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DUKE POWER

May 15, 1996

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Subject: McGuire Nuclear Station, Units 1 and 2
Docket Nos. 50-369 and 50-370
Inservice Testing Program,
Relief Request 1.4.2

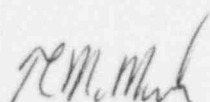
Dear Sir:

By letter dated May 22, 1995, Duke Power Company was informed that certain relief requests dealing with the Inservice Testing Program for Pumps and Valves were approved provisionally and that Relief Request 1.4.2 had been approved for an interim period of one year from the date of the Safety Evaluation Report (SER). The SER confirmed that Duke Power agreed that an interim period of one year would provide adequate time for further review of the potential options or to revise the request and include additional details on the impracticality or hardship of meeting the requirements of OM-6.

To this end, the Duke Power Company response to the concerns of the May 22, 1995 SER are herein presented for the review and approval of the Staff.

Should there be any questions regarding this matter, please contact John M. Washam at (704) 875-4181.

Very truly yours,


T.C. McMeekin

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xc: Mr. S.D. Ebnetter
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Mr. Victor Nerses
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Mr. George Maxwell
Senior NRC Resident Inspector, McGuire
McGuire Nuclear Station

Response to the May 22, 1995 Safety Evaluation and Review of Responses to NRC Safety Evaluation Action Items and Revised Relief Request for the McGuire Nuclear Station, Units 1 and 2, Inservice Testing Program (TAC NOS. M91368 and M91369)

The proposed course of action for the Diesel Generator Engine Fuel Oil System (FD) pumps is to:

- (1) Place the FD pumps in the Supplemental Test Program. At a 6 month frequency, the FD pump performance will be monitored to ensure that flow does not decrease to less than 200 % of flow required (approximately 12.5 gpm). Current pump flow rates are at approximately 22 gpm,
- (2) Remove the FD pumps from the IST Program and delete Relief Request 1.4.2.

NUREG-1482, 3.4 states the following:

Pending endorsement of OM codes and standards which specifically address skid-mounted components which are subject to IST, the staff has determined that the testing of the major component is an acceptable means for verifying the operational readiness of the skid-mounted and component subassemblies if the licensee documents this approach in the IST Program. This is acceptable for both Code class components and non-Code class components tested and tracked by the IST Program.

The proposed revision of ISTB (Inservice Testing of Pumps in Light-Water Reactor Power Plants) includes exclusion of "Skid-mounted pumps and component subassemblies that are tested as part of the major component and are determined by the Owner to be adequately tested" (ISTB 1.2). A similar change is in the proposed revision of ISTC, for valves. These changes have been approved but not yet issued. A "White Paper" on the Proposed Change to ISTB 1.2 Exclusions, Pumps That Are Part of Skid-Mounted Components, states that the proposed change is applicable provided: (1) the pumps are part of the (skid-mounted) major component, (2) the pumps receive testing under the major component test programs, and (3) the owner has determined that the major component test adequately assesses the operational readiness of the individual skid-mounted component. The White Paper also states that "It is the intent of the authors of the proposed change to allow the exemption of skid-

mounted components, even though those components are not directly located on the skid, provided the component is dedicated to the major component and is adequately tested during the major component test." OM-16 (Inservice Testing and Maintenance of Diesel Drives in Nuclear Power Plants) includes the fuel oil system within its scope; the FD system must function to support the diesel.

The operational readiness of the FD transfer pumps is demonstrated by the monthly 1 hour diesel runs, in which the transfer pump will typically cycle 5 times. FD pump operation is also required for the 18 month diesel runs (these are 24 hour runs). As a measure to ensure FD pump performance in addition to its demonstrated readiness for the diesel runs (failure of the pump to run would result in diesel shutdown during the runs), every 6 months the flow rate of the FD pumps will be measured. The authorized method of measuring day tank level over time will be used (as is currently used). The OM-6 requirement of 2 minutes testing will not apply to this test, which is outside of this scope.

- (3) Send an inquiry to the Code Committee for ISTB with the above information attached. It appears that the proposed test method meets the intent of the White Paper (FD pumps are part of the major component, receive testing under the diesel test programs, and the Supplemental Program will ensure not only operational readiness, but any significant FD pump degradation is detected).

These measures will not require any reclassification of the FD pumps from ASME Class 3.

