

April 27, 2005

Steven Aftergood
Federation of American Scientists
1717 K St, NW
Washington, DC 20036



FEMA

RE: Freedom of Information Act Request
FOIA Case No.: 04-098

Dear Mr. Aftergood:

This letter is in response to Allen Thomson's February 12, 2004 Freedom of Information Act (FOIA) request. In that request, he asked for a copy of "Nuclear Attack Planning Base 1990 Final Project Report," dated April 1987, an out-of-print FEMA publication.

In responding to a FOIA request, the U.S. Department of Homeland Security (DHS)/Federal Emergency Management Agency's (FEMA's) search will include responsive records in its control on the date the search began. FEMA's search began on February 19, 2004.

Your request is granted in full at no cost to you. Please include the following caveat in any further posting of this publication. "This publication was provided by the Federal Emergency Management Agency, Department of Homeland Security, for its academic and historical value only." Enclosed please find the FEMA library reference copy on loan to you for duplication. Kindly return the publication to me when you complete the task and include the url information for your website.

For your information, this FOIA request, including Mr. Thomson's identity and the information made available, is releasable to the public under subsequent FOIA requests. In responding to these requests, FEMA does not release personal privacy information, such as home address, telephone number, or social security number, all of which are protected from disclosure under FOIA Exemption 6.

Thank you for your interest in FEMA's programs and policies.

Sincerely,

A handwritten signature in cursive script that reads "Elaine I. Chan".

Elaine I. Chan
General Attorney
Office of General Counsel
500 C St, SW
Washington, DC 20472

Enclosure
Cc: Allen Thomson

Federal Emergency Management Agency

NUCLEAR ATTACK PLANNING BASE - 1990 (NAPB-90)

F I N A L P R O J E C T R E P O R T

TABLE OF CONTENTS

ACKNOWLEDGMENTS..... v

EXECUTIVE SUMMARY vii

PART 1. PROJECT OVERVIEW

- A. General Overview 1
 - 1. Purpose 1
 - 2. Scope 1
 - 3. Limitations 2
- B. TR-82 vs. NAPB-90 3
 - 1. General Comparisons 3
 - 2. General Characteristics 4
 - 3. Targeting Classes 5
 - 4. Assessments 6

PART 2. PROJECT DEVELOPMENT

- A. Soviet Strategic Policies and Procedures 7
 - 1. Nuclear War-Fighting Objectives 7
 - 2. Nuclear War-Fighting Scenarios 7
 - 3. Targeting Strategies 8
 - 4. Force Application 8
- B. Target Selection 9
 - 1. Military Aim Point Editing 9
 - 2. Industrial Aim Point Editing 9
- C. Weapon Inventory File 10
- D. Targeting Considerations 11
 - 1. Height of Weapon Detonation 11
 - 2. Target Surface Considerations 12
 - 3. Target Vulnerability 12
 - 4. Probability of Damage or Destruction 13
- E. Other Considerations 13
 - 1. "Nuclear Winter" 13
 - 2. Electromagnetic Pulse (EMP) 14
 - 3. Strategic Defense Initiative (SDI) 15
- F. References 15

PART 3. RISK DEFINITIONS

- A. Direct Effects Risk 19
 - 1. General Overview 19
 - 2. Extent of Risk 19
 - 3. Statistical Overview 20
 - 4. Methodology Employed 20
 - a. Very High Direct Effects Risk 21

(1) Definition	21
(2) Criteria	21
(3) Overview	21
b. High Direct Effects Risk	21
(1) Definition	21
(2) Criteria	22
(3) Overview	22
c. Medium Direct Effects Risk	22
(1) Definition	22
(2) Criteria	22
(3) Overview	23
d. Low Direct Effects Risk	23
(1) Definition	23
(2) Criteria	23
(3) Overview	23
B. Fallout Risk	23
1. General Overview	23
2. Extent of Risk	26
3. Statistical Overview	27
4. Methodology Employed	27
a. Very High Fallout Risk	28
(1) Definition	28
(2) Criteria	28
(3) Overview	30
b. High Fallout Risk	30
(1) Definition	30
(2) Criteria	30
(3) Overview	32
c. Medium Fallout Risk	32
(1) Definition	32
(2) Criteria	32
(3) Overview	33
d. Low Fallout Risk	33
(1) Definition	33
(2) Criteria	33
(3) Overview	35
C. Thermal and Secondary Fire Risk	35
1. General Overview	35
2. Composition of the Fire Risk	36
a. Origination	36
(1) Relationship to Overpressure	36
(2) Primary Fire Starts	37
(3) Secondary Ignitions	38
b. Growth	38
(1) Area Density	38
(2) Simultaneous Burning	39
(3) Fuel Load	39
c. Severity	40
(1) Relationship to Overpressure	41
(2) Burn Time	41

(3) Potential Energy	42
(4) Mass Fire/Firestorm Potential	44
3. Statistical Overview of Risk	46
4. Methodology Employed	46
a. Very High Fire Risk	47
(1) Definition	47
(2) Criteria	47
(3) Overview	47
b. High Fire Risk	47
(1) Definition	47
(2) Criteria	47
(3) Overview	48
c. Medium Fire Risk	48
(1) Definition	48
(2) Criteria	48
(3) Overview	48

ANNEX A: DIRECT EFFECTS/FIRE RISK - STATISTICS & MAPS

ANNEX B: FALLOUT RISK - STATISTICS & MAPS

A C K N O W L E D G M E N T S

This report represents many hours of work by professionals in and out of government whose experience and knowledge covered a wide spectrum of academic and governmental disciplines in nuclear weapons effects and civil preparedness planning. Grateful acknowledgment is made for the contributions of participants of the informal Nuclear Attack Planning Base - 1990 Working Group who met voluntarily to discuss, debate, and decide policy and planning considerations. In this regard, special acknowledgment should be made of the high degree of professionalism displayed by Donald Moore and his staff in the Systems Development Division, OP-IR-SD, in the generation of computer data for Working Group discussions and for this report.

Lastly, I must acknowledge the welcome advice, encouragement, and generous support accorded this project by Joseph A. Moreland, Assistant Associate Director, SL-EM.

The final shape and thrust of NAPB-90 is the result of the unstinting dedication, enthusiasm, and effort of all project participants.

Ronald F. Treichel
Executive Officer, SL-EM
NAPB-90 Project Coordinator