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September 8, 1983

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Mr. J. P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
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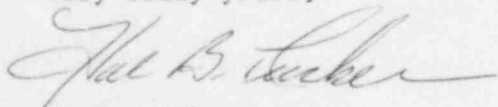
Subject: Oconee Nuclear Station
Docket Nos. 50-269, 50-270, and 50-287

Dear Sir:

The IE Bulletin 83-05 dated May 13, 1983, concerning the ASME Nuclear Code Pumps and Spare Parts manufactured by the Hayward Tyler Pump Company (HTPC) required a response by August 16, 1983, from holders of operating licenses for nuclear power reactors which use or plan to use pumps and/or spare parts manufactured by the HTPC. My August 16, 1983 letter addressed the delay in the submittal of the report providing information in response to the required actions specified in the Bulletin and that the report would be submitted to you no later than September 16, 1983.

Please find attached a report providing the requested response as specified by Items 3 and 4. Please note that my August 16, 1983 letter had previously addressed action Item 4 of the Bulletin. The response to Item 4 provided in the attached report supercedes the response provided in the August 16, 1983 letter.

Very truly yours,



H. B. Tucker

PFG:dyh

Attachment

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

Mr. J. C. Bryant
NRC Resident Inspector
Oconee Nuclear Station

Mr. John F. Suermann
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Section Files OS-815.02
OS-801.02

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Action Item 1:

Those holders of operating licenses that use or plan to use ASME Code pumps important to safety manufactured by HTPC are to take the following actions:

- a. Review all ASME Code pumps manufactured by HTPC and provide a list of affected pumps and their service application. A list of affected pumps that was developed by review of HTPC records is given in Attachment 1.
- b. Provide a summary of the inservice test requirements or plans to develop inservice test requirements for each affected pump at your facility.
- c. Conduct a pump performance test to assure that each pump will perform its intended safety function. As a minimum, this test should contain the criteria given in Attachment 2 of the IE Bulletin 83-05. In addition to the criteria presented in Attachment 2, it should be demonstrated that the pumps operated satisfactorily for a minimum duration of 48 hours without maintenance or repair. Provide the results of the pump tests or, if testing has not been completed at the time of the Bulletin response, provide a description of the test plan. Nuclear reactor facility licensees with pumps that are currently in service can provide the results of previous tests and/or operating experience that provide equivalent data and results in lieu of performing the above tests.
- d. Provide the results of the required ASME Code system hydrostatic pressure test that was performed at your facility when the pump was tested and any corrective actions taken as a result of the test. If the system hydrostatic test has not been completed, provide the test plans.

Response 1:

- a. The only pump manufactured by the Hayward Tyler Pump Company (HTPC) currently installed at the Oconee Nuclear Station is located in the Units 1 and 2 Spent Fuel Cooling System. Its application is to take suction from the Units 1 and 2 shared spent fuel pool and to recirculate the fluid back to the pool after passing through the coolers, demineralizer, and filters in various combinations depending on conditions. There are two additional pumps in service in the Units 1 and 2 Spent Fuel Cooling System. These two additional pumps were not manufactured by the HTPC.

Twelve pumps manufactured by HTPC will be installed in the radwaste facility. The radwaste facility is currently under construction and is scheduled to begin operation in March 1986. Prior to placing the facility into service, appropriate testing and checkout of the facility's systems, which will include the HTPC pumps, will be performed. These pumps (the 12 HTPC pumps); however, are considered to be non-safety-related. These twelve pumps are considered to be exempt from the action items required of this Bulletin, since they are not important to safety.

- b. The Hayward Tyler pump installed in the Units 1 and 2 Spent Fuel Pool Cooling System is tested periodically as required by Section XI, IWP,

of the ASME Boiler and Pressure Vessel Code, 1980 edition, (hereinafter referred to as the "Code").

The Periodic Testing requirements include inlet pressure measurement, outlet pressure measurement, developed head calculation, vibration amplitude measurement and, annually, bearing temperature measurement. Also, observation of an adequate lubricant supply is specified for each pump being tested.

