

**DUKE POWER COMPANY**  
**P. O. Box 2178**  
**CHARLOTTE, N. C. 28242**

**A. C. THIES**  
**SENIOR VICE PRESIDENT**  
**PRODUCTION AND TRANSMISSION**

**(704) 373-4249**

November 30, 1979

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

Attention: Mr. Robert L. Baer, Chief  
Light Water Reactor Project Branch No. 2

Reference: McGuire Nuclear Station Units 1 and 2  
Docket Nos. 50-369 and 50-370

Dear Mr. Denton:

Mr. W. O. Parker's letter of March 30, 1979, applied for an extension of time for completion of McGuire Nuclear Station, Units 1 and 2 until December 31, 1979 and December 31, 1981, respectively. As allowed by 10 CFR 2.109, the McGuire construction permit was temporarily extended due to our timely renewal application.

As you were advised in Mr. W. O. Parker's letter of July 20, 1979, McGuire Nuclear Station, Unit 1 is now scheduled for fuel loading in May, 1980 with commercial operation in August, 1980 and Unit 2 is scheduled for fuel loading in January, 1982, with commercial operation in April, 1982. These delays necessitate an extension of the construction permits beyond that requested in Mr. Parker's March 30, 1979 letter.

It is therefore requested that the completion date specified in CPPR-83 for Unit 1 be extended to December, 1980. It is further requested that the completion date specified in CPPR-84 for Unit 2 be extended until July, 1982 to allow for the delay which resulted from the diversion of construction effort from Unit 2 to Unit 1. The completion dates requested allow an additional period of time for contingencies, however, these dates do not represent a delay in our construction activities.

The following discussion is provided to characterize the types of problems that have been experienced and to demonstrate that good cause exists for the extension of the construction permits for McGuire Nuclear Station, Units 1 and 2.

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1. Pipe Hanger Problems

Due to problems arising from different interpretations of the hanger tolerance specification and more stringent erection requirements, Duke Power Company decided to reinspect approximately 14,000 completed hangers (refer to Significant Deficiency Report SD-369, 370/79-02 for more information). A program has been developed and implemented which requires "as built" sketching of the hanger prior to the inspection. This program also applies to the 1,200 design hangers which will be erected in Unit 1 and all of Unit 2 design hangers not erected. Pipe cleaning and installation of insulation is required after completion of inspections. Delays are also expected in other areas of testing and construction due to the reinspection program.

2. Hot Functional Testing (HFT)

Although the hot functional test conducted previously completed the majority of the testing required, several areas remain outstanding and the decision has been made to conduct another limited hot functional testing program prior to fuel loading. These items include testing to verify proper operation of the pressurizer power-operated relief valves, to obtain additional thermal expansion measurements on systems at elevated temperatures, and to verify proper containment ventilation system operations. Although it is anticipated that the next hot functional test will be of a limited nature, this item will be a critical path item. In addition, before this test, all damaged mirror insulation must be replaced.

3. Ice Condenser

Due to the sublimation rate of the ice condenser following the initial ice loading, the decision was made to completely melt the ice in the ice condenser and reload to substantially increase the weight of ice at the start of unit operations. Techniques for reliably providing heavier ice basket weights are still being examined. In addition, many modifications have been made which should reduce the sublimation previously experienced. The ice meltdown has been completed and reload activities have begun. Those ice baskets which do not meet the weight acceptance criteria initially will be reloaded. Although this item is not presently on the critical path, activities concerning the ice condenser have escalated rapidly from initial predictions.

4. Testing Delays

Numerous tests have been delayed due to the completion of hanger work, instrument problems and general maintenance problems concerning operability of equipment. Major tests which have required additional time and manpower and which have the greatest possibility for future delays are as follows:

