

Gas, Mud, and Blood at Ypres

The Painful Lessons of Chemical Warfare

Major Thomas S. Bundt, U.S. Army, Ph.D.

It burned my throat, caused pains in my chest and made breathing all but impossible. I spat blood and suffered dizziness. We all thought that we were lost.

—French soldier, 1915¹

A FORGOTTEN battlefield with significant lessons for the future, Ypres reminds us of one of the greatest fears in modern war—the use of chemical weapons. On 22 April 1915, the German Army introduced poison gas at Ypres, France, in an effort to break the stalemate across Flanders. With nearly 13,000 gas-related casualties, Ypres marked the first successful demonstration of the incapacitating effects of poison gas against entrenched soldiers. Although a previous attempt took place in February that same year at the Battle of Bolimov, Russia, the gas did not have the desired effect because low temperatures caused the poisonous vapors to freeze and drop to the ground.²

Even though the use of gas was successful at Ypres, it still posed several dilemmas for commanders. Reviewing literature and primary sources, four significant problems emerge: the human reaction to unfamiliar and terrifying weapons; the management of chemical casualties; considerations for multinational forces; and short-notice logistics requirements. Based on the outcomes at Ypres, analysts can hypothesize on how these themes might affect future conflicts.³

Before 1915, armies relied on maneuver warfare to decide engagements. Less than a year later, maneuver warfare had become trench warfare, a morass of mud and blood on an unprecedented scale. Belligerents measured success in single yards of

churned-up earth. Although the Battles of Verdun and the Somme soon dwarfed the casualty figures in the Flanders salient, the dilemma at Ypres provided an ominous premonition for future campaigns.⁴

Poison gas, as a relatively new weapon, significantly affected the psyche of the Allies, especially considering their state of unpreparedness for chemical warfare. From an individual's perspective, poison gas only multiplied the horrors of trench warfare.⁵

On the collective level, poison gas created confusion and pandemonium. Initially, the Allies' reaction to gas warfare was the same as their opponents—surprise. The French had experimented with gas grenades in 1914 but were not impressed by their lackluster performance and discontinued their use. British leaders, who did not believe gas weapons could be used effectively, reassured themselves that the Germans would abide by the 1907 Hague Convention statutes, which prohibited the use of

poison or poisonous weapons. German commanders, also suspicious of the capabilities of gas, orchestrated Ypres as more of a weapon-testing ground than a truly decisive engagement. To everyone's surprise, the gas attack was so devastating and unexpected that it created a gap over 4 miles wide in the Allied lines.⁶

When news of the attack reached the Allies, public outrage was pervasive. The Allies had received warnings from German prisoners attesting to the impending attacks, but, incredibly, the Allies chose to ignore them. As a result of Allied unpreparedness, significant second- and third-order effects appeared in the form of combatant casualties.⁷

Ypres not only demonstrated a willingness of cultured nations to use chemical weapons, it magnified



the challenges faced by medical units who had to treat a new type of patient—the chemical casualty. In 1915, the average soldier never envisioned the types of casualties that Ypres produced. Existing gas masks and other chemical equipment did not provide sufficient protection. Neither army had the necessary knowledge to adequately treat such casualties. The combination of the medical system's inability to counteract the effects of chemical poisoning and its lack of urgency to produce adequate protective devices only aggravated existing conditions and increased the likelihood of high numbers of chemical casualties. Archives containing World War I primary-source literature recount the hundreds of lingering and slow deaths that were common to the most-heavily contaminated individuals. Even if the patient had not succumbed to the effects of the gas, he was often racked with respiratory illnesses and foreign dermatological afflictions for a lifetime.⁸

The Allies also suffered from a lack of coordination with other multinational forces. Algeria, Morocco, Italy, Montenegro, Serbia, and other nations served alongside the major Allied powers of the United States, France, and Britain. However, the Allied forces at Ypres failed to develop fluid multinational-force relationships and often operated with a confused command structure and conflicting tactics. After the Germans released gas at Ypres, most colonial forces deteriorated. Gas weapons magnified the challenges that a weak coalition had already created and identified the inherent complications troops faced. In addition to the multinational-force relationship concerns, an enormous gap existed in the availability of chemical support equipment among coalition forces.⁹

Countering the effects of gas required tremendous logistical planning. The Allies could not immediately counter with their own gas attacks. They then developed their projectile- and cylinder-delivery sys-

tems at breakneck speed, sacrificing quality. The hasty development process precluded adequate testing. For example, at the Battle of Loos, the British released gas from cylinders that blew back into the faces of their own advancing troops.

