

# Iraq Chemical Chronology

[2008-2004](#) | [2003-2000](#) | [1999-1990](#) | [1989-1980](#) | [1979-1931](#)

Last update: December 2008

**As of December 2008, this chronology is no longer being updated.  
For current developments, please see the Iraq Chemical Overview.**

## 2008-2004

### 2-5 December 2008

A four person Iraqi delegation attends the 13th Session of the Conference of States Parties in the Hague. As Iraq has not yet completed its process of accession to the CWC its delegation was accorded observer status allowing it to attend the conference's plenary sessions.

—*Provisional List of Participants to the Thirteenth Session of the Conference of the States Parties, C-13/INF.3*, Organisation for the Prohibition of Chemical Weapons, 4 December 2008, p. 39, [www.opcw.org](http://www.opcw.org).

### 29 September 2008

The Iraqi law on accession to the CWC is published in the Official Gazette of Iraq moving Iraq one step closer to accession to the Convention. At an unspecified point soon after this date the "Instrument of Accession" is signed and steps are initiated to deposit with the United Nations Secretary-General.

—*Addendum to the Annual Report on the Implementation of the Action Plan for the Universality of the Chemical Weapons Convention during the period from 3 September 2007 to 25 September 2008, C-13/DG.5/Add.1*, 18 November 2008, p. 2, [www.opcw.org](http://www.opcw.org).

### 24-27 June 2008

Iraq requests and is granted the right to attend the 53rd Session of the OPCW Executive Council as an observer. [This continues an ongoing effort on the part of Iraq to actively involve itself in the work of the OPCW prior to completing the process of accession at the Convention.]

—*Summary of the Fifty-Third Session of the Executive Council*, Organisation for the Prohibition of Chemical Weapons, 27 June 2008, [www.opcw.org](http://www.opcw.org).

### 7-18 April 2008

An Iraqi delegation attends the 2nd CWC Review Conference in the Hague. As Iraq has not yet completed its process of accession to the CWC its delegation was accorded observer status.

—*Attendance by Non-Signatory States at the Second Special Session Of The Conference Of The States Parties To Review The Operation Of The Chemical Weapons Convention (Second Review Conference), RC-2/DEC.1*, Organisation for the Prohibition of Chemical Weapons, 7 April 2008, [www.opcw.org](http://www.opcw.org).

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#### **12 March 2008**

The Iraqi government announces its intent to take legal action against the suppliers of chemicals used in a 1988 CW attack on the town of Halabja in Iraq's Kurdish north.

—"Iraq says to sue Halabja chemical weapons suppliers," Reuters, 12 March 2008, [www.reuters.com](http://www.reuters.com).

#### **4-7 March 2008**

Iraq requests and is granted the right to attend the 52nd Session of the OPCW Executive Council as an observer. [This continues an ongoing effort on the part of Iraq to actively involve itself in the work of the OPCW prior to completing the process of accession of the Convention.]

—"Update on the Implementation of the Universality Action Plan," *Chemical Disarmament Quarterly*, Vol. 6, No. 3 (September 2008), p. 14.

#### **5-9 November 2007**

A three person Iraqi delegation attends the 12th Session of the Conference of States Parties in the Hague. As Iraq has not yet completed its process of accession to the CWC its delegation was accorded observer status allowing it to attend the conference's plenary sessions.

—*List of Participants to the Twelfth Session of the Conference of the States Parties, C-12/INF.3/Rev.1*, Organisation for the Prohibition of Chemical Weapons, 9 November 2007, p. 37, [www.opcw.org](http://www.opcw.org).

#### **22 November 2007**

The Iraqi presidential council approves the law on Iraq's accession to the CWC which had been passed earlier by the Council of Representatives (Parliament).

—"Chief of Organizations and International Cooperation Department at Foreign Ministry Stresses Presidency's Endorsement on law of Iraq's Affiliation to Agreement of Prohibition, Storage and Using of Chemical Weapons," Ministry of Foreign Affairs of Iraq website, 22 November 2007, [www.mofa.gov.iq](http://www.mofa.gov.iq).

#### **29-31 October 2007**

Eleven Iraqi officials attend a CWC implementation training course in Amman Jordan coordinated by the OPCW. This training session, intended to assist Iraq in its preparations for CWC accession is the fourth in a series. The primary purpose of the workshop was to work toward finalizing Iraq's draft initial declaration and to review the progress made by Iraq towards joining the Convention. Participants agreed on a number of recommendations and actions to be taken by Iraq in order to finalize their initial declarations. [see also 11 December 2006, 6 February 2006 and 6 July 2005]

—*OPCW Conducts Fourth Workshop on the CWC for Iraqi Officials*, Press release #117, Organisation for the Prohibition of Chemical Weapons, 15 November 2007, [www.opcw.org](http://www.opcw.org); *Annual Report on the Implementation of the Action Plan for the Universality of the Chemical Weapons Convention during the period from 3 September 2007 to 25 September 2008, C-13/DG.5*, 29 September 2008, p. 9, [www.opcw.org](http://www.opcw.org).

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—*OPCW Conducts Fourth Workshop on the CWC for Iraqi Officials*, Press Release #117, Organisation for the Prohibition of Chemical Weapons, 15 November 2007, [www.opcw.org](http://www.opcw.org).

#### **13-16 March 2007**

The Executive Council of the OPCW invites Iraq to participate in its 48th Session as an observer. The action follows a request from Iraq, a State not Party to the CWC. The Council took the decision as part of the OPCW's ongoing effort to encourage the universality of the Convention in the Middle East.

—"Summary of the Forty-Eighth Session of the Executive Council," *Chemical Disarmament Quarterly*, Vol. 5, No. 2 (June 2007), p. 4.

#### **11-14 December 2006**

Twelve Iraqi officials attend a CWC implementation training course in Amman Jordan coordinated by the OPCW. The officials, represented Iraqi stakeholder ministries including Defense, Foreign Affairs, Health and the National Monitoring Department of the Ministry of Science and Technology. The four-day intensive training course provided the Iraqi officials with the expert guidance, knowledge and skills needed to prepare mandatory declarations and to efficiently put in place the required regulatory measures to implement the Convention. The four-day intensive training course, which was a continuation of the February 2006 session provided the Iraqi officials with the expert guidance, knowledge and skills needed to prepare mandatory declarations and to efficiently put in place the required regulatory measures to implement the CWC.

—"OPCW Conducts Third CWC Training for Iraqi Officials," *Chemical Disarmament Quarterly*, Vol. 5, No. 1 (March 2007), p. 14.

#### **5-8 December 2006**

Three Iraqi representatives attend the eleventh session of the Conference of the States Parties to the Chemical Weapons Convention in The Hague as observers. Although Iraq has not yet acceded to the CWC it has publicly declared its intention of doing so and is making preparations for CWC implementation.

—*List of Participants to the Eleventh Session of the Conference of the States Parties The Hague, 5 - 8 December 2006, C-11/INF.3/Rev.1*, 8 December 2006, p. 37, [www.opcw.org](http://www.opcw.org).

#### **30-31 October 2006**

The Iraqi government participates in the twenty-fifth Proliferation Security Initiative (PSI) interdiction exercise which takes place in international waters off the north-eastern coast of Bahrain. [Iraqi participation does not appear to include the deployment of military assets and may be limited to an observation role.]

—*The CBW Conventions Bulletin*, No. 74 (December 2006), p. 61-62.

#### **25-October 2006**

An Iraqi government representative attends the *Third OPCW Workshop to Promote the Universality of the Chemical Weapons Convention among States in the Mediterranean Basin, the Middle East, and neighboring regions* held in Rome, Italy.

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—"Rome Workshop on Chemical Weapons Ban in the Middle East," *Chemical Disarmament Quarterly*, Vol. 4, No. 4 (December 2006), p. 17-18.

### **18 August 2006**

As part of its ongoing process of preparation for accession to the CWC the Iraqi government requests that UNMOVIC provide it with copies of "certificates of destruction" of the chemical weapons-related material and equipment that had been destroyed under United Nations supervision. Iraq also requests a copy of the handover protocol signed in 1994 between Iraq and UNSCOM concerning the transfer of the Muthanna chemical warfare agent production site to the custody of Iraq. The protocol provides a full account of destruction activities conducted at Muthanna between 1992 and 1994 and sets out safety and security measures to be applied at the site. The documents are provided to the Iraqi government on 15 October 2006 after being edited to remove proliferation-sensitive content.

—*Twenty-seventh quarterly report on the activities of the United Nations Monitoring, Verification and Inspection Commission submitted in accordance with paragraph 12 of Security Council resolution 1284 (1999)*, UN document S/2006/912, 22 November 2006, p. 2, [www.un.org](http://www.un.org).

### **3 August 2006**

The Iraqi Council of Ministers approves a Foreign Ministry recommendation that Iraq accede to the CWC. Following this decision, a bill for CWC ratification is proposed to the Council of Representatives (Parliament) for discussion and adoption at its next session which begins on 5 September 2006.

—"Cabinet Approves Foreign Ministry's Recommendation on Accession to CWC," Ministry of Foreign Affairs of Iraq, 3 August 2006, [www.mofa.gov.iq](http://www.mofa.gov.iq).

### **30 May 2006**

In response to an April 2006 request by the Iraqi government for a copy of the full, final and complete disclosure relating to chemical weapons that was provided by the National Monitoring Directorate of Iraq in 1996 and after receiving instructions from the UN Security Council UNSCOM takes the following action. It "provide[s] the government of Iraq with the relevant sections of the "Currently accurate, full and complete declaration", transmitted by the National Monitoring Directorate in December 2002 and circulated to the Security Council, which is an updated document, having due regard to issues related to the disposition of proliferation-sensitive documents and materials." UNSCOM also annexes a nine-page overview of the chemical weapon program of Iraq to its regular quarterly report. [See 7 April 2006]

—*Twenty-fifth quarterly report on the activities of the United Nations Monitoring, Verification and Inspection Commission submitted in accordance with paragraph 12 of Security Council resolution 1284 (1999)*, UN document S/2006/342, 30 May 2006, p. 3, [www.un.org](http://www.un.org).

### **7 April 2006**

The Permanent Representative of Iraq to the UN writes to the Acting Executive Chairman of UNMOVIC stating that Iraq intends to accede to the Chemical Weapons Convention. He also requests that UNMOVIC provide to the government of Iraq the full, final and complete disclosure relating to chemical weapons that was provided by the National Monitoring Directorate of Iraq to the United Nations Special Commission in 1996." [The clear implication

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of this request is that the Iraqi government intends to reduce the considerable burden associated with preparing its initial CWC declaration by submitting a copy of the earlier declaration submitted to UNSCOM.]

—*Twenty-fifth quarterly report on the activities of the United Nations Monitoring, Verification and Inspection Commission submitted in accordance with paragraph 12 of Security Council resolution 1284 (1999)*, UN document S/2006/342, 30 May 2006, p. 3, [www.un.org](http://www.un.org).

#### **14-17 March 2006**

The Executive Council of the OPCW invites Iraq to participate in its 44th Session as an observer. The action follows a request from Iraq, a State not Party to the CWC. The Council took the decision as part of the OPCW's ongoing effort to encourage the universality of the Convention in the Middle East. The decision also noted the "special circumstances of the requesting State not Party, which has also clearly indicated its intention to join the Convention and is actively working towards that end."

—"Summary of the Forty-Fourth Session of the Executive Council," *Chemical Disarmament Quarterly*, Vol. 4, No. 2 (June 2006), p. 4.

#### **9 March 2006**

Speaking at the Middle East Institute in Washington DC, former CIA official, Mr. Paul Pillar, speculates that Iraq will be seeking WMD again within the next five to ten years. He explains this as a necessary reaction to threats posed to Iraqi security by regional neighbors possessing or seeking WMD themselves.

—*The CBW Conventions Bulletin*, No. 72+73 (September 2006), p. 13.

#### **6-9 February 2006**

In Amman, Jordan, the OPCW conducts its second in-depth implementation training workshop for Iraqi officials in preparation of Iraq's accession to the CWC. The training course focused on practical issues related to implementation of the Convention. The course addressed the specific requirements of the Iraqi Government to ensure that it would be able to effectively fulfill its obligations once Iraq accedes to the Convention. The first training course was conducted at the OPCW headquarters in The Hague in July 2005.

—"Update on the Implementation of the Action Plan for the Universality of the Chemical Weapons Convention (CWC)," *Chemical Disarmament Quarterly*, Vol. 4, No. 2 (June 2006), p. 16.

#### **26 January 2006**

Georges Sada, formerly second in command of the Iraqi Air Force, claims that in June 2002 Iraq transported WMD to Syria aboard several refitted commercial jets, under the pretence of conducting a humanitarian mission for flood victims. He says that two commercial jets were converted to cargo jets, in order to carry raw materials and equipment related to WMD projects. The passenger seats, galleys, toilets and storage compartments were removed and new flooring was installed. Hundreds of tons of chemicals were reportedly included in the cargo shipments. Sada says he obtained the information from two Iraq Airways captains who were reportedly flying the sorties. The allegations are included in Sada's newly published book, "Saddam's Secrets" which he is promoting in the United States.

—Ira Stoll, "Iraq's WMD Secreted in Syria, Sada Says," *The New York Sun*, 26 January 2006, <http://web.lexis-nexis.com>.

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#### **17-26 January 2006**

Two Iraqi government representatives participate in the *Foundation Course for National Authorities involved in the implementation of the Chemical Weapons Convention (CWC)*. The course was jointly organized by the Foreign and Commonwealth Office and the Ministry of Defence of the United Kingdom, and the OPCW. The course's purpose was to assist state party personnel in fulfilling their nation's obligations under the CWC.

—"Foundation Course for CWC National Authorities Held in Swindon, UK," *Chemical Disarmament Quarterly*, Vol. 4, No. 1 (March 2006), p. 8.

#### **15 December 2005**

In an interview with the *New York Sun*, Lieutenant General (ret.) Moshe Yaalon, former chief of staff of the Israeli Defense Forces (IDF) claims that in the period preceding the 2003 invasion of Iraq "he [Saddam Hussein] transferred the chemical agents from Iraq to Syria.

—Ira Stoll, "Saddam's WMD Moved to Syria, An Israeli Says," *The New York Sun*, 16 December 2005, <http://web.lexis-nexis.com>.

#### **7-11 November 2005**

Four Iraqi representatives attend the tenth session of the Conference of the States Parties to the Chemical Weapons Convention in The Hague as observers. Although Iraq has not yet acceded to the CWC it has publicly declared its intention of doing so and is making preparations for CWC implementation.

—*List of Participants to the Tenth Session of the Conference of the States Parties The Hague, 7 - 11 November 2005*, C-10/INF.4, 11 November 2006, p. 47, [www.opcw.org](http://www.opcw.org).

#### **15 October 2005**

The permanent Constitution of Iraq is ratified by popular referendum. Article 9, paragraph 1 (e), provides that "the Iraqi Government shall respect and implement Iraq's international obligations regarding the non-proliferation, non-development, non-production, and non-use of nuclear, chemical and biological weapons and associated equipment, materiel, technologies and delivery systems for use in the development, manufacture, production and use of such weapons".

