FNP-PAL-039

Offshore Power Systems

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July 11, 1979

Mr. Robert L. Baer, Chief
Light Water Reactors Branch No. 2
Division of Project Management
U.S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, Maryland 20852

P. B. Haga
Director
Plant Analysis & Licensing

Re: Docket No. STN 50-437; Effect of Core Ladle on Reactor Cavity Pressure Analysis

Dear Mr. Baer:

In the reactor cavity analyses presented in Section 15.5.3.1 of the Plant Design Report, the net volume in the reactor sump region is 20,900 cubic feet. This is the free volume in elements 79 and 82 of the TMD analyses. The corresponding reactor sump region volume with the core ladle is calculated to be 20,031 cubic feet. The differential volume of approximately four percent would have an inconsequential effect upon the previously calculated peak pressure in elements 79 and 82 since the vent areas of 50 ft^2 from these elements remain unchanged. The peak pressures of 9 psig in elements 79 and 82 are shown in Table 15.5.3-2A of the Plant Design Report.

The design of the reactor sump region is based upon the containment design pressure of 15 psig plus the water head up to elevation 117 feet developed as a result of a break at the pipe nozzle. This design basis, which results in a pressure of 32 psig at elevation 77 feet in elements 79 and 82, is considerably more conservative than the short term pressure increase from the reactor cavity analyses.

Very truly yours,

P. B. Haga

P. B. Haga

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CC: V. W. Campbell
A. R. Collier

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