

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 FACIL: 50-400 Shearon Harris Nuclear Power Plant, Unit 1, Carolina 05000400
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 RECIP. NAME RECIPIENT AFFILIATION
 DENTON, H. R. Office of Nuclear Reactor Regulation, Director (post 851125)

SUBJECT: Revises info provided in util 840418 ltr re inadequate core cooling sys. RCS info calculated by ERFIS computer. Info does not impact SSER 1, Section 4.4.6.

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 TITLE: DR Submittal: Inadequate Core Cooling (Item II.F.2) GL 82-28

NOTES: Application for permit renewal filed. 05000400

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Carolina Power & Light Company

SERIAL: NLS-86-205

JUN 13 1986

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT
UNIT NO. 1 - DOCKET NO. 50-400
INADEQUATE CORE COOLING INSTRUMENTATION

Dear Mr. Denton:

Carolina Power & Light Company (CP&L) hereby submits revised information concerning the Shearon Harris Nuclear Power Plant (SHNPP) inadequate core cooling instrumentation. This revises information provided via CP&L letter dated April 18, 1984, however, it does not impact Safety Evaluation Report (SER) Supplement 1, Section 4.4.6.

The Reactor Coolant System (RCS) subcooling information at SHNPP is calculated by one of the two 100-percent redundant ERFIS computers (ERFIS Computer A or B). The ERFIS computers are integrated process and emergency response computers with a minimum availability of 99 percent. The ERFIS computer system calculates the saturation temperature corresponding to the RCS wide-range pressure. In conjunction with this, ERFIS Computers A and B both screen all 51 core exit thermocouples (T/C) and calculate the core exit temperature based on the average of the five (5) hottest temperatures. This temperature (average of five (5) hottest), as recommended by the Westinghouse Owners Group, is compared with the calculated saturation temperature to derive the subcooling margin. Those calculations are updated at a minimum of once every 30 seconds. Additionally, all of the parameters are derived from safety grade instrumentation; i.e., qualified RVLIS displays for core exit temperature and RCS wide-range pressure indicators for pressure used in conjunction with steam tables. The margin to subcooling can be displayed on the SPDS and any of the Control Room and TSC/EOF CRTs. The margin to subcooling is also continuously recorded in the ERFIS archive for historical reviews.

If you have any questions on this subject or require additional information, please contact our staff.

Yours very truly,

S. R. Zimmerman
Manager

Nuclear Licensing Section

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