METROPOLITAN EDISON COMPANY SUBSIDIARY OF GENERAL PUBLIC UTILITIES CORPORATION

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August 18, 1978
GQL 1390

Director of Nuclear Reactor Regulation
Attn: R. W. Reid, Chief
Operating Reactor Branch No. 4
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Sir:

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

In response to your letter of August 14, 1978 (concerning the possible use of weld filler wire which was atypical of the submerged arc weld filler wires used by Babcock & Wilcox (B&W), in TMI-2 Reactor Vessel welds), please be advised that B&W has determined that the only possible uses of the atypical material in the TMI-2 Reactor Vessel were:

1) as filler material for the buildup of low areas on the ID and OD of the Upper Shell (¼" ID: not of sufficient depth to affect operating limits or structural integrity), and

2) as weld material on the Dutchman to Lower Head weld (low flux, low stress location).

B&W has analyzed these possible applications of the atypical weld material, and has found that; "The structural integrity of the reactor vessel has not been compromised by the possible presence of the atypical material". B&W has also concluded, based on their analysis that: "There is no effect on the reactor vessel operation for TMI-2".

As you may be aware, the possible use of this atypical weld material (i.e., material having a greater percentage concentration of silicon(1.0% vs 0.5%) and a smaller percentage concentration of nickel (0.1% vs 0.6%) than specified by B&W) in critical weld locations may require some plants to operate under more stringent pressure-temperature heatup and cooldown rate limitations.

This is not the case for TMI-2. B&W has determined that the heatup and cooldown rate limitations are calculated for a "critical weld". This critical weld is neither of the two welds mentioned above in which the atypical weld material may have been used. (All other welds including the two welds mentioned above, require less stringent heatup and cooldown limitations than does the "critical weld".) B&W has reanalyzed the welds in which the atypical material may have been used, and has determined that the "critical weld" has not changed. The current heatup and cooldown limitations have been, therefore, found to be acceptable for all welds in the TMI-2 reactor vessel (even for those welds in which the atypical weld material may have been used).

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Therefore, please be advised that Met-Ed is not contemplating taking any interim measures to ensure reactor vessel integrity, for TMI-2 because, as indicated above, such measures are not necessary. We also believe that, despite the possible use of atypical weld material, the continued safe operation of TMI-2 is assured. This is because the current heat up and cooldown rates, as well as the structural integrity of the TMI-2 Reactor Vessel have been analyzed and found to be acceptable.

Sincerely,

J. G. Herbein
Vice President

JGH:RAL:tas

cc: Mr. S. A. Varga
Mr. H. Silver