FD pump data over the past two years indicates the following:

FD Pump 1A:	Run Time	Discharge Pressure Range (PSIG)	Average Flow (GPM)
	15 sec	7.5-9	
	75 sec	12-20	
	90 sec	13-21	
			21

FD Pump 1A:	Run Time	Discharge Pressure Range (PSIG)	Average Flow (GPM)
	15 sec	7-10.5	
	75 sec	12.3-15	
	90 sec	14-17	
			21.87

FD Pump 2A:	Run Time	Discharge Pressure Range (PSIG)	Average Flow (GPM)
	15 sec	20-23.5	
	75 sec	22-24.25	
	90 sec	Not Achievable	
			21.8

FD Pump 2B:	Run Time	Discharge Pressure Range (PSIG)	Average Flow (GPM)
	15 sec	20.6-24	
	75 sec	22-25	
	90 sec	24 (Obtained once)	
			22.29

The above data shows acceptable FD pump operation over a wide range of discharge pressure (which is dependent on day tank level and the setpoint of the backpressure control valve). Flow rate shows a margin of approximately 9 gpm over the 200 % point at which corrective action will be taken on degrading FD pump performance under the IST Supplemental Program.

Test Acceptance Criteria (TAC) Sheet MCTC-1609-FD.P001-01, Rev. 0 will need to be revised to delete the reference to ASME Section XI Subsection IWP. As stated on this TAC sheet, the design basis of the Diesel Fuel Oil Transfer Pumps is to transfer fuel oil from the respective Diesel Fuel Oil Storage Tank to the respective Fuel Oil Day Tank. The FD Pump must be capable of transferring fuel oil from the other train's Diesel Fuel Oil Storage Tank to its respective Fuel Oil Day Tank. The FD Pump must provide a minimum fuel oil flow to meet the fuel consumption requirements of the least efficient diesel generator. In addition to this, the proper operation of the backpressure relief valve (> 10 psig) ensures that the Fuel Oil Storage Tank will not gravity feed to the day tank. These parameters will continue to be tested, outside of the IST program. Technical Specification testing will continue as before, per Tech Spec Surveillance Requirements 4.8.1.1.2 and 4.8.1.2 (transfer pump starts and transfers fuel from the storage system to the day tank, on the normal DG test schedule), and 4.8.1.1.2.e.12 (transfer pump transfers fuel oil from each fuel storage tank to the day tank of each diesel via the installed cross-connection lines, once per 18 months).

In conclusion, it is felt that the above approach will ensure the operational readiness of the Diesel Fuel Oil Transfer Pumps, and detect any degradation at a point sufficiently above the required flow rate. Past performance of these pumps indicates operation at a point far exceeding

the flow required. A review of NUREG-1482 and Code changes indicates that these pumps are not within the scope of OM-6.

The submittal revisions should be considered as Revision 23 and 18 of the McGuire Inservice Testing Program, Units 1 and 2 respectively. The only changes to the submittal are as follows:

- 1) Section I.2 (Unit 1), delete 1FDP0054 and 1FDP0055 from the Unit 1 Pump Inservice Testing General Data and Specific Data listings.
- 2) Section I.4 (Unit 1), delete Specific Relief Request 1.4.2 (2 pages, leave as blanks with "Specific Relief Request 1.4.2 Deleted per Rev. 23").
- 3) Section I.2 (Unit 2) delete 2FDP0054 and 2FDP0055 from the Unit 2 Pump Inservice General Data and Specific Data listings.
- 4) Section I.4 (Unit 2), delete Specific Relief Request 1.4.2 (2 pages, leave as blanks with "Specific Relief Request 1.4.2 Deleted per Rev. 18").

The eight revised pages are attached as Attachment 1. Please remove the corresponding pages in the current submittal and replace them with attachment 1. No other changes are being made per Revisions 23 (Unit 1) and 18 (Unit 2). The remaining relief requests addressed in the May 22, 1995, SER and the April 12, 1995, teleconference do not require changes.

Response to May 22, 1995 SER
Attachment 1

Replace the corresponding 8 Pages of the current Pump and Valve Inservice Testing Program with the attached pages:

- Section I.2 (Unit 1) pp. 1 and 2 of 12
- Section I.4 (Unit 1) pp. 2 and 3 of 11
- Section I.2 (Unit 2) pp. 1 and 2 of 8
- Section I.4 (Unit 2) pp. 2 and 3 of 11

UNIT 1 - McGUIRE NUCLEAR STATION
Pump Inservice Testing General Data

Pump ID. Number	Description	Code Class	Flow Diagram	Applicable Relief Requests	Test Frequency	Remarks
1CAPU0001	Motor Driven Auxiliary Feedwater Pump 1A	3	MC-1592-1.1	RR-I.3.1, RR-I.4.1	Quarterly	NONE
1CAPU0002	Motor Driven Auxiliary Feedwater Pump 1B	3	MC-1592-1.1	RR-I.3.1, RR-I.4.1	Quarterly	NONE
1CAPU0003	Turbine Driven Auxiliary Feedwater Pump #1	3	MC-1592-1.1	RR-I.3.1, RR-I.4.1	Quarterly	NONE
1KCPU0001	Component Cooling Water Pump 1A1	3	MC-1573-1.0	RR-I.3.1, RR-I.4.3	Quarterly	NONE
1KCPU0002	Component Cooling Water Pump 1A2	3	MC-1573-1.0	RR-I.3.1, RR-I.4.3	Quarterly	NONE
1KCPU0003	Component Cooling Water Pump 1B1	3	MC-1573-1.0	RR-I.3.1, RR-I.4.3	Quarterly	NONE

