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U.S. NUCLEAR REGULATORY COMMISSION

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50-287

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INCIDENT REPORT

TO:

Mr. Dudley Thompson

FROM:

Duke Power Company
Charlotte, North Carolina
William O. Parker, Jr.

DATE OF DOCUMENT

8/5/77

DATE RECEIVED

8/19/77

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DESCRIPTION

PLANT NAME:
Oconee Unit No. 3
RJL 8/19/77

(1-P)

ENCLOSURE

Licensee Event Report (RO 50-287/77-9) on
7/7/77 concerning high chloride concentration
in reactor coolant system.....

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ACKNOWLEDGED

NOTE: IF PERSONNEL EXPOSURE IS INVOLVED
SEND DIRECTLY TO KREGER/J. COLLINS

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772310071

DUKE POWER COMPANY

POWER BUILDING

422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

August 5, 1977

TELEPHONE: AREA 704
373-4083

Regulatory

File Cy

Mr. Dudley Thompson, Acting Director
U. S. Nuclear Regulatory Commission
Suite 818
230 Peachtree Street, Northwest
Atlanta, Georgia 30303

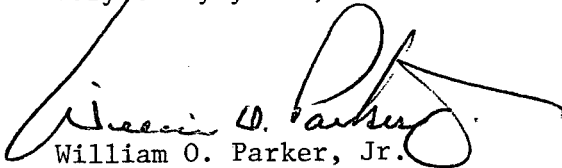


Re: Oconee Unit 3
Docket No. 50-287

Dear Mr. Thompson:

Pursuant to Sections 6.2 and 6.6.2 of the Oconee Nuclear Station Technical Specifications, please find attached Reportable Occurrence Report RO-287/77-9.

Very truly yours,


William O. Parker, Jr.

MST:ge
Attachment

cc: Director, Office of Management Information
and Program Control

772310071

DUKE POWER COMPANY
OCONEE UNIT 3

Report No.: R0-287/77-9

Report Date: August 5, 1977

Occurrence Date: July 7, 1977

Facility: Oconee Unit 3, Seneca, South Carolina

Identification of Occurrence: High chloride concentration in reactor coolant system

Conditions Prior to Occurrence: Unit at 100 percent full power

Description of Occurrence:

On July 6, 1977 at 1000, a routine chemical sample indicated a chloride concentration of 0.22 ppm in the Oconee 3 reactor coolant system. Pursuant to Technical Specification 3.1.5.2, corrective action was initiated within 8 hours to reduce the concentration by placing the "A" deborating demineralizer in service. However, due to this demineralizer having a high boron concentration, only intermittent operation of the demineralizer was possible. The maximum chloride concentration reached was 0.26 ppm. At 0930, July 7, 1977, a reactor shutdown was initiated in accordance with the requirements of Technical Specification 3.1.5.4. At this time, the chloride concentration in the reactor coolant system was 0.17 ppm and decreasing. At 1350, the concentration was 0.14 and the reactor shutdown was terminated.

Designation of Apparent Cause of Occurrence:

The apparent cause of this occurrence was the general degradation of the two purification demineralizers due to extended use. Sluicing of these demineralizers was not possible due to excessive inventories of liquid waste from recent Oconee outages.

Analysis of Occurrence:

The Oconee Technical Specification limits on chloride concentration in the reactor coolant system are conservative margins which assure that stress corrosion attack does not occur. A 24-hour time period for action to correct the high concentration is allowed by Oconee Technical Specification 3.1.5.4, then a hot shutdown is required. All technical specification requirements were followed during this incident resulting in reactor coolant system protection and operating flexibility. The combination of time, temperature and pressure and chloride concentration have been evaluated and it is concluded that sufficient protection from stress corrosion attack existed during this incident. It is concluded that the health and safety of the public were not affected by this incident.

Corrective Action:

Both purification demineralizers have been replaced with fresh resins. This should prevent recurrence of this incident in the future.

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77 AUG 8 All : 44

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