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April 29, 1985

W3P85-1242
A4.05

Director of Nuclear Reactor Regulation
Attention: Mr. G. W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Knighton:

Subject: Waterford 3 SES
Docket No. 50-382
Licensing No. NPF-38
Reactor Coolant Pump Seal Leakage

Reference: LP&L letter W3P85-0662, dated 3/20/85, transmittal of
Licensee Event Report Number 85-006.

As a result of the inadvertent Containment Spray Actuation at Waterford 3 Steam Electric Station on February 20, 1985 a meeting was held between members of the NRC Staff and Louisiana Power & Light (LP&L) to discuss both the actuation and Reactor Coolant Pump (RCP) seal degradation. As part of the review process, LP&L asked Combustion Engineering to evaluate RCP seal leakage with respect to the Small Break Loss of Coolant Analysis (SBLOCA) as delineated in the referenced Licensee Event Report (LER)-85-006, dated March 20, 1985.

Over the past several years RCP seal integrity has been substantiated by a 30 minute loss of Component Cooling Water (CCW) test with the pump running and a 50 hour blackout test (complete loss of all AC power) performed on production seal cartridge assemblies. During these tests the maximum vapor seal leakage measured was approximately 0.5 gpm for the loss of CCW test and 0.25 gpm for the blackout test. Post test inspections showed that, although some seal damage/degradation occurred, the seal package still functioned to maintain vapor seal integrity. In addition, the results of several operating events, including the event at Waterford 3, support the assurance of vapor seal integrity. Although the estimated leakage at Waterford 3 was somewhat larger than described above, the event in no way should be considered a total loss of seal function. (Complete loss of seal function being defined as a failure of all three full pressure seals and the vapor seal, such that the multi-stage seal package fails to hold system pressure.) Examination of seal performance data shows that the seal package functioned to prevent excessive leakage past the vapor seal thereby maintaining seal integrity while the plant was cooled down. Based on this, Combustion Engineering has concluded that it is not credible that the pump seals including the vapor seal will experience a complete loss of seal function.

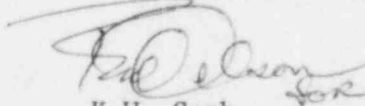
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Mr. G. W. Knighton
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Should you have any questions on this matter please contact me at (504)
595-2805.

Very truly yours,

A handwritten signature in dark ink, appearing to read 'K.W. Cook', with a stylized flourish at the end.

K.W. Cook
Nuclear Support & Licensing Manager

KWC:LWL:sms

cc: Robert D. Martin, NRC-Region IV
D.M. Crutchfield, NRC-NRR
J.H. Wilson, NRC-NRR
NRC Resident Inspectors Office
INPO Records Center (J.T. Wheelock)
E.L. Blake
W.M. Stevenson