

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

February 18, 1986  
TS-FC-86-86  
LIC-86-057

Mr. Ashok C. Thadani, Project Director  
PWR Project Directorate #8  
Division of PWR Licensing - B  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

- References:
- (1) Docket No. 50-285
  - (2) Letter NRC (E. J. Butcher) to OPPD (R. L. Andrews) dated August 26, 1985.
  - (3) OPPD Application, dated September 3, 1985.
  - (4) Letter OPPD (R. L. Andrews) to NRC (E. J. Butcher), dated October 4, 1985 (LIC-85-436).

Dear Mr. Thadani:

**MINI-CECOR Validation**

The Omaha Public Power District's Cycle 10 reload submittal to the NRC on September 3, 1985 contained a section on the use of the MINI-CECOR/BASSS program to monitor Limiting Conditions for operation on peak linear heat rate and departure from nucleate boiling. The approval of the use of this software for incore LCO monitoring was made contingent on the validation by Combustion Engineering that the CECOR version on the OPPD plant computer and the version licensed for use on the CE mainframe computer yield identical results for a variety of cases. The purpose of the validation was to provide assurance that the MINI-CECOR software loaded on the District's plant computer works properly and that the physics uncertainties associated with the use of the mainframe version of CECOR are applicable to the mini-computer version.

MINI-CECOR is a mini-computer version of Combustion Engineering's CECOR code. It uses the same algorithms as the mainframe version but has a reduced level of editing options to enable it to fit on a mini-computer.

To enable the code to fit on the Fort Calhoun computer, Combustion Engineering started with a 2.0 Mod 5 version of CECOR and performed the following:

8602250238 860218  
PDR ADDCK 05000285  
P PDR

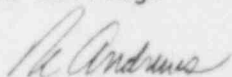
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1. Removed the capability of writing the PDQ 221 file.
2. Removed the capability of writing the COLSS file.
3. Removed the capability of writing the TOUCHY file.
4. Removed the capability of reading the BULL file.
5. Added the BASSS calculation.
6. Changed the temporary coefficient file format to direct access.
7. Provided for a single set of CECOR files for all cases.
8. Resized common blocks to reflect the small Fort Calhoun core (relative to other CE designed cores that are larger).

After CE personnel completed this work, the code was loaded on the Fort Calhoun computer by Combustion Engineering. At this time CE performed a seventeen case validation check to confirm that the version OPPD would use would yield identical results relative to the version executed on the CE main-frame. On January 28, 1986, Combustion Engineering notified OPPD that all of the work on the MINI-CECOR version was complete and that both CECOR versions had calculated identical results for all seventeen cases. These recorded calculations have been documented through the Combustion Engineering quality assurance program.

Based on the validation effort recently completed by Combustion Engineering, the District believes that MINI-CECOR/BASSS can now be declared operational. Your approval is hereby requested so that MINI-CECOR/BASSS may be used for incore monitoring of the Limiting Conditions for Operation on peak linear heat rate and departure from nucleate boiling.



R. L. Andrews  
Division Manager  
Nuclear Production

RLA/JDK/rh

cc: LeBoeuf, Lamb, Leiby & MacRae  
1333 New Hampshire Avenue, N.W.  
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Mr. E. G. Tourigny, NRC Project Manager

Mr. P. H. Harrell, NRC Senior Resident Inspector