

Military Review

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CHEMICAL WEAPONS

in the Iran/Iraq War

Lee Waters

As our force faces the menace of Iraqi chemical weapons in Operation Desert Shield, the author calls our attention to recent reports of effective use of chemical agents in the Iran-Iraq War. Writing before Iraq invaded Kuwait and US forces were deployed to Saudi Arabia, he points out a lack in our own Army of collective and force capability to fight in a chemical environment. He sees this as a weakness that must be addressed as the number of nations with chemical weapons and delivery systems appears to be proliferating.

ON A BATTLEFIELD in Iraq, uniformed Iranians stand waiting the word to advance. But they are hardly soldiers. They are children, 12 to 17 years of age. The stenciled words on their jackets grant the ayatollah's permission to enter heaven, and their cloth headbands silently shout religious slogans. Around each neck is a chain with a key to the gates of paradise.

These assurances aside, they are roped together in groups, a precaution against faint hearts. They have received more propaganda than useful military training, but this is appropriate to their mission. On order, they will march through the barbed wire entanglements, into the Iraqi machine guns, and across the minefields—to clear the way for the tanks. Tanks are becoming scarce; Iran's strong suit is martyrs.

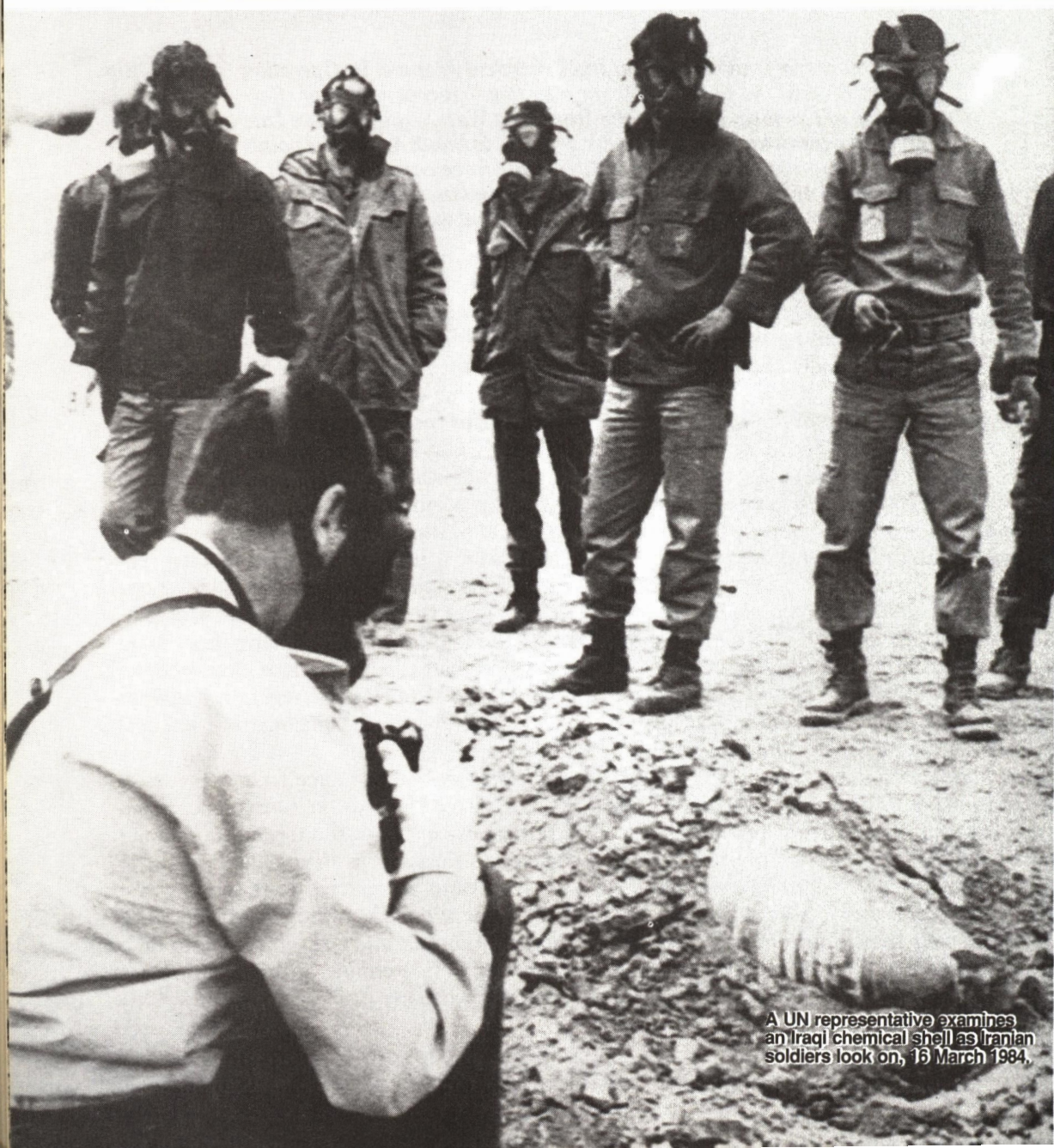
Iran launches its offensive in February 1984, with a half-million men across a 700-mile front. Knowing its strengths, Iran has invested in engineer equipment and trained its forces to cross the water barriers. Iran attacks with helicopters, water craft and mobile pontoon bridging. Iraq cannot bring the weight of its armor and artillery to bear in the marshlands, and Iran has the edge in

