

Meeting Notice

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R. C. DeYoung  
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S. Varga  
R. Clark  
T. Speis  
P. Collins  
C. Heltemes  
R. Houston  
R. J. Mattson  
H. Denton  
ACRS (16)  
L. Crocker  
H. Berkow  
Project Manager - R. Birkel  
Attorney, ELD  
IE (3)  
SD (7)  
J. Lee  
Receptionist - Phillips  
L. Rubenstein  
R. Bosnak  
W. Haass

J. Knight  
D. Ross  
R. Tedesco  
S. Pawlicki  
I. Sihreil  
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Z. Rosztoczy  
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B. Youngblood  
W. Regan  
D. Bunch  
J. Collins  
W. Kreger  
R. Ballard  
M. Spangler  
J. Stepp  
L. Hulman  
H. Ornstein  
L. Dreher  
B. Faulkenberry, IE  
OPA  
Principal Staff Participants:  
V. Stello  
P. Matthews  
W. Butler  
R. Ferguson  
D. Eisenhut  
M. Fairtile  
R. Reid

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

APR 13 1978

Docket Nos. 50-369/370  
and 50-269/270/287

MEMORANDUM FOR: Karl Kniel, Chief, Light Water Reactors Branch No. 2, DPM

FROM: Ralph A. Birkel, Project Manager, Light Water Reactors  
Branch No. 2, DPM

SUBJECT: FORTHCOMING MEETING WITH DUKE POWER COMPANY  
(McGuire Nuclear Station, Units 1 & 2)

DATE & TIME: Friday, April 14, 1978  
2:15 p.m.

LOCATION: Room P-422, Phillips Building  
Bethesda, Maryland

PURPOSE: Discussion of Duke Power Company's  
appeal to staff fire protection  
position for McGuire and Oconee cable  
spreading rooms.

Position of applicant and staff are  
enclosed.

PARTICIPANTS: DUKE POWER COMPANY  
(W. Owens, W. Parker, et al)

NRC - STAFF  
(V. Stello, R. Mattson, R. Boyd,  
R. Tedesco, V. Benaroya, P. Matthews,  
W. Butler, R. Ferguson, D. Eisenhut,  
D. Vassallo, K. Kniel, R. Birkel,  
M. Fairtile, R. Reid, et al)

*Ralph A. Birkel*

Ralph A. Birkel  
Light Water Reactors  
Branch No. 2  
Division of Project Management

Enclosure:  
Applicant/Staff Positions



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

Docket Nos. 50-369  
and 50-370

NOTE TO: Attendees  
Duke Power Company  
Appeal Meeting, Friday, April 14, 1978

Subject: Fire Suppression System  
McGuire/Oconee Cable  
Spreading Rooms

Enclosure No. 1 - Duke Power Company Position Statement  
Enclosure No. 2 - NRC Staff Requirements

DUKE POWER COMPANY  
 FIRE PROTECTION SUPPRESSION SYSTEM  
 NRC APPEAL MEETING  
 APRIL 14, 1978

M. Fairlie  
 NRC/OARR/DOE  
 Operating Room  
 Branch 4

SUMMARY OF DUKE POWER COMPANY POSITION

Duke Power Company has proposed to install a "Standby Shutdown System" at its Oconee and McGuire Nuclear Stations. These systems would be capable of bringing one or more units to a safe shutdown condition following postulated fires or sabotage scenarios. The SSS at each station would be redundant to normal installed plant equipment utilized for shutdown or accident mitigation. Further information on the SSS has been presented to the staff on January 18, 1978 (verbal) and February 1, 1978 (written) for Oconee and on March 23, 1978 (verbal) for McGuire. A formal submittal on the McGuire SSS is scheduled for May 1, 1978.

As redundant shutdown capability, the SSS at each station is protected from fires or sabotage such that no currently postulated event could cause the loss of both normal and SSS shutdown capability. The position has been expressed by the NRC staff, however, that a fixed automatic or manual fire suppression system should be provided in areas such as cable spreading rooms and equipment rooms.

Duke Power Company agrees that an adequate level of fire suppression capability should be provided throughout a station, even though redundant safe shutdown capability is provided. Such capability is demanded by good engineering practice, responsible management to minimize property loss potential, and recognition of the need for "defense in depth" to assure protection of public health and safety. It is considered, however, that adequate protection can be assured by providing suppression capability by other than fixed systems - e.g., portable extinguishers and installed hose stations in and near cable spreading rooms. This position is also considered to be consistent with the staff's position as expressed in Appendix A to BTP 9.5-1 which requires that when a dedicated shutdown system is utilized manual fire fighting capability to protect other safety-related systems is required.

The only valid basis, therefore, for a decision is cost versus benefit with regard to installing a suppression system in addition to manual capability. It is Duke Power Company's position that considering the existence of a standby shutdown system the incremental benefit of a fixed, versus non-fixed, suppression system is not greater than its associated cost. Otherwise, it appears that a Standby Shutdown System has little relative benefit from a fire protection perspective.

POOR ORIGINAL

Staff Requirements

- 1.0 Minimum safe shutdown systems when one division of all safety systems is not available.
- 1.1 Following any fire, the plant can be brought to hot shutdown conditions using equipment and systems that are free of fire damage.
- 1.2 The plant should be capable of maintaining hot shutdown conditions for an extended time period significantly longer than 72 hours.
- 1.3 Fire damage to systems necessary to achieve and maintain cold shutdown conditions should be limited so that repairs can be made and cold shutdown conditions achieved within 72 hours.
- 1.4 Repair procedures for cold shutdown systems should be prepared now and material needed for such repairs should be on the site.
- 1.5 The hot shutdown condition must be achievable with power from the offsite power system, and upon its loss, with power from the onsite power system. A dedicated power supply may be substituted for the onsite power system.
- 1.6 The power needed to achieve the cold shutdown condition may be obtained from any one of the offsite power, onsite power, and dedicated power system.
- 1.7 When these minimum systems are provided their adequacy shall be verified by a thorough evaluation of:
  - a. Systems required for hot shutdown;
  - b. Systems required for cold shutdown;
  - c. Fire damage to power distribution systems; and
  - d. Interactions caused by fire damage to power and water supply systems and to supporting systems, i.e., component cooling water supply.
- 2.0 Minimum fire protection when dedicated or alternate shutdown systems are provided.
- 2.1 The fire protection systems in areas (such as cable spreading rooms) that contain cables for a large number of systems should consist of:
  - a. Fire detection system;
  - b. Hose stations; and
  - c. Fixed manual suppression system (gas or water)

NOTE: Consideration to preventing fire propagation via covered trays, fire retardant coating, barriers or blankets on a case-by-case basis.

- 2.2 Where access is difficult or impossible automatic systems should be provided.
- 2.3 Where modifications will not be implemented for an extended period, interim protection measures should be required to compensate for the lack of protection.