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DAVID MANNING

IRAQI WMD PROGRAMMES: PROPOSED PUBLIC PAPER

In advance of the Prime Minister's visit to Washington, I enclose the latest version of this paper. It differs slightly from that submitted last week. In this version we have included specific figures for the CW material unaccounted for by UN inspectors (page 7). These figures have been agreed with the FCO at working level and MOD but are now being double-checked with the US Agencies. So they are not absolutely final.

JS

JOHN SCARLETT

4 April 2002

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IRAQI WMD PROGRAMMES

This document draws on information from a range of sources, including intelligence. Because of the need to protect the safety of sources, details underpinning intelligence judgements cannot be made public. But the Government is confident of the judgements set out in this paper.

INTRODUCTION

- Nuclear, chemical and biological weapons are collectively known as Weapons of Mass Destruction (WMD). Several countries have WMD programmes and missile systems capable of delivering nuclear, chemical or biological warheads. They are working to develop more accurate and longer-range missiles that will allow them to threaten more than just their immediate neighbours.

- Most countries have promised not to acquire these weapons. They have signed relevant international agreements including the Treaty on the Non Proliferation of Nuclear Weapons (NPT), the Chemical Weapons Convention (CWC), and the Biological and Toxins Weapons Conventions (BTWC).

- A few countries have either failed to sign these agreements or have decided to break them. The position of Iraq is a particular concern. Iraq is a signatory to the NPT, but since the late 1980s it has not abided by its obligations. Since the Gulf War Iraq has been bound by five UN Security Council Resolutions (UNSCRs) relating to its WMD programmes. It remains in breach of all of them. In 1980 and 1990 Saddam Hussein used his conventional forces to mount unprovoked attacks against his neighbours, Iran and Kuwait respectively. He has used chemical weapons both against Iran and against his own Kurdish people.

- The International Community has repeatedly sought to disrupt Iraq's efforts to acquire WMD. On each occasion Saddam has sought to rebuild his capabilities. His efforts are making progress. The Government monitors these efforts very closely. This paper sets out what the Government is able to say about them.

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SUMMARY

BALLISTIC MISSILES:

- Retains more than a dozen prohibited Al Hussein missiles (650km) **in breach of UNSCR 687;**
- Working on designs for longer-range missiles **in breach of UNSCR 687;**

Evidence:

- *Infrastructure damaged in the Gulf War and Operation Desert Fox has now largely been reconstituted;*
- *Infrastructure for longer-range missiles is under construction;*
- *UNSCOM unable to account for all imported missiles; others could have been built using hidden retained components.*

NUCLEAR WEAPONS:

- Iraq has a nuclear weapons programme, **in breach of its NPT and IAEA obligations and of UNSCR 687**, but will find it difficult to produce fissile material while sanctions remain in place.

Evidence:

- *Comprehensive programme prior to the Gulf War;*
- *Recalled scientists to work on a nuclear weapons programme;*
- *Covert efforts to procure nuclear related materials and technology.*

CHEMICAL AND BIOLOGICAL WEAPONS:

- Iraq has a capability to produce chemical and biological weapons **in breach of UNSCR 687.**

Evidence:

- *The amount of chemical and biological material, including weapons and agents, left unaccounted for when the UNSCOM inspections terminated would provide a significant offensive capability;*
- *Produced and used proficiently a variety of chemical weapons in 1980s against Iran and its own citizens;*
- *Concealed large scale production of the nerve agent VX until discovered by UNSCOM;*
- *Produced and weaponised at least three BW agents but concealed this capability until forced to declare it in 1995;*
- *Failed to convince UNSCOM of the accuracy of its declarations.*

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BACKGROUND

Before the Gulf War, Saddam Hussein demonstrated his readiness to deploy extensively WMD in the form of chemical weapons both against his neighbours and his own population. Since the Gulf War, he has failed to comply with UN Security Council Resolutions, which his government accepted. While the successful enforcement of the sanctions regimes and the UN arms embargo have impeded Iraq's efforts to reconstitute its weapons of mass destruction, they have not halted them. Much of Iraq's missile infrastructure has been rebuilt; the nuclear weapons programme is being reconstituted; and Iraq continues to have the capability to produce chemical and biological weapons, and may already have done so. Since the withdrawal of inspectors in 1998, monitoring of Iraqi attempts to restore a WMD capability has become more difficult.

