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February 6, 1981

Mr. T. Ippolito  
 Operating Reactors - Branch 2  
 Division of Operating Reactors  
 U.S. Nuclear Regulatory Commission  
 Washington, DC 20555

Subject: Dresden Station Units 2 and 3  
 Additional Response Concerning  
 Fire Protection Modifications  
NRC Docket Nos. 50-237/249

Reference (a): T. A. Ippolito letter to J. S. Abel  
 dated October 27, 1980

Dear Mr. Ippolito:

Reference (a) transmitted a summary of the NRC staff requirements to resolve open items concerning fire protection.

Enclosure 1 to this letter provides our responses to the staff positions, including proposed modifications where deemed necessary, except for items relating to safe shutdown capability (Item 3.2.4). Response to these items will be forwarded to you under separate cover.

Please address any questions concerning this matter to this office.

One (1) signed original and thirty-nine (39) copies of this transmittal are provided for your use.

Very truly yours,

Robert F. Janecek  
 Nuclear Licensing Administrator  
 Boiling Water Reactors

cc: RI Inspector - Dresden

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Enclosure 1

Dresden Station Units 2 and 3  
Response to NRC Staff Requirements  
Concerning Fire Protection

Smoke Detection System Tests SER items 3.1.2

To adequately address the concerns of the staff and assure that the detection system will provide timely detection of any fires, the licensee should conduct bench tests of the detectors to verify that they will be responsive to the products of combustion of combustibles, including transient combustibles, in each area where the detectors are installed.

Response

A survey will be made to identify significant fixed and transient combustibles to which smoke detectors in any hazard area of the plant may be exposed. Samples of these combustibles will be submitted to Pyrotronics, the supplier of all the smoke detectors in question, to be bench tested at their test facility to verify adequate response to the products of combustion of these samples. One detector of each type installed will be subjected to appropriate products of combustion for verification. Successful detector operation for this test will verify that the smoke detectors are satisfactory. A test report will be submitted when the tests are completed.

Water Suppression Systems SER item 3.1.5

1. Provide alternate shutdown capability independent of the turbine mezzanine area.

Response

The attached Supplement 2 Fire Protection "Safe Shutdown Analysis Part 2, provides a description of an alternate shutdown capability independent of the turbine mezzanine area.

2. Provide line detectors in the cable trays or spot type heat detectors between the horizontal trays for actuation of the pre-action system.

Response

Figure 1 shows the layout of the cable trays along the south wall of the Dresden Unit 2 Turbine Mezzanine Floor. Figure 1 also shows the proposed addition of fire detectors to activate the preaction sprinkler system.

Shields will be placed on the bottom of the 4th tray up from the bottom and on the bottom of the fourth tray down from the top. The shields will extend the length of the trays as they are covered by the sprinkler system.

Fire detectors will be mounted on the under side of the shields at the front of the trays on appropriate centers along the protected length of tray. The shields between the tray and the wall and the shields at the front of the trays will result in a concentration generated in the section of trays below the detectors. The detectors in this configuration will provide early actuation of the preaction system and insure that the system has been charged when the sprinkler system is required.

3. Verify that this pressure sensing switch for the turbine mezzanine water system is located on the system side of any regulators or check valves.

Response

The pressure sensing switch for the turbine mezzanine water system has been field checked to verify that it is located on the sprinkler system side of any regulators or check valves in the system.

Gas Suppression Systems SER item 3.1.6

Auxiliary Electrical Equipment Room

To meet accepted fire protection engineering practice the licensee should provide Halon and CO<sub>2</sub> discharge nozzles in the underfloor area of the computer room and the small area of the tunnel.

Response

Halon and CO<sub>2</sub> discharge nozzles will be appropriately placed in the underfloor area of the computer room and in the small area of the cable tunnel considered part of the Auxiliary Electric Equipment Room.

Portable Ventilation Equipment SER item 3.1.12

To meet the guidelines of Section D-4 of Appendix A to BTP9.5-1 and provide adequate smoke removal capability the licensee should provide at least three portable smoke ejectors with a combined capacity of at least 17,500 cfm. The smoke ejectors provided should be capable of being operated in case of loss of offsite power.