close infantry fighting. To exploit their limited gains, the Iranians advance in mass formation on Iraqi defensive positions across open desert. But the Iraqi army, created for the open desert, drives the Iranians back into the marshes. By the end of March, Iran will have suffered 40,000 casualties and will retain only one significant territorial gain—the Majnoon Islands.¹

However, Iraq has lost 9,000, and the mounting casualty figures are of concern in a state exploring the material benefits of its oil revenues. It is not whether Iraq could survive a war of attrition; the army is inflicting many times more casualties than it receives. It is more whether President Saddam Hussein's regime can survive. Iraq lacks the religious fanaticism that fuels Iran's Islamic Republic.

Hussein has built a force for mobile desert warfare, suited for battle on the Syrian or Israeli frontier. Facing Iran, the terrain looks quite different. Kurdistan is mountainous, and the south is a vast, flat stretch of rivers, canals, man-made lakes and reed-covered marshland. The factors of terrain and the reluctance to take casualties will determine, in large part, Iraq's choice of weapons.

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WIDE WORLD PHOTOS

A UN representative examines an Iraqi chemical shell as Iranian soldiers look on, 16 March 1984.

On the Majnoon Islands in March 1984, an Iraqi bomb explodes near an Iranian soldier. He is not wounded by the shrapnel, but he notices the heavy smoke cloud and a strong smell of garlic. After 20 minutes, he has the sensation of something in the eyes. This is the mucous lining in the eyes beginning to break down.

Iraq's State Enterprise for Pesticide Production has bought millions of dollars worth of modern Western chemical production equipment from international brokers. It is installed in the chemical production plant at Samarra, north of Baghdad. Tons of chemicals are obtained, including thiodiglycol and phosphorous trichloride. Both have industrial uses. Thiodiglycol is used in textile printing, photo developing and in the ink for ball-point pens. Both are also precursors for chemical warfare agents—thiodiglycol for mustard, and phosphorous trichloride for nerve agent. Samarra is Iraq's primary production facility for chemical weapons.² Iraq has tested its nerve agents on camels and sheep in the desert.

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The soldier is evacuated to the Iranian field hospital in Ahwaz and five days later, the skin of his forehead, neck, chest and shoulders becomes separated and detached. As the doctors examine him, they hear the cracking sounds in his chest, probably from gas gangrene. He is dead that night.³

In November 1983, Iran reported to the United Nations (UN) Security Council that

Iraq was using chemical weapons in the Gulf war. This was probably a propaganda campaign, rather than a real military concern. From the beginning of the war until the end of 1983, Iran reported only 600 chemical casualties. But 1984 began with a disturbing trend. In February alone, Iran suffered 1,100 chemical casualties and by March, the figure had doubled.⁴

Early in March, Iran alerted the world by sending 30 chemical casualties to hospitals in Vienna, London, Stockholm and Tokyo. The medical evidence supported Iran's claim of chemical weapons' use, and now the UN acted. An investigative team was sent to Iran and was escorted to the battlefield by Iranian authorities. They examined chemical casualties, took soil samples and even samples of mustard agent from unexploded Iraqi 250-kilogram bombs. The report concluded that mustard, a blister agent, and the nerve agent Tabun had been used in the Gulf war. The report stopped short of stating flatly that Iraq had used chemical weapons, and neither did it acquit Iran. But the narrative left little doubt as to who had broken the 1925 Geneva Convention, signed by both parties. Following the report, the United States, Britain, France, Japan, and later Australia, banned the export of chemicals—to both Iraq and Iran—that could be used to make mustard or nerve agent.

