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DEPARTMENT OF NUCLEAR ENGINEERING AND ENGINEERING PHYSICS
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SCHOOL OF ENGINEERING AND APPLIED SCIENCE
CHARLOTTESVILLE, VA 22901

Telephone: 804-924-7136

March 7, 1984

Mr. James P. O'Reilly
Regional Administrator
U.S. Nuclear Regulatory Commission, Region II
101 Marietta Street NW
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

In reviewing your letter of February 16, 1984 in which you addressed our November 3, 1983 response to the October 6, 1983 Notice of Violation and Proposed Civil Penalty, I noted several errors in your summary of the NRC's understanding of my conversation with Mr. Paul Bemis on November 22, 1983. I am concerned that these points may be reviewed in subsequent inspections and would like to resolve them as soon as possible.

First, we have established controls to ensure that all core changes which differ in reactivity by greater than or equal to $\pm 0.1\%$ or ± 0.001 delta-k/k from previously tested configurations will be considered a core configuration change and be operated at powers below 1 kw for measurement of the control rod worths, shutdown margin, and excess reactivity. I believe that the 0.001% delta-k/k stated in your letter was a typographical error.

Second, a xenon reactivity worth curve has been developed and experimentally verified for use in determining a shutdown period during which the xenon in the core will decay to a reactivity worth less than 0.05% delta-k/k. It was not clear from your letter that it was understood that, until we obtain additional data, we have elected to wait for the xenon to decay rather than to account for the xenon's reactivity worth in the shutdown margin calculation.

Third, we believe there are significant differences between our definition and use of minimum permissible critical rod positions (MPCRP) and the statement in your letter concerning the concept of minimum permissible (allowable) critical rod positions and instrument response checkpoints. MPCRP's are calculated to ensure that the shutdown margin requirements of Technical Specification 3.11 of Appendix A of Facility License No. R-66 (Docket No. 50-62) are met and are also used as an instrument response check point. If the actual critical rod positions for a xenon-free startup are above the MPCRP, then the technical specification shutdown margin requirements are satisfied. Additionally, if an increase in subcritical multiplication is not observed during any startup from a constant source range count rate condition by the time the control rods are within one inch of the MPCRP, then the startup will be terminated and the reactor shut down. For a startup from a

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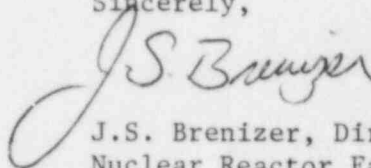
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decreasing source range count rate (this condition exists for approximately one hour after shutdown), an MPCRP is not used. Instead, the instrument response checkpoint is defined to be one inch below the critical rod positions prior to the shutdown.

Finally, we stated that it was our belief that at no time during the shutdown margin noncompliance was the public health and safety directly compromised by the event. I believe that you agree with this position; however, the statement at the bottom of the first page of your letter addressing our position appears to be incomplete and on first reading, seems to say that we acknowledged some compromise. I am confident that we expressed our opinion to all of your staff members and that this is an omission of several key words.

Thank you for your attention to these concerns.

Sincerely,

A handwritten signature in dark ink, appearing to read "J.S. Brenizer". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

J.S. Brenizer, Director
Nuclear Reactor Facility