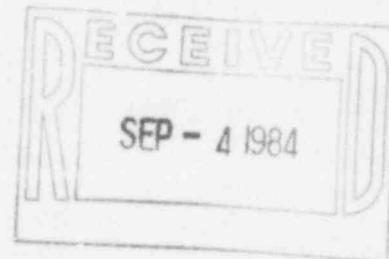


Omaha Public Power District
1623 Harney Omaha, Nebraska 68102
402/536-4000

August 29, 1984
LIC-84-267

Mr. J. T. Collins, Administrator
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011



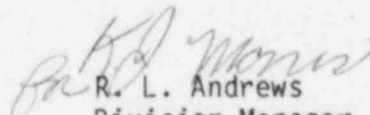
Reference: Docket No. 50-285

Dear Mr. Collins:

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 8.

Sincerely,


R. L. Andrews
Division Manager
Nuclear Production

RLA/DJM/rh-R

Attachment

cc: LeBoeuf, Lamb, Leiby & MacRae
1333 New Hampshire Avenue, N. W.
Washington, D. C. 20036

Mr. E. G. Tourigny, NRC Project Manager

Mr. L. A. Yandell, Senior Resident Inspector

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Fort Calhoun Station

Cycle 8

Fuel Performance Report

Fort Calhoun Station
Cycle 8 Fuel Performance Report

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

Cycle 7 fuel performance related chemistry data will provide the basis for evaluating the Cycle 8 fuel performance. The Cycle 7 data will be utilized because comprehensive fuel assembly examinations were performed at the conclusion of this cycle. The lead assembly from Cycle 7 achieved an average burnup of 52,000 MWD/MTU with no rod perforations or anomalies found during its examination. The lead batch of fuel for Cycle 8 had an average burnup of 37,800 MWD/MTU which is well below the Cycle 7 high burnup demonstration assembly.

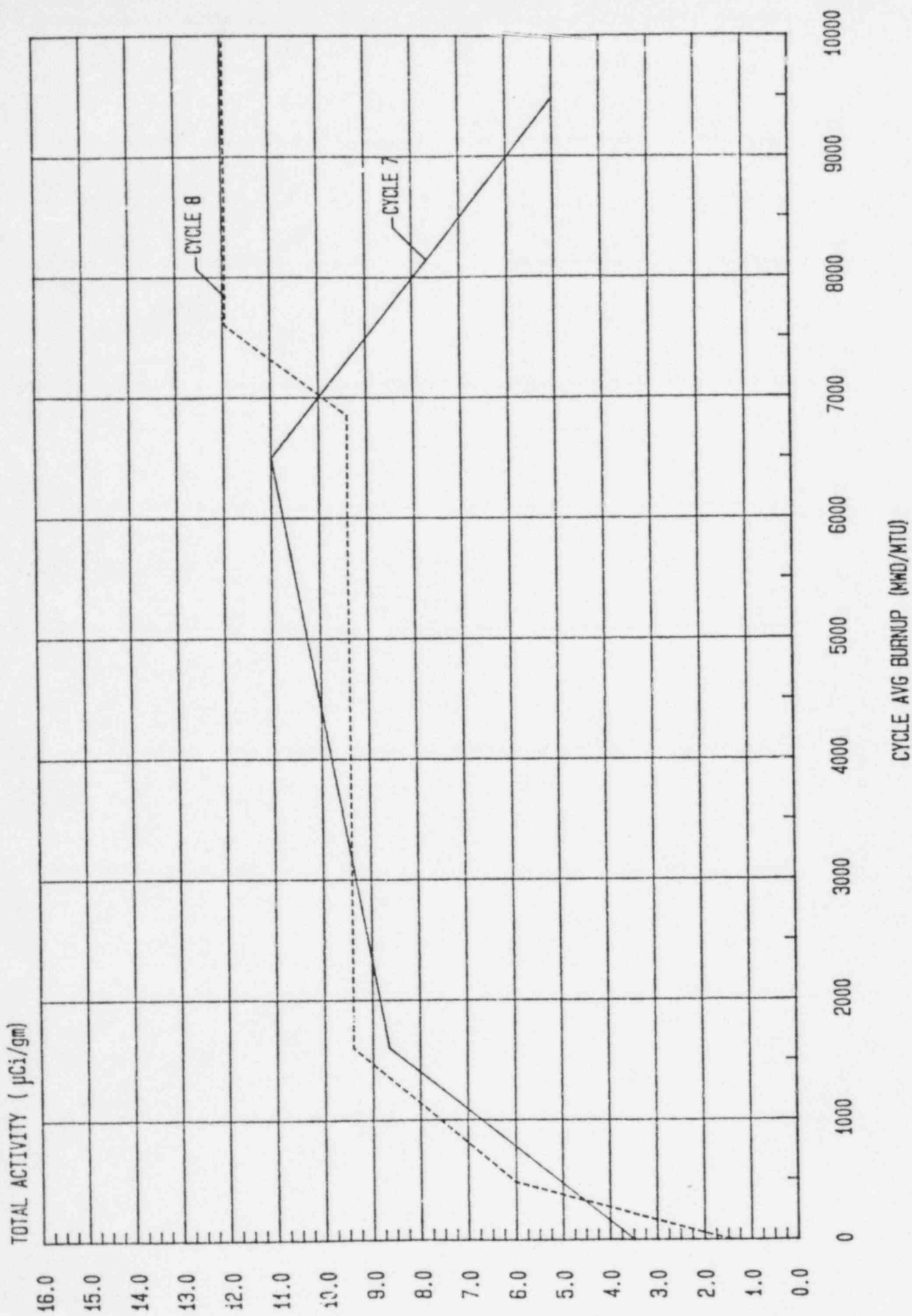
Figures 1 and 2 show a comparison of the chemistry data for Cycles 7 and 8. Figure 1 indicates that the total coolant activity ($\mu\text{Ci/gm}$) for Cycle 8 was about the same as the previous cycle. The end of cycle value was approximately 9% of the Technical Specification (2.1.3(1)b.) limit of $100/E \mu\text{Ci/gm}$.

Figure 2 shows the I-131 equivalent data for Cycles 7 and 8. The Cycle 8 data shows an increase in the iodine activity level, suggesting that additional fuel failure may have occurred near the end of the cycle. The dose equivalent level was less than $0.17 \mu\text{Ci/gm}$ and is well below the Technical Specification limit of $1.0 \mu\text{Ci/gm}$. For the part of the cycle where the total coolant activity showed a slight increase, the CEA and power histories were examined. Prior to the activity increase and until the end of the cycle; the CEA's were fully withdrawn and no severe power maneuvers occurred. Additionally, throughout the cycle the fuel was operated within the PCI criteria. The activity increase occurred during normal steady state power operations.

In summary, the Cycle 8 data shows that the fuel achieved burnups within the range of previously examined Cycle 7 fuel, and that comparable fuel performance related chemistry data existed for both cycles, thus demonstrating excellent fuel performance in Cycle 8.

TOTAL PRIMARY COOLANT ACTIVITY

FIGURE 1



I131 EQUIVALENT vs BURNUP

FIGURE 2

