



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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MEMORANDUM FOR: Karl Kniel, Chief, Core Performance Branch, DSS
THRU: Daniel Fieno, Leader, Reactor Physics Section, CPB/DSS SF
FROM: M. Dunenfeld, Reactor Physics Section, CPB/DSS
SUBJECT: NRC-BNL MEETING ON DECEMBER 11, 1979

M. Dunenfeld visited BNL on December 11, 1979 to discuss progress on the DSS physics technical assistance program. Discussions were held primarily with D. Diamond, with other BNL personnel present as appropriate.

A revised version of the center rod drop (BWR) accident analysis has been completed and sent to NRC for comment. The initial version, prepared in October, resulted in definition of a number of additional cases by H. Richings and Dan Fieno in order to make the study more complete. These have been run and are included in the revised report.

The off center rod work scheduled for FY 80 is planned for start later in the year. In general, because of our failure to get program letters out, although a quarter of the fiscal year has elapsed (exceeding our record for poor performance of last year) and because BNL didn't finish two of the FY 79 tasks as scheduled, our FY 80 program is going to suffer some delays.

Dr. Cheng is writing a report documenting last year's experience running MEKIN. This involves running one additional case of a BWR rod drop to get results exactly comparable to the reference TWIGL case. Included in the report will be the results of the PWR analysis run with MEKIN by J. Herczig before he left BNL in 1979.

M. Todosow has been working on the power distribution control analysis task. This was delayed beyond the close of FY 79 because the modifications needed to the DWARF code in order to run the analysis made the code inoperative. Although this problem was overcome, additional modifications were initiated in order to generate power shapes for a DOR project, which again made the code inoperative. This was exceedingly poor planning, and the BNL people presumably won't do anything that dumb again. M. Todosow has found the axial model he is using for power distribution control analysis is unstable for axial xenon without an initiating perturbation. This should not be the case physically. Although burned PWRs are unstable, we think it takes a xenon maldistribution to initiate instability. M. Todosow has adjusted the cross sections to remove this instability.

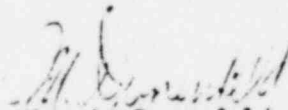
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BNL has not received the CASMO code package yet, although the purchase order D. Diamond wrote after funding became available was dated July 12, 1979. This delay is the result of lawyers bickering as to which state litigation would occur in should that ever become necessary.

The general problem of quadrant tilts was discussed with L. Eisenhart. There have been several cases of unexplained tilts in reactors which supposedly were designed to be symmetrical. We are trying to define calculations which might shed some light on when these tilts are indicative of a more serious problem, or when it is perfectly all right to continue operation of the reactor. At this point the only thing we see that is meaningful to calculate is the magnitude of tilt reduction with increasing power.

L. Eisenhart reported (on the Monte Carlo effort) that BNL has tried unsuccessfully thus far to get RCP from the Argonne Code Center. We called them, but couldn't get a commitment. It seems that the code has been released by Bettis, but Argonne has not checked it out yet. BNL wants RCP because it can handle more isotopes than SAM, which they also plan to use.



Marvin Dunenfeld
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cc: See Attached Distribution Sheet

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