Iraq had shown some selectivity in chemical agent employment. A chemical strike required special authorization, and pilots were not allowed to inspect the bombs. Chemical weapons were used largely as a last resort, to forestall routs of its own forces against the human-wave as-



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Iranian infantry moving through obstacles on the Majnoon Islands, 10 March 1984.



WIDE WORLD PHOTOS

saults of the Revolutionary Guards. Delivery and employment tactics were also in an experimental stage. Iraqi helicopters and even cargo planes literally dumped drums of mustard on Iranian positions.⁵ Much of the agent went into the marshes, and Iranian soldiers who had been hit with mustard sometimes washed themselves in the marshes only to suffer worse from the contaminated water.⁶

The pattern of war was now set. The largely ground-pounding Iranians knew how to fight in the mountains and the marshes, but could not meet the mechanized Iraqis on open ground. Iran continued to train its infantry in small engagements and infiltration, to invest in engineer equipment and water craft and to develop its lines of communications to the battlefield.

Iran launched a new offensive in February 1986, with a force of about 70,000. They took advantage of darkness and bad weather, this time capturing the Al Faw Peninsula, and with it, the vital Shatt-al-Arab waterway, Baghdad's only access to the Persian Gulf. But again, Iraq could not bring its armor to bear, and the soft ground of the marshy Al Faw area absorbed and dissipated the shock of Iraqi tube artillery.

Now desperate, Iraq employed chemical warfare agents much more extensively than in previous battles, attacking not only the Iranian front, but the rear areas of Khorramshar, Ahwaz and Abadan. At the Hahdrat Fatima Hospital near Abadan, an Iraqi mustard bomb fell 15 meters from the main entrance. Vapors entered

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through the hospital ventilation system, causing casualties among doctors and nurses in the operating room.⁷ From a loss of 20,000 men in the southern campaign, Iran would suffer 8,600 chemical casualties.⁸

The peninsula was the last substantial gain Iran would make. The fighting continued through 1987, but the war settled back into a stalemate.

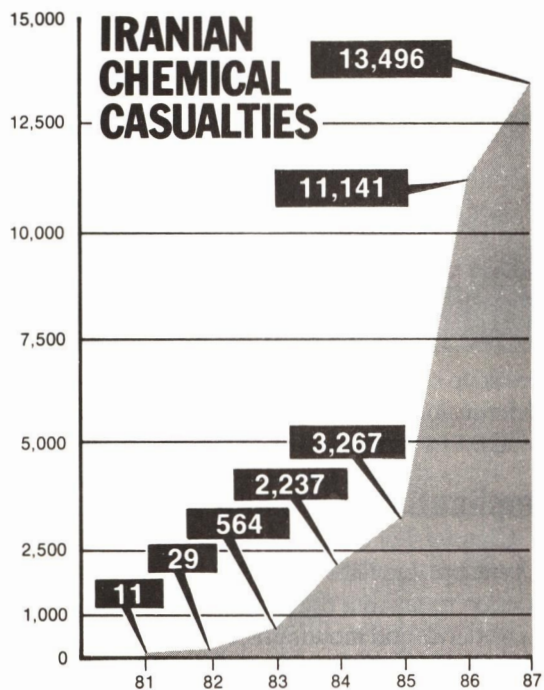
The lack of real international response to Iraqi use of chemical weapons probably signaled Iran's loss of the propaganda war, with a demoralizing effect. Iraq's capabilities in chemical warfare and its boldness in using them were becoming greater. Although the fighting in 1987 had not been as dramatic as the previous year, Iran took 13,500 chemical casualties, compared to 11,100 in 1986. And for 1988, the figure was already at 13,300 by mid-March.

Iraq Takes the Offensive

Iraq launched a counteroffensive in April 1988. The first target was the Al Faw, which would give Iraq back the Shatt-al-Arab. Next was the Fish Lake area, which threatened Basra and the waterway, and then the Majnoon Islands, with their oil wells.

It was back into the marsh for the Iraqi army, but now its chemical delivery arsenal included aerial bombs, artillery and 122mm rockets launched from the Soviet-made BM-21. A unique Iraqi innovation was 90mm helicopter-launched air-to-surface rockets. Chemical strikes were integrated into the fire plan, and tactical employment doctrine for chemical warfare agents had been refined. Chemical weapons were used extensively in all three battles. Iraq retook Al Faw in April and the Fish Lake in May.

