Duke Power Company
Nuclear Production Dept
P.O. Box 1007
Charlotte, N.C. 28201-1007

M.S. Tuckman
Vice President
Nuclear Operations
(704)373-3851

DUKE POWER

December 4, 1990

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Subject: McGuire Nuclear Station, Units 1 and 2
Docket Nos. 50-369 and 50-370
Revision to the McGuire Fire Protection Review Manual

Gentlemen:

Please find attached the subject manual revision that reflects changes resulting from self-initiated technical audit SITA 89-02 (MC) as addressed in the letter to NRC from H.B. Tucker dated April 30, 1990. Only pages from your existing manual that have been revised should be removed. Actual revisions are indicated by change bars in the right margin. This revision is for your information only.

Should you have any questions regarding this matter, please contact L.J. Rudy at (704) 373-3413.

Very truly yours,

M.S. Tuckman

M.S. Tuckman

LJR/s

Attachment

xc (w/attach): Mr. S.D. Ebneter
Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta St., NW, Suite 2900
Atlanta, GA 30323

Mr. T.A. Reed, Project Manager
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
One White Flint North, Mail Stop 9H3
Washington, D.C. 20555

Mr. P.K. VanDoorn
NRC Senior Resident Inspector
McGuire Nuclear Station

A006

McGUIRE NUCLEAR STATION

FIRE PROTECTION REVIEW

Revision Log:

1. January 1979
2. September 1982
3. September 1985
4. March 1986
5. February 1989
6. October 1990

ELEVATION 767 + 0

CONTROL AREA

The Control Area Ventilation and Air Conditioning Systems are designed to maintain the environment in the Control, Cable and Equipment Rooms within acceptable limits for the operation of the units.

Because of the uninterrupted safe occupancy during post-accident shutdown criteria, this system is designed as Engineered Safety Feature System with absolute and carbon filtration in the outside air intakes and equipment redundancies for use as conditions require.

Where Control Area Ventilation System ducts penetrate fire barriers, supports are located within five feet of each penetration on each side of the barrier. In areas where fire loading analysis indicates a need, the supports are fireproofed to a rating equivalent to the damper located in the penetrations.

Two 100 percent Safety Class 3 redundant air handling systems are provided for the Control Room.

Essential electrical apparatus involved with the cooling, heating and pressurizing of the Control Room during accident conditions is connected to emergency standby power.

A 1000 CFM purge fan serves the Control Room to purge smoke to the Auxiliary Building exhaust system for discharge through the station vent.

Smoke from other areas on the 767 + 0 Elevation will be handled by the Auxiliary Building exhaust system assisted by portable fans.

ELEVATION 750 + 0

The Cable Rooms for Unit 1 and Unit 2 are served by the Control Area Ventilation and Air Conditioning System as described on page 41.

The Equipment and Cable Room make-up fans supply 1000 CFM each. The circulation fans supply 55,000 CFM each.

The remainder of Elevation 750 + 0 is served by the Auxiliary Building ventilation system. Portable fans will be used to remove smoke from affected areas to the exhaust system as required.

ELEVATION 733 + 0

The Equipment/Battery Rooms are served by the Control Area Ventilation System.

The Battery Room exhaust fans are provided with a differential pressure switch located in the fan discharge. Upon loss of ventilation supply or exhaust air for the Battery Rooms, "OFF" status indicator lights on the HVAC Main Control Board located in the Control Room are energized. Operator action would include switching to the redundant ventilation system served from the redundant power train.

Refer also to Elevation 750 + 0 for make-up and ventilation fan capacities.

Paragraph 3520 -

Smoke detection equipment will be installed in accordance with the intent of NFPA 72E, 1974 as recommended by persons trained in fire protection system engineering.

(b) FIRE DETECTION SYSTEM SHOULD GIVE AUDIBLE AND VISUAL ALARM AND ANNUNCIATION IN THE CONTROL ROOM. LOCAL AUDIBLE ALARMS SHOULD ALSO SOUND AT THE LOCATION OF THE FIRE.

Activation of any detector gives a local alarm on the elevation of the activation as well as an audible and visual alarm in the Control Room.

(c) FIRE ALARMS SHOULD BE DISTINCTIVE AND UNIQUE. THEY SHOULD NOT BE CAPABLE OF BEING CONFUSED WITH ANY OTHER PLANT SYSTEM ALARMS.

In addition to the local alarm, the PA system is used to alert fire brigade personnel and possibility of confusion of the fire alarm with other plant system alarms is negligible.

(d) FIRE DETECTION AND ACTUATION SYSTEMS SHOULD BE CONNECTED TO THE PLANT EMERGENCY POWER SUPPLY.

The central supervising station is powered from the battery-backed Auxiliary Control Power System. Each data gathering panel of the detection system is equipped with back-up batteries and each sub-zone panel alarms to the central supervising station on loss of power.

2. <u>FIRE PROTECTION WATER SUPPLY SYSTEMS</u>

(a) AN UNDERGROUND YARD FIRE MAIN LOOP SHOULD BE INSTALLED TO FURNISH ANTICIPATED FIRE WATER REQUIREMENTS. NFPA 24 - STANDARD FOR OUTSIDE PROTECTION - GIVES NECESSARY GUIDANCE FOR SUCH INSTALLATION. IT REFERENCES OTHER DESIGN CODES