

CBW  
(Math's office)

HARVARD UNIVERSITY  
THE BIOLOGICAL LABORATORIES  
16 DIVINITY AVENUE  
CAMBRIDGE, MASSACHUSETTS 02138

November 16, 1970.

Mr. Narindā Aggarwala  
Carnegie Endowment for International Peace  
United Nations Plaza at 46th Street  
New York, N. Y. 10017

Dear Mr. Aggarwala,

Thank you for sending me the edited text of "The Military Value and Political Implications of the Use of Riot Control Agents in Warfare". With one exception, all of the editorial changes improve the readability of the manuscript without interfering with the meaning. The exception occurs at the bottom of page seventeen and the top of page eighteen. You will notice the distortion of meaning if you compare the edited sentence with the next paragraph. I suggest that you leave the last sentence at the bottom of page seventeen and the ~~first full~~ sentence at the top of page eighteen as they were in the original text.

Regarding the seven questions about the text that accompanied your letter, I have the following comments

Page 3, footnote 3: As now indicated in the text the initials of Fries and West are A. A. and C. J. respectively.

Page 7, first paragraph, under III: Although the initial development of CS as a riot control agent was carried out in the United Kingdom in the early 1950s, as described in the text, it is true that the first report of the synthesis of CS came from the United States in 1928. Indeed the symbol CS was invented by the British but refers to the names of the organic chemists at Middlebury College, Vermont who first synthesized the compound in 1928. Their names were Ben Corson and Roger Staughton. In view of this history, I suggest that the first sentence under III be altered to read as follows:

The initial development of CS as a riot control agent was carried out in the United Kingdom in the early 1950s. The compound was named after B. B. Corson and R. W. Staughton the American chemists who first reported its synthesis in 1928. The technology was soon transmitted...

Page 12, second line: The word "staffs" is correct. It refers to staffs attached to each of several divisions in Vietnam.

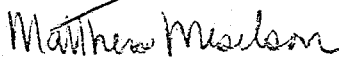
Page 13, footnote 6: The correct reference to this circular is Employment of Riot Control Agents, Flame, Smoke, Anti-Plant Agents, and Personnel Detectors Encounter Guerilla Operations, U. S. Department of the Army, April 1969 (Training Circular TC 3-16).

Page 18, first line: "Nth division" means a certain division.

Page 27 : "chemical officers" is an accepted term.

On the accompanying pages I list a number of additional editorial changes and minor corrections.

Sincerely yours,



Matthew Meselson

MM:ag

Copies to:

Mr. Stuart Blumenfeld

Dr. Herbert Scoville

Additions and Corrections to  
"The Military Value and Political Implications of the  
Use of Riot Control Agents in Warfare"

1. Page 1, paragraph 1, line 5: Replace this line with ...reaffirm that the U.S. would not use lethal chemicals except in retaliation...
2. Page 3, paragraph 1, line 2: Replace the sentence beginning there with "the chemicals first employed in World War I..."
3. Page 7, table I: It would be helpful to add to the table the total amount of all forms of CS procured for each fiscal year.
4. Page 10, paragraph 2, line 3: The word ...other... before the word...forces... should be deleted.
5. Page 14, paragraph 3, the last two sentences of the paragraph should be deleted. The sentence now ending the paragraph should be changed to read as follows:  
Its smoke-like visibility serves to disclose hidden openings to caves and tunnels although ordinary smoke grenades will serve the same purpose.
6. Page 16, paragraph 3, line 4: The penciled word "higher" should instead be ...high...
7. Page 19, paragraph 4, last line: The following sentence should be added:  
Also there are cases in which civilians either enter or fail to evacuate a "free fire" zone, knowingly or not, and fall victim to artillery fire or air strikes.
8. Page 21, paragraph 2: All of the paragraph after the second sentence should be deleted.
9. Page 24, paragraph 3: The first sentence should be changed to read,  
CS has found considerable acceptance in Vietnam as a military weapon useful in certain situations.
10. Page 25, paragraph 1: The first line in the paragraph should be changed to read...known how effective CS has been in the overall context of the war. In a sense...
11. Page 25, paragraph 2: The part of the paragraph following the first sentence should be replaced with the following:  
The great preponderance of a sample of U.S. troops interviewed in the field in 1968 (who had been in operations in which CS was used) responded with some enthusiasm. Only a few believed it did not contribute to their combat

capability. However, by 1970 there were indications that the troops were less enthusiastic about the value of CS, possibly because of changes in the nature of the war and the tactics of the enemy. Still, these observations, although unquantified, must be construed to support the conclusion that CS possesses significant military worth, at least in certain situations that have occurred in the Vietnam war.

12. Page 26, paragraph 1: Last sentence should be changed to read, "This, of course does not square with the impression of U. S. troops who feel that they use CS to good effect against the enemy."
13. Page 28, paragraph 2: The sentence ending at the bottom of the page and continuing on to page 29 should be deleted. Instead insert the following:  
In many situations lethal chemical weapons would favor guerilla forces. Such forces generally have no shortage of targets. They know the locations of military instalations such as base camps and support facilities. Their problem is their great inferiority in fire power. For anti guerilla forces, the reverse is usually true, their main tactical problem being location of the enemy. In this situation, any major enhancement of the area coverage of light weight weapons disproportionately favors less sophisticated forces operating in smaller units and capable of dispersing or mingling with the civilian population. Moreover, the proliferation of lethal chemical weapons....(continue with the remainder of paragraph one on page 29).
14. Page 29, paragraph 2: The sentence "It should further be noted that analysis and planning for..." should begin a new paragraph.
15. Page 35, paragraph 1: The third sentence should be revised to read:  
Riot control agents also provide the potential for reducing civilian casualties in situations where military and civilians are intermingled, although this has not occurred nearly as frequently in Vietnam as originally anticipated.
16. Page 35, paragraph 2, second sentence: The sentence should be revised to read  
"As the United States continues to use CS, the forces of opposing nations will develop defensive tactics..."