Omaha Public Power District
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402/536-4000

May 5, 1989
LIC-89-402

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, DC 20555

Reference: Docket No. 50-285

Gentlemen:

SUBJECT: Cycle 11 Fuel Performance Report

Pursuant to the requirement of Fort Calhoun Station Unit No. 1 Technical Specification 5.9.3.h Omaha Public Power District (OPPD), holder of Facility Operating License No. DPR-40, submits the attached Fuel Performance Report for Cycle 11.

If you have further questions on this matter, please do not hesitate to contact me or members of my staff.

Sincerely,

James J. Fisicaro

K. J. Morris
Division Manager
Nuclear Operations

KJM/jak

Attachment

c: LeBoeuf, Lamb, Leiby & MacRae
R. D. Martin, NRC Regional Administrator
P. D. Milano, NRC Project Manager
P. H. Harrell, NRC Senior Resident Inspector

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FORT CALHOUN STATION, UNIT 1

CYCLE 11

FUEL PERFORMANCE REPORT

Fort Calhoun Station, Unit 1
Fuel Performance Report
Cycle 11

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

The Cycle 11 fuel performance was based on a month-by-month evaluation of I-131 activity data (Figure 1). No visual inspection was performed for the discharged Cycle 11 fuel assemblies since there were no fuel assemblies with failed pins loaded into the Cycle 11 core (as confirmed by ultrasonic inspection performed at the end of Cycle 10) and no indication of fuel failures during Cycle 11 operation.

There were no observable iodine spikes recorded, as evaluated on a daily basis throughout Cycle 11, indicating no fuel failures. The fuel reliability indicator (FRI) parameter used in conjunction with reporting of INPO performance indicators also supported the conclusion of no fuel failures. The I-134 coolant activity level (Figure 2) was indicative of continued operation of fuel that was resident in cycles containing failed fuel. The total primary coolant activity level of Cycle 11 (Figure 3) was significantly lower than Cycle 10 (Figure 4) due to the removal of the failed fuel assemblies during the previous refueling outage.

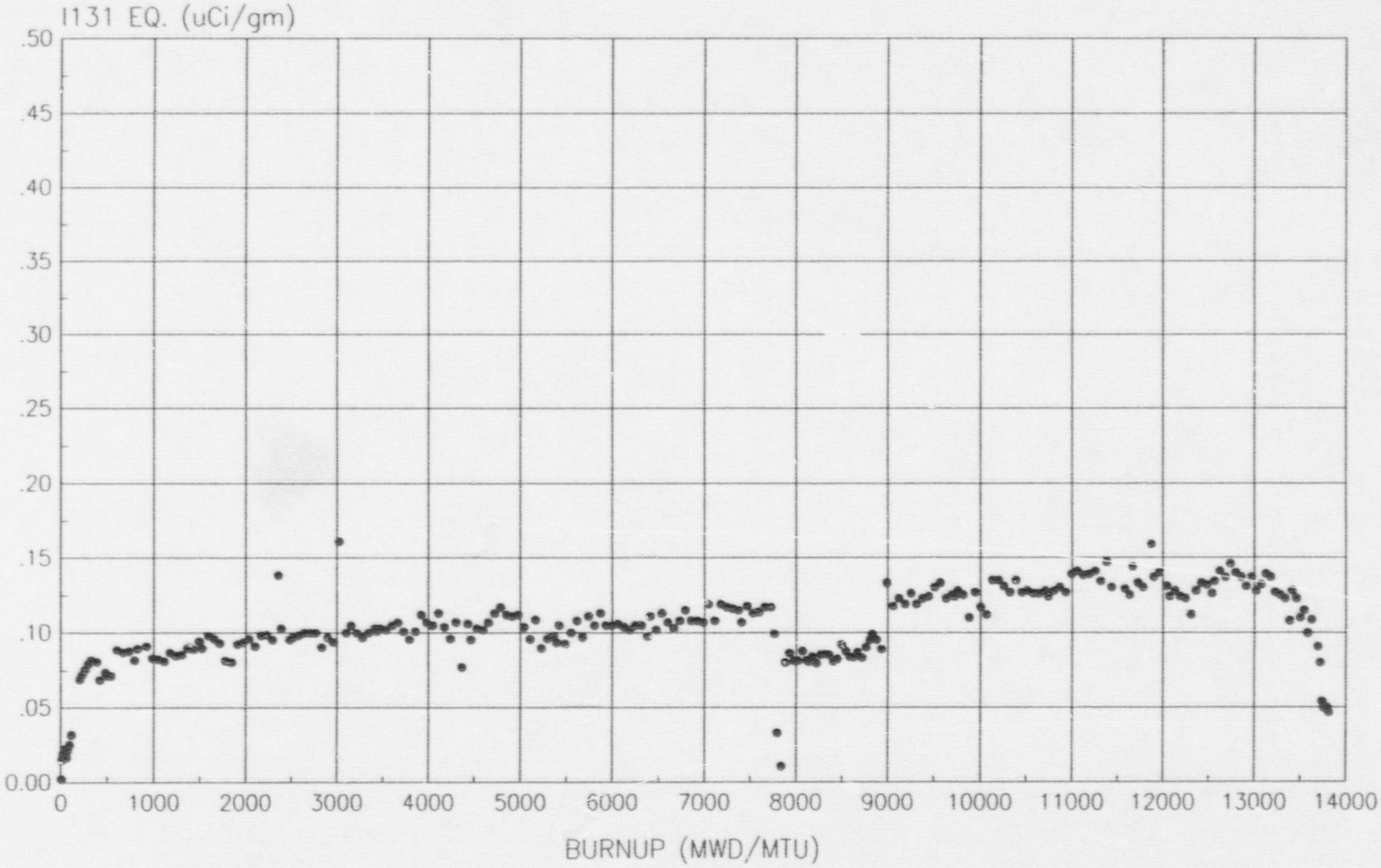
The cycle capacity was calculated to be 88.18% yielding a cumulative capacity factor of 68.8% (using MDC net). The cycle achieved a core average burnup of 13,811 MWD/MTU. The core consisted of 44 Combustion Engineering fuel assemblies in their first cycle of operation and 89 Advanced Nuclear Fuel (Exxon) assemblies in various cycles of operation.

