission approval pursuant to Section 50.59. There have been no changes in procedures required to be reported to or approved by the Commission under Section 50.59.

A. Facility Changes

1. During December 1963, the steam drum level sensors (RE 06 A and B, and RE 20 A and B) and the steam drum pressure sensors (RE 07 A, B, C and D), all as shown on Drawing No. M-121, Final Hazards Summary Report, Volume II, Tab D, were removed from the C-30 instrument panel and mounted on the concrete steam drum enclosure wall. This change was made to reduce

the possibility of spurious contact operation from vibration or bumping of the panel. For background and further detail, see Special Report No. 6, submitted December 20, 1963.

2. The main steam bypass valve control system was modified in April 1964 by the addition of a second servo amplifier and servo pilot valve, providing two independent control paths. In addition, the hydraulic system was modified to provide a means of remote manual closure of the bypass valve. This manual system bypasses both the automatic control and the servo pilot valve.

3. A further modification to the seal system of the reactor recirculating pumps was made in April 1964 by removing the solenoid-operated valve at the outlet of the 3/4-inch heat exchanger. The motor-operated valve, installed upstream of the heat exchanger, (see first annual Report of Changes, Tests or Experiments, dated October 9, 1963, Item A.7.) provides the necessary remote isolation in the event of heat exchanger failure.

4. The high-pressure nitrogen system for the liquid poison system was modified in September 1963 by the addition of a 6000 psig nitrogen bottle, a 6000 psig regulator and relief valve. This bottle can be used, if necessary, to top off the nominal 2000 psig bank of nitrogen bottles to maintain the desired pressure.

5. The annunciation for safety system operations has been modified. The vent valve and back-up scram valve bus relay contacts, previously connected into Channel No. 1 and Channel No. 2 scram annunciators, have been reconnected so that Channel No. 1 scram annunciation will occur only if both scram valve solenoid buses on Channel No. 1 have been de-energized. Similarly, Channel No. 2 scram annunciation will occur only if both

solenoid buses on Channel No. 2 have been de-energized. The loss of power to Channel No. 1 and Channel No. 2 "vent valve and back-up scram valve" buses will now actuate a separate alarm. For background and further detail, see Special Report No. 6, submitted December 20, 1963.

6. A new off-gas monitoring system was installed in June 1964 and is operating in parallel with the original off-gas monitoring system for purposes of evaluating performance. The new system consists of an ion chamber strapped to a vertical section of off-gas sample line and connected to a six-decade log amplifier, with appropriate readout in the control room.

7. In April 1964 the top fission chamber on one of the standard in-core assemblies was replaced with a high-sensitivity fission chamber capable of use with a high-gain amplifier and counting equipment. This special chamber was installed to evaluate performance of miniature in-core counting equipment in monitoring the start-up and low power operation of the reactor.

8. Protective relaying was installed in April 1964 to protect against overvoltage and undervoltage in the output of the reactor protection M-G sets.

With an increase in generator output voltage to 140 ± 5 volts on either reactor protection M-G set, indicative of failure of the voltage regulator, the generator voltage will drop to zero and the reactor protective channel connected to that M-G set will trip. The electronic components supplied from the defective M-G set are thus protected.

A loss of 480-volt power to the motor of either reactor protection M-G set initiates an alarm in the control room and, after a ten-second delay, the generator voltage drops to zero and the reactor protective channel connected to that M-G set will trip. This relaying action, upon loss of motor power, provides for a more positive and faster actuation of the undervoltage scram breaker.

9. In June 1964 the area monitor in the radwaste area was moved about five feet to afford better measurement of the general radiation field in the operating gallery and to simplify calibration procedures. The monitor was moved from Room 7 to Room 1 of the radwaste area (see Drawing No. A-52, Final Hazards Summary Report, Volume II, Tab A).

B. Tests or Experiments

1. Nonpurification tests were performed on the primary system and feed-water system on several occasions by bypassing either the condensate demineralizer, reactor clean-up demineralizer, or both. These tests, together with detailed feed-water chemical analyses, have shown that the corrosion products being fed into the reactor come predominantly from the feed-water system. The feed-water heater tubes are the principal contributors. The condensate demineralizer appears to have very little influence on the absolute amounts of corrosion products entering the primary system from the feed-water system.

By R. L. Haueter (Signed)
Assistant Electric Production
Superintendent - Nuclear
Consumers Power Company
Jackson, Michigan

Date: November 13, 1964

Sworn and subscribed to before me this 13th day of November 1964.

(SEAL)

Grace Warner (Signed)
Notary Public, Jackson County, Michigan
My commission expires February 16, 1968

FROM: CONSUMERS POWER COMPANY (R. L. Bauer)		DATE OF DOCUMENT: 11-13-64	DATE RECEIVED: 11-16-64	NO.: 5276
TO: Doan		ORIG. X &	CC: 21 confirmed cys.	OTHER:
CLASSIF.: U	POST OFFICE REG. NO.	ACTION NECESSARY <input type="checkbox"/>	CONCURRENCE COMMENT <input type="checkbox"/>	DATE ANSWERED BY:
DESCRIPTION: (Must Be Unclassified)		FILE CODE: DOCKET 50-155 ✓		
Mr. submitting the following in accord with Section 50.5ys		REFERRED TO: Boyd;	DATE: 11-16	RECEIVED BY:
ENCLOSURES: (21 cys notarized 11-13-64)		w/all extras - FOR INFO and/or Action		
Report of Changes, Tests or Experiments, covering the period of 8-31-63 thru 8-30-64.		Mr. Doan (w/info cys)		
REMARKS: Distribution: 1 - formal file 1 - suppl file 1 - AEC POM 2 - Compliance		5216		
1 - GC 1 - H. Steale		U. S. ATOMIC ENERGY COMMISSION MAIL CONTROL FORM FORM AEC-3265 (8-60)		

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