Also, the Allies' masks could not protect them against all types of agents. The immediate solution consisted of a gauze pad soaked in urine. Within a few days of Ypres, nearly 100,000 troops received these gauze-type masks. The delayed production of adequate equipment, gas masks, and supplies came at the cost of increased casualties and wasted resources from accidents involving hurried training programs.¹⁰

Noted theorist and Polish financier Ivan Bloch envisioned gas as the "gateway" weapon that would introduce new instruments of terror. He described the futile competition born of total war and the development of trench-warfare systems. The logistical needs of gas warfare fit well into the paradigm of his future war theory. Bloch saw the beginning of a repetitive cycle of events that would lead to the end of all war or all life, whichever came first. Complementing his theory, the after-effects of Ypres led scientists and soldiers to begin fielding increasingly destructive and terrifying weapons, such as flamethrowers and air deliverable incendiary bombs.¹¹

The aftereffects of creating and using terror weapons serves as a lesson in dictating current tactical doctrine and diplomatic developments, which ironically, the Hague Convention put in place in 1907.¹² The reality of chemical warfare seen at Ypres challenges the hypotheses of what chemical weapons pose for peace negotiations, future armed conflict, and the level of preparedness of U.S. forces. Nations now face distinct challenges involving chemical weapons and should take special note of the lessons from the Second Battle of Ypres. **MR**

NOTES

1. See French General Henri Mordacq's account of the first German gas attack, 22 April 1915, on-line at <www.holycross.edu/departments/history/tmcbride/1914-16.html>, accessed 22 February 2003.

2. Charles Heller, *Chemical Warfare in World War I: The American Experience, 1917-1918* (Fort Leavenworth, KS: U.S. Army Command and General Staff College (CGSC), September 1984), 6-7; John Giles, *Flanders Then and Now: The Ypres Salient and Passchendaele* (Great Britain: Plaistow Press, Ltd., 1987), 57-59; Tonie and Valma Holt, *Major and Mrs Holt's Battlefield Guide to the Ypres Salient* (London: Leo Cooper, Inc., 1997), 21.

3. Glenn Frankel, "Blair: Iraq Can Deploy Quickly: Report Presents New Details on Banned Arms," *Washington Post*, 25 September 2002, 1; Heller, "The Perils of Unpreparedness: The American Expeditionary Forces and Chemical Warfare," *Military Review* (January 1985): 12-25.

4. Leon Van Der Essen, *The Invasion and the War in Belgium* (London: T. Fisher Unwin, Ltd., 1917), 349-56; Alistair Horne, *Death of a Generation: From Neuve Chapelle to Verdun and the Somme* (Great Britain: Purnell & Sons, Ltd., 1970), 7-11; 53-80.

5. Adolf von Schell, "Battle Leadership," *The Benning Herald*, 1933, 19; Giles 43, 82.

6. Heller, *Chemical Warfare*, 9; Holt, 21; Giles, 57-59; Heller, "The Perils," 12-25.

7. Will Irwin, "The German Army Dispersed Chlorine Gas over Allied Lines at Ypres on 22 April 1915," *New York Tribune*, 25, 26, 27 April 1915), 1; Horne, 22-24; Heller, *Chemical Warfare*, 3-7; Giles, 59.

8. U.S. Army (USA), Office of the Adjutant General, Army War College, War Department Document no. 705, *Gas Warfare*, Part II, "Methods of Defense Against Gas Attacks," Carlisle, PA, January 1918, 10-19; M.W. Ireland, *The Medical Department of the United States Army in the World War* (Washington, DC: U.S. Government Printing Office [GPO], 1926), 5, 25-38; Horne, 22-40; B. Pitt, D. Mason, I.V. Hogg, and J. Keegan, *Weapons Book No. 43, "Illustrated History of the Violent Century"* (Toronto: Ballantine Books, Ltd., 1975), 12-14.

9. John Laffin, *The Western Front Illustrated, 1914-1918* (United Kingdom: Sutton Pub., 1991), 130.

10. *Ibid.*, 119-32; James E. Edmonds, *Military Operations: France and Belgium 1916: History of the Great War Based on Official Documents* (London: Macmillan and Co., 1932), 77-81; Horne, 15-40; Pitt, Mason, Hogg, Keegan, 24-30; Laffin, 130.

11. Horne, 5; Jean D. Bloch, *The Future of War* (Fort Leavenworth, KS: CGSC, 1991), viii-xxxviii; William L. Langer, *Gas and Flame in World War I* (New York: Knopf and Boro, 1965), 73-83.

12. USA, *Gas Warfare*, 3-7; Heller, "The Perils of Unpreparedness," 12-25.

Major Thomas S. Bundt, U.S. Army, is Chief, Managed Care Division, Darnell Army Community Hospital, Fort Hood, Texas. He received a B.S. from the University of Washington; an M.A. from Louisiana State University; an M.B.A., M.H.A., and a Ph.D. from the University of Florida, and is a graduate of the U.S. Army Command and General Staff College. He has served in various command and staff positions in the continental United States and Germany.