

APR 28 1969

R. S. Boyd, Assistant Director for Reactor Projects, DRL
THRU: S. Levine, Assistant Director for Reactor Technology, DRL

PRELIMINARY SAFETY ANALYSIS REPORT - THREE MILE ISLAND UNIT 2 - DOCKET NO. 50-320

In reviewing the PSAR for the Three Mile Island plant we have applied our standard model in calculating the exclusion radius thyroid dose resulting from the loss-of-coolant accident. Since the TMI #2 containment air recirculation cooling system is not equipped with HEPA filters, we have assumed a total of 15% of the available iodines are in a non-removable form (10% organics and 5% particulates). The calculated thyroid dose is 445 Rem during the 2 hour post-accident period. If a HEPA filtering system were included, the dose would be reduced to 380 Rem, a value still in excess of the guidelines of 10CFR100.

The applicant has specified that if R&D programs currently underway do not substantiate adequate spray removal effectiveness, a recirculating filter system can be installed to reduce the available iodines; the containment spray system can be redesigned for greater effectiveness; or the containment design basis leak rate can be reduced. Our calculations indicate that a total reduction factor of 5.2 or greater is needed to bring the calculated dose within Part 100 guidelines.


I suggest we have an "in-house" meeting on this matter and decide how we want to handle it.

P. W. Howe, Chief
Environmental & Radiation Safety
Technology Branch
Division of Reactor Licensing

RT-371A
DRL:E&RSTB:WFW

cc: P. Schroeder
R. Tedesco
R. Powell

DISTRIBUTION:

Suppl. 
DRL Reading
E&RSTB Reading
AD/RT Reading

OFFICE ▶	DRL:E&RSTB	DRL:E&RSTB	DRL:D/ADRT	DRL:AD/RT		
SURNAME ▶	WFW	PWHowe	RCDeYoung	SLevine		
DATE ▶	4/24/69	4/24/69	4/24/69	4/24/69		