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DESCRIPTION: Ltr re our 5-27-75 & 8-22-75 ltrs....furn addl info on Main Steam Isolation Valves & trans the following:

ENCLOSURES: Rockwell Reports :
(1) 2573-51 entitled Energy Absorption in the Size 24 Fig. 607 Valve Seat & Distk....

(2) 2573-49 entitled Disk Velocity at Impact with Seat for Line Break at Upstream Side of Size 24 Fig. 607-Non-Return Valve...

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PLANT NAME: Three Mile Island Unit 1 see Report

FOR ACTION/INFORMATION

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October 3, 1975
GQL 3363

Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Sir:

Three Mile Island Nuclear Station Unit I (TMI-1)
Operating License No. DPR-50
Docket No. 50-289

This letter is in response to your letter of May 27, 1975 and our letter of August 22, 1975 regarding your request for additional information on our Main Steam Isolation Valves (MSIV's).

As stated in our previous correspondence the MSIV's installed at TMI-1 can withstand a sudden closure which would result from an instantaneous release of pressure upstream of the valves. This statement is supported by the attached Rockwell reports, 2573-49 and 2573-51.

In addition, responses to your specific questions are provided as follows:

NRC QUESTION 1.

Provide a summary of the analyses employed to confirm the integrity of the main steam isolation valves (MSIVs) under the dynamic loads associated with the postulated steam line breaks. Include the following:

(a) The maximum calculated impact energy that will be sustained by valve internal elements and seating surfaces under the conditions imposed by postulated main steam line breaks for your station. For Y-pattern globe MSIVs, this response should address both forward and reverse flow.

Response to Item (a) The maximum calculated impact energy that will be substained by valve internal elements etc.: Page 2 of Report 2573-51; impact energy=1,380,000 in. lb. with a disk velocity of 107 ft/sec.

OL

(b) A summary of the methods employed to calculate the energy levels given in response to (a) above.

Response to Item (b) This is covered in Rockwell Report 2573-49.

(c) A summary of the maximum stress or strain calculated to occur in the principle elements of the valve assembly when subject to the impact forces characterized in (a) above.

Response to Item (c) A summary of the maximum stress or strain.

The maximum stress occurs below the seat and is calculated at 46.2 ksi (Page 3 of Report 2573-51).

(d) A summary of any other methods or criteria employed in conjunction with, or in lieu of, the information requested in (a), (b), and (c) above to provide assurance that the valve is adequately designed to perform the specified safety functions.

Response to Item (d) This has been defined in Report 2573-51.

NRC QUESTION 2.

Describe any modifications incorporated in, or to be incorporated in, the main steam isolation valves at your station. Provide the present schedule for completion of this work.

Response to Question 2 - No modifications have been made nor will any be required.

We trust that this submittal adequately resolves any concerns you have and should you have any questions, please contact me.

Sincerely,

R. C. ARNOLD
Vice-President

RCA:CWS:rk
File: 20.1.1/7.7.3.1.1
Attached: Rockwell Reports #2573-51 & 2573-49