



Consumers
Power
Company

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December 28, 1983

Mr J G Keppler, Administrator
US Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

MIDLAND ENERGY CENTER PROJECT -
MIDLAND DOCKET NOS 50-329, 50-330
IE BULLETIN 83-05, "ASME NUCLEAR CODE
PUMPS AND SPARE PARTS MANUFACTURED BY THE HAYWARD
TYLER PUMP COMPANY"
FILE 0505.12 SERIAL 27189

- REFERENCES
1. IE BULLETIN 83-05 DATED MAY 13, 1983
 2. LETTER FROM R C DE YOUNG TO J W COOK DATED MAY 19, 1983
 3. LETTER FROM F W BUCKMAN TO J G KEPPLER DATED AUGUST 10, 1983
SERIAL 23900
 4. LETTER FROM F W BUCKMAN TO J G KEPPLER DATED AUGUST 10, 1983
SERIAL 23902
 5. LETTER FROM J W COOK TO H R DENTON DATED AUGUST 27, 1982
SERIAL 18799

This letter provides the complete response to IE Bulletin 83-05 as committed by Reference 3. Consumers Power Company (CP Co) has determined that none of the pumps which are used in safety-related systems in the Midland Plant were manufactured by the Hayward Tyler Pump Company (HTPC). However, spare parts for several pumps used in safety-related systems at the Midland Plant were procured from HTPC during the period 1977 through 1981. These spare part procurements were initiated following Hayward Tyler's acquisition of the Babcock & Wilcox Canada Pump Company product line.

The pumps involved, their service application, and associated HTPC spare parts have been tabulated and transmitted to the Staff as proprietary information in Reference 4. This information is being treated as proprietary per the NRC follow-up letter, Reference 2. The responses to the action items listed in IE Bulletin 83-05 for the Midland Plant are as follows:

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Item 1

CP Co did not purchase any ASME Code safety-related pumps manufactured by HTPC during the period 1977 through 1981 for the Midland Project. Therefore, Item 1 is not applicable to the Midland Project.

Item 2a

CPCo will implement the HTPC recommendations for replacement parts as given in Attachment 3 of the IE Bulletin. These recommendations, which apply to parts not already installed, will be incorporated into appropriate maintenance procedures. For those spare parts which have already been installed, (eg, set screws and bearing cover gaskets) it has been determined that none of these parts are affected by the recommendations of Attachment 3. Furthermore, reliability of these parts will be demonstrated through the remainder of preoperational testing which is based on:

1. Regulatory Guide 1.68, Revision 1: Initial Test Programs for Water-cooled Reactor Power Plants.
2. Regulatory Guide 1.79, Revision 1: Preoperational Test of Emergency Core Cooling Systems for Pressurized Water Reactors.
3. Hydraulics Institute Standards, Thirteenth Edition, 1975.

Item 2b

CPCo's inservice testing program for the pumps which will use HTPC spare parts (pertinent to IE Bulletin 83-05) is based on Section XI of the ASME Boiler and Pressure Vessel Code (B&PVC). Inservice testing will be performed under Technical Specification 4.0.5 which references the frequency shown in Section XI of the ASME B&PVC. The ASME code presently states that inservice testing will be performed quarterly or whenever any maintenance is performed on a pump which would alter its flow characteristics. These tests will include measurement of idle inlet pressure, inlet pressure, discharge pressure, differential pressure, flow rate, maximum pump vibration and maximum motor vibration. These tests are estimated to run approximately thirty minutes per pump.

Item 2c

CPCo Midland Plant procedures will include the requirements described in Attachment 2 of IE Bulletin 83-05 subject to the exceptions noted below. These maintenance and testing requirements will be performed for the effected pump spare parts that would affect a measured parameter or a function demonstrated by the test. As part of the Midland Plant maintenance procedures, both the pump-to-motor alignment and rotation checks will be performed. However, due to their size, the rotation check for both the decay heat removal (DHR) and the make-up (MU) pumps will be performed by "bumping the motor," and not by hand. The rotation check for the reactor building spray (RBS) pumps will be performed by hand.

Likewise, leakage checks will be performed for the affected pumps as part of the normal maintenance procedures for spare part replacement.

