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JAN 07 1980

Ms. Eleanor Morris Illoway
Pepper, Hamilton & Scheetz
123 South Broad Street
Philadelphia, Pennsylvania 19109

Dear Ms. Illoway:

This is in response to your telephone calls and letter of December 21,
1979, regarding public risks from the Three Mile Island accident releases
reported at the December 10th meeting of the American Industrial
Hygiene Association in Philadelphia. In my presentation, I provided a
table of mortality risks equivalent to the lifetime mortality risk
resulting to a child following in utero exposure. A copy of that table is enclosed.

I also pointed out that the lifetime mortality risk for in utero exposure
to 83 millirem maximum observed for the general public would be about
the same as if the mother had spent her 2 months of pregnancy living in
Denver. Similarly, the lifetime mortality risk following in utero
exposure to 1.5 millirem average dose to the population living within
50 miles would be about the same as if the mother had flown to a Colorado
ski resort for a weekend of skiing in her first trimester of pregnancy
2.5 before she knew she was pregnant. The higher radiation doses
from living in Colorado come from higher cosmic ray doses [due to the] higher [ele-]
elevation and terrestrial doses [due to] higher levels of uranium, etc. In
addition [to] ... this radiation exposure from cosmic rays [during] ... air
travel to Colorado would be on the order of a couple millirem.

The additional maximum lifetime risk of cancer mortality [from ... millirem]
and the average risk ... 1.5 millirem for the 50-mile population would be
on the order of 6 chances in 100,000, and one chance in two-million,
respectively. These can be compared with current normal expectations of
cancer mortality, which are on the order of 1 chance in 5.

I hope this information satisfies your needs.

Sincerely yours,

Original signed by

R. L. Gotchy
Senior Radiobiologist
Radiological Impact Section, RAB
Division of Site Safety and
Environmental Analysis

OFFICE►				RAB:OES	RAB:OES
SURNAME►	RGotchy:pc			RAB:OES	FCongel/...
DATE►	1/3/80				1/3/80

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Mortality Risks Numerically Equivalent to the Potential Risk of Mortality
Associated with In Utero Radiation,Exposure Following
The Three Mile Island Accident

Equivalent Mortality Risks*

Type of Activity	(69 millirem) 0-1 Mile from TMI-2	(1.5 millirem) Average for the 50 Mile Population
Smoking	1½ packs of cigarettes	~1 cigarette
Drinking	10 bottles of wine	~1 glass of wine
Automobile Driving	1,000 miles	23 miles
Commercial Flying	5,000 miles	110 miles
Rockclimbing	for 30 minutes	41 seconds
Canoeing	for 2 hours	3 minutes
Being a Man Aged 60	for 7 hours	9 minutes

* Sir Edward Pochin, "The Acceptance of Risk", Br. Med. Bull., Vol. 31, No. 3, pp 184-190 (1975)