UN Security Council Resolutions (UNSCR) relating to WMD

UNSCR 687, April 1991 created the UN Special Commission (UNSCOM) and required Iraq to accept, unconditionally, "the destruction, removal or rendering harmless, under international supervision" of its chemical and biological weapons, ballistic missiles with a range greater than 150km, and their associated programmes, stocks, components, research and facilities. The International Atomic Energy Agency (IAEA) was charged with abolition of Iraq's nuclear weapons programme. UNSCOM and the IAEA must report that their mission has been achieved before the Security Council can end sanctions. They have not yet done so.

UNSCR 707, August 1991, stated that Iraq must provide full, final and complete disclosure of all its WMD programmes and provide unconditional and unrestricted access to UN inspectors. Iraq must also cease all nuclear activities of any kind other than civil use of isotopes.

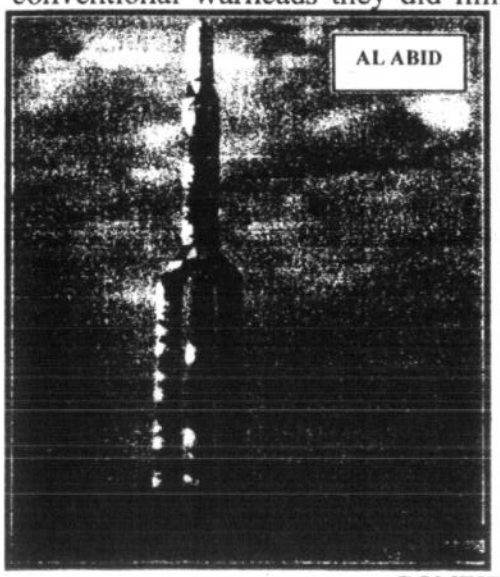
UNSCR 715, October 1991 approved plans prepared by UNSCOM and IAEA for the monitoring and verification arrangements to implement UNSCR 687.

UNSCR 1051, March 1996 stated that Iraq must declare the shipment of dual-use WMD goods.

UNSCR 1284, December 1999, states that Iraq must co-operate with UN inspectors.

BALLISTIC MISSILES

Prior to the Gulf War, Iraq had a well-developed missile industry. Iraq fired over 500 SCUD-type missiles at Iran during the Iran-Iraq War and 93 SCUD type-missiles during the Gulf War. The latter were targeted at Israel and Coalition forces stationed in the Gulf region. Armed with conventional warheads they did limited damage. Iraq had chemical and biological warheads available but did not use them. Most of the missiles fired in the Gulf War were an Iraqi produced stretched version of the SCUD missile, the Al Hussein, with an extended range of 650 km. Iraq was working on other longer-range stretched SCUD variants, such as the Al Abbas, which had a range of 900km. Iraq was also seeking to reverse engineer the SCUD engine with a view to producing new missiles; recent evidence indicates they may have succeeded. In particular Iraq had plans for a new SCUD-derived missile with a range of 1200km. Iraq also conducted a partial flight test of a multi-stage satellite launch vehicle based on SCUD technology, known as the Al Abid.