—*Letter dated 5 February 2006 from the Permanent Representative of Iraq to the United Nations addressed to the Chairman of the Committee*, UN Document S/AC.44/2004/(02)/116/Add.1, 10 February 2006, p. 2, <http://daccessdds.un.org>.

#### **6-9 July 2005**

The Organisation for the Prohibition of Chemical Weapons (OPCW) conducts an implementation training workshop for nine representatives of the Government of the Republic of Iraq at the OPCW's Hague headquarters. The training course was structured to provide the Iraqi participants with the expert guidance needed to prepare obligatory declarations, establish and efficiently operate a National Authority, enact national implementing legislation and put in place the required regulatory measures to eliminate chemical weapons and to prevent their spread in accordance with the CWC. In a statement at the opening of the training course the Ambassador of the Republic of Iraq to the Kingdom of the Netherlands, H.E. Mr Siamand Banaa, stated "that his Government and the States Parties to the CWC shared a common desire and purpose in seeking to accede to the CWC, in particular to

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ensure that the horrors of chemical warfare will never occur again in Iraq, and stated that Iraq, which had suffered greatly from abuses of chemical weapons, will take a leading part in the OPCW in the future."

—"OPCW Trains Iraqi Officials in CWC Implementation," *Chemical Disarmament Quarterly*, Vol. 3, No. 3 (September 2005), p. 12.

#### **13-15 June 2005**

An Iraqi government representative attends the "Second OPCW Workshop to Promote the Universality of the Chemical Weapons Convention among States in the Mediterranean Basin, the Middle East, and Neighboring Regions" in Nicosia, Cyprus.

—"Cyprus Workshop on a Universal Chemical Weapons Ban in the Mediterranean Basin and the Middle East," *Chemical Disarmament Quarterly*, Vol. 3, No. 2 (June 2005), p. 12.

#### **27 April 2005**

The Iraq Survey Group (ISG) publicly releases the *Addendums to the Comprehensive Report of the Special Advisors to the DCI on Iraq's WMD*. On the question of purported transfers of Iraqi WMD to Syria the report says: "There was evidence of a discussion of possible WMD collaboration initiated by a Syrian security officer, and ISG received information about movement of material out of Iraq, including the possibility that WMD was involved. In the judgment of the working group, these reports were sufficiently credible to merit further investigation. ISG was unable to complete its investigation and it is unable to rule out the possibility that WMD was evacuated to Syria before the war. It should be noted that no information from debriefing of Iraqis in custody supports this possibility." The report concluded that "based on the evidence available at present, ISG judged that it was unlikely that an official transfer of WMD material from Iraq to Syria took place. However, ISG was unable to rule out unofficial movement of limited WMD-related materials."

—"Addendums to the Comprehensive Report of the Special Advisors to the DCI on Iraq's WMD (Duelfer Report)," March 2005, [www.cia.gov](http://www.cia.gov); Dana Priest, "Report finds no evidence Syria hid Iraqi arms," *Washington Post*, 26 April 2005; Katherine Shrader, "Weapons inspector ends WMD search in Iraq," Associated Press, 26 April 2005; Rowan Scarborough, "CIA can't rule out WMD move to Syria," *Washington Times*, 27 April 2005, [www.washingtontimes.com](http://www.washingtontimes.com); "Puncturing another weapons myth," *New York Times*, 30 April 2005, p. A12; Anders Strindberg, "Report finds no evidence of WMD transfers to Syria," *Jane's Intelligence Review*, 1 June 2005.

#### **26 April 2005**

The Secretariat of the Iraqi Council of Ministers authorizes the establishment of a multi-agency committee chaired by a representative of the Ministry of Foreign Affairs to consider the question of Iraq's accession to the CWC.

—"Foreign Ministry Invigorates Efforts of Iraq's Accession to CWC," Ministry of Foreign Affairs of Iraq website, 21 May 2006, [www.mofa.gov.iq](http://www.mofa.gov.iq).

#### **17 January 2005**

US Intelligence and congressional officials say they have not seen any evidence that WMD components or equipment were moved from Iraq to Syria, Jordan or elsewhere before or after the March 2003 US invasion. In a separate statement Charles Duelfer, head of the Iraq Survey Group (ISG) says: "What I can tell you is that I believe we know a lot of materials left Iraq and went to Syria. There was certainly a lot of traffic across the border points."

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But whether in fact in any of these trucks there was WMD-related materials, I cannot say."

—Katherine P. Shrader, "US intelligence found no evidence WMD moved from Iraq," Associated Press, 17 January 2005, <http://web.lexis-nexis.com>.

#### **14 January 2005**

White House spokesman, Scott McClellan, rules out the possibility that Iraqi WMD may have been moved to Syria.

—Brian Knowlton, "Search for banned weapons in Iraq ends quietly," *International Herald Tribune*, 14 January 2005, p. 3.

#### **29 November-2 December 2004**

An Iraqi representative attends the ninth session of the Conference of the States Parties to the Chemical Weapons Convention in The Hague as an observer. Iraq has neither signed nor ratified the Chemical Weapons Convention.

—*List of Participants to the Ninth Session of the Conference of the States Parties, 29 November - 2 December 2004, C-9/INF.3/Rev.1*, 2 December 2004, p. 41, [www.opcw.org](http://www.opcw.org).

#### **13 October 2004**

UNMOVIC remains concerned about the destruction of WMD sites and facilities in Iraq and the subsequent disappearance of dual-use equipment. It recommends that Iraq set up an inventory system to track the location and condition of such equipment and indicates that UNMOVIC is ready to assist in this effort. Iraq had no immediate comment on UNMOVIC's concerns, but the US State Department, which has been helping Iraq set up methods to restrict the movement of these materials, said that Iraq has put new export controls in place to prevent WMD materials or technology from leaving Iraq.

—Robert McMahon, "Iraq: UN Mission hopes for tighter controls on Iraqi 'dual-use' sites," *Radio Free Europe/Radio Liberty*, 13 October 2004.

#### **8 October 2004**

Charles Duelfer, head of the Iraq Survey Group is quoted responding to a question about the possibility that Iraqi WMD were transferred out of Iraq prior to March 2003. He says: "We cannot yet definitively say whether or not WMD materials were transferred out of Iraq before the war. Neither can we definitely answer some questions about possible retained stocks though, as I say, it is my judgment that retained stocks did not exist." [By excluding the possibility of retained stocks of WMD, or new production prior to March 2003 Duelfer also excludes the possibility that WMD were transferred to Syria or any other country.]

—Janine Zacharia, "Bush concedes Iraq had no WMDs," *Jerusalem Post*, 8 October 2004, p. 1, <http://web.lexis-nexis.com>.

#### **30 September 2004**

The Iraq Survey Group releases its final report on Iraq's Weapons of Mass Destruction. The report finds that Saddam Hussein intended to resume WMD programs after UN sanctions were lifted. The ISG determined that Iraq probably destroyed its chemical stockpiles in 1991 and there were no indications that Iraq had resumed chemical weapons production. However, Iraq's chemical industry was re-organized in the mid-1990s to preserve the Iraqi chemical weapons knowledge base.

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—*Comprehensive report of the Special Advisor to the DCI on Iraq's WMD*, Central Intelligence Agency, 30 September 2004, [www.cia.gov](http://www.cia.gov).

#### **23 September 2004**

Abu Musab al-Zarqawi and his followers threaten to behead a British contractor, Ken Bigley, unless Iraqi female prisoners are released. This demand focuses attention on two imprisoned women scientists: Dr. Rihab Taha, also known as "Dr. Germ", who was in charge of an Iraqi facility that weaponized anthrax, botulinum toxin, and aflatoxin and believed to have designed the Iraqi biological weapons program; and Huda Salih Mahd Ammash, also known as "Mrs. Anthrax" and "Chemical Sally", who was the only woman to serve on Saddam Hussein's Revolutionary Command Council. Although the Iraqi Ministry of Justice is not opposed to releasing these women, the US authorities are still refusing to release them.

—"Hostage crisis: US detaining Iraq scientists despite failure to find WMD," *Independent* (London), 23 September 2004, p. 4; "Scientists had key roles in Saddam's laboratories," *Irish Times*, 23 September 2004.

#### **20-22 September 2004**

An Iraqi representative attends the "Second Asian National Authorities Meeting" in Beijing, China.

—"Second Asian National Authorities Meeting," *Chemical Disarmament Quarterly*, Vol. 2, No. 4 (December 2004), p. 32.

#### **27 August 2004**

UNMOVIC reports that significant amounts of Iraqi WMD related items have been exported from Iraq as scrap metal and are showing up in scrapyards in many countries, most notably Jordan and the Netherlands. These items include SA-2 missile engines and chemical dual-use items that still had UN tags attached to them. UNMOVIC estimates that the export of these items began in June 2003 and continued until June 2004. Through the use of satellite imagery, UNMOVIC has determined that several sites previously monitored by them before Operation Iraqi Freedom have been looted and razed. With the exception of the items that have turned up in scrapyards, the status of the dual-use equipment and materials contained at these sites is unknown.

UNMOVIC comments on the likelihood of chemical munitions being found in Iraq by coalition forces. It states that it is not surprised that some chemical munitions have been found since large amounts of munitions had been produced and deployed in Iraq since the early 1980s and not all of them had been accounted for. UNMOVIC further states that the condition of newly discovered chemical munitions could range from highly degraded to very pure.

UNMOVIC also assesses Iraq's remotely piloted and unmanned aerial vehicle (RPV/UAV) programs based on inspections conducted in the 1990s and 2003. They state that although they had concerns about the ability of some the RPV/UAVs to fly beyond the allowed range, the vehicles were unable to effectively deliver chemical or biological agents. While Iraq's RPV/UAVs technically could have been modified to carry small amounts of chemical or biological agents, the quantities would not have been large enough to make an effective military weapon. In addition, no technical evidence was ever found by UNMOVIC indicating that the Iraqis had tried to develop such modifications.

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—Eighteenth quarterly report on the activities of the United Nations Monitoring, Verification and Inspection Commission submitted in accordance with paragraph 12 of Security Council resolution 1284 (1999), UN document S/2004/693, 27 August 2004, [www.un.org](http://www.un.org).

#### **17 August 2004**

The US CIA is reported to have discovered that in the weeks before the war, Saddam Hussein replaced Iraqi border guards with trusted intelligence agents who supervised moving truckloads of contraband materials into Syria. Although officials caution that the new information is "not considered concrete evidence Saddam shipped chemical and biological agents to Syria before the US invasion," there is a clear intention to raise the possibility that this transfer did occur.

—Niles Lathem, "Saddam's WMD may be in Syria," *New York Post*, 17 August 2004, p. 10, <http://web.lexis-nexis.com>.

#### **12 August 2004**

The Iraqi Minister for Foreign Affairs writes to the Director-General of the Organization for the Prohibition of Chemical Weapons (OPCW), a letter of reply in which he affirms "Iraq's commitment to the conventions and treaties on the non-proliferation of weapons of mass destruction and its intention to accede to the [Chemical Weapons] Convention as soon as an elected Iraqi Government [is] established."

—*Letter dated 13 April 2005 from the Permanent Representative of Iraq to the United Nations addressed to the Chairman of the Committee*, UN Document S/AC.44/2004/(02)/116, 18 April 2005, p. 7, <http://daccessdds.un.org>.

#### **14 July 2004**

The Butler Report is issued in Britain. This report mostly reviews the reliability and quality of intelligence provided to the UK government prior to the 2003 war with Iraq. The report says that the September 2002 dossier of the Joint Intelligence Committee in Britain omitted several caveats qualifying British intelligence on Iraq. For example, the dossier claimed that Iraq could deploy chemical or biological weapons within 45 minutes, but did not mention that this claim only referred to short range munitions and came from only one source. The report also says that Iraq did not have significant stocks of chemical and biological weapons or developed plans to use such weapons.

—*Review of Intelligence on Weapons of Mass Destruction*, House of Commons document number HC 898, 14 July 2004, [www.official-documents.co.uk](http://www.official-documents.co.uk).

#### **3 July 2004**

The Coalition Press Information Center in Baghdad reports that the 16 122-millimeter rocket rounds found by Polish troops on 23 June have tested negative for chemical weapons agents. They went on to say that two other 122-millimeter rounds found by Polish troops on 16 June tested positive for sarin, but were in a very degraded state and not militarily useful.

—Walter Pincus, "Chemicals not found in Iraq warheads," *Washington Post*, 3 July 2004, p. A21.

#### **23 June 2004**

Polish troops find and buy 17 chemical 122-millimeter warheads and two 82 millimeter mortar bombs, all of which believed to contain cyclosarin. In addition, Polish military intelligence had received information that Iraqi terrorists

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were offering \$5,000 per chemical warhead. Initial indications are that the warheads were produced before 1989.  
—"Roundup: Poles confirm discovery of chemical warheads in Iraq," *Deutsche Presse-Agentur*, 2 July 2004.

#### **14 June 2004**

Some US experts disagree with the assessment that the people making the sarin bomb, which exploded on 17 May, did not realize the shell contained chemical agents. These experts point out that other similar homemade bombs found in the same area as the sarin bomb typically are constructed by drilling out the old artillery shell and placing the detonator inside the shell. However, in the case of the sarin bomb, the shell was not drilled and the detonator was simply placed next to the shell.

—Mark Hosenball, "IED's secret sarin supply?" *Newsweek* 143 (14 June 2004), p. 8.

#### **Early June 2004**

Polish troops find two warheads in an Iraqi bunker that test positive for cyclosarin nerve agent. Further testing is conducted in Baghdad and the US.

—"Polish troops find sarin warheads in Iraq," *USA Today*, 1 July 2004, [www.usatoday.com](http://www.usatoday.com).

#### **28 May 2004**

UNMOVIC comments on the unclassified portion of Charles Duelfer's testimony to the US Congress on March 30, 2004, saying that Iraq purchased both biological and chemical dual-use equipment between 1999 and 2002, but there is no evidence that it was used in prohibited weapons programs. Most of the materials bought were declared to UN monitors properly.

—*Seventeenth quarterly report on the activities of the United Nations Monitoring, Verification and Inspection Commission submitted in accordance with paragraph 12 of Security Council resolution 1284 (1999)*, UN document S/2004/435, 28 May 2004, [www.un.org](http://www.un.org).

#### **17 May 2004**

Brigadier General Mark Kimmitt confirms that an artillery round filled with sarin was found in Baghdad by a US convoy. The artillery round was rigged as an explosive device and partially detonated before being disarmed, resulting in minor injuries to two members of the explosive ordnance team from sarin exposure. Kimmitt comments that the people who rigged the bomb probably did not realize the shell contained chemical agents.

—Paul Kerr, "Chemical munition found in Iraq," *Arms Control Today* 34 (June 2004), p. 43.

#### **30 March 2004**

Senator Carl Levin issues a statement that the publicly released testimony of Charles Duelfer to Congress on 30 March 2004 creates a misleading impression that there is WMD in Iraq, while the classified testimony casts doubts on that conclusion.

—Senator Carl Levin, Press Release, 30 March 2004, "Statement of Senator Carl Levin relating to public release of testimony of Mr. Charles Duelfer DCI's Special Advisor for WMD in Iraq", [www.nci.org](http://www.nci.org).

