

~~SECRET~~

1. PHIL BELCHER
2. MAIL & RECORDS
OK RPB

J-13

June 15, 1959

*116-3449-149-1
116-3449-149-1
116-3449-149-1*

Dr. Gaelen Felt
Space Technology Laboratories
P. O. Box 45564
Airport Station
Los Angeles 45, California

Dear Gaelen:

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
1ST REVIEW-DATE: <u>1-26-96</u>	DETERMINATION [CIRCLE NUMBER(S)]
AUTHORITY: DAOC DAADCS ADD	<input type="checkbox"/> 1. CLASSIFICATION RETAINED
NAME: <u>John S. Malik</u>	<input type="checkbox"/> 2. CLASSIFICATION CHANGED TO: _____
2ND REVIEW-DATE: <u>5-21-96</u>	<input type="checkbox"/> 3. CONTAINS NO DOE CLASSIFIED INFO
AUTHORITY: ADD	<input type="checkbox"/> 4. COORDINATE WITH: _____
NAME: <u>Phil Belcher</u>	<input type="checkbox"/> 5. CLASSIFICATION CANCELLED
	<input type="checkbox"/> 6. CLASSIFIED INFO BRACKETED
	<input type="checkbox"/> 7. OTHER (SPECIFY): _____

Please pass on the enclosed memo to Dr. Ben Bussholz.

We find that you are the only one able to receive classified reports between LASL and the Space Technology Laboratories.

Thank you for your help in this matter.

Sincerely,

JSM

John S. Malik

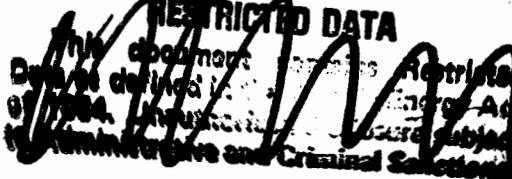
Jc

enclosure

*Original sent to Bell Atlantic 116-3449-149-1
by - S. Malik - 116-3449-149-1
Enclosed - File Document transmitted
containing info from
Energy General Building File*

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Dr. Ben Bussholz
Space Technology Laboratories

June 10, 1959

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JUN 11 1959
(Signature & Initials)

9/15/59

John Malik

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GAMMA RADIATION FROM NUCLEAR WEAPONS (u)

J-13-317

The gamma radiation behavior from nuclear weapon explosions is outlined in LA-1420 which includes the data available through 1953 and attempts to describe a model to explain that data. There have been additional data since that time, notably that of Peter Brown of Evans Signal Laboratory obtained during Castle (IIR-913) and Redwing (IIR-1311), which has not been used to test the model.

For the pressure range of 25 to 1000 psi which you are interested in, there is a scarcity of data; scaling and extrapolation are dangerous since blast and radiation scale differently. Prediction of the gamma radiation, particularly for situations involving collimation and shielding, must be based on some model and that outlined seems to work.

Briefly, the description is as follows: The initial pulse of radiation is of gamma rays rising from neutron inelastic processes involving materials of the outer layers of the device (neutron transmission-wise).

DOZ
b(3)

[Redacted] Contribution to the total dose is only 1 or 2 percent.

Following the nuclear reactions, the explosion leaves neutrinos, fission fragments and other bomb debris. [Redacted]

DOZ
b(3)

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