In summary, the Cycle 11 primary chemistry indicated that the fuel provided excellent performance with no failures.

CYCLE 11

I131 EQUIVALENT vs BURNUP

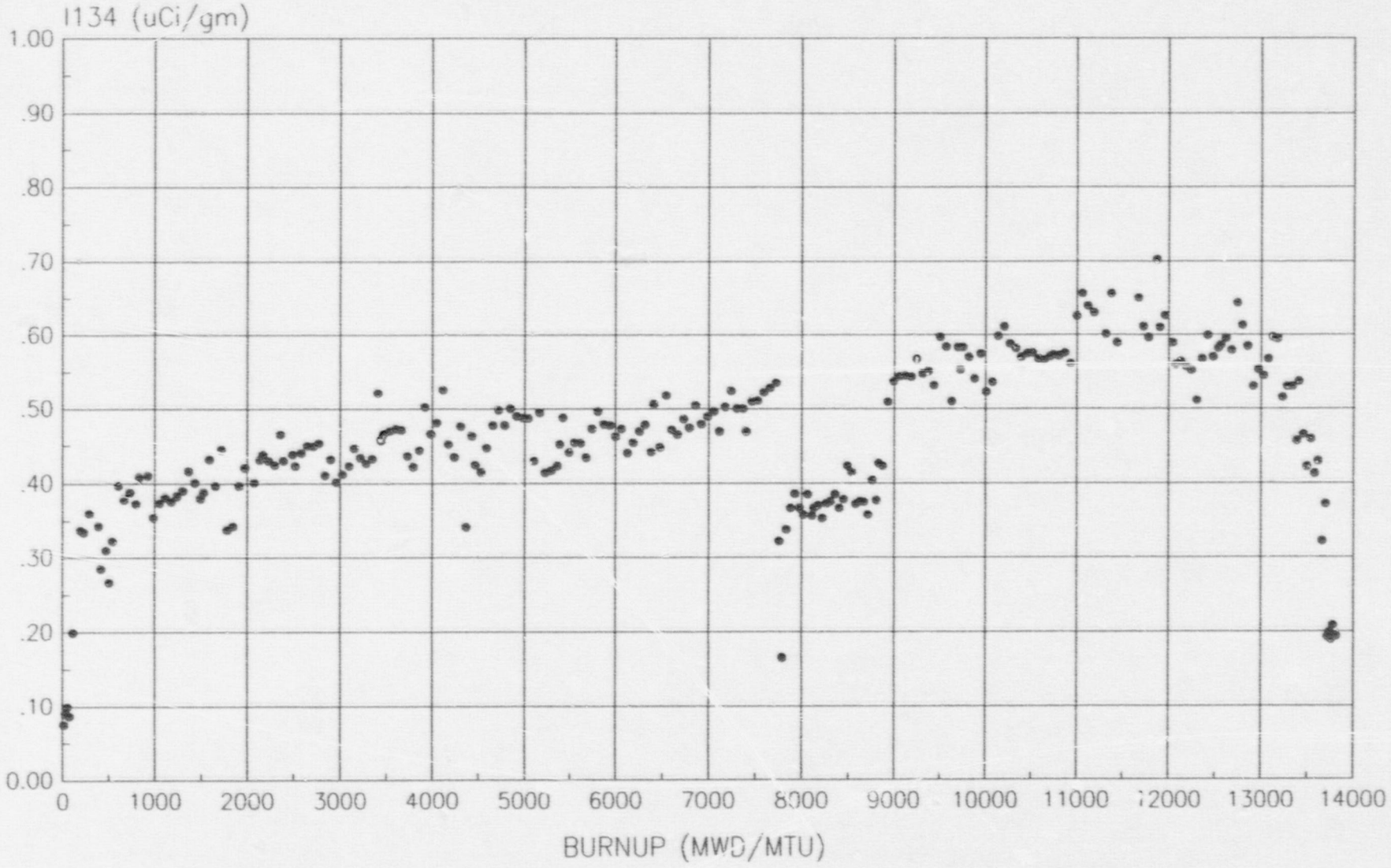