#### **30 March 2004**

The CIA releases the unclassified portion of testimony by the new head of the Iraq Survey Group (ISG), Charles Duelfer, before the US Congress. Regarding chemical weapons, Duelfer says that the ISG has new information on

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Iraq's dual-use facilities and research projects and their potential to be quickly converted to weapons programs. He states that Iraq had such facilities and also had plans to build new facilities, including plans to build chemical facilities capable of producing substantial quantities of chemicals every month. Although most of the chemicals in this plan were only commercial use, a few were dual-use, including DCC, which can be used as a stabilizing agent for VX nerve agent.

—Testimony to the US Congress by Mr. Charles Duelfer, Director of Central Intelligence Special Advisor for Strategy regarding Iraqi Weapons of Mass Destruction (WMD) Programs, 30 March 2004, [www.cia.gov](http://www.cia.gov).

#### **27 February 2004**

UNMOVIC releases a summary of Iraqi chemical and biological munitions. Through the 1990s Iraq declared and subsequently destroyed 155-millimeter artillery shells filled with mustard agent, 122-millimeter rocket warheads filled with Sarin nerve agent, and sub-munitions for cluster bombs filled with chemical agent simulant. Iraq considered, but did not implement, development of chemical warheads for the 107-millimeter rocket and 540-millimeter rocket. In addition, UNMOVIC discovered unusual components indicating possible chemical munitions development and implementation for 81-millimeter rocket warheads, cluster warheads for a 200-millimeter rocket, and sub-munitions for the Nasr-28 cluster bomb. UNMOVIC was not able to complete investigations on these components prior to its withdrawal from Iraq.

— *Sixteenth quarterly report on the activities of the United Nations Monitoring, Verification and Inspection Commission in accordance with paragraph 12 of Security Council resolution 1284 (1999)* , UN document S/2004/160, 27 February 2004, [www.un.org](http://www.un.org).

#### **25 January 2004**

There are suspicions that Iraq's CBW materials may have been moved to Syria. "We are not talking about a large stockpile of weapons," he said. "But we know from some of the interrogations of former Iraqi officials that a lot of material went to Syria before the war, including some components of Saddam's WMD program. Precisely what went to Syria, and what has happened to it, is a major issue that needs to be resolved." There is no physical evidence to support this contention.

—"Saddam's WMD hidden in Syria, says Iraq survey chief," *The Telegraph* (U.K.), 25 January 2004, [www.telegraph.co.uk](http://www.telegraph.co.uk).

#### **23 January 2004**

Dr. David Kay resigns his position as head of the Iraq Survey Group. In public statements he explains that he resigned because he concluded that WMD would not be found in Iraq: "I don't think they existed. What everyone was talking about is stockpiles produced after the end of the last Gulf War and I don't think there was a large-scale production programme in the 90s." David Kay criticized the intelligence that led to the war in testimony to the Senate Armed Services Committee, saying "we were all wrong and that is most disturbing." Kay does state that even if Iraq did not have weapons stockpiles, this does not mean that it wasn't dangerous.

—"US Steps Back from WMD Claims," *BBC News*, 24 January 2004, <http://news.bbc.co.uk>; "Admit WMD mistake, survey chief tells Bush" *The Guardian* (London), 3 March 2004, [www.guardian.co.uk](http://www.guardian.co.uk).

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## 2003-2000

### 2 October 2003

*David Kay delivers to Congress a statement on the progress of the Iraq Survey Group. He reports that much has been found concerning the intent of Saddam to restart both his illicit programs. He also reports that stockpiles of chemical weapons have not been found.*

—Statement by David Kay on the Interim Progress Report on the activities of the Iraq Survey Group (ISG) before The House Permanent Select Committee on Intelligence, The House Committee on Appropriations, Subcommittee on Defense, and The Senate Select Committee on Intelligence, 2 October 2003, [www.cia.gov](http://www.cia.gov).

### 18 July 2003

*Declassified excerpts from the October 2002 National Intelligence Estimate are released by the White House. These excerpts contain 40 "distinct caveats or conditions on the intelligence judgment" which were usually dropped in other official publications and statements.*

—Joseph Cirincione, Jessica T. Mathews, George Perkovich, with Alexis Orton, *Weapons of Mass Destruction in Iraq: Evidence and Implications*, (Washington DC: Carnegie Endowment for International Peace, January 2004), p. 17.

### June 2003

The Iraq Survey Group (ISG) is created to search for WMD in Iraq. It is composed of approximately 1,400 WMD specialists and is led by David Kay, a former top UN weapons inspector.

—James Risen, "After the war: Illegal weapons; US asks ex-UN inspector to advise on arms search," *New York Times*, 11 June 2003, p. A18.

### 30 May 2003

UNMOVIC reports on the findings of its inspections in Iraq. Highlights of this report include a VX destruction study, mobile chemical weapons production laboratories, and destruction of chemical agents and munitions. A VX destruction study was conducted to attempt to verify Iraq's claims of unilateral destruction of VX nerve agent and its precursors in 1991. In the study, Iraq provided additional documentation and scientific soil sampling of the alleged dump site at Muthanna State Establishment. The study failed to conclusively prove the destruction of the VX agent and also did not address other unresolved issues such as knowledge retention of the VX program. However, the study did provide valuable information which would be useful in future sampling missions. UNMOVIC inspected several suspected mobile chemical weapons production facilities in Iraq. Inspections were made based on intelligence provided by other governments. Several sites had seed-processing equipment that looks similar to chemical weapons production equipment, but no evidence of mobile chemical weapons production activity was found. UNMOVIC requested and received declarations and pictures from Iraq on all its mobile facilities. These facilities were then randomly tested by UNMOVIC during regular inspections, but no evidence of chemical weapons production was found. In addition to inspections, UNMOVIC destroyed fourteen 155-millimeter shells containing 49 liters of mustard gas, destroyed 500 ml of thioglycol, tagged 18 122-millimeter chemical warheads for destruction, and determined that Iraq should destroy eight pieces of chemical equipment at Al Fallujah and Al Qaa Qaa. The destruction of this equipment was not completed before the inspectors left Iraq.

—Thirteenth quarterly report of the Executive Chairman of the United Nations Monitoring, Verification and

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*Inspection Commission in accordance with paragraph 12 of Security Council resolution 1284 (1999)*, UN document S/2003/580, 30 May 2003, [www.un.org](http://www.un.org).

### **19-20 March 2003**

US and Coalition forces commence Operation Iraqi Freedom, a military invasion of Iraq, on 20 March at 4 am in Baghdad (8 pm on 19 March in Washington, DC).

—"The war begins," *Economist*, 20 March 2003, [www.economist.com](http://www.economist.com).

### **18 March 2003**

UNMOVIC inspectors withdraw from Iraq following a notification from the US administration of the imminent invasion of Iraq.

—*Thirteenth quarterly report of the Executive Chairman of the United Nations Monitoring, Verification and Inspection Commission in accordance with paragraph 12 of Security Council resolution 1284 (1999)*, UN document S/2003/580, 30 May 2003, [www.un.org](http://www.un.org).

### **7 March 2003**

Hans Blix reports to the UN Security Council on the progress of the UNMOVIC disarmament mission in Iraq. He reports that there was initial period of reluctant cooperation by the Iraqis but that there now seemed to be an acceleration of cooperative initiatives including the acceptance of disarmament of its al-Samoud 2 missiles.

—"United Nations Weapons Inspectors Report to the U.N. Security Council on Progress in the Disarmament of Iraq," United Nations, 7 March 2003.

### **28 February 2003**

After three months of inspections, UNMOVIC observes that Iraq has been very helpful in matters relating to inspection "process" but has been less forthcoming in substantive matters and notes that Iraq could have made greater efforts to either find and produce remaining WMD stockpiles or show credible evidence of their destruction.

—*Twelfth quarterly report of the Executive Chairman of the United Nations Monitoring, Verification and Inspection Commission in accordance with paragraph 12 of Security Council resolution 1284 (1999)*, UN document S/2003/232, 28 February 2003, [www.un.org](http://www.un.org).

### **February 24, 2003**

Dan Rather interviews Saddam Hussein concerning the many aspects of Iraq's alleged illicit weapons programs and the impending military confrontation. Hussein denies that Iraq is in breach of Security Council resolutions.

—Dan Rather Interview with President Saddam Hussein, 24 February 2003.

### **19-20 February 2003**

*The Independent* reports on 19 February that three giant cargo ships, which are suspected of carrying Iraqi weapons of mass destruction, are being tracked by US and British intelligence. However, the following day, a report by *The Guardian* says that the US Navy is boarding approximately six ships per day in search of Iraqi WMD, but so far has only found small amounts of drugs and unauthorized guns. Also in the report, David Osler, an editor of Lloyd's List maritime journal, notes that chemical weapons do not take up much space and safe storage of

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missiles on a commercial ship would require large-scale adaptations.

—"Iraq Crisis: Three mystery ships are tracked over suspected weapons' cargo," *Independent* (London), 19 February 2003; "Ships boarded in search for smuggled weapons," *Guardian* (London), 20 February 2003.

#### **5 February 2003**

United States Secretary of State Colin Powell presents US intelligence on Iraq's weapons programs to the U.N. Security Council.

—White House Press Release, "US Secretary of State Colin Powell Addresses the U.N. Security Council", 5 February 2003.

#### **7 December 2002**

Iraq provides UNMOVIC with an updated full and complete declaration as required by Resolution 1441 describing its proscribed weapons programs and other chemical programs. The declaration consists of more than 12,000 pages, but with the exception of non-weapons related biological declarations and missile development declarations, UNMOVIC finds very little new information.

—*Twelfth quarterly report of the Executive Chairman of the United Nations Monitoring, Verification and Inspection Commission in accordance with paragraph 12 of Security Council resolution 1284 (1999)*, UN document S/2003/232, 28 February 2003, [www.un.org](http://www.un.org).

#### **27 November 2002**

The first UNMOVIC team begins inspections in Iraq.

—*Twelfth quarterly report of the Executive Chairman of the United Nations Monitoring, Verification and Inspection Commission in accordance with paragraph 12 of Security Council resolution 1284 (1999)*, UN document S/2003/232, 28 February 2003, [www.un.org](http://www.un.org).

#### **16 September 2002**

Iraq announces that it will allow the return of UN inspectors without conditions.

—*Eleventh quarterly report of the Executive Chairman of the United Nations Monitoring, Verification and Inspection Commission in accordance with paragraph 12 of Security Council resolution 1284 (1999)*, UN document S/2002/1303, 27 November 2002, [www.un.org](http://www.un.org).

#### **12 September 2002**

President Bush addresses the United Nations General Assembly, expressing that "if Iraq's regime defies us again, the world must move deliberately...the Security Council resolutions will be enforced...or action will be unavoidable."

—"Presidents Remarks at the United Nations", Office of the Press Secretary, 12 September 2002.

#### **September 2002**

A declassified DIA study purports that Operation Desert Storm and UNSCOM destroyed a "substantial amount of Iraq's chemical warfare agents, precursors, munitions, and production equipment," but "nevertheless, we believe Iraq retained production equipment, expertise and chemical precursors and can reconstitute a chemical warfare program in the absence of an international inspection regime."

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—Declassified section of the Defense Intelligence Agency's *Iraq - Key WMD Facilities - An Operational Support Study*, September 2002.

#### **29 January 2002**

President Bush lists Iraq in his "Axis-of-Evil" State of the Union Address. He also states that "the Iraqi regime has plotted to develop anthrax, and nerve gas, and nuclear weapons for over a decade."

—The President's State of the Union Address, The United States Capitol, Washington, D.C. Office of the Press Secretary, 29 January 2002.

#### **Early March 2001**

A classified report by UNMOVIC, which is based on analysis of information inherited from UNSCOM, states that Iraq could still have mustard agent and shells to deliver it.

—"Missiles and Viruses Still Troubling U.N. UNMOVIC Report," *Financial Times*, 2 March 2001, p. 11.

#### **28 February 2001**

U.S. officials say that Iraq and Sudan are engaged in a joint effort to develop chemical and biological weapons in the Sudan. It is also reported that Iraq has exported technology and expertise in non-conventional weapons to Libya and Sudan.

—"Iraq Exports WMD Expertise to Arab Allies," *Middle East Newline* 3(84), 28 February 2001.

#### **26 February 2001**

The BND leaked new details on the Iraqi chemical weapons program. According to the report, the al-Mamoun plant is actively producing ammonium perchlorate, which is one of the main components needed to make solid fuel for long range missiles and solid rocket boosters. The equipment for the factory was bought by a Delhi company known as NEC Limited, which is on the German Economics Ministry's list of businesses involved in arms proliferation.

—Roger Boyes, "Iraq Builds Chemical Weapons System 'Capable of Hitting European Cities'," *The Times*, 26 February 2001, Roger Boyes, "German Spies Reveal Iraq Planning Chemical Warfare," *Calgary Herald*, 26 February 2001, p. A5.

#### **15 February 2001**

According to an internal U.N. report, several facilities making chlorine to purify water supplies and "huge imports" of the chemical financed by the U.N.'s oil-for-food program "...are probably being diverted for use as precursor chemicals in the manufacture of weapons."

—Ian Bruce, "Revealed: Saddam's Factory of Death, Iraq Uses Castor Oil By-Product to Make Biological Weapons," *The Herald*, 15 February 2001, p.2 .

#### **30 January 2001**

The Iraqi Vice President Taha Yasin Ramadan and his delegation visit the Arab Company for Pharmaceuticals Industries, Tamico, in Damascus. They tour the company's facilities, which produce over a 100 medicines, as well as vaccines and baby food.

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—"Iraq's Ramadan Tours Syrian Plants, Umayyad Mosque, Saladin Mausoleum," *Syrian Arab Television TV1*, 30 January 2001, in FBIS Document GMP20010130000251, 30 January 2001.

#### **26 January 2001**

The Vision Television of Islamic Intifadah announces that the Iraqi regime intends to place chemical weapons at the disposal of the Iranian opposition group MKO (Mujahidin-i Khalq Organization).

—Iranian Students New Agency, "Intifadah Reports on the Arming of Monafeqin with Chemical Weapons by the Saddam Regime," 26 January 2001, in *BBC*, "Iran: Iraq Reportedly Planning to Arm Iranian Opposition with Chemical Weapons," 26 January 2001.

#### **22 January 2001**

According to a new intelligence estimate, "Iraq has rebuilt a series of factories that the United States has long suspected of producing chemical and biological weapons...." The construction of two factories, located in an industrial complex in Falluja, is resumed, as well as the production of chlorine at a third factory in the same complex. Government officials say that all three factories were previously involved in producing chemical or biological agents. The Iraqi Trade Minister, Mohammed Mahdi Salih, denies the charges and responds in an interview with *Al-Jazeera* that, "Iraq has no weapons of mass destruction."

—Steven Lee Myers and Eric Schmitt, "Iraq Rebuilt Weapons Factories, Officials Say," *New York Times*, 22 January 2001, "Trade Minister Denies Iraq Rebuilt Chemical Weapons Plants," *BBC*, 23 January 2001.

#### **January 2001**

U.S. DOD states that "Iraq retains the expertise, once a decision is made, to resume chemical agent production within a few weeks or months, depending on the type of agent."

—U.S. Department of Defense, Office of the Secretary of Defense, *Proliferation: Threat and Response*, January 2001, p.40.

