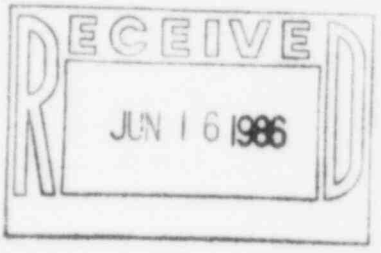
Omaha Public Power District
1623 Harney Omaha, Nebraska 68102-2247
402/536-4000

June 4, 1986
LIC-86-241



Mr. R. D. Martin, Administrator
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

Reference: Docket No. 50-285

Dear Mr. Martin:

Fuel Performance Report

Pursuant to the requirement of Fort Calhoun Station Unit No. 1 Technical Specification 5.9.3.h., Omaha Public Power District, holder of Generating License DPR-40, submits the attached Fuel Performance Report for Cycle 9.

Sincerely,

R. L. Andrews
Division Manager
Nuclear Production

RLA/me

Attachment

cc: LeBoeuf, Lamb, Leiby & MacRae
1333 New Hampshire Ave., N.W.
Washington, DC 20036

Mr. D. E. Sells, NRC Project Manager
Mr. P. H. Harrell, NRC Senior Resident Inspector

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Employment with Equal Opportunity
Male/Female

FORT CALHOUN STATION

CYCLE 9

FUEL PERFORMANCE REPORT

Fort Calhoun Station
Cycle 9 Fuel Performance Report

As required by Fort Calhoun Station Technical Specification 5.9.3, the Omaha Public Power District is submitting a fuel performance summary.

The Cycle 9 fuel performance was evaluated based on the month by month averages of I-131 (Figure 1) and a visual inspection of the 65 assemblies discharged at the end of the cycle. Cycle 9 had two intervals of higher I-131 levels. These two intervals occurred during the first and seventh month of operation of the cycle.

In the initial month of Cycle 9 an I-131 spike of .74 micro curies per cc was measured. A second chemistry sample and subsequent analysis confirmed the initial results. Cesium data was used to identify the burnup and hence the batch in which the failure occurred. It was estimated that the failure was from one of the higher burnup batches (25000-30000 MWD/MTU). During the seventh month of the cycle, the I-131 value peaked a second time. This spike was approximately 1/2 of the value measured during month one. Due to the use of the mixed resin bed, no Cesium data was available. Subsequent to the failure, the purification system reduced the level of I-131 in the primary coolant.

Prior to both increases in I-131 level, the station had been operated with the CEAs fully withdrawn. Additionally, throughout the cycle the fuel was operated within the PCI criteria. The activity increases occurred during normal steady state power operation.

A visual inspection was performed at the end of the cycle. All four faces of the 65 discharged fuel assemblies were examined. During visual inspection of the discharged fuel, a hydride failure was identified in one of the higher burnup assemblies. The hydride was found just below the second grid from the top of the assembly. The burnup of this failed assembly corresponded to the Cesium data for the BOC 9 failure.

The I-131 activity for the first part of Cycle 10 has been approximately .02 microcuries/cc. This level combined with the visual inspection indicates that the two failures were both isolated cases and removed from the core.

In summary, the Cycle 9 primary chemistry, with the exception of the two isolated failures, indicated that the fuel continued its very good performance.

RCS I-131

CYCLE (9)