Wayne H. Jens
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Detroit Edison

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6400 North Dixie Highway
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(313) 586-4150

March 6, 1985
NE-85-0344

Director of Nuclear Reactor Regulation
Attention: Mr. B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C.   20555

Dear Mr. Youngblood:

References: 1)   Fermi 2
                   NRC Docket No. 50-341

              2)   Detroit Edison letter to NRC,
                   "Purge Valves - Additional Information",
                   EF2-72041, dated January 10, 1985.

              3)   NRC to Detroit Edison letter, "Fermi-2
                   Containment Purge and Vent Valve
                   Operability", dated March 1, 1985.

              4)   Detroit Edison letter to NRC,
                   "Purge Valve Operability",
                   EF2-72272, dated October 11, 1984.

Subject: Purge Valves - Followup Information

Subsequent to NRC review of Reference 2, Mr. R. Wright
(NRR-EQB) requested additional information on the
containment purge and vent valves. The request was
documented in Reference 3. The discussion below addresses
the specific requests of Reference 3.

The bracket material for the 10-inch Jamesbury valves is
ductile iron, Grade 604010. The bracket material for the
24-inch Jamesbury valves is carbon steel, SA-36.

Based on review of Attachment 2 (Table 2) of Reference 4,
the existing bolts for the 10-inch Jamesbury valves are not
overstressed. An allowable shear stress of 42,000 psi for
bolts made of SA-193 B7 envelopes the maximum calculated
stress values for the subject 10-inch valve bolts. In
addition, based on the removal of an overconservatism in the
analysis in the same Attachment 2, the existing bolts for
the 24-inch Jamesbury valves are not overstressed.

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The maximum total shear stress for the 24-inch valve bracket
bolts was previously calculated to be 44,000 psi (refer to
Table 2 of Attachment 2). This value was calculated by
adding the maximum shear stress for seismic to the maximum
shear stress for torque and multiplying this sum by 2.06,
the stress amplification factor.

Referring to page 4 of 27 of Supplemental Calculation No. 1
to Attachment 2, the previous calculation was:

τ max (seismic) = 15,120 psi
τ max (torque) = 6,270 psi
                       21,390 psi

τ max (total) = 21,390 psi x 2.06 $\cong$ 44,000 psi.

The latter value (44,000 psi) was the calculated
overstressed condition in consideration of an allowable
design stress of 42,000 psi (105,000 psi x 0.4) for the
SA-193 B7 bolts.

As explained on pages 5 and 6 of Attachment 2, the stress
amplification factor (2.06) applies to dynamic torque, not
the seismic stress. Therefore, the more correct application
of the 2.06 value is:

τ max (torque) = 6,270 psi

  6,270 psi x 2.06 $\cong$ 12,900 psi

τ max (torque) x 2.06 $\cong$ 12,900 psi
τ max (seismic)   = 15,120 psi
τ max (total)   = 28,020 psi

Therefore, by comparison to 42,000 psi, the existing bracket
bolts for the 24-inch valves are acceptable.

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Please direct any questions to Mr. O. K. Earle at (313)
586-4211.

Sincerely,

cc: Mr. P. M. Byron
        Mr. M. D. Lynch
        Mr. R. J. Wright
        USNRC Document Control Desk
           Washington, D.C.   20555