UNIT 1 - McGUIRE NUCLEAR STATION
Pump Inservice Testing Specific Data

Pump ID. Number	Speed	Inlet Pressure	Discharge Pressure	Differential Pressure	Reference Vibration	Flow Rate	Pump Type	Revision
1CAPU0001	Not Required	RR-I.4.1	Meets Code Requirements	Meets Code Requirements	RR-I.3.1	Meets Code Requirements	Centrifugal	
1CAPU0002	Not Required	RR-I.4.1	Meets Code Requirements	Meets Code Requirements	RR-I.3.1	Meets Code Requirements	Centrifugal	
1CAPU0003	Meets Code Requirements	RR-I.4.1	Meets Code Requirements	Meets Code Requirements	RR-I.3.1	Meets Code Requirements	Centrifugal	
1KCPU0001	Not Required	RR-I.4.3	Meets Code Requirements	Meets Code Requirements	RR-I.3.1	Meets Code Requirements	Centrifugal	
1KCPU0002	Not Required	RR-I.4.3	Meets Code Requirements	Meets Code Requirements	RR-I.3.1	Meets Code Requirements	Centrifugal	
1KCPU0003	Not Required	RR-I.4.3	Meets Code Requirements	Meets Code Requirements	RR-I.3.1	Meets Code Requirements	Centrifugal	

Specific Relief Request

(Specific Relief Request 1.4.2 Deleted per Rev. 23)

Specific Relief Request

(Specific Relief Request 1.4.2 Deleted per Rev. 18)

Specific Relief Request

(Specific Relief Request 1.4.2 Deleted per Rev. 23)

Specific Relief Request

(Specific Relief Request 1.4.2 Deleted per Rev. 18)

UNIT 2 - McGUIRE NUCLEAR STATION
Pump Inservice Testing General Data

Pump ID. Number	Description	Code Class	Flow Diagram	Applicable Relief Requests	Test Frequency	Remarks
2CAPU0001	Motor Driven Auxiliary Feedwater Pump 2A	3	MC-2592-1.1	RR-I.3.1, RR-I.4.1	Quarterly	NONE
2CAPU0002	Motor Driven Auxiliary Feedwater Pump 2B	3	MC-2592-1.1	RR-I.3.1, RR-I.4.1	Quarterly	NONE
2CAPU0003	Turbine Driven Auxiliary Feedwater Pump #2	3	MC-2592-1.1	RR-I.3.1, RR-I.4.1	Quarterly	NONE
2KCPU0001	Component Cooling Water Pump 2A1	3	MC-2573-1.0	RR-I.3.1, RR-I.4.3	Quarterly	NONE
2KCPU0002	Component Cooling Water Pump 2A2	3	MC-2573-1.0	RR-I.3.1, RR-I.4.3	Quarterly	NONE
2KCPU0003	Component Cooling Water Pump 2B1	3	MC-2573-1.0	RR-I.3.1, RR-I.4.3	Quarterly	NONE

UNIT 2 - McGUIRE NUCLEAR STATION
Pump Inservice Testing Specific Data

Pump ID. Number	Speed	Inlet Pressure	Discharge Pressure	Differential Pressure	Reference Vibration	Flow Rate	Pump Type	Revision
2CAPU0001	Not Required	RR-I.4.1	Meets Code Requirements	Meets Code Requirements	RR-I.3.1	Meets Code Requirements	Centrifugal	
2CAPU0002	Not Required	RR-I.4.1	Meets Code Requirements	Meets Code Requirements	RR-I.3.1	Meets Code Requirements	Centrifugal	
2CAPU0003	Meets Code Requirements	RR-I.4.1	Meets Code Requirements	Meets Code Requirements	RR-I.3.1	Meets Code Requirements	Centrifugal	
2KCPU0001	Not Required	RR-I.4.3	Meets Code Requirements	Meets Code Requirements	RR-I.3.1	Meets Code Requirements	Centrifugal	
2KCPU0002	Not Required	RR-I.4.3	Meets Code Requirements	Meets Code Requirements	RR-I.3.1	Meets Code Requirements	Centrifugal	
2KCPU0003	Not Required	RR-I.4.3	Meets Code Requirements	Meets Code Requirements	RR-I.3.1	Meets Code Requirements	Centrifugal	