



DYMB/50.55(u)

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81-01 #3

July 8, 1981

Mr J G Keppler, Regional Director  
Office of Inspection & Enforcement  
US Nuclear Regulatory Commission  
Region III  
799 Roosevelt Road  
Glen Ellyn, IL 60137



MIDLAND PROJECT  
DOCKET NOS 50-329, 50-330  
UNDERRATED TERMINAL STRIPS ON LIMITORQUE VALVE OPERATORS  
FILE: 0.4.9.47 SERIAL: 12041

Reference: J W Cook letters to J G Keppler, same subject:

- 1) Serial 11190, dated February 13, 1981
- 2) Serial 11976, dated April 24, 1981

This letter, as were the referenced letters, is an interim 50.55(e) report concerning the terminal strip voltage ratings on Limitorque valve operators. Enclosure (1) provides a status of the planned corrective actions. Item 4 of Enclosure (1) lists three items which Limitorque was to supply the week of June 22, 1981. This information has been received and is being evaluated.

Another report, either interim or final, will be sent on or before September 11, 1981.

*James W. Cook*

WRB/lr

Enclosure (1): MCAR-46, Interim Report 3, dated June 19, 1981 -  
Underrated Terminal Strips on Limitorque Valve Operators

CC: Director, Office of Inspection & Enforcement  
Att Mr Victor Stello, USNRC (15)

Director, Office of Management  
Information & Program Control, USNRC (1)

RJCook, USNRC Resident Inspector  
Midland Nuclear Plant (1)

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Serial 12041

CC: CBechhoefer, ASLB Panel  
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# Bechtel Associates Professional Corporation

Enclosure 1  
Serial 12041  
81-01 #3

033634

SUBJECT: MCAR 46 (issued 1/15/81)  
Underrated Terminal Strips on Limitorque Valve  
Operators

INTERIM REPORT: 3

DATE: June 19, 1981

PROJECT: Consumers Power Company  
Midland Plant Units 1 and 2  
Bechtel Job 7220

## Status of Corrective Action and Investigation

The status of actions in progress to resolve MCAR 46 follows.

1. There are only 17 unshipped Limitorque operators at shop and hence it was considered convenient to have them inspected on receipt at the jobsite by an electrical resident engineer. The inspection will not be performed by a Bechtel supplier quality representative at shop as stated in MCAR 46 Interim Report 2, Item 4.
2. As stated in MCAR 46 Interim Report 2, Item 3, Limitorque began the inspection for underrated terminal blocks during the week of May 11, 1981, in accordance with the random sampling program developed by Bechtel.
3. To facilitate the replacement, if necessary, of the correctly rated terminal blocks during inspection, Limitorque did not start inspection for any valve on Purchase Order 7220-M-132 (Henry Pratt Company order) pending the acceptability of the Marathon 300 Series terminal blocks. All Marathon 100 Series terminal blocks will be replaced with Bechtel-approved terminal blocks.
4. On May 27, 1981, and June 11, 1981, conference calls were made to Limitorque (W. Breitmayer) to discuss Limitorque's response dated April 27, 1981 (attached), to MCAR 46 Interim Report 2, Item 1. The following agreements were reached.
  - a. Limitorque was to immediately send a complete inspection report on its visit during the week of May 11, 1981. The inspection report has not been received yet. Bechtel expects to receive this report the week of June 22, 1981.
  - b. Limitorque is to provide Bechtel with breakdown voltage test results of the Marathon 300 Series terminal blocks (to be obtained from Marathon by Limitorque). Limitorque will provide this information during the week of June 22, 1981.

Bechtel Associates Professional Corporation

033634 MCAR 46  
Interim Report 3

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- c. Limitorque is also to provide more detailed information on all terminal blocks identified during inspection, other than Marathon Type 100 and 300 Series, to verify their acceptability. This information is expected during the week of June 22, 1981.

Bechtel will determine the acceptability of Marathon 300 Series and other types of terminal blocks upon receipt of the above information.

Our next report on this subject is scheduled for August 28, 1981.

Submitted by:

*T. Ballweg*  
T. Ballweg

Approved by:

*E. Anderson*  
E. Anderson

Concurrence by:

*K. Bailey*  
K. Bailey

Attachment: Limitorque letter to Henry Pratt Company, 4/27/81 (Com 029081)

ATTACHMENT TO MEAK-48  
INTERIM REPORT-3  
**LIMITORQUE CORPORATION**



5114 Woodall Road • P. O. Box 11318 • Lynchburg, Virginia 24506  
02908; Telephone—804-528-4400 Telex-829448

April 27, 1981

Henry Pratt Company  
401 South Highland Avenue  
Aurora, IL 60507

Attention: Mr. Bruce Cummins

Gentlemen:

Subject: Terminal Block Inspection

Mr. W. S. Carter of Bechtel Power Corporation has forwarded copies of all of his correspondence to the different valve manufacturers requesting the terminal block inspection. Consequently, we have responded directly to Bechtel Power Corporation. It is Limitorque's position that in our letters of January 21, 1981, we justified the rating on the Marathon 300 terminal block and clearly demonstrated that the discovered Marathon 100 terminal blocks were an isolated incident. On this basis, we have informed Bechtel that we will provide a field service engineer to assist in the inspection at our standard field service rates.

In Mr. Carter's letter to you, he requested additional information concerning terminal blocks. The response follows:

- A. Presently we do not have copies of Marathon's test reports. However, our January 21, letter did include copies of published data out of a Marathon catalog showing the actual breakdown voltages.
- B. Our present standards for terminal blocks are as follows:

SMB-000 through SMB-2

Commercial and Non-Containment Applications  
Kulka 622, 600 volt rated (by creepage and clearance distances)

Nuclear Containment Applications  
Marathon 300, 600 volt rated (by breakdown voltage)

SMB-3 through SMB-5

Commercial and Non-Containment Applications  
Curtis Type L, 600 volt rated (by creepage and clearance distances)

Mr. Bruce Cummins  
April 27, 1981

029081

Nuclear Containment Applications  
Curtis Type L, 600 volt rated

These are the standard power terminal blocks used on actuators furnished without integral controls (reversing contactor, transformer, etc.)

- C. The Marathon 100 series terminal blocks were not provided by our factory, nor have they ever been a standard Limitorque terminal block. Consequently, we are not familiar with the ratings on this block.
- D. There are three other terminal blocks that may have been used on the equipment furnished for the Midland Power site. A Vernitron 7600 terminal block rated for 600 volt service based upon breakdown voltage was manufactured by Beau Products. A Buchanan terminal strip may have also been used. This terminal strip is 600 volt rated on a breakdown voltage basis. There are also many occasions when a customer will specify the terminal block. Consequently, there may be other terminal blocks installed in Limitorque actuators based upon the valve manufacturer's requirements.

Please contact me if we can be of further service.

Very truly yours,

LIMITORQUE CORPORATION

*Daniel S. Warsing*  
Daniel S. Warsing  
Technical Manager

jhb

cc: K. A. Wilson/Henry Pratt  
W. S. Carter/Bechtel Power  
F. K. Denham  
P. G. McQuillan