

DUKE POWER COMPANY

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May 11, 1984

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Ms. E. G. Adensam, Chief
Licensing Branch No. 4

Re: Catawba Nuclear Station
Docket Nos. 50-413 and 50-414

Dear Mr. Denton:

Section 9.5.1 of the Catawba Safety Evaluation Report discusses Open Item 14, Fire Protection Program. The following information is provided to supplement previous submittals on fire protection.

1. The 17' x 17' cover of each Turbine Driven Auxiliary Feedwater Pump Pit is made up of seven removable 12" thick concrete slab sections and RTV silicone foam. These covers are supported by W16 x 64 horizontal structural steel members. No fire resistive coating has been applied to this steel based on the minimal insitu and potential transient combustible loading.

Combustible materials consist of armor interlock cable, grease, sealite conduit, and lubricating oil. Due to the limited quantity and distribution of these materials, an uncontrolled fire could not be expected to develop sufficient duration and temperature to threaten the heavy steel members. A high pressure carbon dioxide system protects each pit providing additional assurance of barrier integrity. Photoelectric type smoke detectors are also installed in each pit providing early warning to the Control Room through the EFA system.

Considering these factors, application of a fire resistive coating to the structural members is not beneficial and an exception is requested.

2. Rubatex R1800FS cellular foam insulation is used to insulate HVAC ducts and cold pipes. This material has a Flame Spread Index of 25, a Smoke Development Index of 100 (max), and a Fuel Contribution Index of 30.

FR/Armaflex insulation may be substituted. This material has similar combustion characteristics with the exception of the Smoke Development Index which is 150. Appendix A to BTP APCSB 9.5-1 requires that insulating materials such as these have flame, smoke, and fuel index ratings of 25 or less. NUREG 800 requires that these materials be noncombustible.

The quantity of these materials used at Catawba is low. Use of these materials does not significantly increase the combustible load of any fire area. Additionally, fire detection is generally provided in the areas where these materials are used. As utilized, these materials do not create a hazard justifying replacement or protection. An exemption is therefore requested.

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3. A 1-hour cable wrap system developed by B&B Insulation is used to protect selected cables located in the Auxiliary Feedwater Pump Rooms.

NUREG 800 requires that automatic fire suppression and fire detection be provided where such a cable separation method is used. Automatic sprinkler protection is provided throughout the fire area with the exception of the ceiling over the Auxiliary Feedwater Pump Pits. Each pit is protected by an automatic carbon dioxide extinguishing system. Fire detection is provided through the fire area with the exception of the ceiling above the enclosed Turbine Driven Auxiliary Feedwater Pump Pit. This arrangement is considered satisfactory since combustible loading in the unsprinklered areas is minimal and carbon dioxide is provided for protection of the main hazards. Smoke detection provided for all but a 20' x 20' ceiling area provides reasonable assurance that early warning will be achieved in the Control Room.

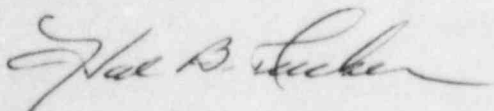
Considering these factors, an exemption from additional automatic fire suppression and detection is requested.

4. Where wall or floor penetrations exist which exceed the 6' x 9' dimensions of the tested penetration firestop assemblies, steel plate or tubing is used to divide the openings. The dividing steel is coated with a minimum thickness of 1 7/16 inches of Pyrocrete 241. The fire resistive characteristics of Pyrocrete in beam and column protection are well known. The thickness utilized has achieved a 3-hour rating in several UL tests for structural steel.

The combination of a tested penetration assembly with a proven method of protecting structural steel results in a penetration firestop which may be considered equivalent to a single tested assembly.

Acceptance of this method of dividing large penetration openings is requested.

Very truly yours,



Hal B. Tucker

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cc: Mr. James P. O'Reilly, Regional Administrator
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NRC Resident Inspector
Catawba Nuclear Station

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