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FOR
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DUKE POWER COMPANY

POWER BUILDING

422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

September 10, 1980

TELEPHONE AREA 704
373-4083

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

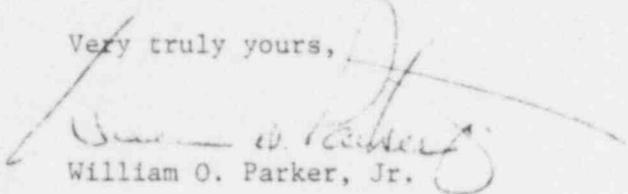
Attention: Mr. B. J. Youngblood, Chief
Licensing Projects Branch No. 1

Re: McGuire Nuclear Station
Docket Nos. 50-369, 50-370

Attached is Duke Power Company's response to the request for information concerning containment pressure boundary fracture toughness which was transmitted by Mr. Robert L. Tedesco's letter of August 22, 1980.

If you have additional questions regarding this matter, please advise.

Very truly yours,


William O. Parker, Jr.

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Attachment

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SEND DRAWINGS TO:
TERA (RETURN TO REG FILES
AFTER FILING)

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McGuire Nuclear Station
Containment Pressure Boundary Fracture Toughness
Response to Mr. Robert L. Tedesco's
Letter of August 22, 1980

As a result of our review of your application we find that we are in need of the following information:

1. Identification of the fabrication code (edition and addenda) and the specific paragraph in the code that specify the fracture toughness requirements and acceptance criteria (for weldments and base metals). Codes and code paragraphs should be identified for all materials which constitute part of the containment boundary (e.g., containment vessel, piping penetrations, personnel airlocks, equipment hatch).

Response:

The McGuire containment vessel, including the personnel air locks and the equipment hatch were fabricated to Subsection B, Section III of the ASME Boiler and Pressure Vessel Code 1968 Edition including addenda through the Summer 1970 addendum. The materials as defined in the FSAR Table 3.8.2-2 meet the requirements of Article 12. Paragraphs N1210 and N1211 reference paragraph N330 for impact test requirements except a test temperature of 30°F below lowest service metal temperature is specified.

Piping penetrations were fabricated in accordance with ASME Section III Subsection NC, 1971 Edition including Summer 1971 addenda. The flued head material was not impact tested because paragraph NC-2320 did not invoke fracture toughness requirements; however, the stub end parts of the penetrations which weld to the containment sleeve were impact tested at a temperature of 30°F below the lowest service metal temperature.

2. The materials test data that certify that the fracture toughness acceptance standards have been met for each of the identified materials in the containment pressure boundary.

Response:

The materials test data for all of the components which make up the containment pressure boundary are in storage at the McGuire site. The large volume of data precludes submittal of this information. This data is available for inspection at the McGuire site.

All of the containment vessel, equipment hatch and personnel hatch materials tested meet the impact test requirements of paragraph N330 at the test temperature of -20°F or lower. Similarly, piping penetration assemblies meet the impact test requirements of paragraph NC-2320, Summer 1971 addenda, at a test temperature of 20°F.

3. Lowest service metal temperature of reactor containment pressure boundary materials.

Response:

The lowest service metal temperature for the containment vessel, personnel air locks and equipment hatch is specified as 10⁰F. For piping penetration assemblies the lowest service metal temperature is specified as 50⁰F.

4. As built dimensions and materials of construction of flued head of hot penetrations shown in FSAR Figure 3.8.2-3, Revision 9.

Response:

Materials of construction and dimensions of the flued heads are given in the following drawings:

MCM 1206.00 -210
MCM 1206.00 -211
MCM 1206.00 -212
MCM 1206.00 -736

A copy of each of these drawings is attached.