#### **19 November 2000**

According to Western intelligence reports, Iraq has been stockpiling an arsenal of chemical and biological weapons in schools and hospitals. The items listed include 610 tons of precursor chemicals for the production of VX.

—Christina Lamb, "Saddam Stockpiling Deadly Chemical Weapons," *Sunday Telegraph*, 19 November 2000.

#### **June 2000**

An Iraqi opposition group, the Free Fighters Command, announces that they have mounted an attack on a secret arms cache in the Diyala region in eastern Iraq and seized a chemical agent that "the regime's forces used in artillery shells and missiles."

—"Jordanian Weekly: Iraqi Opposition Movement Seizes 'Chemical Weapon', Claims Responsibility for Attack on MKO Members," *Al-Hadath*, 5 June 2000, in FBIS Document GMP20000605000181, 5 June 2000, "Iraqi Opposition Organization Announces Its Force's Seizure of Chemical Weapon," *Al-Hayah*, 2 July 1999, p. 2, in FBIS Document FTS19990702000657, 2 July 1999.

#### **25 May 2000**

The U.S. releases its investigation concerning accounts that an Iraqi helicopter may have dropped canisters

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containing a yellow chemical spray on the city of al-Nasiriyah in 1991. The U.S. Department of Defense finds no "conclusive evidence" that Iraq used chemical weapons against the rebellious Shiite population.

—"US Pentagon Finds No Evidence of Iraqi Chemical Weapons Use," *Agence France Presse*, 26 May 2000.

#### **24 May 2000**

Richard Butler says that he has evidence from his time in Baghdad that Saddam Hussayn kept weapons of mass destruction from the U.N. and that over the past 18 months he has used the absence of the U.N. to build up his arsenal of missiles and chemical and biological weapons.

—Ewen MacAskil, "Iraqi Nerve Gas 'Could Paralyse Western Cities'," *The Guardian*, 24 May 2000.

#### **17 May 2000**

Head of U.K. Defence Intelligence says that "Iraq has the capacity to produce mustard and nerve agents within a few weeks."

—"Gulf Weapons Proliferation Unstoppable," *Middle East Economic Digest*, 23 May 2000, p. 4.

#### **February 2000**

Reportedly, an Iraqi defector says his unit delivered warheads to a secret site where they were loaded with chemicals and returned to a secret hiding place near Baghdad.

—Marie Colvin and Uzi Mahnaimi, "Saddam's Elite Troops Prime Poison Missiles," *Sunday Times*, 20 February 2000.

#### **February 2000**

In an interview with the German paper *Sueddeutsche Zeitung*, U.S. Defense Secretary William Cohen says that Iran, Iraq, and North Korea are trying to manufacture nuclear, chemical, and biological weapons and are trying to build missiles capable of carrying these weapons. According to an Iraqi defector, the warheads contained Sarin and Cyclosarin (GF).

—Voice of the Islamic Republic of Iran, 11 February 2000.

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## **1999-1990**

#### **17 December 1999**

The U.N. Security Council adopts Resolution 1284, which replaces UNSCOM with the United Nations Monitoring, Verification and Inspection Commission (UNMOVIC).

#### **September 1999**

U.S. Under Secretary of State for Arms Control, John Holum, reports that, "since the end of the Gulf War, Iraq has rebuilt key portions of its chemical production infrastructure for industrial and commercial use."

—John D. Holum, "The Proliferation of Weapons of Mass Destruction: Challenges and Responses," *USIA Electronic Journal*, Vol. 4, No. 2, September 1999.

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### **25 October 1999**

*U.S. News & World Report* reports that intelligence sources are concerned about the presence of two Russians at a pesticide plant in the al-Saklawiyah region in the western al-Anbar province in Iraq. The Russians, who identify themselves as civilian agricultural advisers, are reportedly former subordinates of retired Gen. Anatoly Kuntsevich, the former deputy commander of the Russian Army Chemical Corps, and are experts in third generation nerve agents, "the Novichoks".

—Richard Z. Chesnoff with Douglas Pasternak, "A Mystery At a Pesticide Plant," *U.S. News & World Report*, 25 October 1999, p. 42.

### **August 1999**

Saddam Hussayn deploys troops wearing gas masks and special white uniforms, designed as personal protection equipment against chemical weapons, around Najaf. Following the deployment, fears rise that the government will use chemical weapons in case of local uprising.

—Patrick Cockburn, "Iraq: Iraq Villagers Braced for Germ Attack," *Independent*, 4 August 1999, p.16.

### **June 1999**

According to an unconfirmed report cited by *Foreign Report*, twelve senior Iraqi chemical weapons scientists arrive in Sudan to check the quality and conditions of storage of Iraqi CW arsenal hidden in Sudan. According to the report, the CW materials were smuggled from Iraq to Sudan in recent years in order to prevent UNSCOM from detecting and destroying it. Yugoslav equipment for early warning and protection is used.

—"Foreign Report: Transport of Iraqi CW From Sudan Planned," *Foreign Report*, 5 October 1999, in FBIS Document FTS19991006001559, 5 October 1999.

### **26 October 1998**

A U.N. report, prepared by an international panel of arms experts and submitted to the Security Council, confirms that fragments of shells uncovered at a weapons demolition site in Iraq had traces of the nerve agent VX. In an accompanying letter, Richard Butler noted that "the existence of VX degradation products conflicts with Iraqi declaration that the unilaterally destroyed special warheads had never been filled with chemical warfare agents." According to the report, the second sets of test performed at U.S. labs found no chemical warfare products. In the third series, the Swiss laboratory found nothing and the French laboratory detected the presence of a decomposing nerve agent product in one sample.

—John M. Goshko, "Tests Don't Back Iraq's Denials," *Washington Post*, 27 October 1998, p.A17, Youssef M. Ibrahim, "Panel Studying Iraq Missiles Is of 2 Minds on Nerve Gas," *New York Times*, 27 October 1998, p. A12.

### **26 October 1998**

Both U.S. and French scientists confirm that samples taken from an Iraqi weapons demolition site near Nabai show traces of VX agents. This is a challenge to the declarations made by Iraq that it had never filled these warheads with agents.

—Michael Littlejohns, "Scientists Confirm Traces of Deadly Iraqi Nerve Gas," *Financial Times*, 27 October 1998, p. 2.

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### **7-8 October 1998**

According to weapons experts and diplomats, tests performed in French laboratories on Iraqi missile warheads appear to have found traces of chemicals related to VX. According to diplomats, France is delaying the disclosure of the information.

—Evelyn Leopold, "French Find VX-Linked Chemical on Iraqi Weapons," *Washington Times*, 8 October 1998, p.A19, Barbara Crossette, "France Detects Iraqi Nerve Gas, Experts Assert," *New York Times*, 7 October 1998, p. A13.

### **29 September 1998**

The *Washington Post* reports that tests performed in Swiss and French laboratories on Iraqi missile warheads have found no evidence of VX.

—John M. Goshko, "New Tests of Iraqi Warheads Don't Find Nerve Gas," *Washington Post*, 29 September 1998, p. A12.

### **5 August 1998**

Iraq officially suspends all inspections by UNSCOM.

### **10-15 July 1998**

At Iraq's request, UNSCOM holds an international expert meeting in Baghdad regarding the results of the tests in the U.S. laboratory. Iraq continues to insist that VX has never been weaponized.

—United Nations, UNSCOM report to the Security Council, S/1998/920 (1998), 6 October 1998, [www.un.org](http://www.un.org).

### **July 1998**

General Wafiq al-Sammarai, former head of Iraqi Military Intelligence, tells the *Independent* newspaper that Iraq used VX against Iranians during the Iran-Iraq war. According to al-Sammarai Iraqi engineers aided by German scientists succeeded in producing VX in late 1987, which was stored at al-Tharthar, a facility northwest of Baghdad.

—Patrick Cockburn, "Iraq Used Deadly Gas on Iranians," *Independent*, 3 July 1998, "Iraq Reportedly Used VX Gas in Iran-Iraq War," *CNN*, 3 July 1998.

### **June-July 1998**

UNSCOM collects additional samples from other missile warhead remnants in order to collect more data on the filling of the warheads. Samples are sent to laboratories in the U.S., France and Switzerland.

—United Nations, UNSCOM report to the Security Council, S/1998/920 (1998), 6 October 1998, [www.un.org](http://www.un.org).

### **June-July 1998**

"VX disulfide...and stabilizer" are discovered on Iraqi missile warhead fragments. Chemical tests are performed at the U.S. Army's Aberdeen Proving Ground lab in Maryland on missile fragments recovered from Al-Nibai, the site where Iraq unilaterally claimed to destroy and bury its special warheads in 1991. While Iraq admitted producing VX, weaponization was denied. Following these reports, Iraq's U.N. Ambassador Nizar Hamdun denies the accusation, suggesting inherent flaws in the U.S. tests, and demands more tests at labs in different countries. Iraq's U.N. mission says in a statement that the results "cannot be accurate since VX was not used in any kind of munitions in Iraq due to continuous production failure." Although Richard Butler describes the original findings as "utterly unambiguous," the U.N. agrees to send the parts to laboratories in France and Switzerland for further

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testing.

[Note: The tests at Aberdeen were conducted specifically at Edgewood Chemical Biological Forensic Analytical Center]

—Betsy Pisik, "U.S. Verifies Iraqi Weapons Violations," *Washington Times*, 24 June 1998; Christopher S. Wren, "Evidence Revealed of Iraqi Warhead Loaded With Nerve Gas," *New York Times*, 24 June 1998, p. A8; "Iraq Wants Nerve Gas Tests Repeated," *CNN*, 27 June 1998; "U.N. Experts Check for VX Gas," *Washington Times*, 14 July 1998, p. 17; "Iraqi Missile Parts Will be Tested For VX in France and Switzerland," *Wall Street Journal*, Interactive edition, 11 July 1998; Christopher S. Wren, "Iraq Making Chemical Weapons, U.N. Official Says," *New York Times*, 25 June 1998, p. A8; "U.N. Hears Evidence of Iraqi Nerve Gas Weapons," *CNN*, 24 June 1998; Christopher S. Wren, "Lab Reports of Iraq Poison Bolster Case for Sanction," *New York Times*, 24 June 1998, p. 9; Christopher S. Wren, "U.N. Arms Inspector Firm on Iraq Nerve Gas but Accepts New Tests," *New York Times*, 25 June 1998, p. A10; John M. Goshko, "Iraqi Nerve Gas Tests Confirmed," *Washington Post*, 25 June 1998, p. A30.

#### **10 June 1998**

U.S. Army laboratory at Aberdeen completes an analysis of warhead fragments recovered from a destruction pit at al-Taji in March. According to the analysis, "significant amounts" of "VX disulfide...and stabilizer" were found in the samples.

—John M. Goshko, "Iraqi Nerve Gas Tests Confirmed," *Washington Post*, 25 June 1998, p. A30.

#### **April-May 1998**

U.N. weapons inspectors excavate warhead fragments from a weapons dump in Nibai, the site where Iraq claimed it unilaterally destroyed its missiles and send the recovered munition pieces to a U.S. Army laboratory at Aberdeen, Maryland for analysis. The purpose is "to verify Iraq's declarations on the filling of the special warheads."

—United Nations, UNSCOM Report to the Security Council, s/1998/920 (1998), 6 October 1998, [www.un.org](http://www.un.org), Christopher S. Wren, "Lab Reports of Iraq Poison Bolster Case for Sanction," *New York Times*, 24 June 1998, p.9.

#### **29 April 1998**

Richard Butler says today that experts discovered active mustard agent the prior month in artillery shells found at an Iraqi ammunitions depot in 1996.

—Barbara Crossette, "U.N. Experts Report Finding Mustard in Iraqi Shells," *New York Times*, 29 April 1998, p. A10.

#### **April 1998**

An Iraqi opposition group states that Iraq is hiding chemical and biological weapons in farms located 30 km outside of Baghdad. Reportedly, the weapons are hidden underground in order to escape satellites and ground penetrating radar.

—"Opposition Groups Claim Iraq Hiding Weapons in Farms," *Pointer* 5(4), April 1998, p. 7.

#### **26 March 1998**

A 70-member team of U.N. weapons inspectors, accompanied by 20 diplomats, conducts the first inspection of eight palaces of Saddam Hussayn at Radwanayah Palace. No inspections have previously been permitted at these

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sites. Each of the 1,058 buildings inside Hussien's eight presidential compounds are inspected in eight days, but no new evidence of banned materials is found.

—Vijay Joshi, "U.N. Search of 8 Iraqi Palace Sites Turns Up Mostly Unfurnished Rooms," *Washington Times*, 4 April 1998, p. A6, Leon Barkho, "Inspectors Find Nothing at Saddam's Palaces," *Washington Times*, 5 April 1998, p. A9, "Touring Iraq's Presidential Sites," *New York Times*, 30 March 1996, Vijay Joshi, "U.N. Team Inspects Saddam Compound," *Washington Times*, 27 March 1998, p. A15, Barbara Crossette, "Inspection of 8 Presidential Sites Starts Today, U.N. tells Iraq," *New York Times*, 26 March 1999, p. A9, "U.N. Teams Find Nothing at Iraqi Sites," *New York Times*, 4 April 1998, p. A4.

### **9 February 1998**

Britain's Defence Secretary George Robertson tells MPs that Iraq has built up stocks of the nerve agent "Agent 15". [Note: Agent 15 is thought to be an analogue of BZ, an incapacitating agent.]

—Philip Webster, "Saddam 'Has Big Stockpile of Agent 15 Nerve Gas'", *London Times*, 10 February 1998, p. 1.

### **February 1998**

At the request of the Iraqi government, experts hold technical evaluation meetings (TEMS) in Baghdad to assess Iraqi claims to have eliminated all its chemical arms and ballistic missile warheads. Two panels of experts from nine countries conclude that Iraq could have a clandestine stockpile of chemical weapons and has not met the requirements for disclosing all information on its weapons of mass destruction.

—Jeffrey Smith, "2 Panels Reject Iraqi Claims on Arms After Hearings in Baghdad, Experts Call Data Unreliable," *Washington Post*, 20 February 1998, p. A19, UNSCOM: Chronology of Main Events, December 1999, [www.un.org](http://www.un.org).

### **January 1998**

UNSCOM investigates suspicions that Iraq had tested chemical and biological weapons on prisoners. Tariq Aziz, the Iraqi deputy Prime Minister, calls the allegation "a sheer lie." He says, "it is a pretext used to enter a site." No conclusive evidence has been found concerning the prisoner issue.

—Laura Silber, "Iraq Suspected of Testing Weapons on Prisoners," *Financial Times*, 15 January 1998, p. 14, Hugh Davies, "Iraqis May Have Tested Weapons on Humans," *Daily Telegraph*, 15 January 1998, Betsy Pisik, "Chemical Arms Tests on Inmates Suspected," *Washington Times*, 15 January 1998, p.1, "Iraq Denies Using Humans in Biological Weapons Tests," *CNN*, 14 January 1998.

### **January 1998**

Saddam Hussayn calls for a freeze on all weapons inspections.

—Barbara Crossette, "Iraq Orders Freeze on Arms Inspections," *New York Times*, 22 January 1998.