The Midland Plant procedures do not include a bearing temperature, motor current, nor pump rundown checks. A relief request from bearing temperature checks is currently being sought by CPCo (see Reference 5). This request is based on industry experience which indicates that bearing temperatures rise only minutes prior to failure and are, therefore, not a good indicator of possible pump deficiencies. In accordance with ASME B&PV Codes, motor current checks are not currently performed. It is considered that motor current testing will not provide any new information about the pumps performance that is not already covered by other pump testing practices. In addition, motor current overloads are alarmed in the main control room for the three affected pumps (DHR, MU, and RBS). Likewise, a pump rundown check will not be performed. Pump testing will be run at normal flow only. Minimum and runout flow testing are associated with one time pump acceptance tests, not repetitive inservice testing. Repetitive testing under such abnormal flow conditions can be detrimental to pump service life as well as pump reliability. CPCo has, therefore, not committed to these tests.

CPCo is taking exception to the requirement to demonstrate that the pumps operate satisfactorily for a minimum duration of 48 hours without maintenance or repair. This type of testing is also associated with one time pump acceptance testing. To require a 48 hour pump run after the replacement of a single part implies that the pumps cannot be declared operable until the 48 hour run is completed. Present Technical Specifications require redundant safety-related pumps to be returned to service within 72 hours or shutdown of the plant. This testing plus the required testing in Attachment 2 of the IE Bulletin is conservatively estimated to require 60 hours with only 12 hours remaining to complete pump repairs. This is considered to be an unreasonable constraint on plant operations as well as a limiting factor in the lifetime of pumps which are not running during normal operation (eg, reactor building spray pump) since such extended testing requirements were not factored into their design life. Normal testing, including additions incorporated as a result of IE Bulletin 83-05, will demonstrate the reliability of the affected pump spare parts.

Item 2d

CPCo's Midland Plant hydrostatic testing procedures have not been written to date. The basis for the Midland Plant hydrostatic testing procedures is Section XI of the ASME B&PVC. CPCo plans to implement system pressure tests and inservice examinations as described in Subsection IWC of Section XI for Class 2 components.

Item 3

CPCo provided a response to this item in References 3 and 4 as described in this letter.

Item 4

CPCo's Midland Plant which currently does not hold an operating license is not affected by this item.

Item 5

CPCo intends to perform the requested actions consistent with this response to IE Bulletin 83-05. Initial inservice tests to obtain baseline information will be run prior to issuance of an operating license. Since the affected parts are primarily uninstalled spare parts (see Item 2a response which addresses installed parts), they most likely will not be used until after the plant is operating. In that case, testing will be deferred until actual installation of the affected parts. Upon installation of the spare part, the pump would be declared inoperable until satisfactory completion of the appropriate tests.

Item 6

CPCo's construction permit for the Midland Plant, which has not been suspended, delayed or cancelled, is not affected by this item.

It is CPCo's position that the present testing requirements, the requirements of the Midland Plant maintenance procedures, and the items which are being incorporated into the Midland Plant procedures in response to IE Bulletin 83-05 will demonstrate the reliability of the affected spare parts. The Staff is requested to contact us should any questions or comments arise on our response to this bulletin.



SHH/MFC/bjw

CC HRDenton, US NRC
RJCook, Midland Resident Inspector
DSHood, US NRC, Licensing Branch No 4
MAMiller, Licensing Branch No 4

CONSUMERS POWER COMPANY
Midland Units 1 and 2
Docket No 50-329, 50-330

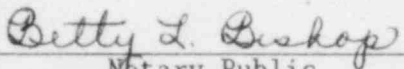
Letter Serial 27189 Dated December 28, 1983

At the request of the Commission and pursuant to the Atomic Energy Act of 1954, and the Energy Reorganization Act of 1974, as amended and the Commission's Rules and Regulations thereunder, Consumers Power Company submits its complete response to IE Bulletin 83-05.

CONSUMERS POWER COMPANY

By 
S H Howell, Executive Vice President

Sworn and subscribed before me this 28th day of Dec. 1983 .


Notary Public
Jackson County, Michigan

My Commission Expires July 26, 1986