

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 MEMORANDUM IN SUPPORT OF ITS MOTION
FOR SUMMARY DISPOSITION RESPECTING CONTENTION 17

I. Preliminary Statement

Applicant, The Cincinnati Gas & Electric Company, et al., incorporates Section I of "Applicants' Memorandum in Support of Their Motion for Summary Disposition Respecting Certain Admitted Contentions." dated April 6, 1979.

II. Statement of the Case

Applicant incorporates by reference Section II of "Applicants' Memorandum in Support of Their Motion for Summary Disposition Respecting Certain Admitted Contentions" dated April 6, 1979.

III. Discussion of Contention 17

On August 7, 1979, the Atomic Safety and Licensing Board ("Licensing Board") admitted, inter alia, Contention 17 in this proceeding. Contention 17 states as follows:

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Contention 17

Fire insulation material which is being used to protect the cables in the cable trays from fire is inadequate to protect the cables in light of the cable tray installation design and cable tray load. The tests of the fire insulation material were improperly performed in that conditions which will exist during operation were not adequately simulated. 1/

In admitting this contention, the Licensing Board stated that "MVPP base[d] its contention . . . on tests performed during September, October and November, 1978, and January, 1979" 2/ The Board's Memorandum and Order Admitting New Contentions stated that Miami Valley Power Project ("MVPP") had alleged that the tests on insulation material were "inadequately performed." 3/ In addition, the Board stated that MVPP had examined the details of an earlier test of the insulation material performed by Underwriters Laboratory and "discovered that 'the test of the material was actually a failure.'" 4/ The Licensing Board stated, in admitting the contention, that MVPP would rely on Mr. Robert Hofstader as an expert witness in this proceeding. 5/

Both the Applicant and the Nuclear Regulatory Commission Staff sought to take the deposition of Robert Hofstader

1/ Cincinnati Gas & Electric Co. (Wm. H. Zimmer Nuclear Station), LBP-79-22, 10 NRC (August 7, 1979).

2/ Id. at 2.

3/ Id.

4/ Id. at 3.

5/ Id. at 5.

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after he had been identified by counsel for MVPP as their only witness on Contention 17.^{6/} On September 10, 1979, Mr. Robert Hofstader called counsel for the Applicant and stated that he would not appear for MVPP as a witness in this proceeding. Accordingly, the Applicant cancelled the deposition which it had set for September 13, 1979. The Staff, which was also informed of this development by counsel for MVPP, also cancelled its deposition.^{7/}

Previously Applicant had propounded a set of interrogatories to MVPP related to Contention 17. Information was requested from the Project, inter alia, with regard to the basis for its contention and its proposed testimony.^{8/} The Staff had also submitted a set of interrogatories to the Miami Valley Power Project.^{9/} The Project has responded to neither of these requests for discovery. On the other hand, both the Staff and Applicant responded to interrogatories

^{6/} See letter from Leah S. Kosik to the Licensing Board dated August 24, 1979.

^{7/} Letter from Troy B. Conner, Jr. to Leah S. Kosik dated September 10, 1979 and "NRC Staff Motion to Strike Miami Valley Power Project Contention Number 17, Concerning Fire Protection of Cable Trays and the Termination of All Discovery Relating Thereto" dated September 1, 1979. See also letter from Tawn Fichter to the Chairman of the Licensing Board dated September 10, 1979.

^{8/} Applicant's Sixth Set of Interrogatories to Miami Valley Power Project dated August 24, 1979.

^{9/} NRC Staff Interrogatories to Miami Valley Power Project Regarding Contention Number 17 dated August 22, 1979.

propounded by the Miami Valley Power Project relating to Contention 17.^{10/}

Thus, discovery has been a one-way street. The Applicant and Staff have been unable to obtain from MVPP any specificity whatsoever as to the basis of its contention nor the sources and individuals relied on. No particularity has been provided as to the asserted problems associated with fire protection for the cable trays at the Zimmer Station.^{11/}

The fire protection provisions for the Zimmer Station are described in detail in the Fire Protection Evaluation Report ("FPER")^{12/} [See the Affidavit of Robert E. Cotta at Paragraph 2 (hereinafter "Cotta Affidavit, ["__"])]. In addition, 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 [FEPR at §1.0]. The fire protection program and plant arrangements are evaluated with respect to the effect of a fire on the performance of necessary safe plant shutdown

^{10/} Letter to Leah S. Kosik, Esq. from Daniel W. Kemp, Esq. dated September 11, 1979 and NRC Staff Response to Interrogatories of Miami Valley Power Project dated September 13, 1979.