### **1998**

Iraq is further developing its aerial delivery platforms to include remotely piloted vehicles, modified L29 trainers (tandem seat, single engine primary jet trainer), and Polish M-18 Dromader agricultural crop-sprayers. It is asserted that Saddam Hussayn's eldest son, Udai, has developed a front "cloud seeding" program. [Note: cloud seeding is the method of dispersing silver iodide particles into clouds from aircraft, which stimulates rain.]

**Related content is available on the website for the Nuclear Threat Initiative, [www.nti.org](http://www.nti.org).**



—Alan George, "New Iraqi Covert Weapons Projects Discovered", *The Middle East*, January 1999, p. 11., Damian Kemp, "Iraq's UAVs Will Advance 'Anthrax Air Force'", *Jane's Defense Weekly*, 6 January, 1999, p.3.

#### **November 1997**

Iraqi soldiers receive treatment at the Hilla Hospital in southern Baghdad for severe injuries received while moving containers filled with unspecified chemicals out of Baghdad. Doctors treating the soldiers are convinced the injuries were consistent with being exposed to agents used to manufacture chemical weapons.

—Con Coughlin, "Elite Iraqi Troops Treated for Toxins," *Washington Times*, 16 November 1997, p. A7.

#### **29 October 1997**

Iraq expels six American weapons inspectors working for the U.N.. Their fellow inspectors depart are withdrawn on November 13.

—Richard J. Newman and Kevin Whitelaw, "Saddam Ups the Ante," *U.S. News & World Report*, 24 November 1997, p. 44, "Could Iraq Spread Death Via Remote Crop Dusters?" *Deseret News*, 9 November 1997, <http://deseretnews.com>.

#### **27 October 1997**

The Executive Chairman of UNSCOM, Richard Butler, sends a letter to Deputy Prime Minister Tariq Aziz, suggesting the agenda for forthcoming meetings in Baghdad. The letter proposes that Iraq address important outstanding issues, including warheads, VX and the biological weapons area.

—UNSCOM: Chronology of Main Events, December 1999, [www.un.org](http://www.un.org).

#### **11 October 1997**

In his first report to the U.N. Security Council since taking office, Richard Butler concludes that Iraq is withholding some data on chemical weapons.

[Note: On 1 July 1997, Richard Butler, formerly Australia's Ambassador to the U.N., succeeded Rolf Ekéus of Sweden as Chair of UNSCOM.]

—Barbara Crossette, "New U.N. Monitor Says Iraq Is Still Hiding Data on Weapons," *Christian Science Monitor*, 8 October 1997.

#### **October 1997**

UNSCOM completes the destruction of additional, large quantities of chemical weapons related equipment and precursors chemicals. Iraq had previously denied that part of the equipment had been used for CW production. Only in May 1997, on the basis of UNSCOM's investigations, did Iraq admit that some of the equipment had indeed been used in the production of VX.

—UNSCOM: Chronology of Main Events, December 1999, [www.un.org](http://www.un.org).

#### **July 1997**

U.S. Customs intercepts a shipment of 34 light, fast, and highly maneuverable military helicopters destined for Iraq. The helicopters were smuggled through Canada via a front company in the Philippines. 16 of helicopters these were modified to disperse chemicals.

**Related content is available on the website for the Nuclear Threat Initiative, [www.nti.org](http://www.nti.org).**



—Lori Rozsa, "Plot to Sell Helicopters to Iraq Foiled," *Miami Herald*, 22 July 1997, Laurie Mylroie, "Iraq's Weapons of Mass Destruction and the 1997 Gulf Crisis," *MERIA Journal* 4, December 1997.

#### **18 April 1997**

Rolf Ekéus addresses the U.N. Security Council, reporting that Iraq is still not cooperating fully with the U.N. to dismantle its programs to produce biological, chemical, and nuclear weapons.

—Edith M. Lederer, "Biological Weapons," Associated Press, 24 April 1997.

#### **1 November 1996**

The *Washington Times*, quoting U.S. intelligence documents that were placed on the Internet, reports that before and during the Gulf War, Iraq hid chemical and biological weapons in Iran using camouflaged trucks. Once in Iranian territory the trucks were turned over to the Iranian Revolutionary Guard Corps (IRGC).

—"Iraq Hid Bio Agents in Iran," *Washington Times*, 1 November 1996.

#### **June 1996**

Iraq provides third "Full, Final and Complete Disclosure" of its prohibited chemical weapons program. The progress achieved in verifying this disclosure, and subsequent attachments presented by Iraq, is described in the Commission's October 1997 report to the U.N. Security Council.

—UNSCOM: Chronology of Main Events, December 1999, [www.un.org](http://www.un.org).

#### **October 1995**

Saddam's son-in-law Hussayn Kamil identifies U.N. envoy's interpreter as an Iraqi spy.

—"Hussein Kamil Identifies 'Spy' at UN," *Der Spiegel*, DATE, in FBIS Document No. 23 October 1995.

#### **8 August 1995**

General Hussayn Kamil, Minister of Industry and Minerals and former Director of Iraq's Military Industrialization Corporation, with responsibility for all of Iraq's weapons programs, leaves Iraq for Jordan. Iraq claims that Hussayn Kamil had hidden from UNSCOM and the IAEA important information on the prohibited weapons programs. Iraq withdraws its third biological "Full, Final and Complete Disclosure" and admits a far more extensive biological warfare program than previously admitted, including weaponization. Iraq provides UNSCOM and the IAEA with large amounts of documentation, hidden on a chicken farm ostensibly by Hussayn Kamil, related to its prohibited weapons programs which subsequently leads to further disclosures by Iraq concerning the production of the nerve agent VX and Iraq's development of a nuclear weapon. Iraq also informs UNSCOM that the deadline to halt its cooperation is withdrawn.

—UNSCOM: Chronology of Main Events, December 1999, [www.un.org](http://www.un.org).

#### **Summer 1995 (between June and August)**

UNSCOM believes that a number of political prisoners had been transferred from the Abu Ghraib Prison to a secret site in western Iraq, where they were subjected to tests with chemical and biological agents under the supervision of a special unit from the Military Industrial Commission. According to a weapons inspector, there was "credible evidence" that prisoners were taken from the Abu Ghraib to al-Salman.

—Betsy Pisik, "Chemical Arms Tests on Inmates Suspected," *Washington Times*, 15 January 1998, p. 1, Scott Ritter,

**Related content is available on the website for the Nuclear Threat Initiative, [www.nti.org](http://www.nti.org).**





Saddam's Trap," *New Republic*, 21 December 1998, p. 18, "U.N. Looks into Reports That Iraq Used Humans in Weapons Tests," *MSNBC*, date is not identified, [www.msnbc.com](http://www.msnbc.com).

#### **March 1995**

Iraq provides the U.N. its second "Full, Final and Complete Disclosure" (FFCD) of its chemical weapons program.  
—UNSCOM: Chronology of Main Events, December 1999, [www.un.org](http://www.un.org).

#### **1995**

General Wafiq al-Sammara'i, former head of Iraqi Military Intelligence defects and reveals that President Hussayn is concealing more chemical and biological weapons than was released to U.N. inspectors. This includes a possible "'255 containers' of biological materials- 230 with powder and 25 with liquid."

—Sean Boyne, "Iraq 'Unlikely' to Give Up Nuclear Option", *Jane's Intelligence Review*, September 1996, p. 6.

#### **June 1994**

UNSCOM completes the destruction of large quantities of chemical warfare agents and precursors and their production equipment.

—UNSCOM: Chronology of Main Events, December 1999, [www.un.org](http://www.un.org).

#### **May 1994**

UNSCOM declares that all known Iraqi chemical munitions, agents and precursors have been eliminated.

—Robert Burns, "Iraq-Chemical Weapons," *Associated Press*, 14 November 1997.

#### **1994-1995**

According to Professor Hussayn al-Shahrestani, an Iraqi nuclear scientist Iraq dumps barrels containing biological weapons and banned chemicals in the Euphrates and Tigris Rivers and uses explosions to destroy chemical weapons in isolated wastelands. The purpose of this action was to prevent U.N. inspectors from discovering them.

—Mu'idd Fayyad, "Iraqi Nuclear Scientist Hussein al-Shahrestani: Baghdad Dumped Barrels of 'Chemical' Weapons in the Tigris and Euphrates," *Al-Sharq al-Awsat*, 26 February 2001, p. 5, in "Scientist Claims Iraq Dumped Chemical, Biological Weapons in Rivers," *FBIS Document GMP20010227000063*, 26 February 2001.

#### **1994-1995**

A CW production facility is shipped to Iraq in 23 shipments under the guise of a pesticide production plant. The Baghdad-based al-Eman Establishment for Trade Investment is used as a front by the Iraqi intelligence service.

Some of the shipments "may have transported toxic precursor chemicals."

—Scott Ritter, *Endgame: Solving the Iraq Problem - Once and for All*, (New York: Simon & Schuster, 1999), p. 217.

#### **May 1993**

Physicians for Social Responsibility (PSR) obtains samples from clothing and soil at Birjinni, where Sarin-containing bombs were allegedly detonated against civilians. Samples (transferred under strict chain of custody guidelines) were able to detect Sarin degradation products, thereby verifying use of Sarin.

—Lois Ember, "Chemical Weapons Residues Verify Iraqi Use on Kurds," *Chemical Engineering News*, 3 May 1993, Vol. 71, Issue 18, pp. 8-9.

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### **May 1993**

Iraq buries banned chemicals and biological material in al-Karkh Cemetery, 25 km from Baghdad. According to Muhammad Ibrahim al-A'zami, a former Iraqi police officer who fled to Germany, the materials are placed inside nine "well-built and tightly sealed coffins" and placed under guard. In February 2001, al-A'zami visited the cemetery and discovered that the nine graves had been leveled and the guards disappeared.

—Mu'idd Fayyad, "Escapee Iraqi Police Officer Reveals Secret of Bogus Funerals. Baghdad's Authorities Buried Chemical and Biological Material," *Al-Sharq al-Awsat*, 12 March 2001, p. 3, in "Iraqi Escapee Cited on Regime's Concealment of 'Chemical, Biological' Material," FBIS Document GMP20010312000143, 12 March 2001.

### **July 1992**

UNSCOM begins the destruction of large quantities of Iraq's chemical weapons and production facilities.

—UNSCOM: Chronology of Main Events, December 1999, [www.un.org](http://www.un.org).

### **June 1992**

Iraq provides the U.N. its first "Full, Final and Complete Disclosure" (FFCD) for its chemical weapons program.

—UNSCOM: Chronology of Main Events, December 1999, [www.un.org](http://www.un.org).

### **19 March 1992**

Iraq declares the existence of previously undeclared chemical weapons and associated material. Iraq reveals that most of these undeclared items were unilaterally destroyed in the summer of 1991, in violation of resolution 687.

—UNSCOM: Chronology of Main Events, December 1999, [www.un.org](http://www.un.org).

### **1992**

Stockholm International Peace Research Institute (SIPRI) analysts conclude that information about Iraq's CW program is, at best, uncertain. There are strong doubts with regard to the "quality and quantity" of Iraqi CW agents, whether they were ever mounted on SCUD missiles, and whether missiles are a militarily-effective means of CW delivery. There is some information with regards to suspected CW production facilities. Most of the Iraqi CBW research and development is believed to have been conducted at the Saad 16 complex, at al Kasha and at Salman Pak. According to SIPRI, "CW precursor production was carried out at Baiji, al Fallujah and Musayyib, and CW production took place at Samarra, Badush and possibly al Qaim. A munition filling facility was located 2 km from Samarra, and artillery casing production took place at al Iskandriyah."

—S.J. Lundin and Thomas Stock, "Chapter 6: Chemical and biological warfare and arms control developments in 1991," *SIPRI Yearbook 1992: World Armaments and Disarmament*, (Oxford: Oxford University Press, 1992), pp. 149-150.

### **End 1991**

In late 1991, Iraq claims that it possessed 46,000 chemical-filled munitions. UNSCOM suspects the number is much higher, and by the end of the year Iraqi personnel (under UNSCOM supervision) were made to destroy almost 12,000 of an estimated 75,000 unfilled munitions. According to UNSCOM executive chairman Rolf Ekéus, Iraqi filled munitions included "different types of aerial bombs, artillery rockets and shells."

**Related content is available on the website for the Nuclear Threat Initiative, [www.nti.org](http://www.nti.org).**



—Rolf Ekéus, "Chapter 13: The United Nations Special Commission on Iraq," *SIPRI Yearbook 1992: World Armaments and Disarmament*, (Oxford: Oxford University Press, 1992), pp. 515-516.

#### **9 June 1991**

"UNSCOM commences its first chemical weapons inspection."

[Note: No further details are given with regards to the inspection.]

—UNSCOM: Chronology of Main Events, December 1999, [www.un.org](http://www.un.org).

#### **16 May 1991**

Iraq submits revised declarations to the U.N. These documents cover additional chemical weapons and a refinement of the missile declaration.

—UNSCOM: Chronology of Main Events, December 1999, [www.un.org](http://www.un.org).

#### **May 1991**

The United Nations Special Commission on Iraq (UNSCOM) is formally established to "carry out immediate on-site inspection of Iraq's biological, chemical and missile capabilities, to provide for the elimination of these capabilities and to perform other functions assigned to it in part C of the resolution." UNSCOM relies on several sources of intelligence to conduct its mission. To identify questionable chemical weapons sites, UNSCOM bases its information on Iraqi declarations, outside government's intelligence as well as data based on internal UNSCOM reports.

—Rolf Ekéus, "Chapter 13: The United Nations Special Commission on Iraq," *SIPRI Yearbook 1992: World Armaments and Disarmament*, (Oxford: Oxford University Press, 1992), pp. 510-512.

#### **18 April 1991**

Iraq provides its initial declaration under resolution 687. It declares some chemical weapons and materials.

—UNSCOM: Chronology of Main Events, December 1999, [www.un.org](http://www.un.org).

#### **6 April 1991**

Iraq accepts resolution 687.

—UNSCOM: Chronology of Main Events, December 1999, [www.un.org](http://www.un.org).

#### **3 April 1991**

U.N. Security Council Resolution 687 (1991), Section C, mandates that Iraq shall unconditionally accept, under international supervision, the destruction, removal or rendering harmless of its weapons of mass destruction, ballistic missiles with a range over 150 kilometers, and related production facilities and equipment. It also provides for establishment of a system of ongoing monitoring and verification of Iraq's compliance with the ban on these weapons and missiles. It requires Iraq to make a declaration, within 15 days, of the location, amounts and types of all such items.

—UNSCOM: Chronology of Main Events, December 1999, [www.un.org](http://www.un.org), Rolf Ekéus, "Chapter 13: The United Nations Special Commission on Iraq," *SIPRI Yearbook 1992: World Armaments and Disarmament*, (U.K.: Oxford University Press) 1992, p. 510.

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**January 1991**

Hussayn Kamil asks the Ministry of Defense to provide 31 trailers to forward-deploy munitions filled at the al-Muthanna State Establishment to the Ikhaidar and Nasiriyah depots in southern Iraq.

—Timothy V. McCarthy and Jonathan B. Tucker, "Saddam's Toxic Arsenal" Chemical and Biological Weapons in the Gulf Wars," in Peter R. Lavoy, Scott D. Sagan and James J. Wirtz (Ed.), *Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons*, (Ithaca and London: Cornell University Press, 2000), p. 70.

