



**LOUISIANA**  
POWER & LIGHT

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September 27, 1982

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W3P82-2532  
3-A1.01.04  
Q-3-A29.14  
3-A43.02

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Mr. T. H. Novak  
Assistant Director of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

SUBJECT: Waterford SES Unit No. 3  
Docket No. 50-382  
Test Exception to Delete the  
Stuck Control Rod Physics Test

Dear Sir:

We understand that the NRC has recently concluded that the subject test places a reactor in a potentially unsafe configuration and that this test was deleted from the San Onofre Operating License. As such, please consider the following to be a justification for not performing this test at Waterford 3.

The stuck control rod startup physics test consists of a configuration in which the reactor is just critical with all the control rods full (or nearly fully) inserted except for the highest worth rod which is fully withdrawn from the core. The reactor is hot, near zero power, and with a low boron concentration (about 100-500 ppm) in the primary coolant water. In this configuration, the moderator temperature coefficient (MTC) has a large negative value thus the reactor is vulnerable to, among other things, overcooling transients which could result in fuel failures before sufficient negative reactivity could be added to shut the reactor down. In the event of fuel failures, the radioactive dose would be small due to the accumulation of very little core burnup; however, the economic impact could be drastic.

In order to ensure that the reactor conforms to design calculations, the initial physics testing program includes: Shutdown and Regulating CEA Group Worth measurements, CEA Symmetry measurements, core power distributions, and reactivity coefficient measurements. This testing is sufficient to ensure that the reactor conforms to the design calculations.

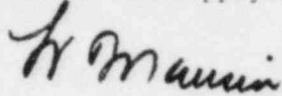
The benefit of performing the stuck rod worth test is limited to obtaining the worth of the highest-worth control rod in a particular reactor state. It is not explicitly required by Regulatory Guide 1.68. It is not required

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to verify design calculations or the shutdown margin for the cycle. The negative impact of the test is that it has the potential for placing the reactor in an unsafe configuration.

We would appreciate a timely consideration of this matter so that our startup schedule can be adjusted. Please do not hesitate to contact us if we can supply any additional information.



L. V. Maurin

LVM/RMF/pco

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