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Mail Stop 623-SS  
US Nuclear Regulatory Commission  
Washington DC 20555

WM DOCKET CONTROL CENTER

June 5, 1987

WM Project

'87 JUN -8 A11:41

Dear Kien:

SUMMARY OF EFFORT, JUNE 1 - JUNE 5, 1987

This letter describes the tasks which have been addressed during the time period indicated.

1. Work continued on a PC version of the Methodology Demonstration Model CONVO.

--The block of code which performs the uniform corrosion calculations has been coupled to a Simpson integrating routine. The integrator sums the corrosion increments until a preset limit is encountered. This limit may be a critical temperature value (eg, the 125 deg C point, in the BWIP model), a critical time value (eg, the time of packing resaturation), or simply the end of the simulation if that comes first.

--The data file for the Temperature Response Surface creation has been created and debugged. This file allows the TRS to be calculated off-line and will save several minutes of run time in each usage session. The capability of modifying the TRS still exists in CONVO; this option can be exercised by changing a counter value and then recompiling.

--The time/diffusivity/temperature interpolator now works with values of log time. These can be equally spaced, providing a more uniform interpolation accuracy. This interpolator consists of a set of subroutines taken from the book 'Numerical Recipes' by W.H.Press et al. It accomplishes the same ends as the IMSL interpolator using spline methods, but its workings are available for examination.

Enclosed is a Voucher for Professional Services for this time period.

The tasks planned for the next period are:

1. Include the Brookhaven model for uniform corrosion in the corrosion subroutine. The same Simpson integrator can be used to compare corrosion depths and critical time/temperature values.

2. The tabulation subroutines for calculating the canister failure pdf and cdf will be initiated.

3. Begin coding the pitting corrosion model.

4. A planning session will be held with other NRC consultants to define work objectives for the next three months or so.

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WM Project: WM-10, 11, 1a  
PDR yes

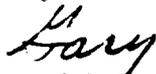
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WM Record File: A4165  
LPDR yes

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If you have any questions, please call me.

Very Truly Yours,

A handwritten signature in cursive script, appearing to read "Gary", written in black ink.

Gerald H. Fuller  
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