**January 1991**

Saddam gives orders to his commanders to launch chemical and biological weapons against enemy capitals and troops if Iraq is attacked by nuclear weapons. The decision is made to not use chemical or biological weapons against coalition troops and civilian populations due to the U.S. threat that, "any use of unconventional arms would provoke a devastating response." This quote was taken to mean nuclear retaliation.

—Anthony Goodman, "Iraq Targeted "Enemy Capitals" is Baghdad in Nuked," *Reuters*, 21 September 1995.

**1991**

Iraq acknowledges holding 11,000 chemical weapons.

—Agence France-Presse, "Team Was Close to Uncovering Iraqi Nerve Gas, Report Says," *USA Today*, 3 November 1997.

**1991**

Iraq claims to have destroyed the major part of its CW technical documentation.

—UNSCOM Report to the Security Council, 25 January 1999, Annex B: Status of Verification of Iraq's Chemical Weapons Programme, [www.fas.org](http://www.fas.org).

**25 September 1990**

In an internal communication between the United States Consulate General in Jidda, Saudi Arabia and the State Department, it is reported that "Iraq had provided the Sudanese government with chemical weapons to use against the rebels in the south."

—"[Excised] Says Saddam Gave Sudan CW Against Rebels," United States Consulate General in Jidda, Saudi Arabia, 25 September 1990.

**18 August 1990**

Tariq Aziz says in an interview with an American television network, CBS, that Iraq will not use chemical weapons unless the U.S. uses nuclear weapons against it first.

—"INA Reports 'Aziz Remarks on Chemical Weapons,'" *INA*, 18 August 1990, in FBIS Document FBIS-NES-90-161, 20 August 1990.

**9 August 1990**

The Iraqi ambassador to Greece announces that Baghdad would use chemical weapons if it is attacked by the United States or Israel.

—Timothy V. McCarthy and Jonathan B. Tucker, "Saddam's Toxic Arsenal" Chemical and Biological Weapons in the

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Gulf Wars," in Peter R. Lavoy, Scott D. Sagan and James J. Wirtz (Ed.), *Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons*, (Ithaca and London: Cornell University Press, 2000), p. 67.

#### **May 1990**

Iraq conducts live firings of 122 mm rockets filled with CW agents.

—Barbara Starr, "Iraq Reveals a Startling Range of Toxin Agents," *Jane's Defense Weekly*, Vol. 24, No. 19, 11 November 1995, p. 4.

#### **17 April 1990**

In a meeting with a delegation of U.S. senators, Saddam Hussayn says, "If Israel uses atomic bombs, we will strike at it with the binary chemical weapon..."

—Timothy V. McCarthy and Jonathan B. Tucker, "Saddam's Toxic Arsenal" Chemical and Biological Weapons in the Gulf Wars," in Peter R. Lavoy, Scott D. Sagan and James J. Wirtz (Ed.), *Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons*, (Ithaca and London: Cornell University Press, 2000), p. 58.

#### **1 April 1990**

In a speech to his senior military commanders, Saddam Hussayn boasts that Iraq has developed a "binary" chemical weapon.

[Note: There is significant debate as to whether this resembled a true binary weapon or something else.]

—Timothy V. McCarthy and Jonathan B. Tucker, "Saddam's Toxic Arsenal" Chemical and Biological Weapons in the Gulf Wars," in Peter R. Lavoy, Scott D. Sagan and James J. Wirtz (Ed.), *Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons*, (Ithaca and London: Cornell University Press, 2000), p. 58.

#### **April 1990**

Iraq flight-tests the al-Hussayn missile with a chemical warhead.

—Barbara Starr, "Iraq Reveals a Startling Range of Toxin Agents," *Jane's Defense Weekly*, Vol. 24, No. 19, 11 November 1995, p. 4.

#### **1990-1991**

12-Frame bunkers (reinforced and compartmented bunkers, deriving their name due to their appearance) are found located in the al-Salman Pak BW facility and others, containing lighting arrestors and possible airlocks. These bunkers were also environmentally controlled and several contain refrigeration units. Bunkers of similar disposition have been found in other areas of Iraq and deemed possible BW agent or CW storage bunkers. Many bunkers were located in ammunition storage depots throughout Baghdad.

[Note: these storage facilities probably did not contain BW or CW agents or munitions when they were bombed, but their construction would have been suitable for CBW storage and possibly designed for just this purpose.]

—"Intelligence Related to the Possible Sources of Biological Agent Exposure During the Persian Gulf War", Office of the Special Assistant for Gulf War Illnesses, [www.gulfink.osd.mil](http://www.gulfink.osd.mil), August 2000.

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## 1989-1980

### November 1989

Iraq conducts weaponization tests with 122 mm artillery rockets.

—Barbara Starr, "Iraq Reveals a Startling Range of Toxin Agents," *Jane's Defense Weekly*, Vol. 24, No. 19, 11 November 1995, p. 4.

### 1989

The Research and Development Center, known as Saad 16 in Mosul, is completed. It is equipped with facilities for the development of missiles and chemical weapons.

—Adel Darwish and Gregory Alexander, *Unholy Babylon: The Secret History of Saddam's War*, (London: Victor Gollancz Ltd., 1991), p. 85.

### December 1988

A British laboratory finds traces of 1-4-Dithiane in soil samples taken from Iraqi Kurdistan, which supports allegations that Iraq used chemical weapons, specifically sulfur mustard, against its Kurdish population.

—"Poison Gas Traces Are Found in Iraq," *New York Times*, 4 December 1988, p. 25.

### 17 September 1988

A letter issued by the presidential council, signed by Hussayn Kamil, states, "The principal of deterrence is the best means for defense against the Zionist entity and we suggest in this respect the following: to continue to develop the chemical weapons with an attempt to acquire more lethal types of munitions in large quantities..."

—Presidential Council letter No. A/4/99/32573, 17 September 1988, in Scott Ritter, *Endgame: Solving the Iraq Problem – Once and for All*, (New York: Simon & Schuster, 1999), p. 92.

### 15 September 1988

U.S. government officials say that the U.S. had intercepted communications by the Iraqi Air Force indicating that Iraq had used poisonous agents against Kurdish guerillas.

—Robert Pear, "U.S. Says It Monitored Iraqi Messages on Gas," *New York Times*, 15 September 1988, p. 12.

### 9 September 1988

The Turkish government says that its investigation produced no evidence that Iraq used chemical weapons against the Kurds.

—Clyde Haberman, "Turkey Reports Kurdish Refugees Showed No Signs of Iraqi Gassing," *New York Times*, 10 September 1988, p. 4.

### 8 September 1988

The U.S. State Department says that based on its information, it is convinced that Iraq used "poison gas" against Kurdish guerillas and condemns the action as "abhorrent and unjustifiable."

—Clyde Haberman, "Turkey Reports Kurdish Refugees Showed No Signs of Iraqi Gassing," *New York Times*, 10 September 1988, p.4, Norman Kempster, "U.S. Says Iraqi Use of Poison Gas on Kurds Is 'Abhorrent'," *Los Angeles*

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*Times*, 9 September 1988, p.9, Julie Johnson, "U.S. Asserts Iraq Used Poison Gas Against the Kurds," *New York Times*, 9 September 1988, p. 1.

### **September 1988**

According to Iraq's 1995 disclosure, it abandons its VX program.

### **25 August 1988**

According to a staff report issued by the Senate Foreign Relations Committee in September 1988, Iraq uses chemical weapons against Kurdish guerillas and civilians in Kurdish towns and villages near the Turkish border. A report by Physicians for Human Rights from February 1989 also concludes that Iraq used lethal agents against Kurds in northern Iraq on this day.

—"Iraq Uses Gas Against Kurds, Senate Staff Report Charges," *New York Times*, 22 September 1988, p. 21, Melissa Healy, "Senate Probers See 'Genocide' In Iraq Gas Use," *Los Angeles Times*, 22 September 1988, p.1, Winds of Death: Iraq's Use of Poison Gas Against Its Kurdish Population, Report of a Medical Mission to Turkish Kurdistan by Physicians for Human Rights, February 1989.

### **20 August 1988**

Cease-fire in Iran-Iraq war comes into effect, to be monitored by the U.N. Iran-Iraq Military Observer Group (UNIIMOG).

### **12-14 August 1988**

A U.N. team visits Iran to investigate CW allegations. The team concludes that Iraq bombed the Sheikh Othman district in Oshnabiyah with mustard agent.

—Gordon M. Burck and Charles C. Flowerree, *International Handbook on Chemical Weapons Proliferation*, (Westport, Connecticut: Greenwood Press, 1991), p. 114.

### **20 July 1988**

The U.N. releases a report describing their investigation. The team concludes that the Iraqis had used both sulfur mustard and a nerve agent against Iran in June.

—Gordon M. Burck and Charles C. Flowerree, *International Handbook on Chemical Weapons Proliferation*, (Westport, Connecticut: Greenwood Press, 1991), pp. 112-113.

### **9-12 July 1988**

An U.N. team visits Iraq to investigate Iraqi allegations of chemical weapons use by Iran.

—Gordon M. Burck and Charles C. Flowerree, *International Handbook on Chemical Weapons Proliferation*, (Westport, Connecticut: Greenwood Press, 1991), p. 113.

### **June 1988**

Iraq employs both aircraft and artillery shells to deliver chemical warfare agents, including mustard, cyanide and nerve agents against Iranian forces deployed on Majnoon Island.

—Adel Darwish and Gregory Alexander, *Unholy Babylon: The Secret History of Saddam's War*, (London: Victor Gollancz Ltd., 1991), p. 112, Timothy V. McCarthy and Jonathan B. Tucker, "Saddam's Toxic Arsenal" Chemical and

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Biological Weapons in the Gulf Wars," in Peter R. Lavoy, Scott D. Sagan and James J. Wirtz (Ed.), *Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons*, (Ithaca and London: Cornell University Press, 2000), p. 65.

### **3 May 1988**

The village of Gop Tapa is bombed with chemical weapons by six Iraqi planes. [Note: The original source is the Iraqi Patriotic Union of Kurdistan so distortion is possible. The attack does coincide with the 1988 Anfal campaign in this area.] This report was filed in 2000 upon the discovery of mass graves around the village.

"Mass Grave of Chemical-Attack Victims Found in Kurdish Region," Iraqi Patriotic Union of Kurdistan satellite TV, 11 November 2000, appears in *BBC Worldwide Monitoring* (British Broadcasting Corporation, 13 November 2000).

### **17-18 April 1988**

VX is allegedly used against Iranian forces in the al-Faw Peninsula. The delivery systems are long-range artillery shells and aircraft. [This information is provided in 1998 by General Wafiq al-Sammarai a former head of Military Intelligence.]

—"Iraq Reportedly Used VX Gas in Iran-Iraq War," *Reuters*, 3 July 1998; Patrick Cockburn, "Iraq Used Deadly Gas on Iranians," *Independent*, 3 July 1998; "Iraq Reportedly Used VX Gas in Iran-Iraq War," *CNN*, 3 July 1998, [www.cnn.com](http://www.cnn.com).

### **8-11 April 1988**

The U.N. team visits Iraq to investigate CW allegations at Halabja made by both Iraq and Iran. The team concludes that victims have been exposed to sulfur mustard.

—Gordon M. Burck and Charles C. Flowerree, *International Handbook on Chemical Weapons Proliferation*, (Westport, Connecticut: Greenwood Press, 1991), p. 110.

### **April 1988**

Iraq flies 15 Iraqi soldiers to England, Australia and West Germany for treatment of wounds it says they suffered from Iranian chemical weapons during the fighting in Halabja. Iraq has said 88 of its soldiers were wounded in the Iranian attack.

—"Fifteen Iraqi soldiers Flown to London, Vienna for Treatment," *The Associated Press*, 11 April 1988.

### **April 1988**

Iraq uses 100 tons of Sarin on Iranian forces occupying parts of the Al-Faw peninsula. In the following months Iraq uses Sarin and other nerve agents against Iranian positions.

—Iraq's Weapons of Mass Destruction: The Assessment of the British Government. 2002, p. 15.

### **16-18 March 1988**

As part of an ongoing military campaign, Iraqi forces use chemical weapons in an attack on Halabja, a Kurdish town of 45,000 in northern Iraq. The attack involves multiple chemical agents including mustard and the nerve agents Sarin, Tabun, and VX. Some sources also report cyanide use, although according to a Pentagon study of questionable reliability Iran is the party who used cyanide in the attack. It is estimated that approximately 5,000 people died in the attack.

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—Gordon M. Burck and Charles C. Flowerree, *International Handbook on Chemical Weapons Proliferation*, p. 33, UNSCOM Seventh Report Under Resolution 715, S/1995/284n, 10 April 1995 found at the Federation of American Scientists, [www.fas.org](http://www.fas.org), Christine Gosden, "Why I Went, What I Saw," *Washington Post*, 11 March 1998, p. A19, Christine Gosden, "Kurdish Hell of Cancer and Despair," *Sydney Morning Herald*, 14 March 1998, Patrick E. Tyler, "Both Iraq and Iran Gassed Kurds in War, U.S. Analysis Finds," *Washington Post*, 3 May 1990, p. A3.

### **Early 1988**

Iraq plans to build a major petrochemical complex at Musayyib that would be capable of hypothetically producing 420,000 tons per year of ethylene and 67,000 tons of ethylene oxide as well as other chemicals which are needed in the production of mustard agent. Techcorp is the government-owned company responsible for construction. Total estimated cost is about \$2.5 billion, mostly financed by foreign loans.

—Middle East Economic Digest, February 17 1989, p. 17, *Middle East Economic Digest*, November 18, 1988, p. 17.

### **Late 1987**

According to General Wafiq al-Sammarai, former head of Iraqi Military Intelligence, Iraqi engineers aided by German scientists succeeded in producing VX in late 1987.

—Patrick Cockburn, "Iraq Used Deadly Gas on Iranians," *Independent*, 3 July 1998, Patrick Cockburn, "How Saddam Kept Deadly Gas Secret," *Independent*, 3 July 1998, "Iraq Reportedly Used VX Gas in Iran-Iraq War," *CNN*, 3 July 1998.

### **1987**

Iraqi aircraft attack 20 small villages with chemical weapons including mustard, Tabun and nerve agents.

[Note: It is not clear from the source whether the villages were located in Iran, the Kurdish strongholds in Iraq, or both]

—"Chemical Weapons Programs- Iraq special Weapons Facilities," Federation of American Scientists, [www.fas.org](http://www.fas.org).

### **3 August 1987**

The United States expands its chemical exports embargo against Iraq in response to the continued procurement efforts by Iraq and its neighbors. The eight additional chemicals in this new extension are: n-diisopropylaminoethane-2-thiol, n-diisopropylaminoethyl-2-chloride, dimethyl phosphate (DMP), 3-hydroxy-1-methylpiperidine, phosphorus trichloride, 3-quinuclidinol, thionyl chloride, trimethyl phosphate (TMP). The four chemicals already embargoed and now subject to worldwide export licensing are: dimethyl methylphosphonate (DMMP), methylphosphonyl dichloride (DC), methylphosphonyl difluoride (DF), phosphorous oxychloride.

—"U.S. Expands Ban on Chemical Sales," *The Journal of Commerce*, 4 August, 1987, p.6A.

