

### THE USE OF CS IN VIET NAM

On March 24, 1965 following press reports that the United States had employed certain non-lethal gases in Viet Nam, Secretary of State Dean Rusk stated that

"We do not expect that gas will be used in ordinary military operations."

"The anticipation is, of course, that these weapons be used only in those situations involving riot control or situations analogous to riot control."\*

Secretary Rusk's statement contrasts strongly with the manner in which gas has actually been employed in Viet Nam and with the scale of its use.

The principal gas being used by U.S. forces is CS (o-chloro-benzalmalononitrile). Actually, it is not a gas but a powder. Three forms of CS have been used. These are CS, CS1, and CS2. CS1 and CS2 are more finely pulverized than CS, thereby facilitating dispersal in the air. CS2 is treated with silicone to render it moisture resistant. Its micropulverization and water resistance impart to CS2 considerable persistence in the field. Even after CS2 has fallen to the ground, it can be blown back into the air by wind. The following Army procurement figures for Southeast Asia reflect the use of CS.

U.S. Army Procurement of CS  
for S.E. Asia\*\* (thousands of pounds)

	<u>FY 64</u>	<u>FY 65</u>	<u>FY 66</u>	<u>FY 67</u>	<u>FY 68</u>	<u>FY 69</u>
CS	225	93	378	437	714	2,018
CS1	142	160	1,217	770	3,249	160
CS2	0	0	0	0	288	3,885
TOTAL	367	253	1,595	1,207	4,251	6,063

TOTAL 13,736,000 lbs for the period FY64-FY69

\* Department of State Bulletin, April 12, 1965, pages 529 and 531.

\*\*Congressional Record, H4775, June 12, 1969. The Record does not make clear whether this includes all CS procurement for Southeast Asia or if other services, agencies, or the Republic of South Viet Nam procure additional amounts.

The total amount, approximately 7,000 tons, represents large-scale employment of CS. The following comparisons are illustrative.

In World War I the total amount of mustard gas used by both sides was approximately 12,000 tons. Although the action of CS is quite different from that of mustard, the comparison serves to indicate the scale on which CS has been used in Viet Nam.

According to the unclassified U.S. Army Field Manual FM3-10, "Employment of Chemical and Biological Weapons"\*, fifty pounds of micropulverized CS will provide effective field coverage over an area of approximately 0.4 square miles when spread by a helicopter-mounted M5 disperser operating under typical conditions. Thus, the 9,871,000 lbs of micropulverized material (CS1 and CS2) procured by the Army for use in Southeast Asia would be sufficient to cover 80,000 square miles if dispersed in this manner. The area of South Viet Nam is 66,000 square miles. This is not to say that the total cumulative area covered is greater than the area of South Viet Nam, for the M5 helicopter-mounted disperser is considerably more efficient than other devices also in use. Nevertheless, the foregoing computation again serves to indicate the scale on which CS has been employed.

Relatively little has appeared in the press regarding the manner in which CS is used in Viet Nam. However, published reports suggest that it is widely used to enhance the effectiveness of bombs, artillery, and small arms fire in ordinary military operations. On February 22, 1966 the New York Times reported that CS was dropped from the air over a large area in preparation for a B-52 raid. The Department of Defense was quoted as stating that the purpose of the gas attack was to force enemy troops to the surface, where they would be vulnerable to the fragmentation effects of the bomb bursts. The Los Angeles Times reported on May 10, 1968 that U.S. planes had dropped several tons of CS on enemy positions before beginning an infantry assault. On September 10, 1968 the New York Times reported the routine use of CS to drive the enemy into the open before bombing and artillery attacks.

Clearly, both the scale and the manner in which CS has been used in Viet Nam have escalated far beyond the initial anticipation that gas would be used only in situations analogous to riot control and not in ordinary military operations.

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\* Departments of the Army, Navy, and Air Force, March, 1966.