

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
 )  
The Cincinnati Gas & Electric ) Docket No. 50-358  
Company, et al. )  
 )  
(Wm. H. Zimmer Nuclear Power )  
Station) )

APPLICANT'S STATEMENT OF MATERIAL FACTS AS TO WHICH  
THERE IS NO GENUINE ISSUE TO BE HEARD  
RESPECTING CONTENTION 17

Contention 17

1. The fire protection provisions for the Zimmer Station are described in detail in the Fire Protection Evaluation Report ("FPER").

2. The Fire Protection Evaluation Report describes those systems utilized to provide early detection of fires and provides a detailed description of those systems designed to limit the consequences of a fire should one occur.

3. The fire protection program and plant arrangements are evaluated in the FPER with respect to the effect of a fire on the performance of necessary safe plant shutdown functions.

4. The Zimmer Station complies with all design criteria and requirements for fire protection as promulgated by the Nuclear Regulatory Commission.

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5. The design of the Zimmer Station provides for safe plant operation and shutdown with regard to the fire protection system and programs to be utilized.

6. Certain cable trays in specific locations had to be protected in order that redundant divisions would not be adversely affected by a postulated fire.

7. The determination of the specific cable trays to be protected was made on the basis of an evaluation of each area in consultation with the Nuclear Regulatory Commission Staff which also participated in the specification of the protection required.

8. Where protection of a cable tray is required, that cable tray will be cocooned with three one-inch layers of "Kaowool," a ceramic fiber made into an insulating blanket.

9. The Applicant participated in various tests to qualify the insulating material and the method of insulating the cable trays.

10. The test of relevance as far as the qualification of the cocooned cable trays utilized at the Zimmer Station is the one described in Revision 13 to the Fire Protection Evaluation Report, the CTL Report.

11. The CTL test was performed by Construction Technology Laboratories under the direction of Melvin S. Abrams, an expert in fire protection.

12. The CTL test is fully described in Revision 13 to the Fire Protection Evaluation Report.

13. The cable trays and Kaowool utilized in the CTL test and the method of application are the same as utilized in the Zimmer Station.

14. The cables utilized in the CTL tests were the same which will be cocooned in Kaowool at the Zimmer Station.

15. Four cable tray specimens were fabricated for the fire test.

16. Cables were placed in a random manner in each of the trays by personnel of CTL.

17. Prior to putting cables in trays, thermocouples were attached to the trays.

18. After a tray was filled, the insulating cover was placed on the tray and the entire assembly banded with steel bands in accordance with the specifications.

19. The cable trays were fixed in the CTL furnace to simulate the vertical separation of cable trays.

20. Furnace atmosphere temperatures were programmed to follow the time temperature relationship specified in ASTM Designation E119.

21. The wrapping of the cable trays with the Kaowool blanket protected the circuit continuity of cables in the trays for a minimum of 94 minutes.

22. No short circuits occurred during the test period.

23. In addition, no short circuits occurred at a cable jacket temperature of 200°C which is considered as the maximum,

continuous service temperature for maintaining continuity for this type of cable jacketing.

24. The cables which were removed from the furnace 30 minutes after the end of the test period and after temperatures of the cables had increased about 50°F over those at the end of the test showed no damage to the cable jacketing material.

25. Cables removed some 3 1/2 hours after the test was terminated (and after temperatures of the cables had continued to rise an additional 100 to 200°F for about 1 1/2 hours after the test was terminated) showed some softening of jacket material, but the cable tested still maintained circuit continuity.

26. The insulating barrier of Kaowool, using the application techniques and thickness described in detail in the CTL report, proved to be qualified as a fire thermal barrier between the enclosed system and external area of exposure fire, for the system arrangement used during the testing program.

27. The 90 minute test period for the CTL test was determined in consultation with the NRC Staff.

28. The test period was determined on the basis that if this test were passed, sufficient fire protection as needed in the Zimmer facility would be provided considering the locations of cable trays, ignition and fuel sources, and fire detection and fire protection measures at the various critical locations.

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29. Applicant is not relying on the Husky fire tests which were run during the period September 1978 through January 1979 in order to qualify the Kaowool-cocooned cable trays.

30. Any asserted deficiency in the Husky tests done to qualify Kaowool cocooned cable trays are irrelevant.

31. The Underwriters Laboratory Test Report R8758 is not being relied upon.

32. Any asserted deficiencies in the Underwriters Laboratory Test are irrelevant.

33. Cables which pass through cable trays to be cocooned in Kaowool have been suitably derated in order that their design temperatures are not exceeded either in normal operation or as a result of a postulated fire.

34. A design feature of the Zimmer Station is the utilization of concrete curbs around penetrations of floors through which cable trays are routed such that any flammable or other liquids spilled on the floor cannot contact a vertical cable tray or penetrate into the Kaowool cocoon.

35. When Kaowool butts to a floor, ceiling or wall, a qualified fire retardant sealant will be used to prevent penetration of any flammable liquid into a Kaowool wrapped cable tray.

36. Adequate fire protection has been provided for the Zimmer Station as described in the Fire Protection Evaluation Report.

37. Adequate consideration has been given to protection of redundant cables against specified fire hazards.

38. Where necessary, one of the redundant cable divisions has been protected with a qualified Kaowool cocoon.

39. The type and amount of insulation for cable trays has been determined considering the location and available fire detection and protection methods.

40. The Kaowool insulating material has been qualified by test to assure that all NRC requirements and criteria are met.

41. Other design measures have been taken to assure the functioning of the cables both during normal operation and during a fire.