### **29 June 1987**

Iran asserts that Iraqi warplanes dropped mustard agent on four residential areas of Sardasht, a predominantly Kurdish region of northwestern Iran. There are 10 civilian deaths and approximately 650 injuries.

—"Iranians Say Iraqis Killed 10 in Poison Gas Raid on Town," *New York Times*, 29 June 1987, p. 6.

### **March 1987- April 1988**

Alcolac International Inc., a U.S. company, violates U.S. export law by selling thiodiglycol, a major ingredient in

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mustard, to Iraq. Alcolac pleads guilty to this violation in 1989.

—Tom Toolen, "N.J. Man Accused of Poison Gas Role; Crackdown on Illegal Exports," *Los Angeles Times News Service*, 31 January 1989.

#### **April 1987**

British officials refused a request to export hydrogen fluoride to the "Rayon State Establishment" for what was stated to be "[research and development] for a pilot scale production of a chemical product .... for the Iraqi state electricity organization." Hydrogen fluoride is a chemical used in the production of Sarin.

—Appendices to the Report of the Inquiry into the Export of Defence Equipment and Dual-Use Goods to Iraq and Related Prosecutions laid before The House of Commons on 15 February 1996, Volume One, Section D, "Arms and Defence-Related Exports to Iraq," Chapter 2 Applications of The Guidelines in the period December 1984 to August 1988, D2.246.

#### **1987**

The first Iraqi chemical attacks against civilian populations takes place. Attacks launched by Iraqi aircraft against 20 small villages in the Balasan Valley near Arbil.

—Khidhir Hamza with Jeff Stein, *Saddam's Bombmaker: The Terrifying Inside Story of the Iraqi Nuclear and Biological Weapons Agenda*, (New York: Scribner, 2000), p. 200.

#### **1987-1988**

VX becomes the focus of Iraqi CW agent research late in 1987. 250 tons of phosphorus pentasulphide and 200 tons of di-isopropylamine are imported, which are precursors for production of VX. Iraq claims that by September 1988, it had abandoned further attempts to develop VX.

—*S/1995/284n- UNSCOM Seventh report under resolution 715*, 4 October, 1995.

#### **1986**

The administration of the Muthanna State Establishment is transferred from the Chemical Corps, which ran it since 1978, to the Special Office for Technical Industry (SOTI), the technical arm of the Special Security Organization (SSO), under Hussayn Kamil.

—Scott Ritter, *Endgame: Solving the Iraq Problem – Once and for All*, (New York: Simon & Schuster, 1999), pp. 83, 86.

#### **1986**

The Dutch firm Melchemie is convicted by the Dutch government of export violations for attempting to export to Iraq phosphorous oxychloride, a precursor of the nerve agent Tabun.

—Adel Darwish and Gregory Alexander, *Unholy Babylon: The Secret History of Saddam's War*, (London: Victor Gollancz Ltd., 1991), p.106; Anthony Cordesman, "Creating Weapons of Mass Destruction," *Armed Forces Journal International* 126 (February 1989), p. 56.

#### **December 1986**

Iraq attacks Iranians with sulfur mustard in the area of Umm ar Rasas.

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—"Anthony Cordesman, "Iraq's Search for Weapons of Mass Destruction", *The Military Balance in the Middle East*, Part XIV (CSIS, 6 Sept, 1999), pp. 50-60.

### **3 August 1986**

General Dayya Abd-al-Wahab 'Izzat, commander of the Iraqi Erbil Division, issues an order to take a semi-annual inventory of all "biological and chemical materials."

—The document was obtained by Human Rights Watch from the Kurdistan Democratic Party. Human Rights Watch in a letter to Rolf Ekéus, Chairman of UNSCOM, 29 December 1992.

### **March 1986**

U.N. Secretary General Javier Perez de Cuellar formally accuses Iraq of using chemical weapons against Iran, citing the report of the U.N. experts.

—UNSCOM Seventh Report Under Resolution 715, S/1995/284n, 10 April 1995, Federation of American Scientists, [www.fas.org](http://www.fas.org).

### **February and March 1986**

The U.N. sends four chemical warfare experts to Iraq to investigate continuing allegations of chemical weapons use.

—UNSCOM Seventh Report Under Resolution 715, S/1995/284n, 10 April 1995, Federation of American Scientists, [www.fas.org](http://www.fas.org).

### **February 1986**

According to a U.S. intelligence report released in February 1998, Iraq attacks Iranian forces using mustard and the nerve agent Tabun, allegedly resulting in 8,000 to 10,000 fatalities.

—Bill Gertz, "'White Paper' Details Iraq's Hidden Biological Weapons," *Washington Times*, 18 February 1998, p. A10.

### **February 1986**

Iraq attacks Iranian forces in the area of the al-Faw peninsula with mustard and Tabun.

—"Anthony Cordesman, "Iraq's Search for Weapons of Mass Destruction," *The Military Balance in the Middle East*, Part XIV, CSIS, 6 Sept, 1999, pp. 50-60.

### **1986**

The U.N. conducts a second investigation, which validates the conclusion from the first investigation that Iraq used Tabun.

—Anthony Cordesman, "Creating Weapons of Mass Destruction, *Armed Forces Journal International* 126 (February 1989), p. 56.

### **Mid-1980s**

East German specialists (from the now-disbanded Volksarmee) install a large chemical warfare training center in Iraq. The facility was established to train the Iraqi army in effective delivery of CW agents.

**Related content is available on the website for the Nuclear Threat Initiative, [www.nti.org](http://www.nti.org).**



—Adel Darwish and Gregory Alexander, *Unholy Babylon: The Secret History of Saddam's War*, (London: Victor Gollancz Ltd., 1991), p. 111.

#### **Late 1985**

Iraq has the capability to indigenously manufacture nerve agents.

—Victor A. Utgoff, *The Challenge of Chemical Weapons: An American Perspective*, (New York: St. Martin's Press, 1991), p. 83.

#### **March 1985**

Iraq attacks Iranians in the area of Hawizah Marsh with mustard and Tabun.

—"Anthony Cordesman, "Iraq's Search for Weapons of Mass Destruction", *The Military Balance in the Middle East*, Part XIV, CSIS, 6 Sept 1999, pp. 50-60.

#### **February 1985**

British authorities receive a request for insurance support for a British subsidiary of a West German company to design, build and commission a "Chlorine-Alkali-Electrolysis" plant in Iraq. The British government is not able to find substantial justification to block the contract.

—Appendices to the "Report of the Inquiry into the Export of Defence Equipment and Dual-Use Goods to Iraq and Related Prosecutions," laid before The House of Commons on 15 February 1996, Volume One, Section D, Arms and Defence-Related Exports to Iraq, Chapter 2 "Applications of The Guidelines in the period December 1984 to August 1988."

#### **November 1984 -January 1985**

Dutch authorities obtain evidence that between November 1984 and January 1985 the Dutch company Melchemie BV had legally exported over 1200 tons of chloroethyl, dimethylamine, thiodiglycol, and 20,000 kg of phosphorous trichloride, all of which are used for the manufacture of chemical weapons.

—Adel Darwish and Gregory Alexander, *Unholy Babylon: The Secret History of Saddam's War*, (London: Victor Gollancz Ltd., 1991), p. 106.

#### **1985-1990**

According to Iraqi declarations, it constructed three facilities (Fallujah 1, 2, and 3) and new production facilities at the al-Muthanna State Establishment to produce the nerve agent precursor chemicals: PCI 3, POCl 3, SOCl 2 and trimethyl phosphate (TMP).

—UNSCOM Report to the Security Council, 25 January 1999, Annex B: Status of Verification of Iraq's Chemical Weapons Programme, [www.fas.org](http://www.fas.org).

#### **3 August and October 1984**

German government experts inspect the al-Samarra plant.

—Gordon M. Burck and Charles C. Flowerree, *International Handbook on Chemical Weapons Proliferation*, (Westport, Connecticut: Greenwood Press, 1991), p. 32.

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**10-11 April 1984**

The United States, Britain, France, Japan, and later Australia, ban exports of certain chemicals to Iraq and Iran.  
—Gordon M. Burck and Charles C. Flowerree, *International Handbook on Chemical Weapons Proliferation*, (Westport, Connecticut: Greenwood Press, 1991), p. 32; Lee Waters, "Chemical Weapons in the Iran Iraq War," *Military Review*, (October 1990), p. 59.

**30 March 1984**

The U.S. bans export of five chemicals suitable for weapons to Iraq and Iran.  
—Charles Z. Wick, "Alleges U.S. Mustard Shipments to Iraq Via Spain," United States Information Agency, sent to the United States Embassy in Spain, 25 June 1984, National Security Archive, box 7, record number 58488; Gordon M. Burck and Charles C. Flowerree, *International Handbook on Chemical Weapons Proliferation*, (Westport, Connecticut: Greenwood Press, 1991), p. 32.

**26 March 1984**

The U.N. issues its first report on the investigation of possible chemical weapons use by Iraq.  
—Gordon M. Burck and Charles C. Flowerree, *International Handbook on Chemical Weapons Proliferation*, (Westport, Connecticut: Greenwood Press, 1991), p. 32.

**23 March 1984**

The Paris daily *France Soir* reports that the Iranians who were recently sent abroad for medical treatment for burns were the victims of an explosion at the Iranian Petro-Chemical Center in Khrobasht that took place on 18 February.  
—Press Release by the Iraqi Press Office, the Iraqi Interests Section, Embassy of India, 23 March 1984, National Security Archive. Box 7, record number 58852.

**15 March 1984**

In a press release Iraq denies that its Akashat Industrial Complex for Fertilizers produces chemical weapons. Iraqi Minister of Industry and Mineral Resources, Subhy Yassin, told the Iraqi News Agency that the facility produces phosphate for the production of chemical fertilizers.  
—Press Release by the Iraqi Press Office, the Iraqi Interests Section, Embassy of India, 15 March 1984, National Security Archive. Box 7, record number 58859.

**13-19 March 1984**

The U.N. conducts its first investigation regarding chemical weapons use. It confirms that mustard and Tabun were used.  
—Andrew Koch, "USA, Israel Say Syria Continues with WMD," *Jane's Defense Weekly*, 11 October 2000, p. 32.

**12 March 1984**

In a letter from the Permanent Representative of Iraq to the United Nations, Iraq denies use of CW, "those responsible in Iraq have confirmed the non-use of chemical weapons in the conflict with Iran."  
—Letter from the Permanent Representative of Iraq to the United Nations to the Secretary General of the United Nations, 12 March 1984, National Security Archive, box 4, record number 58401.

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#### **March 1984**

Reports surface accusing Italian and French firms of aiding Iraq with its chemical weapons technology. The firms deny the accusations.

—"Accusations Against Italian and French Firms for Supplying Chemical Warfare Technology to Iraq," Internal communication between the U.S. Embassy in Italy and the State Department, 14 March 1984.

#### **Feb-March 1984**

Iraqis attack Iranian forces the area of Majnoon Island with mustard.

—"Anthony Cordesman, "Iraq's Search for Weapons of Mass Destruction", *The Military Balance in the Middle East*, Part XIV, CSIS, 6 Sept 1999, pp. 50-60.

#### **21 February 1984**

Iraqi military spokesman states, "the [Iranian] invaders should know that for every harmful insect there is an insecticide capable of annihilating it whatever their number and Iraq possesses this annihilation insecticide."

—"Iraqi Warning re Iranian Offensive," Memorandum from the U.S. Embassy in Iraq to the U.S. State Department, 22 February 1999, National Security Archive, box 7, record number 58480.

#### **February 1984**

U.S. Customs at New York's Kennedy Airport stop an order addressed to the Iraqi State Enterprise for Pesticide Production for 74 drums of potassium fluoride, a chemical used in the production of Sarin. The order was placed by Al-Haddad Enterprises Incorporates, owned by an individual named Sahib al-Haddad.

—Adel Darwish and Gregory Alexander, *Unholy Babylon: The Secret History of Saddam's War*, (London: Victor Gollancz Ltd., 1991), p.105; Anthony Cordesman, "Creating Weapons of Mass Destruction, *Armed Forces Journal International* 126 (February 1989), p. 56.

#### **February 1984**

Iraq attacks Iran with mustard agent and may have used the nerve agent Tabun.

—Stephen C. Pelletiere and Douglas V. Johnson II, *Lessons Learned: The Iran-Iraq War*, Strategic Studies Institute, U.S. Army War College, Carlisle Barracks, Pennsylvania, 1991, p. 98.

#### **Early 1984**

The Iraqi State Ministry of Pesticide Production places a second order for 500 metric tons of thiodiglycol with Phillips. The company, however, grows suspicious, cancels the order and notifies the Belgium government, which cancels Phillips' license to produce the chemical.

[Note: this is most likely the same case as reported in the "late 1983" entry.]

—Anthony Cordesman, "Creating Weapons of Mass Destruction, *Armed Forces Journal International* 126 (February 1989), p.56.

#### **1984**

According to Iraqi defector Khidhir Hamza, about 100 Shiite prisoners are taken to the plant at Al-Samara, where they are subjected to chemical agents.

**Related content is available on the website for the Nuclear Threat Initiative, [www.nti.org](http://www.nti.org).**



—Khidhir Hamza with Jeff Stein, *Saddam's Bombmaker: The Terrifying Inside Story of the Iraqi Nuclear and Biological Weapons Agenda*, (New York: Scribner, 2000), p. 199.

#### **1984**

Iraq begins to use Tabun in relatively small amounts. U.N. investigations after the 1984 attacks confirm that Iraq was using Tabun against Iran.

—Anthony Cordesman, "Creating Weapons of Mass Destruction, *Armed Forces Journal International* 126 (February 1989), p. 56.

#### **1984**

Production begins of Tabun(GA) and Sarin(GB).

—"Chemical Weapons Programs- Iraq special Weapons Facilities," Federation of American Scientists, [www.fas.org](http://www.fas.org).

#### **Late 1983**

An order for 500 tons of thiodiglycol, 200 tons of trimethyl phosphate, 250 tons of phosphorous oxychloride and 200 tons of potassium fluoride is placed by the Iraqis with KBS Holland but was cancelled due to Dutch government pressure.

[Note: All of the agents listed above are used in the synthesis of CW agents.]

—Adel Darwish and Gregory Alexander, *Unholy Babylon: The Secret History of Saddam's War*, (London: Victor Gollancz LTD, 1991), p. 105.

#### **3 November 1983**

Iran formally submits its first allegation of Iraqi chemical weapons use to the United Nations' Security Council.

—Gordon M. Burck and Charles C. Flowerree, *International Handbook on Chemical Weapons Proliferation*, (Westport, Connecticut: Greenwood Press, 1991), p.32.

#### **November 1983**

The Iraqis fire large quantities of mustard agent on the attacking Iranians at Penjwin.

—Stephen C. Pelletiere and Douglas V. Johnson II, *Lessons Learned: The Iran-Iraq War*, Strategic Studies Institute, U.S. Army War College, Carlisle Barracks, Pennsylvania, 1991, p. 98.

#### **September 1983**

Iraq signs a second contract with a subsidiary of Karl Kolb for two larger pilot plants to produce chemical agents.

—Gordon M. Burck and Charles C. Flowerree, *International Handbook on Chemical Weapons Proliferation*, (Westport, Connecticut: Greenwood Press, 1991), p. 32.