- a. Diesel Generator Sequencer Testing - Due to instrumentation problems, interference with work because of hanger modifications and other minor problems testing of the diesel generator was delayed. Testing on the diesel generator load sequencer has been delayed due to this work and due to scheduling problems associated with the increasing need for manpower to deal with deficiencies.
- b. Accumulator Testing - Modifications have been required in order to correct instrumentation problems and to correct the blowdown orifice size in order to meet acceptance criteria.
- c. Pressure Operated Relief Valve and Block Valve Testing - Arrangements have been made to test the PORV and its associated block valve at Marshall Steam Station in order to assure proper operation. As a result of this test modifications have been made to the PORV and the valve was subsequently tested successfully. Components for modification of the McGuire PORVs have been ordered but the schedule for completion of these modifications has not been confirmed. Some modifications must also be made to the block valve. These modifications, which will allow for increased closing force, have not been finalized. Testing will resume after these problems have been solved.
- d. Engineered Safety Features Testing - Problems have been encountered with the setup of valves, calibration of limit switches and in meeting required response times. In order to solve these problems many valves were either replaced or modified. Work is also ongoing on the replacement of components that were not initially environmentally qualified. The present schedule will place ESF testing on a critical path for hot functional testing and fuel loading.

5. Environmental Problems Associated with the Doghouse

Consideration of a feedwater line break and steam line break in the doghouses has necessitated replacement of or modification of components which are not environmentally qualified (refer to Significant Deficiency Report SD-369-370/79-10). Work involved in this area includes: identification of all components which should be environmentally qualified; determination of required modifications or need for replacement of components already identified; and, completion of identified modifications to electrical cabinets, feedwater isolation valves, main steam isolation valves, and auxiliary steam valves. Completion of these modifications will also impact ESF testing and other testing and will require a significant allocation of manpower.

6. Ventilation Systems

A problem with leakage into the Reactor Building annulus has been identified. Testing has been conducted to identify as many leaks as possible. Work to

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seal these leaks is in progress. In addition, the Auxiliary Building fans are not performing at acceptable efficiency. Review by the vendor will be required. Other fans, such as the Fuel Building fans and the Reactor Building purge fans may be affected by any modifications. Modifications are also being made to the controlled area ventilation system.

7. Modification to Major Components/Systems

Modifications have been or will be made to the following major components/systems:

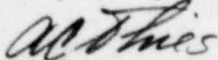
- a. Steam Generator - Instrumentation is being installed in the steam generators to detect bubble collapse water hammer in the preheater and feedwater line. Some difficulties have been experienced in drilling the holes in the steam generator which are necessary to accommodate this instrumentation.
- b. Liquid Waste Recycle System and Waste Gas System - Piping modifications will be made in the waste gas tank room to reduce radiation exposure during routine periodic maintenance. Additional modifications involve removing valve operators, reorienting valves, installing reach rods, relocating valves and deleting valves. It is anticipated that completion of these modifications and checkout and testing of the waste gas system will be a critical path item.
- c. Upper Head Injection Guard Pipe - Disconnection of the UHI guard pipe now requires the disconnection of rod drive cables and removal of several rod drive coil stacks. Modifications to eliminate this interference are being evaluated.
- d. Personnel Air Lock Doors - Due to improper drilling of holes for mounting personnel air lock door seals, modifications will have to be made by the vendor to repair the deficient bolt holes. This problem is discussed in Significant Deficiency Report 369-370/79-06.

8. Impact Due to the Occurrence at Three Mile Island

It is anticipated that additional requirements for licensing of McGuire Nuclear Station will result from the evaluation of the occurrence at Three Mile Island. The recent delay in granting operating licenses by the NRC due to this evaluation and diversion of personnel at both the NRC and Duke Power Company in order to expedite the evaluation, is also expected to impact the issuance of an operating license.

Accordingly, it is requested that the completion date specified in CPPR-83 for Unit 1 be extended to December 31, 1980. It is further requested that the completion date specified in CPPR-84 for Unit 2 be extended until July 31, 1982.

Very truly yours,



A. C. Thies

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Mr. Harold R. Denton, Director  
November 30, 1979  
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A. C. THIES, being duly sworn, states that he is Senior Vice President of Duke Power Company, that he is authorized on the part of said Company to sign and file with the Nuclear Regulatory Commission this request for an extension of time for completion of McGuire Nuclear Station, Units 1 and 2; and that all statements and matters set forth therein are true and correct to the best of his knowledge.

*A. C. Thies*

A. C. Thies, Senior Vice President

Subscribed and sworn to before me this 30th day of November 1979.

*Susan C. Horton*  
Notary Public

My Commission Expires:

My Commission Expires December 8, 1982

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