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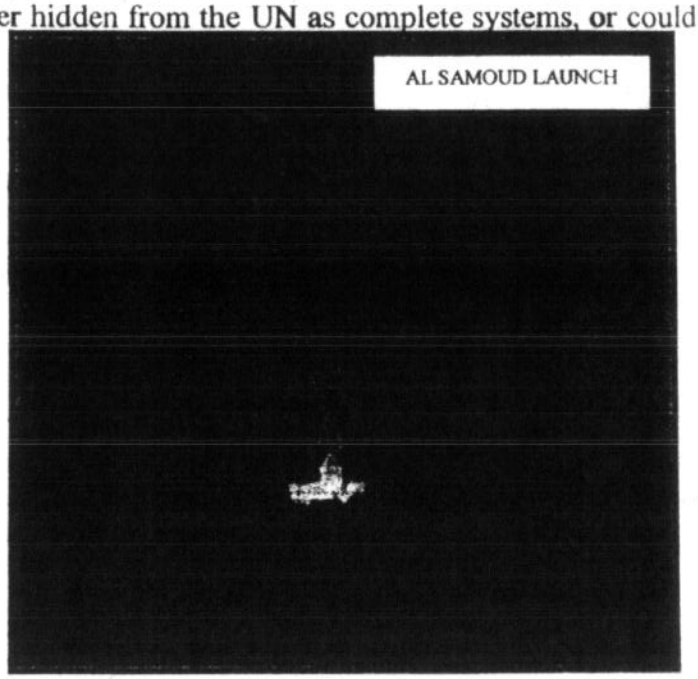
SCUD missiles
The short-range mobile SCUD ballistic missile was developed by the Soviet Union in the 1950s, drawing from the technology of the German liquid-propellant V-2 which saw operational service towards the end of World War II.

For many years it was the mainstay of Soviet and Warsaw Pact tactical missile forces, and it was also widely exported. Recipients of Soviet-manufactured SCUDs included Iraq, North Korea, Iran, and Libya, although not all were sold directly by the Soviet Union.

Also during this period, Iraq was developing the BADR-2000, a 700-1000km range two-stage solid propellant missile (based on the Iraqi part of the 1980s CONDOR-2 programme run in co-operation with Argentina and Egypt). There were plans for 1200-1500km range solid propellant follow-on systems.

Since the Gulf War, Iraq has been openly developing two short-range missiles up to a range of 150km, which are permitted under UN Security Council Resolution 687. The Al-Samoud liquid propellant missile has been extensively tested, has appeared on public parade in Baghdad and is judged to be nearing deployment. In the absence of UN inspectors, Iraq has also worked on extending its range to at least 200km. Testing of the solid propellant Ababil-100 is also underway, with plans to extend its range to at least 200km. Any extension of a missile's range to beyond 150km would be **in breach of UN Security Resolution 687.** We judge that Iraq has retained more than a dozen Al Hussein missiles, **in breach of UN Security Council Resolution 687.** These missiles were either hidden from the UN as complete systems, or could have been re-assembled using illegally retained engines and other components. We do not know the location of these missiles or their state of readiness, but judge that the engineering expertise available would allow these missiles to be effectively maintained. We assess that some of these missiles could be available for use. Although not very accurate when used against Iran, Israel and Saudi Arabia, they are still an effective system, which could be used with a conventional, chemical or biological warhead.



Reporting has recently confirmed that Iraq's priority is to develop longer-range missile systems, which we judge are likely to have ranges over 1000km, enabling it to threaten regional neighbours, Israel and some NATO members. Many hundreds of people are working on these programmes. Imagery has shown a new engine test stand being constructed (A), which is larger than the current one used for Al Samoud (B), and that formerly used for testing SCUD engines (C) which was dismantled under UNSCOM supervision. We judge that this new stand will be capable of testing larger engines for **longer-range missiles than Iraq is permitted under UN Security Council Resolution 687.**