#### **August 1983 – Late 1986**

Saddam Hussayn holds exclusive authority to release chemical weapons. A request can be made by General Staff, corps commanders or division commanders, but all decisions have to be approved by Hussayn.

—Timothy V. McCarthy and Jonathan B. Tucker, "Saddam's Toxic Arsenal: Chemical and Biological Weapons in the Gulf Wars," in Peter R. Lavoy, Scott D. Sagan and James Wirtz (eds.), *Planning the Unthinkable* (Cornell University Press, 2000), pp. 47-78.

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### **July 1983**

Iraq uses mustard agent against Iranian forces in the fighting near Haj Umran. The attack fails due to unfamiliarity with the agent's characteristics.

—Stephen C. Pelletiere and Douglas V. Johnson II, *Lessons Learned: The Iran-Iraq War*, Strategic Studies Institute, U.S. Army War College, Carlisle Barracks, Pennsylvania, 1991, p. 97.

### **July 1983**

KBS Holland BV supplies 500 tons of thiodiglycol, a chemical which can be used to produce sulfur mustard agent, for approximately £500,000 (\$329,900 in 1983) to Iraq's State Enterprise for the Production of Pesticides (SEPP). KBS acquired the thiodiglycol from a Belgian subsidiary of Phillips Petroleum USA.

—Adel Darwish and Gregory Alexander, *Unholy Babylon: The Secret History of Saddam's War*, (London: Victor Gollancz LTD, 1991), p. 105.

### **1983**

Iraq tests some of the CW agents, produced in Akashat, on Kurds captured by Iraqi forces. Several prisoners reportedly died as a result of these experiments.

—Adel Darwish and Gregory Alexander, *Unholy Babylon: The Secret History of Saddam's War*, (London: Victor Gollancz Ltd., 1991), p.109.

### **1983**

The German Quast Company subcontracts to Kulb to provide reactor vessels, piping, and centrifuges for a pilot production plant in al-Samarra.

[Note: Centrifuges are generally associated with BW-related research as well as other legitimate activities. Though this entry does not necessarily point to any illicit transactions, it demonstrates existing scientific trade ties between the two states.]

—Anthony Cordesman, "Creating Weapons of Mass Destruction," *Armed Forces Journal International* 126 (February 1989), p. 56.

### **1980s**

Chemical development at al-Muthanna is supported by storage and precursor facilities Fallujah 1, 2 and 3 near Habbaniyah.

—Iraq's Weapons of Mass Destruction: The Assessment of the British Government. 2002, p. 11.

### **1982**

Iraq signs a contract with West Germany to buy a large amount of equipment for the production of chemical weapons. No further details are specified.

—"The Development of Iraq's Nuclear and Biochemical Weapons," *Shijie Zhishi*, 16 January 1999; in FBIS Document FTS19990214000047, 16 January 1999.

### **1982-1983**

Al-Muthanna becomes operational with five dedicated research and development sections, each pursuing its own program. The complex begins to mature into the leading chemical agent production and weaponization facility.

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[Note: It is not clear from this report on what specific programs each section is working.]

—Iraq's Weapons of Mass Destruction: The Assessment of the British Government. 2002, p.11.

#### **December 1982**

Iraq begins to use mustard agent against Iranian forces.

—Anthony Cordesman, "Creating Weapons of Mass Destruction," *Armed Forces Journal International* 126 (February 1989), p. 56.

#### **July 1982**

Iraq uses riot control agents (CS) against Iranian troops.

—Andrew Rathmell, "Iran's Weapons of Mass Destruction," *Jane's Intelligence Review*, Special Report No. 6, June 1995, p. 15.

#### **1982**

British sources sell 76 chemical protection suits to Iraq.

—Appendices to the "Report of the Inquiry into the Export of Defence Equipment and Dual-Use Goods to Iraq and Related Prosecutions" laid before The House on 15 February 1996, Volume One, Section D, "Arms and Defence-Related Exports to Iraq", Chapter 2 Applications of The Guidelines in the period December 1984 to August 1988.

#### **1981**

Iraq signs a secret agreement with Egypt, under which Iraq reportedly gives Egypt \$12 million to expand its CW capabilities. In return Iraq would assist Egypt with production and storage of CW agents, establishing chemical manufacturing facilities and help purchase raw materials for the production of CW agents.

—Dany Shoham, "Chemical and Biological Weapons in Egypt," *Nonproliferation Review*, Vol. 5, No. 3 (Spring-Summer 1998), p. 51.

#### **1981**

According to another source, production of the blister agent sulfur mustard (HD) reportedly begins.

—"Chemical Weapons Programs- Iraq special Weapons Facilities," Federation of American Scientists, [www.fas.org](http://www.fas.org).

#### **1981**

Production of phosphates begins at the Akashat phosphate mine near Syria capable of producing 1.7 million tons of phosphate a year.

[Note: This is followed by processing and support industrial complexes at al-Qaim, and fertilizer complexes at Baiji and Bara. These additions spanned the decade and represent the bulk of Iraq's phosphorus-based chemical industry which has the potential to be harnessed in the production of chemical agents for a CW program especially the production of nerve agents.]

—Bureau of Mines, U.S. Department of the Interior, *Phosphate Availability: A Minerals Availability Appraisal*, Information Circular 9187 (Washington: Government Printing Office, 1988), p. 37.; *Middle East Economic Digest*, 11 April, 1987, p. 13., *Middle East Economic Digest*, 27 May 1988, p. 13.

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### **16 November 1980**

Iran publishes its first allegation of an Iraqi CW attack.

—Gordon M. Burck and Charles C. Flowerree, *International Handbook on Chemical Weapons Proliferation*, (Westport, Connecticut: Greenwood Press, 1991), p.32.

### **Sept 1980**

Iran-Iraq war begins.

### **1980's**

In a detailed policy paper for the Washington Institute for Near East Policy, W. Seth Carus outlines Iraq's existing chemical and biological weapons programs. Carus asserts that although Iraq was interested in CW since the 1960's, a conclusive effort was not underway until 1974 when a high-level decision to undertake a CW program was made. The Iraqi CW program was placed under the authority of the Ministry of Industry and Military Industries, headed by Saddam Hussayn's son-in-law Hussayn Kamil. Carus concludes that as a result of Iraqi efforts, the country was able to produce approximately 60 tons of sulfur mustard (HD) annually at a small plant near Sammara. Iraq imported the key precursor for producing sulfur mustard, thiodiglycol, from Western sources. According to Carus, Iraq developed the ability to indigenously produce its own thiodiglycol, which is a key component for CW and a dual use chemical. Iraq has also worked on nerve agents such as Sarin, Tabun and VX. Allegedly in the early 1980s West German firms helped build a pilot plant for producing Sarin and another for producing Tabun near Sammara. The nerve agent production program was relatively smaller in size, and hypothetical production stood around 100 tons of agent per year.

—W. Seth Carus, "The Genie Unleashed: Iraq's Chemical and Biological Weapons Production," Policy paper No. 14, Washington Institute for Near East Policy, July 1989.

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## **1979-1981**

### **Late 1970s-early 1980s**

Iraq initiates research into the production of CS tear agent at the al-Salman Pak site for the purpose of riot control, under the auspices of the Committee for National Security. Only a few tons of CS were produced at this site, whereas the military-scale production of the chemical was initiated at al-Muthana in the early 1980s.

[Note: Salman Pak was mainly involved in Iraq's biological warfare (BW) program and is located approximately 30-40 kilometers southeast of Baghdad.]

—UNSCOM Seventh Report Under Resolution 715, S/1995/284n, 10 April 1995, Federation of American Scientists, [www.fas.org](http://www.fas.org).

### **Late 1970s**

Development plans begin for a "commercial scale production facility" in the Iraqi desert under the codename Project 922. This facility is later named the al-Muthanna State Establishment (al-Muthanna) and operated under the name "Iraq's State Establishment for Pesticide Production." Al-Muthanna was assisted by "three separate

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storage and precursor facilities known as Fallujah 1, 2, and 3." Parts of these facilities were not fully complete when they were bombed by allied forces in 1991.

—Iraq's Weapons of Mass Destruction: The Assessment of the British Government, 2002, p.11.

### **Early 1979**

Iraq reportedly builds its first, crude, chemical warfare plant near the town of Akashat in northwest Iraq. The plant has a hypothetical production capacity of 2,000 tons per year. The British Department of Trade and Industry grants an export license for the protective clothing used by workers in the plant.

[Note: The type of agent produced at the plant is not specified. Furthermore, according to a CNS scientist, most of the calculations are overestimated by approximately 20-50%]

—Adel Darwish and Gregory Alexander, *Unholy Babylon: The Secret History of Saddam's War*, (London: Victor Gollancz Ltd., 1991), p.105.

### **1978**

The Al-Hazen Institute closes and the chemical weapons development programs are moved to al-Rashad and the al-Muthanna State Establishment.

[Note: The source does not indicate any particular reasons why the program moves to a different site but according to Iraqi sources, the al Hazen Ibn al-Haytham Institute is shut down and several workers, including the Chairman Major Ghazan Ibrahim, are arrested due to financial fraud. The Institute is closed due to poor management coupled with lack of appropriate facilities and equipment.]

—Scott Ritter, *Endgame: Solving the Iraq Problem - Once and for All*, (New York: Simon & Schuster, 1999), p.83.

### **1976**

An unnamed Italian company in Milan reportedly helps Iraq build a chemical weapons plant under the cover of producing pesticides.

—"The Development of Iraq's Nuclear and Biochemical Weapons," *Shijie Zhishi*, 16 January 1999; in FBIS Document FTS19990214000047, 16 January 1999.

### **1976**

The Iraqi Phosphate Company is established. The company is composed of phosphate mines and a chemical facility that includes "a processing plant, a sulfuric acid plant and a fertilizer plant." The fertilizer plant was bombed by Allied forces in the 1990 Gulf War regained its operational capability by November 1999. The Iraqi Phosphate Company's chemical plant also produces other products such as "sodium phosphates, silica gel, sodium fluoro-silicate (sic), ammonium chloride, and calcium phosphate."

[Note: Although there is no apparent direct link to a CW program, this facility's description goes to demonstrate Iraqi scientific capability.]

—"Alif Ba' Reports on Iraqi Phosphate Industry", *FBIS*, 30 December 1999, ID: FTS19991230000190.

### **1975-1981**

Iraq signs contracts with Karl Kolb GmbH for seven chemical pilot plants. The Hamburg-based company provided Iraq with several "heavy duty pumps and chemicals."

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—Gordon M. Burck and Charles C. Flowerree, *International Handbook on Chemical Weapons Proliferation*, (Westport, Connecticut: Greenwood Press, 1991), p.32.; Anthony Cordesman, "Creating Weapons of Mass Destruction, *Armed Forces Journal International* 126 (February 1989), p. 54.

#### **1975**

Reportedly, Iraq approaches the Pfaudler Company of Rochester, New York, regarding help in creating a relatively small "pesticide blending" production facility. Pfaudler is known for producing corrosion-resistant, glass-lined steel vessels, which are suitable for producing large amounts of toxic chemicals. The discussions break off in mid-1976 because Pfaudler tries to persuade Iraq to proceed first with a pilot plant, whereas Iraq insisted on constructing a massive plant to "blend organophosphate pesticides." Early in 1978 the U.S. government refuses to grant Pfaudler a license to export the machinery for building the plant, but the Iraqis managed to acquire the drawings and technical specifications. Iraq then turns to Imperial Chemical Industries (ICI), which refuses to negotiate the proposal due to British export controls. As a result, Iraq turns to several European firms to finally purchase various equipment that it needed, and in 1975 Iraq builds a "nerve and mustard agent production facility" near Samarra.

—Anthony Cordesman, "Creating Weapons of Mass Destruction, *Armed Forces Journal International* 126 (February 1989), p. 54; Adel Darwish and Gregory Alexander, *Unholy Babylon: The Secret History of Saddam's War*, (London: Victor Gollancz Ltd., 1991), p. 104.

#### **1975**

The Chemical Corps are heavily involved in establishing the al-Hazen Ibn al-Haytham Institute.

—Scott Ritter, *Endgame: Solving the Iraq Problem - Once and for All*, (New York: Simon & Schuster, 1999), p. 83.

#### **1974**

Al-Hasan Ibn al-Haitham is established as a dedicated organization, pursuing the quest for CW.

—Iraq's Weapons of Mass Destruction: The Assessment of the British Government. 2002, p. 11.

#### **1974-1977**

A three-man committee made up of then vice-president Saddam Hussayn, Vice- Premier Adnan Hamdani and Chief of Staff, General Adnan Khairallah, head the Iraqi quest for weapons of mass destruction (WMD). They engage a Beirut-based consulting company called Arab Projects and Development (APD) to help in this endeavor. APD recommends that Iraq recruit foreign scientists and engineers, as it lacked an indigenous technical capability. As a result, between 1974 and 1977, Iraq enlists the services of over 4,000 scientific personnel from countries such as Egypt, Morocco, and Algeria,

—Adel Darwish and Gregory Alexander, *Unholy Babylon: The Secret History of Saddam's War*, (London: Victor Gollancz LTD, 1991), pp. 102-103.

#### **1970s**

Iraq starts research and development activities into production of chemical weapons.

[Note: this date referring to the beginnings of an Iraqi CW program is different from the one noted by Cordesman in the entry above.]

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—UNSCOM report to the Security Council, 25 January 1999, Annex B: Status of the Verification of Iraq's Chemical Weapons Programme, [www.fas.org](http://www.fas.org).

### **1971**

Research begins at a small site in Rashad, northeast of the capital Baghdad. Research on Mustard, CS and Tabun (GA) are pursued.

—Iraq's Weapons of Mass Destruction: The Assessment of the British Government. 2002, p. 11.

### **Late 1960s**

Iraq's chemical warfare program reportedly commences after the Iraqis note effective use of Egyptian CW against Yemen.

—Anthony Cordesman, "Creating Weapons of Mass Destruction, *Armed Forces Journal International* 126 (February 1989), p. 54; Harvey J. McGeorge, "Iraq's secret Arsenal," *Chemical and Biological Warfare*, (January/February 1991), p. 6.

### **1964**

The Iraqi Army Chemical Weapons Branch (CWB) is founded with the responsibilities for planning, transporting, using, and conducting defensive operations against chemical weapons. The CWB commander is also the leader of the Iraqi Chemical Corps.

—Timothy V. McCarthy and Jonathan B. Tucker, "Saddam's Toxic Arsenal: Chemical and Biological Weapons in the Gulf Wars," in Peter R. Lavoy, Scott D. Sagan and James Wirtz (ed.), *Planning the Unthinkable* (Cornell University Press, 2000), p. 62.

### **1960s**

According to Lieutenant General Nizar 'Abd al-Karim al-Khazraji, who was questioned by UNSCOM inspectors, the Iraqi army had been trained to operate in a chemical warfare (CW) environment since the 1960s.

—Scott Ritter, *Endgame: Solving the Iraq Problem - Once and for All*, (New York: Simon & Schuster, 1999), p. 83.

### **8 September 1931**

Iraq accedes to the Geneva protocol, banning the use of chemical weapons. Iraq makes a "no first use reservation," as do approximately 30% of States Parties to the treaty.

—"1925 Geneva Protocol," <http://disarmament.un.org>.

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