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DUKE POWER COMPANY

POWER BUILDING

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

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

May 22, 1981

TELEPHONE: AREA 704
373-4083

Mr. James P. O'Reilly, Director
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

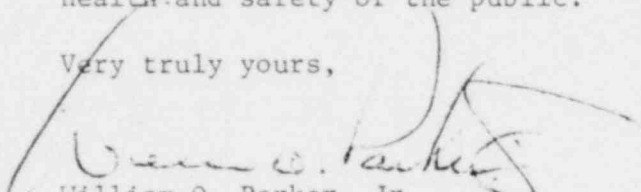
Re: McGuire Nuclear Station Unit 1
Docket No. 50-369



Dear Mr. O'Reilly:

Please find attached Reportable Occurrence Report RO-369/81-67. This report concerns the boron concentration in the UHI accumulator reaching 2153 ppm. This incident was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,


William O. Parker, Jr.

RWO:pw
Attachment

cc: Director
Office of Management & Program Analysis
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. Bill Lavallee
Nuclear Safety Analysis Center
P. O. Box 10412
Palo Alto, CA 94303

Ms. M. J. Graham
Resident Inspector - NRC
McGuire Nuclear Station

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McGUIRE NUCLEAR STATION
INCIDENT REPORT

Report Number: 81-67

Report Date: May 25, 1981

Occurrence Date: April 25, 1981

Facility: McGuire Unit 1, Cornelius, N.C.

Identification of Occurrence: Boron concentration in the upper head injection (UHI) accumulator was 2153 ppm.

Conditions Prior to Occurrence: At 1731 hours on April 25, 1981, a chemistry analysis of the contents of the upper head injection accumulator system revealed that boron concentration was 2153 ppm. Since Technical Specification 3.5.1.2 requires that the concentration be between 1900 and 2100 ppm of boron, this incident was reportable.

Apparent Cause of Occurrence: The normal makeup to the UHI accumulator enters near the bottom and the sample line comes off the bottom of the accumulator. Also, insufficient purging before sampling could have contributed to the high boron reading.

Analysis of Occurrence: The normal makeup to the UHI accumulator is from the Refueling Water Storage Tank (FWST). The FWST was sampled on April 28 and the boron concentration was 2089 ppm. The makeup enters the accumulator at one end near the bottom and the normal sample is taken from the middle of the accumulator on the bottom. An inspection of the sample line on May 12 revealed that boron had plated out in the end of the line. Since the makeup enters near the bottom and the sample is taken from the bottom, an insufficient purge of the sample line prior to taking a sample could contribute to a high boron concentration reading. A procedure change will be incorporated into sampling procedure to purge the sample line until no boron crystals are visible.

Safety Analysis: The UHI system is passive and only used during a loss of coolant accident. Since there was only new fuel in the core, safe plant operation and the health and safety of the public were not affected. If the reactor had been at power and a NC system break had occurred, the UHI system would have operated as designed since the boron concentration was only 53 ppm above the upper limit (2100).

Corrective Action: No corrective action was taken to reduce the boron concentration in the UHI accumulator since the pressurizer pressure was reduced below 1900 psig at 1824 hours on April 25, 1981. The sampling procedure will be changed to purge the sample line until no boron crystals are visible prior to sampling.