A motor current check is not routinely performed except for troubleshooting. However, when this pump and motor wire installed, a plant electrician wired the motor, checked rotation, and checked phase current once the motor was running. The motor has no record of malfunction since installation and no problems have been experienced with the motor switch-gear due to overload trips. Further, in response to the Bulletin, a motor current check was performed and showed 38 amperes per phase, an acceptable value for the design load.

- c. At the completion of installation in July 1981, an acceptance test was run to prove the pump's ability to meet design criteria in the Spent Fuel Cooling System. The acceptance test was successfully completed and the pump placed in operation; and the pump has continued to operate acceptably since then. Since the initial acceptance test performed in July, 1981, the pump has been tested per the requirements provided by our response to Action Item 1b and has met all acceptance criteria. Currently the vibration amplitude criteria are the most severe referenced in the Code, and the functional requirements are per the system design/operating conditions with tolerances defined by the Code. Tests were run on this pump monthly as required per Oconee Technical Specifications until the 1981 Code was adopted and testing intervals were redefined as 3 months.

A 48 hour endurance test was initiated on August 10, 1983, at 2300 hours and was completed August 12, 1983 at 2300 hours, with no operating problems.

- d. The pump manufactured by the HTPC and associated piping addition to the Spent Fuel Cooling System was hydrostatically tested at 187.5 psig prior to system turnover with no leaks observed. Operations' shift personnel check the Spent Fuel Cooler area each shift and record which pumps are in operation. Leaks, if observed, are noted on this form and necessary repairs are arranged.

Action Item 2:

Those holders of operating licenses that use or plan to use spare parts manufactured by HTPC in Code pumps important to safety are to take the following actions:

- a. Review the HTPC recommendations on replacement parts given in Attachment 3. For those facilities that have not yet installed the replacement parts, implement the recommendations given in Attachment 3 in your

procedures for pump assembly or provide the basis for any deviations. For those facilities with parts already installed, describe any deviations from the recommendations given in Attachment 3 and discuss their significance.

- b. Provide the information requested in Item 1b.
- c. Conduct a pump performance test as specified in Item 1c unless it can be demonstrated that the spare part in question will not affect any parameters that are measured or function demonstrated by the test.
- d. For spare parts that form part of the ASME Code pressure boundary, perform the actions required in Item 1d.

Response 2:

- a. All spare parts were ordered and received after 1981. A determination of when these spare parts were manufactured with the cooperation of HTPC is underway. However, spare parts manufactured by the HTPC have not been installed on any pumps at Oconee. The recommendation given in Attachment 3 of the Bulletin will be implemented into our procedures for the disassembly/assembly of the HTPC Spent Fuel Cooling Pump prior to September 16, 1983.
- b. The following parameters will be checked if the pump-motor assembly has been repaired, disassembled for inspection, or if other servicing that might affect pump performance has been performed:
 - 1. inlet pressure measurement
 - 2. outlet pressure measurement
 - 3. developed head calculation
 - 4. vibration amplitude measurement
 - 5. bearing temperature

The above parameters are checked in accordance with the Code.

- c,d. As stated earlier, no spare parts manufactured by HTPC have been installed on any pumps at Oconee. The spare parts that will be installed are restricted to the HTPC Units 1 and 2 Spent Fuel Coolant pump and the HTPC pumps being installed in the radwaste facility. When required, a pump performance check will be conducted as specified in Action Item 1c and 1d of the Bulletin.

Action Item 3:

Nuclear reactor facilities holding an operating license are to submit a report describing the results of the actions taken or planned for Items 1 and 2 within 90 days of receipt of this Bulletin.

Response 3:

See response provided to Action Items 1 and 2. An August 16, 1983 letter from Duke addressed the reason for the delay in our response to this

Bulletin.

Action Item 4:

Nuclear reactor facilities holding an operating license, are to complete the actions requested by Items 1c and 2c, as applicable, prior to startup from the outage during which the pump or part is installed or, if the pump or part is already installed, before startup from the next refueling outage.

Response 4:

As stated in the August 16, 1983 letter, the required pump performance test and the 48 hour endurance test of the Units 1 and 2 Spent Fuel Cooling Pump manufactured by the HTPC, as specified by Action Item 1c, were completed satisfactorily prior to startup of Unit 1. Since no spare parts have been installed, actions required by Item 2c are not applicable.