Docket No. 346
License No. NPF-3
Serial No. 641
August 4, 1980

Response to Item 2.C. of Enclosure 1 of Harold R. Denton's letter dated March 29, 1980.

DAVIS-BESSE NUCLEAR POWER STATION

CONTENTS

Revised Programs

Response to Item 2.C. of Enclosure 1 of Harold R..Denton's letter dated March 29, 1980.

Revised programs should be submitted for OLB review by Aug. 1, 1980.

C.1.) Training in heat transfer, fluid flow and thermodynamics.

Response: Heat transfer, fluid flow and thermodynamics have always been a significant portion of the Academic Training Program at Davis-Besse. We have reemphasized the importance of this training by restructuring the content of the heat transfer, fluid flow and thermodynamics in the Academic Training Programs. The revised program provides 160 contact hours of instruction, presented in two seperate programs at Davis-Besse. The first 80 contact hours are presented in our Basic Academic Training Program and the next 80 contact hours are presented in our Specialized License Program which follows the Pressurized Water Reactor Technology Program. These programs address the needs as outlined in Enclosure 2 of the Denton letter.

C.2.) Training in the use of installed plant systems to control or mitigate an accident in which the core is severely damaged.

Response: Training programs have been modified to emphasize the installed systems to be utilized in accident situations. Emphasis has been placed on use of systems in normal, emergency and abnormal modes

of operation. The Simulator Training Program has been modified to incorporate two weeks of emergency and abnormal operations. An additional Training Program is currently being designed to provide specific training on accident responses. This program will review materials from other earlier programs and be structured to better prepare the operator in recognizing and mitigating the consequences of severe core damage. This program will consist of approximately one week of instruction and be presented when the operator has completed the Startup Certification portion of his Simulator Training, but before commencing the Emergency Procedures Training portion of Simulator Training.

Topics to be covered are:

Potentially damaging operating conditions
Core cooling mechanics
Recognizing core damage
Gas/steam binding effects on core cooling
Hydrogen hazards during severe accidents
Monitoring critical parameters during accident conditions
Radiation hazards and radiation monitoring response
Criteria for operation and cooling mode selection.

C.3.) Increased emphasis on reactor and plant transients.

Response: Increased emphasis has been placed on the System Integrated Performance section of our operator qualification standard. Sections have been included on Transient Response and Interrelationship with other Systems. The Simulator Training Program for operators has been modified to increase the emphasis on Reactor and Plant Transients. The training programs involving Plant Systems and Plant Instruments and Controls have been reviewed and modified as necessary to incorporate additional training in plant transients.

Overview Davis-Besse Operator Training

All operators are hired as Auxiliary Operators.

- 0-12 months Auxiliary Operator
- During the first 12 months the operator receives training and qualifies on the following systems:

Makeup/Water Treatment, Demineralized Water, Primary Water
Chlorine
Traveling Screens/Screenwash
Circulating Water, Circ. Water Makeup/Blowdown
Turbine Plant Cooling Water

Vacuum
Condensate
Feedwater, Feedwater Heaters
Auxiliary Feedwater
MFPT Lube Oil Systems

Plant Air
Auxiliary Steam, Heating
Fire Protection
Service Water
Nitrogen
Fuel Oil

4160VAC
480VAC
Instrument AC
Station DC
Lighting

- 12-18 months Equipment Operator I (EO-I)
- During the next 6 month period the operator receives training and qualifies on the following systems:

345 KV
13.8 KV
Diesel Generator

Main Generator/Exciter
Seal Oil
Hydrogen/CO_2
Stator Cooling Water
Main Turbine Gen. Lube Oil

OTSG
Main Steam
Moisture Separator Reheaters
Steam Seals
EHC/Turbine Control (Fluid Systems)

Component Cooling Water
Control Room HVAC
Control Room EVS
Non Radwaste HVAC
Aux. Boiler

- 18-24 months Equipment Operator II (EO II)

- During the next six month period the operator receives training and qualifies on the following systems:

Miscellaneous Liquid Radwaste
Clean Liquid Radwaste
Gaseous Radwaste

Containment Purge Ventilation
Radioactive Waste Ventilation
Fuel Handling Ventilation
Emergency Ventilation System
Sample and Chemical Addition

Fuel Handling
Spent Fuel System

Ohio Stationary Engineer License

- 24-30 months Equipment Operator III (EO III)

- During the next six months the operator receives training and qualifies on the following systems:

ECCS
Decay Heat Removal/Low Pressure Injection
High Pressure Injection
Core Flood

RCS
Reactor Coolant System
Reactor Vessel/Internals
Makeup/Purification/Letdown
Pressurizer
Reactor Coolant Pumps/Motors

CTMT.
Hydrogen Control Systems
CTMT. Spray
CTMT. Air Coolers
CTMT. Vent/Drain Systems
CTMT. Integrity/Vessel Isolation
CTMT. Air Sampling System

- Basic Academic Training

- The operator completes Basic Academic Training consisting of:

a. Mathematics and Scientific Fundamentals
b. Principles of Reactor Physics and Reactor Operations
c. Heat Transfer, Fluid Flow and Thermodynamics
d. Radiation Protection, Safety and Control

- Pressurized Water Reactor Technology

- The operator completes water technology program consisting of:

a. Davis-Besse Systems
b. Plant Instrumentation and Controls
c. Plant Technical Specifications
d. Standard and Emergency Operating Procedures
e. Radiation Protection, Safety and Control
f. Reactivity Control Systems
g. Plant Safety Analysis

- Senior Equipment Operator I (SEO I)

- After the operator is selected to participate in the Reactor Operator Training Program he receives training and qualifies on the following systems:

Safety Features Actuation System
Reactor Protection System
Integrated Control System
Non Nuclear Instrumentation
Nuclear Instrumentation
Steam and Feedwater Rupture Control System (SFRCS)
Control Rod Drive System
Victoreen Rad Monitor
Seismic Monitor, Vibration Monitor
EHC/Turbine Control (Electronic System)

- Shift Operating Training Program

- The operator is then assigned to an operating shift for six weeks. He participates in 'shift operations under supervision'.

