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METEOROLOGICAL PARAMETERS DURING THE SNAPTRAN-2
DESTRUCTIVE TEST

HSHP:DFB

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Reference is made to the letter Hy-[illegible] to Williams, Hy-239-[illegible], Meteorological Parameters for SNAPTRAN-2 Test, dated October [illegible], 1965, and your answer dated October 27, 1965. This subject has been reviewed by personnel of the Air Resources Field Research Office (ARFRO-formerly USWB Research Station) and the Health and Safety Division. The meteorological requirements described in this memorandum constitute the minimum acceptable conditions for the planned destructive test and are based on LWD 3400-4 specifications; the criteria being the release of the total fission product inventory and the off-site dose not to exceed 0.5 rem to the thyroid or 0.17 rem to the whole body.

Meteorological Requirements:

(1) The relative diffusion (X/Q) predicted by the ARFRO, Institute for Atmospheric Sciences, at the NRTS shall be $\leq 2 \cdot 10^{-7}$ sec/m^3 at the nearest site boundary. If ingestion of iodine through the milk cycle from dry fallout is considered to be the critical path, this condition will provide reasonable assurance that no person off-site will receive a dose in excess of the stated criteria. As a sample, this first condition would be satisfied by the following:

Pasquill Stability Category	Minimum Wind Speed (m/s)
C(slightly unstable)	4
B(moderate unstable)	3
A(extremely unstable)	2*

*However, the required wind persistency could probably not be forecast with this low wind speed.

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(2) No precipitation in the immediate vicinity of the projected cloud trajectory to a distance of 30 kilometers. This will prevent rain-out deposition from becoming the source of the maximum dose. Also, significant precipitation would probably invalidate the air sampling data.

(3) The meteorological parameters will be predicted to persist for a minimum of two hours.

(4) Minimum wind speed will be 3 m/s; maximum will be 19 m/s.

(5) Wind direction will be from 180° - 240° with short term fluctuations of 20° allowed on either extreme.

Although these minimum conditions represent a significant relaxation in the meteorological requirements specified in Revision 3 of SNPPR/N-2 Destructive Test, Test Series Proposal No. 1 (Broc-40-65) as transmitted by Ny-235-65), we have found that it does not greatly enhance the probability of achieving the required test conditions. However, since we cannot accurately predict the future probability of any set of acceptable conditions, any legitimate relaxation will be of value.

Inasmuch as we see no possibility of further relaxing the meteorological requirements for this test and still remain in compliance with L/D No. 8400-4, we question the need for the meeting suggested in your referenced letter. If you have questions concerning these restrictions, please refer them to W. P. Gammill, Chief, Health Physics Branch.

cc: E. K. Loop
C. R. Dickson

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