^{11/} The Applicant and Staff have already moved to strike Contention 17. If either motion is granted by the Board, this would moot the instant motion for summary disposition.

^{12/} This Report, including all revisions, has previously been transmitted to the Licensing Board and parties, and is made part of the Affidavit of Robert E. Cotta.

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functions [Id.]. The FPER also addresses compliance with all design criteria and requirements for fire protection as promulgated by the Nuclear Regulatory Commission [Id. at §2.0]. The report concludes that 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 [Id. at §3.0].

As part of this fire protection review, it was determined that certain cable trays in specific locations had to be protected in order that redundant divisions would not be adversely affected by a postulated fire. The determination of the 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 [Cotta Affidavit, ¶5]. 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 [See Cotta Affidavit, ¶4 and page A10 of the Fire Protective Cable Tray Fire Test Report conducted by Construction Technology Laboratories ("CTL Report"), Revision 13 to the Fire Report referenced in the Cotta Affidavit, ¶4. See also the Affidavit of Melvin S. Abrams at Paragraph 3 (hereinafter "Abrams Affidavit, ¶__")].

The Applicant participated in various tests to qualify the insulating material and the method of insulating the cable trays. 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. This test was performed by Construction Technology Laboratories under the direction of Melvin S. Abrams, an expert in fire protection [Abrams Affidavit, ¶2].

This test is fully described in Revision 13 to the Fire Protection Evaluation Report [Id.]. The cable trays and Kaowool utilized in the CTL test and the method of application are the same as utilized in the Zimmer Station [Cotta Affidavit, ¶4; See also CTL Report at A12-13]. The cables utilized in the CTL tests were the same which will be cocooned in Kaowool at the Zimmer Station [Cotta Affidavit, ¶4].

Four cable tray specimens were fabricated for the fire test. Cables were placed in a random manner in each of the trays by personnel of CTL. Prior to putting cables in trays, thermocouples were attached to the trays. 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. The cable trays were fixed in the CTL furnace to simulate the vertical separation of cable

trays [CTL Report at 7-13]. Furnace atmosphere temperatures were programmed to follow the time temperature relationship specified in ASTM Designation E119 [Abrams Affidavit, #2; CTL Report at 13-14].

The pertinent results of the test are summarized in the Abrams Affidavit [Abrams Affidavit, #4; See also CTL Report at 14-20]. 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 [Id.]. No short circuits occurred during the test period [Id.]. 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 [Id.]. 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 [Id.]. 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 [Id.].

In summary, 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 [CTL Report at 5].

The 90 minute test period for the CTL test was determined in consultation with the NRC Staff. It 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 [Cotta Affidavit, ¶5]. Three layers of Kaowool will be utilized on all cable trays which will be cocooned [Cotta Affidavit, ¶6].

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. Thus any asserted deficiency in the Husky tests done for this purpose are irrelevant [Cotta Affidavit, fn. at 2]. Moreover, the Underwriters Laboratory Test Report R8758 is not being relied upon [Id.]. Thus any asserted deficiencies in this test are irrelevant.

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 [Cotta Affidavit, ¶6]. Another 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. In addition, when Kaowool butts to a floor, ceiling or wall, a qualified fire retardant sealant will be used to further prevent penetration of any flammable liquid [Id. at ¶7].

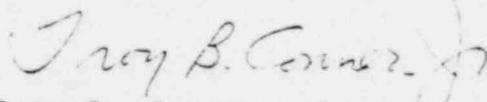
IV. Conclusion

Thus, adequate fire protection has been provided for the Zimmer Station as completely described in the Fire Protection Evaluation Report. Specifically, adequate consideration has been given to protection of redundant cables against specified fire hazards. Where necessary, one of the redundant cable divisions has been protected with a qualified Kaowool cocoon. The type and amount of insulation has been determined considering the location and available fire detection and protection methods. The Kaowool insulating material has been qualified by test to assure that all NRC requirements and criteria are met. In addition, other design measures have been taken to assure the functioning of the cables both during normal operation and during a fire.

Miami Valley Power Project has presented nothing which would contradict any of the material in the Fire Protection Report or any of the statements of the two affiants. MVPP has not responded to any interrogatories nor has any expert witness been identified who will appear on its behalf. Thus, pursuant to 10 C.F.R. §2.749, no genuine issue of fact exists and Applicant is entitled to the granting of its motion for summary disposition. This Board should dismiss Contention 17 from the proceeding.

Respectfully submitted,

CONNER, MOORE & CORBER



Troy B. Conner, Jr.



Mark J. Wetterhahn
Counsel for the Applicant

September 21, 1979