Iraq's successful attack on the Majnoons on 25 June might have been typical. The artillery preparation began at 0300. Chemical rounds were mixed with high explosives. Front-line Iranian defensive positions were attacked with a mix of cyanide, nerve agent and high explosives. The bombardment lasted 2 hours. Iranian defenders were killed and injured, but the contamination dissipated by the time advancing Iraqi forces reached the positions. Iran reported 2,000 chemical casualties in the main battle area. Then, Iraqi helicopters and fighter aircraft joined the attack, dropping mustard and nerve gas in the Iranian rear—on command and control centers, logistics sites and reserves to



Iranian Revolutionary Guards operated essentially as light infantry. . . The mountains and the marshes allowed the Iranians to exploit their skill in infiltration and close infantry fighting, canalized the Iraqi armor and absorbed the shock of Iraqi artillery. Iraq's chemical weapons reversed the relative advantages . . . The foxholes and trenches that had protected the Iranians from shrapnel now became traps for the toxic vapors.



WIDE WORLD PHOTOS

The flag of Iraq flies from a captured Iranian Chieftain tank, 22 June 1988.

break up counterattacks.⁹ Iran lost control of its defense, and when the battle was over, Iraq had retaken its territory, lost since 1984.

Implications for Light Forces

Chapter 3 of US Army Field Manual 100—5, *Operations*, explains what light forces can do and goes on to say that they can do these things best in wetlands and mountains, slow and no-go terrain for heavy forces. But when chemicals are

used, light forces' very strengths (that is, the terrain) and their lack of nuclear, biological and chemical (NBC) protection make them inviting targets to chemical strike planners.

The Iranian Revolutionary Guards operated essentially as light infantry, and in conventional battle, the terrain was an ally. The mountains and the marshes allowed the Iranians to exploit their skill in infiltration and close infantry fighting, canalized the Iraqi armor and absorbed the

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shock of Iraqi artillery. Iraq's chemical weapons reversed the relative advantages. Persistent agent, mustard in this case, was particularly effective. The foxholes and trenches that had protected the Iranians from shrapnel now became traps for the toxic vapors.

The Iranian Revolutionary Guards apparently had no professional chemical protective force structure to see that protective equipment was used properly and that personnel were trained in NBC defense. Protective equipment was available. In the Majnoon battle, three out of four chemical casualties recovered by Iran (for many were captured when Iraq overran the front lines) had used a gas mask.¹⁰ But they were slow to don protective equipment, and the beards often worn by the Revolutionary Guards did not allow for a proper mask fit.

Iraq had trained chemical specialists to administer the army's chemical defense. Further, Iraqi armor and infantry fighting vehicles were largely Soviet made and thus had collective protection systems. Whether the Iraqis used them to exploit the effects of their chemical strikes

is unknown, but they had the capability.

The United States, in both its light and heavy forces, has concentrated on individual protection and has invested in the air-permeable NBC overgarment and agent detectors. The goal is for the individual US soldier to be able to survive a chemical strike and continue the fight. And herein lies a key philosophical difference between threat and US forces. Protective overgarments and chemical warfare agent detectors are a function of individual survivability, whereas chemical reconnaissance and collective protection, whether in vehicles or on shelters, are a function of force survivability.

Chemical warfare agents and delivery systems, including short-range ballistic missiles, are proliferating throughout the Third World where balances of power, as understood in a European scenario, do not exist. As new missions point our light and contingency forces toward the world's trouble spots, our current capabilities to fight on a chemical battlefield appear increasingly at risk. **MR**

NOTES

1. Anthony H. Cordesman, *The Iran-Iraq War and Western Security 1984-87* (London: Jane's Publishing Company Ltd., 1987), 61-65.

2. *Christian Science Monitor*, "Special Report," 1988.

3. Compiled from UN Security Council Report S/16433, 26 March 1984, 20-28.

4. Letter from the permanent representative of the Islamic Republic of Iran to the President of the Conference on Disarmament, 11 April 1988, 2 and 3.

5. *The Sunday Times*, 11 March 1984, 13.

6. UN Security Council Report, S/17911/add. 1, 14 March 1986, 15.

7. Dr. Peter Dunn, *The Second UN Mission to Iran—A Personal Account*, April 1986, 8.

8. Cordesman, 98; Letter from permanent representative, 4.

9. UN Security Council Report, S/20060, 20 July 1988, 10.

10. *Ibid.*, 11.

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