- Simulator Training Program

- The operator is then assigned to a "Simulator Training Program" for the first two weeks of the Simulator Training Program. He is then assigned to a one week course on 'Recognizing and Mitigating the Consequences of Severe Core Damage'. He then completes the final two weeks of Simulator Training, emphasizing Emergency and Abnormal Procedures and Operations..After completing Simulator Training, he returns to Control Room Watch, standing for six weeks under supervision.

- License Review Training

- The operator then participates in the "License Review Training," consisting of:

    a. Self study in areas of weakness identified thru testing.
    b. Formal lectures to enhance knowledge in areas of weakness.
    c. Shift training evolutions and plant evolutions.
    d. Technical Specifications.

- Specialized License Training (SLT)

- The operator participates in the "Specialized License Training Program" which consists of training in the following areas:

    a. Reactor Theory/Principles of Reactor Operation
    b. Principles of Heat Transfer and Fluid Mechanics
    c. Plant Systems and Instrumentation
    d. Plant Safety, Analysis/Safety Related Systems
    e. Radiation Control Safety and Protection
    f. Emergency Plan and Implementing Procedures
    g. Plant Procedures and Technical Specifications

- The operator will then complete:

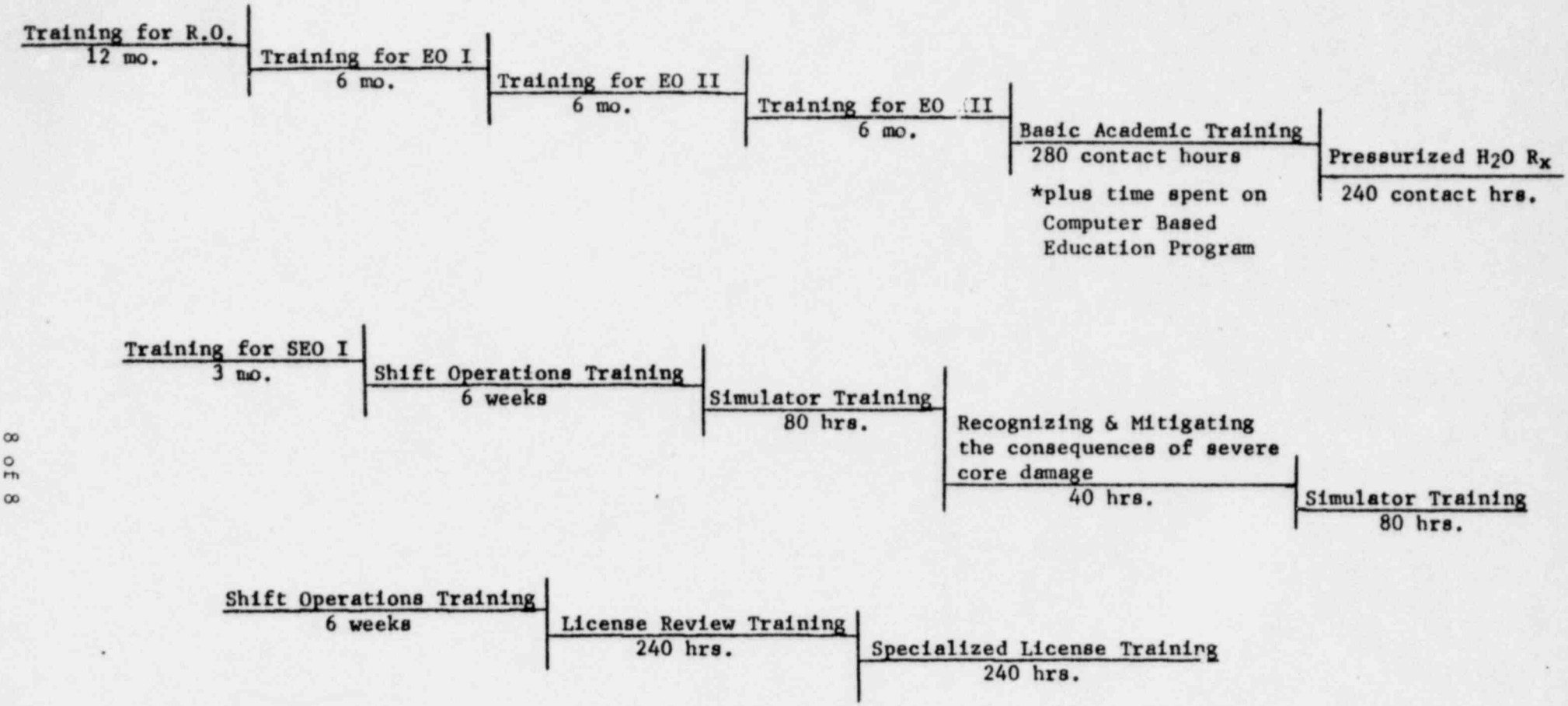
    a. all areas of the Davis-Besse Nuclear Power Plant Operator's Qualification Manual.

    b. all written examinations required prior to being recommended for license.

d. oral examinations from:
   1. Shift Supervisor
   2. Operations Engineer/Operations Supervisor

- Plant update
- The operator will be assigned back on shift to refamiliarize himself with shift operations and conditions.

CHART OF TRAINING PROGRAM



*Time required to complete Computer Based Education-min. of 30 hrs.-max. of 240 hrs. Depending on persons academic skills.

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