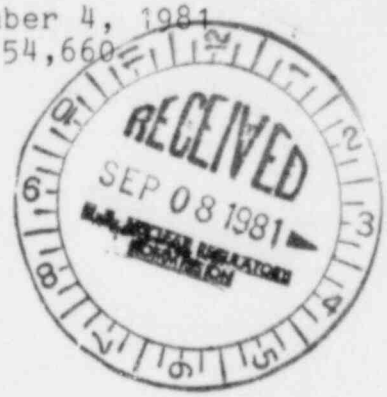
Detroit Edison
2000 Second Avenue
Detroit, Michigan 48226
(313) 237-8000

September 4, 1981
EF2 - 54,660



Mr. L. L. Kintner
U. S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Division of Licensing
Washington, D. C. 20555

Dear Mr. Kintner:

References: Enrico Fermi Atomic Power Plant, Unit 2
NRC Docket No. 50-341

Subject: Training for Mitigating Core Damage

In accordance with your request, Detroit Edison is providing additional information on the subject training program. This information will be included in the FSAR in a future amendment.

Sincerely,

W. F. Colbert
Technical Director
Enrico Fermi 2

WFC:jl
Attachment

cc: Mr. B. Little

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TRAINING FOR SERIOUS ACCIDENTS BEYOND D.B.A.

In accordance with NUREG-0737, NUREG-0660, Appendix H of the Enrico Fermi 2 FSAR, and the March 28, 1980 NRC Staff Directive (Denton letter), Detroit Edison has established a program to train its personnel in controlling and mitigating accidents beyond the Design Basis Accident (DBA). This program will meet both the intent and requirements of the above directives, and the recommendations of the Institute of Nuclear Power Operations (INPO) document titled "Training Guidelines for Recognizing and Mitigating the Consequences of Severe Core Damage", Rev. 1, dated January 15, 1981.

The Detroit Edison program is composed of three distinct phases: (1) Systems Qualification Program for those systems affecting maintenance of safe conditions; (2) Theoretical training in subjects which provide the background necessary to evaluate and respond to varying reactor statuses; (3) A Mitigation of Core Damage Course where all the information and concepts are brought together and applied in an accident environment.

Table 1 lists those systems whose qualification programs include their application in accident conditions. Supplemental instruction in the theory behind the operation of these systems is provided. Precautions and limitations associated with these systems, and consequences of improper utilization of same are covered in detail. Tests assess understanding of both normal utilization and accident operation of the components. At least 10 hours of this program are applicable to training for serious accidents beyond D.B.A.

Table 2 provides a listing of theoretical courses which are being provided. Instruction here is based upon giving operations and other personnel the necessary background to be able to evaluate information which will be available during and after an accident. The material is directly related to EF2 where that is appropriate. The material that is applicable to serious accidents beyond the D.B.A. will provide at least thirty equivalent classroom hours.

Table 3 lists the topics to be presented in an integrated course called Mitigation of Core Damage. The goal of this course is to provide focus and training in the accident environment. Topics, both theoretical and specific, which are applicable to accident conditions are introduced and integrated with previously mastered materials to produce the capability to make correct analyses and timely responses. Also shown are two supplementary courses of instruction - Infrequent Abnormal and Emergency Procedures and Emergency Plan. These courses provide a means to combine the operating and administrative procedures for Enrico Fermi 2 to the skills the trainee has previously mastered. Course lengths will provide at least forty equivalent classroom hours, resulting in a composite program for Serious Accidents Beyond D.B.A. of, at least, eighty equivalent classroom hours.

All operating personnel from the Enrico Fermi 2 Plant Superintendent through the operations chain to the licensed operator will receive this training. Managers and technicians in the Instrument and Control (I&C), Health Physics and Chemistry Groups will receive training commensurate with their responsibilities. This training will be completed by fuel loading.

TABLE 1

SYSTEMS TRAINING

- Residual Heat Removal System (RHR)
  - Low Pressure Cooling Injection (LPCI) Mode
  - Standby Cooling Mode
  - Steam Condensing Mode
  - Head Spray Mode
  - Suppression Pool Cooling Mode
  - Suppression Spray Mode
  - Shutdown Cooling Mode
- Automatic Depressurization System (ADS)
- Core Spray System (CSS)
- High Pressure Coolant Injection (HPCI)
- Standby Liquid Control (SBLC)
- Process Computer Training
- Containment Atmospheric Control
- Instrumentation and Controls
- Reactor Core Isolation Cooling (RCIC)
- Radiation Monitor System

TABLE 2

THEORETICAL TRAINING

- Transient & Accident Analysis (STAs)
- Coolant Chemistry
- Infrequent, Abnormal and Emergency Plant Operations
- Thermohydraulics, Heat Transfer and Fluid Flow
- Emergency Plan
- Control Room Management
- High Radiation Sampling

TABLE 3

MITIGATION OF CORE DAMAGE

A. Prerequisites

1. Completion of Systems Training
2. Completion of Theoretical Training

B. Specific Course Content

1. Core Cooling Mechanics
2. Potentially Damaging Operating Conditions
3. Gas/Steam Binding Effects on Core Cooling
4. Recognizing Core Damage
5. Hydrogen Hazards During Accident Conditions
6. Monitoring Critical Parameters During Accident Condition

   Incore Instrumentation
   Excore Instrumentation
   Process Computer
   High Radiation Sampling

7. Radiation Hazards
8. Criteria for Operation and Cooling Mode Selection
9. Thermodynamics and Heat Transfer
10. Recriticality Potential

C. Suplementary Courses

1. Infrequent Abnormal and Emergency Operating Procedures
2. Emergency Plan