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ZWOLINSKI,J.A.	BWR Project Directorate 1

SUBJECT: Submits results of two revised load drop analyses & screenhouse crane design review,per 851001 ltr.Ten ton hoist will be derated to 5 tons.Screenhouse crane design meets criteria of NUREG-0612,Section 5.5.1(7).

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November 25, 1985

Director of Nuclear Reactor Regulation
Attention: Mr. John A. Zwolinski, Project Director
BWR Project Directorate Number 1
Division of BWR Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Nine Mile Point Unit 1
Docket No. 50-220
DPR-63

Dear Mr. Zwolinski:

Our October 1, 1985 letter indicated that the results of two revised load drop analyses and the screenhouse crane design review would be submitted by November 30, 1985. Provided below are the results of these efforts.

Load Drop Analyses

One hoist analyzed is rated for five tons (Large Equipment Decon Room Monorail), the other, ten tons (Turbine Building Demineralizer Bay Hoist). Both hoists can carry heavy loads over safe shutdown cables. However, an intervening concrete floor is located between the hoists and the cables. As we indicated in our October 1, 1985 letter, we performed load drop analyses to show that no failure or scabbing of the intervening floor would occur. For the five ton hoist, no failure or scabbing of the intervening floor occurs provided the lift height does not exceed one foot above the floor. A sign has been attached to the hoist controls stating that the lift height shall not exceed one foot above the floor without prior engineering approval.

The ten ton hoist can lift loads at least 46 feet above the floor. This hoist can lift a variety of loads which makes assumptions regarding load configurations and weights more difficult to make for the analysis. Since realistic assumptions about load configurations and weights could not be determined, the analysis utilized a ten ton missile with a six inch "sharp-nose" point. Using this conservative assumption, scabbing of the intervening floor occurred.

In order to adequately address NUREG 0612, this hoist will be de-rated to five tons. This will result in a design safety factor of 10:1. With twice the design safety factor for the hoist, no load drop analysis is necessary. Attached to the hoist control pendent is a sign indicating for loads greater than five tons, approval shall be obtained from engineering prior to a lifting operation. In this manner, loads greater than five tons may be used if an analysis (using the specific load configuration and weight) concludes that no failure or scabbing of the intervening floor occurs.

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Screenhouse 25-Ton Crane Design Review

The screenhouse crane design was evaluated by the crane vendor against applicable criteria and guidelines of Chapter 2-1 of ANSI B30.2-1976 "Overhead and Gantry Cranes" and of CMAA-70-1983 "Specifications for Electric Overhead Traveling Cranes".

The screenhouse crane was designed to EOCI-61 in 1967. EOCI-61 was subsequently superceded by CMAA-70 in 1971. CMAA-70 has been revised twice, in 1975 and in 1983.

The results of the vendor evaluation provided two minor items on the entire crane that did not meet ANSI B30.2-1976 and CMAA-70-1983.

The first item is the size 1 contactor used on the main hoist motor. According to EOCI-61 and CMAA-70 (1971 and 1975 revisions) a size 1 contactor was acceptable. The 1983 revision of CMAA-70 now specifies that the main hoist contactor should be size 2. The crane vendor has indicated that they feel a size 1 contactor is acceptable.

The second item in question are the crane bumpers. CMAA-70-1983 states that "a crane shall be provided with bumpers or other means providing equivalent effect, unless the crane has a high deceleration rate due to the use of sleeve bearings, or is not operated near the ends of bridge or trolley travel, or is restricted to a limited distance by the nature of the crane operations and there is no hazard of striking any object in this limited area".

The screenhouse crane bridge and trolley are provided with wheel stops on the runway rails. These wheel stops are considered equivalent to bumpers.

Based on the above, Niagara Mohawk considers the screenhouse crane design to meet the applicable criteria and guidelines outlined in NUREG 0612 Section 5.5.1 (7) Crane·Design.

This letter completes our response to NUREG 0612.

Sincerely,

NIAGARA MOHAWK POWER CORPORATION

CVMangan

C. V. Mangan
Senior Vice President

MG:saa