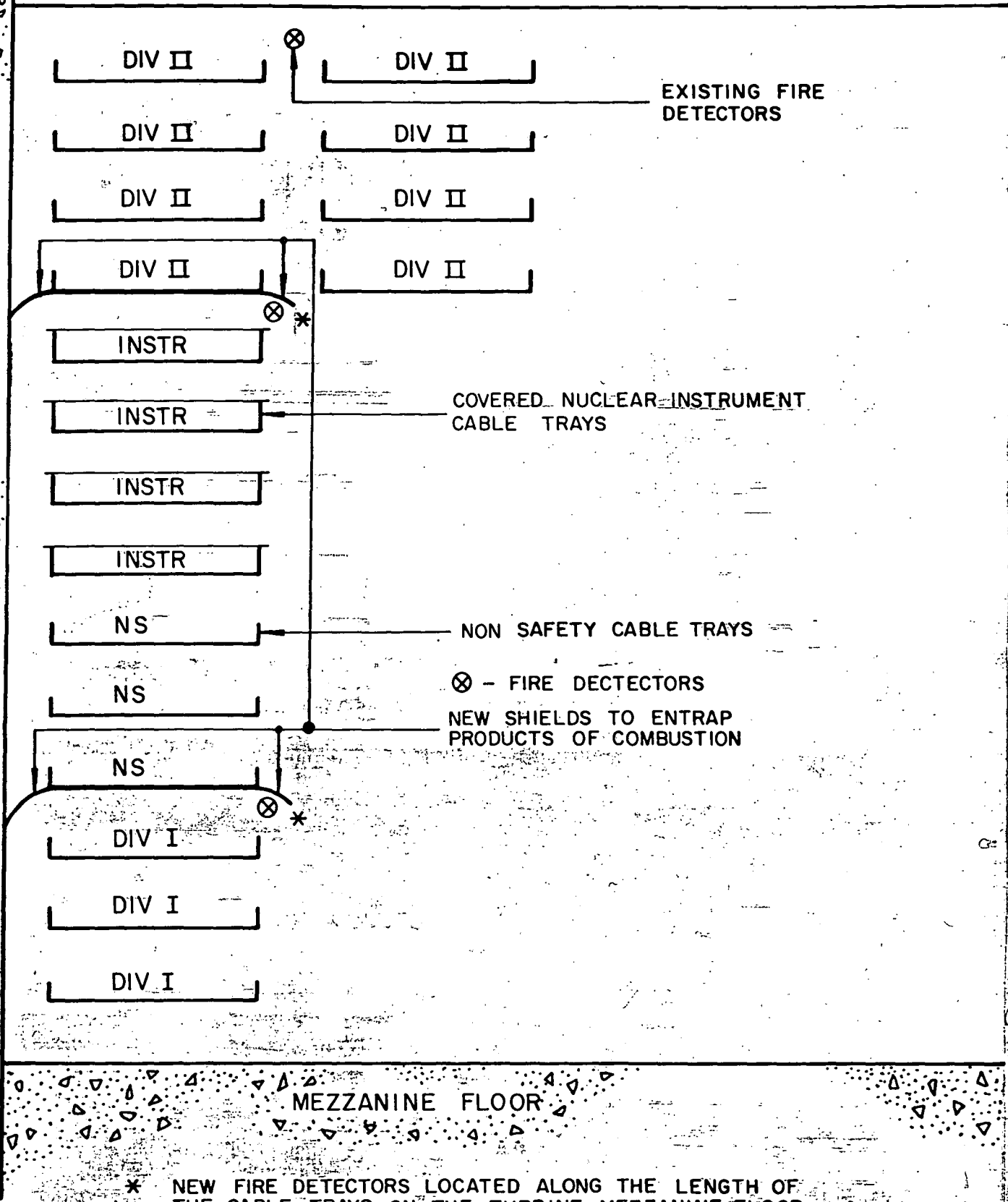
Response

Prior to receipt of the October 27, 1980 letter from the NRC Dresden Station had onsite 3 Super Vac 5200 cfm each portable smoke ejectors manufactured by Super Vacuum Manufacturing Company. These three ejectors were purchased and sized based on discussions with the fire protection reviewers at that time. We believe the combined ejector capacity (15,600 cfm) is adequate to provide the necessary ventilation for the tunnel area. The ejectors can be operated from an onsite power source.

PROPOSED FIRE DETECTOR INSTALLATION ON THE UNIT - 2  
TURBINE MEZZANINE FLOOR

DRESDEN STATION  
FIGURE - 1

TURBINE MEZZANINE SOUTH WALL



EXISTING FIRE  
DETECTORS

COVERED NUCLEAR INSTRUMENT  
CABLE TRAYS

NON SAFETY CABLE TRAYS

⊗ - FIRE DETECTORS

NEW SHIELDS TO ENTRAP  
PRODUCTS OF COMBUSTION

MEZZANINE FLOOR

\* NEW FIRE DETECTORS LOCATED ALONG THE LENGTH OF  
THE CABLE TRAYS ON THE TURBINE MEZZANINE FLOOR  
AS APPROPRIATE. THE SHIELDS WILL BE CONTINUOUS  
FOR THE LENGTH OF THE TRAY FOR THE AREA COVERED  
BY THE SPRINKLER SYSTEM