FIGURE 1



CYCLE 11

I134 vs BURNUP

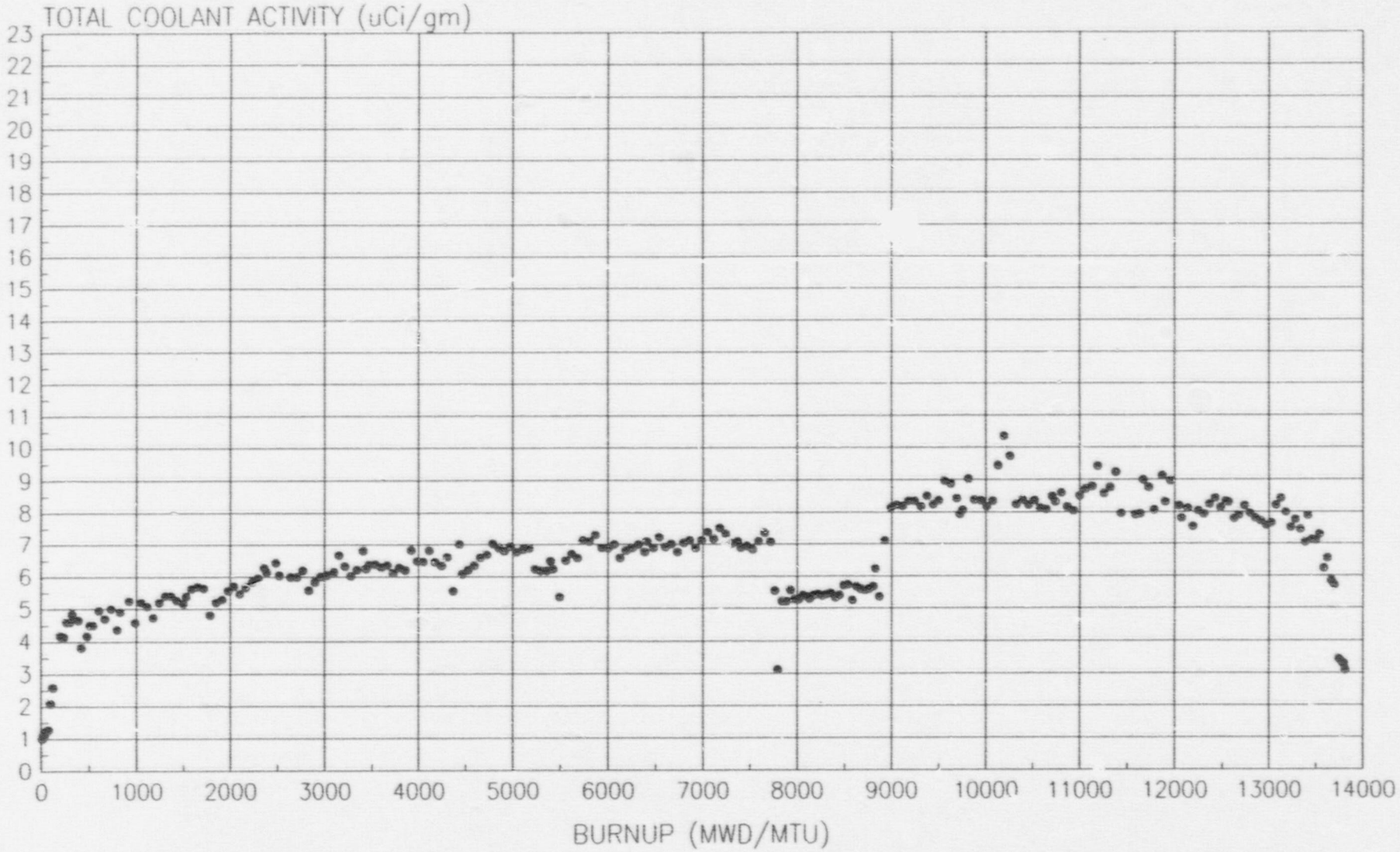
FIGURE 2



CYCLE 11

TOTAL PRIMARY COOLANT ACTIVITY vs BURNUP

FIGURE 3



CYCLE 10

TOTAL PRIMARY COOLANT ACTIVITY

FIGURE 4