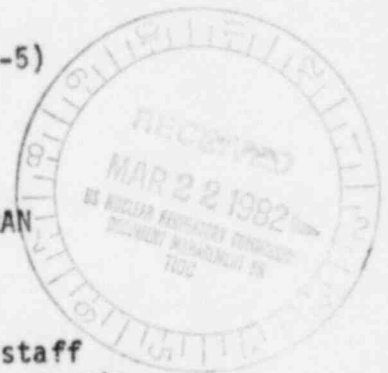FEB 26 1982

MEMORANDUM FOR: All Operating Reactors Project Managers (ORB#1-5)

FROM: Thomas M. Novak, Assistant Director for
Operating Reactors, DL

SUBJECT: SCHEDULE FOR REVIEW OF TOPICAL REPORTS ON RETRAN
METHODOLOGY AND ASSOCIATED RELOADS

The Utility Group for Regulatory Applications informed the NRC staff
that several of their member utilities intend to submit topical reports
in 1982 describing their methodology for transient analysis using the
RETRAN computer code. These methods would then be applied to support
future reloads when necessary.

The Reactor Systems Branch is now in the process of organizing and
allocating the resources required to complete the review of these
topicals and the associated reloads. In order for the Reactor Systems
Branch to be able to plan, conduct and complete this work in an efficient
and effective manner, they need a forecast of this workload.

I request that you call your respective utilities and obtain their assistance
in completing the questionnaire contained in Enclosure 1. Since OMB approval
was required to conduct this survey, a copy of the OMB clearance request is
contained in enclosure 2. You may consider this as an example should you need
to request OMB clearance for any surveys you are asked to perform in the future.
The key to expediting OMB approval appears to be our ability to correlate a
survey request to our current Part 50 clearance.

Please complete this request within five working days of the date of this
memo. You are to give the completed questionnaire to Ed Tourigny. He is
located in Room 437 and can be reached on X27545 if you need assistance.

This request for information was approved by the Office of Management
and Budget under Part 50 clearance number 3150-0011.

Your cooperation is appreciated.

Original signed by:

8203240508 820226
PDR MISC
ID&R-5INFO LTR PDR

Thomas M. Novak, Assistant Director for
Operating Reactors, DL

Enclosure: As stated

cc: D. Eisenhut   B. Sheron
    ORBCs   J. Carter
    R. Mattson   J. Long
    J. Miller   T. Speis
    J. Berggren

RAClark
ETournigny   NRC PDR   Central
PKreutzer   Local PDR
                ORB Rdg
TMNovak

OFFICE ▶	DL:ORB#3	DL:ORB#3	DL:OR	DL:ORB#3			
SURNAME ▶	PKreutzer	RAClark	TMNovak	ETourigny/dd			
DATE ▶	2/1./82	2/2?/82	2/2/82	2/2/82			

NRC FORM 318 (10-80) NRCM 0240   OFFICIAL RECORD COPY   USGPO: 1981—335-960

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cc: D. Eisenhut   B. Sheron
    ORBCs   J. Carter
    R. Mattson   J. Long
    J. Miller   T. Speis
    J. Berggren

Telephone Questionnaire Regarding RETRAN Methodology

Topical Reports

Project Manager:

ORB#   :

Utility   :

Station Name(s):

Unit(s)   :

Question 1:   Do you expect to submit to NRC topical reports supporting
              RETRAN Methodology during the calender years 1982 or 1983?

Answer 1:

Question 2:   If so, when*?

Answer 2:

Question 3:   If so, when do you want NRC to complete the review of
              your topical submittals*?

Answer 3:

Question 4:   Do you expect to use RETRAN to support a reload in 1982
              or 1983?

Answer 4:

Question 5:   If so, when*?

Answer 5:

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* Please specify month and year.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

FEB 1 8 1982

MEMORANDUM TO: Valeria Wilson
NRR OMB Coordinator

FROM: Robert Clark, Chief
Operating Reactors Branch #3, DL

SUBJECT: OMB Clearance Request

Please make arrangements for OMB to review the enclosed clearance request.
An approval by February 28, 1982 would be most helpful. E. G. Tourigny
of my staff is the contact in this matter. Thank you for your cooperation.

Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing

M.H. Williams, Technical Assistant
Division of Licensing

2/18/82

Dupe
8203090105

Proposed Survey on Schedule for Review of
Topical Reports on RETRAN Methodology and Associated Reloads

RETRAN is a computer code approach for analyzing the thermal-hydraulic response of Nuclear Steam Supply Systems to hypothetical Loss of Coolant Accidents and Operational Transients. It is the NRC staff's understanding that utilities intend to submit topical reports describing their methodology for transient analysis using this computer code. These methods would then be applied to support future reloads when necessary. What the NRC staff needs to know is (A) which utilities will be submitting these topical reports in 1982 and 1983, (B) when do these utilities require completion of NRC staff analysis, and (C) will these utilities use RETRAN to support a reload application in 1982 or 1983? The NRC staff needs to know this information so that (1) it can perform its duties in an efficient and effective manner and (2) utility schedules for implementation of this computer code to support reload applications will not be unnecessarily extended out in time awaiting the completion of the NRC review.

The RETRAN computer code is applicable to light-water reactor (LWR) systems. The code would be utilized to support nuclear fuel reloads. The code and reloads would come under the following paragraphs of 10 CFR, Part 50:

(1) 50.46   Acceptance criteria for emergency core cooling systems for
    and   LWRs and ECCS Evaluation Models. RETRAN could be used to
 Appendix demonstrate to the staff that the licensee meets 50.46 and
    K   Appendix K, II.1.a.

(2) 50.59   Changes, Tests, and Experiments. Some fuel reloads require
           changes to the utility's license. RETRAN could be used to
           support a reload license application.

Therefore, this information comes under Part 50 and is being primarily requested to assess the industry's use of this code to meet 10 CFR 50, paragraph 50.46 and Appendix K, II.1.a.

In order to obtain this information, each project manager (about 50 total) will conduct a telephone survey asking each nuclear utility (about 50 total) questions A through C above. The telephone inquiry should require less than 30 minutes on the part of the project manager and the utility. The information would be used by the NRC staff in organizing and allocating NRC resources to complete the review of these topical reports in an efficient, effective, and timely manner. Total cost to NRC is estimated to be about 25 person-hours; total cost to utilities is estimated to be about 25 person-hours. In each case, this was determined by multiplying 50 persons times one half hour. OMB clearance is requested as an add on to the NRC present Part 50 clearance.

ABSTRACT

RETRAN represents a new computer code approach for analyzing the thermal-hydraulic response of Nuclear Steam Supply Systems (NSSS) to hypothetical Loss of Coolant Accidents (LOCA) and Operational Transients. In contrast to the "conservative" approach, RETRAN provides "best estimate" solutions to hypothetical LOCAs and Operational Transients. RETRAN is a computer code package developed from the RELAP series of codes, from reference data, and from extensive analytical and experimental work previously conducted relative to the thermal-hydraulic behavior of light-water reactor systems subjected to postulated accidents and operational transient conditions. The RETRAN computer code is constructed in a semimodular and dynamic dimensioned form where additions to the code can be easily carried out as new and improved models are developed. This report (the first of a four-volume computer code manual) presents the derivation of the general equations, the constitutive models and numerical solution schemes that form the bases of the RETRAN computer code. The three companion volumes describe the programming details, the user input and code output, and the verification and qualification performed with RETRAN.