

Omaha Public Power District
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Omaha, Nebraska 68102-2247
402/636-2000

June 10, 1992
LIC-92-159R

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

- References:
1. Docket No. 50-285
 2. Letter from NRC (J. T. Larkins) to OPPD (W. G. Gates) dated March 26, 1992 (TAC No. M80438)
 3. Letter from OPPD (W. G. Gates) to NRC (Document Control Desk) dated May 15, 1992 (LIC-92-175R)

Gentlemen:

SUBJECT: CENTS Code Technical Manuals Review Schedule

As noted in Reference 2, Omaha Public Power District (OPPD) has requested NRC approval of the CENTS Code by March 1993 to allow its use in development of the Core Operating Limits Report (COLR) associated with the Fort Calhoun Station (FCS) Cycle 15 Reload Application. In comparison with the CESEC Code, the CENTS Code features improved modeling fidelity and accuracy. Reference 3 noted that pressurized thermal shock (PTS) considerations necessitate additional flux reductions for Cycle 15, scheduled to begin in November 1993. These flux reductions are expected to result in thermal margin losses. Under these conditions, the CENTS Code is expected to improve the thermal margin available in the COLR versus the currently approved CESEC Code.

In Reference 2, the NRC requested that OPPD describe the impact if the CENTS Code is not approved until June 1993 or not approved before the end of the next refueling outage in November 1993. OPPD's response to this request follows.

June 1993 Approval

OPPD is targeting submittal of the Cycle 15 Reload Application for June 1993, which is approximately 145 days prior to Cycle 15 startup. The Cycle 15 Reload Application and COLR would thus be prepared using the currently approved CESEC Code. Upon NRC approval of the CENTS Code in June 1993, OPPD would revise the COLR utilizing the CENTS Code as input. This COLR revision would require approximately 550 additional person-hours at a cost of \$20,000.

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November 1993 Approval

Since the CESEC Code contains a more conservative model of FCS than the CENTS Code, the operating limits for the Cycle 15 COLR are predicted to be more restrictive if the CESEC code is used. Cycle 15 will use an extreme low radial leakage core designed specifically to address PTS considerations. Based on previous reload experience, a 2°F to 6°F reactor vessel inlet temperature (T_{COLD}) decrease to recover the thermal margin lost due to the flux distribution of this core would be likely. This would result in a 3 Mwe to 9 Mwe reduction in generator electrical output. Depending on the season, the corresponding revenue loss from this lower electrical output ranges from \$27,600 to \$82,800 per month. As in the previous case, OPPD would also incur additional costs of approximately \$20,000 to revise the COLR using the CENTS Code.

In summary, NRC approval of the CENTS Code after March 1993 would cause OPPD to incur additional expenses for revising the COLR, and could have a significant operating impact if FCS must start Cycle 15 using a COLR based on the CESEC Code. Therefore, OPPD requests approval of the CENTS Code by March 1993.

If you should have any questions, please contact me.

Sincerely,

W. G. Gates

W. G. Gates
Division Manager
Nuclear Operations

WGG/sel

c: LeBoeuf, Lamb, Leiby & MacRae
R. D. Martin, NRC Regional Administrator, Region IV
R. P. Mullikin, NRC Senior Resident Inspector
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