Chemical Warfare and the Persian Gulf States

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Brief Analysis

Iraq's chemical weapons pose two major questions for U.S. policy today:

• How threatening are these arms to U.S. forces?

• What should the United States and its allies do to neutralize these weapons if Iraq's current capacities survive the crisis?

Iraq is now the world's largest producer of chemical agents, with estimated production of about 1,000 tons a year, although the actual figure could be higher. Iraq probably used upmost of its supplies in 1988 at the end of the Gulf War but has now had two years to build-up stocks. Thus, it probably has at least 2,000 tons of chemical agent currently available.

Three Iraqi facilities play key roles:

• Samarra -- production and storage of chemical agents;

• Falluja -- production of chemicals needed by the plants at Samarra to make the actual agents;

• Salman Pak -- reportedly a research and development facility for the chemical program.

In addition, Iraq possesses artillery, rocket, and bomb factories producing munitions armed with chemical agents. It is not known if Iraq has chemical warheads for its ballistic missiles.

Iraq's largest production facilities produce mustard gas, first used during World War 1. In addition, Iraq is known to be able to produce smaller amounts of more lethal nerve agents. The chemical agent production plants used by Iraq were built by West German companies. Although the United States protested German participation in Iraq's chemical weapons program since at least 1984, the West German government was unable or unwilling to stop it. German engineers associated with these companies remained in Iraq through at least the end of 1988.

Iraqi chemical weapons facilities are likely targets for U.S. forces should a war erupt. Production plants would be vulnerable to precision bombing, but it would be far more difficult to destroy existing stocks which are stored in heavily protected bunkers. It is believed Iraq built decoy bunkers to complicate any attack.

Should hostilities break out between the United States and Iraq, it is likely that chemical weapons would be used. Although Iraq might not use poison gas in the opening stages of a conflict, experience suggests that it would do so if it faced likely military defeat.

The U.S. military would like to deter Iraq from using chemical agents, but this would be less likely to work if Saddam Hussein views the war as a struggle for survival. A defeat could easily mean his own death. Hence, he would have little to lose from using chemical agents in the hope offending off disaster.

However, there is no reason to believe that chemical agents would have a decisive impact on the fighting. These are not wonder weapons. Although they can be deadly, they would not necessarily kill massive numbers of soldiers with proper defences. Gas masks, protective garb, detection systems, and medical treatment can minimize or even

eliminate the danger posed by chemical weapons.

Iraq used several thousand tons of chemical agent against Iranians who had no effective defense. Iran's troops lacked not only equipment but also the necessary training and discipline. Nevertheless, even Iran was able to minimize losses. It claims that Iraqi chemical agents caused 27,000 casualties through April 1987, but only 260 deaths. With defenses comparable to those available to U.S. forces, losses would have been reduced significantly.

Civilians are most vulnerable to chemical attack. According to Iran's statistics, about 90 percent of those killed were Kurdish civilians who had no protection. Israel is the only country in the Middle East organized to protect its civilian population against chemical attack. Saudi Arabia, however, is now attempting to acquire chemical defenses for its people.

The main impact of an Iraqi chemical attack is a loss of military effectiveness. In severe heat protective clothing can drastically reduce a soldier's ability to perform even routine tasks. Fortunately, the effects of attacks are reduced if soldiers work in an enclosed environment. This is especially the case for the U.S. Air Force whose bases are designed to function in a chemical environment. Soldiers who fight from tanks or armored vehicles can rely on their vehicles to provide considerable protection.

Nevertheless, U.S. forces would suffer if Iraq employed chemical agents. Some soldiers would die and others would be injured. However, losses are likely to be significantly lower than those caused by more conventional weapons, such as cluster munitions or fragmentation bombs.

The current crisis has emphasized the importance of efforts to negotiate a global ban on the production and stockpiling of chemical agents. A Chemical Weapons Convention to accomplish that objective is now being negotiated at the Conference on Disarmament in Geneva. Within the next few years a final proposal will emerge. Efforts to secure world-wide compliance will need to be a high priority for U.S. diplomacy.

At the present time, no Middle East country is likely to accept the Chemical Weapons Convention. Some countries, such as Iran and Israel, would only sign if Arab states with chemical weapons abandon them. Arab countries, however, have indicated that they will sign only if Israel agrees to give up its nuclear capability. This diplomatic impasse will complicate efforts to negotiate an agreement.

In any case, such a convention is years off. Should a diplomatic solution to the current crisis appear, the United States will have to demand immediate controls and constraints on Iraq's strategic weapons. Unless such steps are taken, a defeated Iraq will pose serious dangers to regional stability.

W. Seth Carus, a fellow at The Washington Institute, was the John M. Olin Foundation Fellow at the Naval War College Foundation for 1989-90. He is author of the Institute studies **The Poor Man's Atomic Bomb: Biological Weapons in the Middle East (http://www.washingtoninstitute.org/templateC04.php?CID=77)** and The Genie Unleashed: Iraq's Chemical and Biological Weapons Programs (Policy Paper #14, 1989). He is co-author, with Hirsh Goodman, of The Future Battlefield and the Arab-Israeli Conflict (Transaction Books, 1990) and, with Patrick Clawson, of Iraq's Economic and Military Vulnerabilities (Policy Focus #14, October 1990). ❖

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