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June 30, 1983
4410-83-L-0120

TMI Program Office
Attn: Mr. L. H. Barrett
Deputy Program Director
US Nuclear Regulatory Commission
c/o Three Mile Island Nuclear Station
Middletown, PA 17057-0191

Dear Sir:

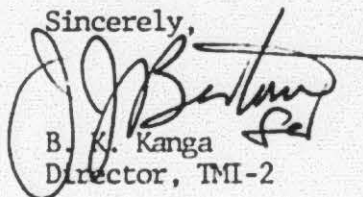
Three Mile Island Nuclear Station, Unit 2 (TMI-2)
Operating License No. DPR-73
Docket No. 50-320
Polar Crane Functional Description

Attached for your information and use in evaluating the refurbishment of the Polar Crane is Revision 3 to the Polar Crane Functional Description. Revision 2 was approved by the NRC via a letter from B. J. Snyder to B. K. Kanga dated March 7, 1983.

The changes are all in Section 4.5.1, and as such, only the revised page is being forwarded. One change places a maximum of 220 tons on the test load and specifies a rating of 170 tons or 80 percent of the test load, whichever is greater. The other changes are editorial in nature.

If you have any questions or desire further information, please feel free to contact Mr. J. J. Byrne of my staff.

Sincerely,



B. K. Kanga
Director, TMI-2

BKK/RBS/jep

Attachment

CC: Dr. B. J. Snyder, Program Director - TMI Program Office

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Upon completion of the initial crane recovery efforts, a load test will be conducted using the main hoist. The test will generally meet the requirements of ANSI B30.2-1976, Paragraph 2-2.2.2. Exceptions to be noted are the actual test load weight and the distance the test load is to be transported.

The maximum load to be handled by the crane is approximately 163 tons. A lifting capacity of 170 tons is sufficient, allowing a margin for in-line load indicating device(s) and additional rigging.

The test load will consist of the lift rigging, load indicating device, test frame and the missile shields from over the reactor pressure vessel and pressurizer. The resultant weight will be at least 200 tons but not greater than 220 tons. The crane rating will be 170 tons or 80% of the test load weight whichever is greater. ANSI B30.2 recommends a test load of approximately 212 tons for a rated capacity of 170 tons (rating is 80% of test load). The addition of weight to the 200 ton, minimum, test load to increase the test load weight is not planned. Providing additional weights will increase worker exposures and, if brought from outside the reactor building, will increase the inventory of contaminated materials. The proposed minimum test load is within 12 tons or less of the 125% load maximum allowed by ANSI. Since the designated minimum lifting capacity (170 tons) is less than 35% of the original 500 ton design rating of the crane and the test load exceeds this capacity by at least 30 tons, the test load will be adequate to demonstrate the crane's ability to perform the required lifts.

The test load will be lifted so it is supported by the crane and held by the hoist brakes. The test load will be lowered, stopped and held by the hoist brakes and finally lowered to the floor. The load will then be transported by the trolley and bridge a distance sufficient to allow at least one full revolution of the trolley and bridge gearing.

Movement of the test load will be restricted by approved operating procedures.

Table 5 provides an acceptable sequence for conducting the load test.

4.5.2 Auxiliary Hoist

A load test using the auxiliary hoist will be performed after the main hoist load test. The test will generally meet the requirements of ANSI B30.2-1976, Paragraph 2-2.2.2. An exception to be noted is that no movement of the bridge or trolley under load will be required to be performed.