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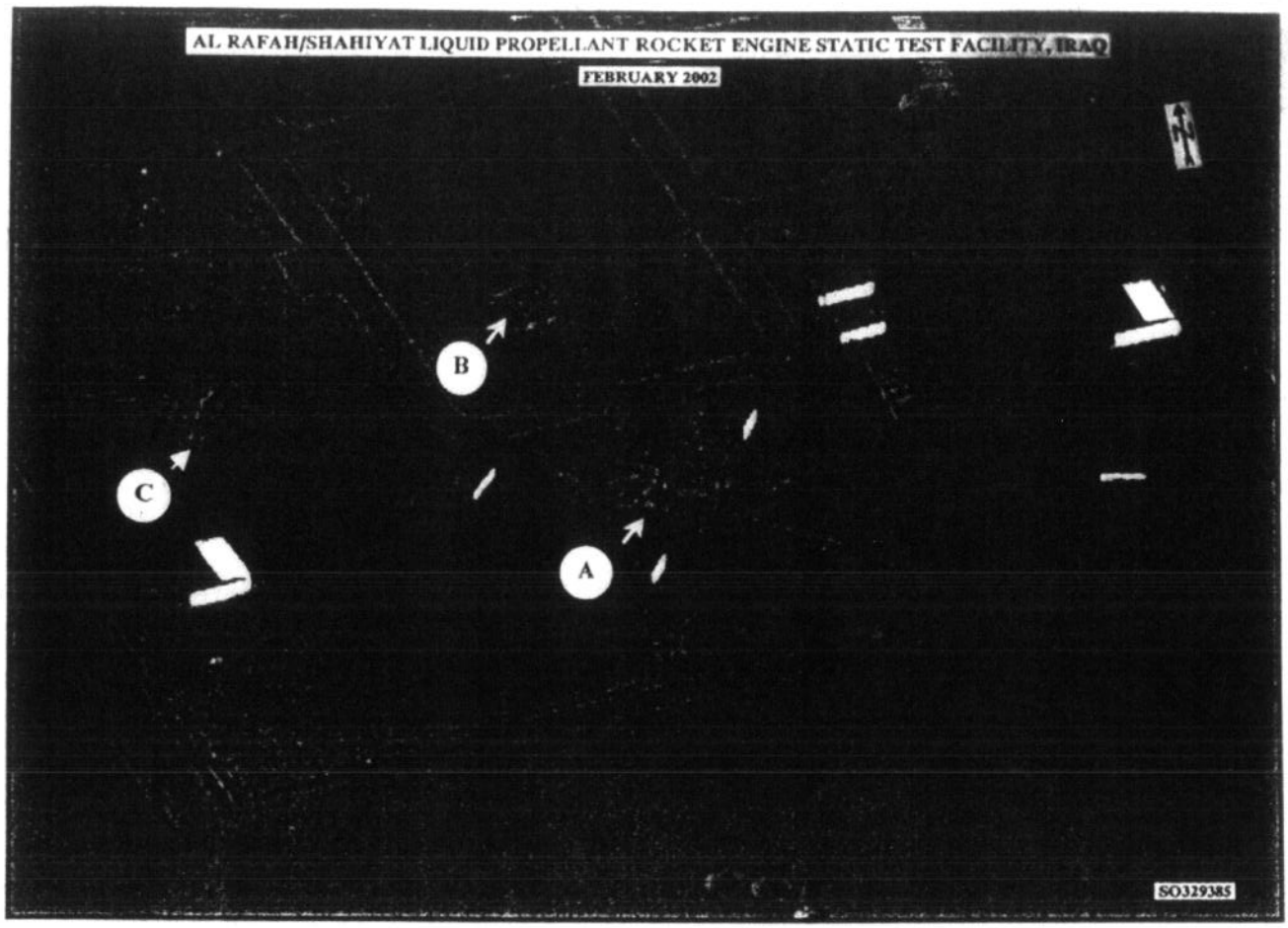

Iraq is also working to obtain improved guidance technology to increase missile accuracy. However, the success of UN restrictions means the development of new longer-range missiles is likely to be a slow process. These restrictions impact particularly on the:

- availability of foreign expertise;
- conduct of test flights to ranges above 150km;
- acquisition of guidance and control technology.

Saddam remains committed to developing longer-range missiles. We assess that, if sanctions remain in place, the earliest Iraq could achieve a limited missile capability of over 1000km is 2007, but it is more likely to be towards the end of the decade.

Iraq has managed to rebuild much of the missile production infrastructure destroyed in the Gulf War and in Operation Desert Fox in 1998. New missile-related infrastructure is currently under construction, including a plant for indigenously producing ammonium perchlorate, which is a key ingredient in the production of solid propellant rocket motors. This was obtained through an Indian chemical engineering firm with extensive links in Iraq. Despite a UN embargo, Iraq has also made concerted efforts to acquire additional production technology, including machine tools, and raw materials, **in breach of UN Security Council Resolution 1051**. The embargo has succeeded in blocking many of these attempts, but we know some items have slipped through and will inevitably continue to do so.

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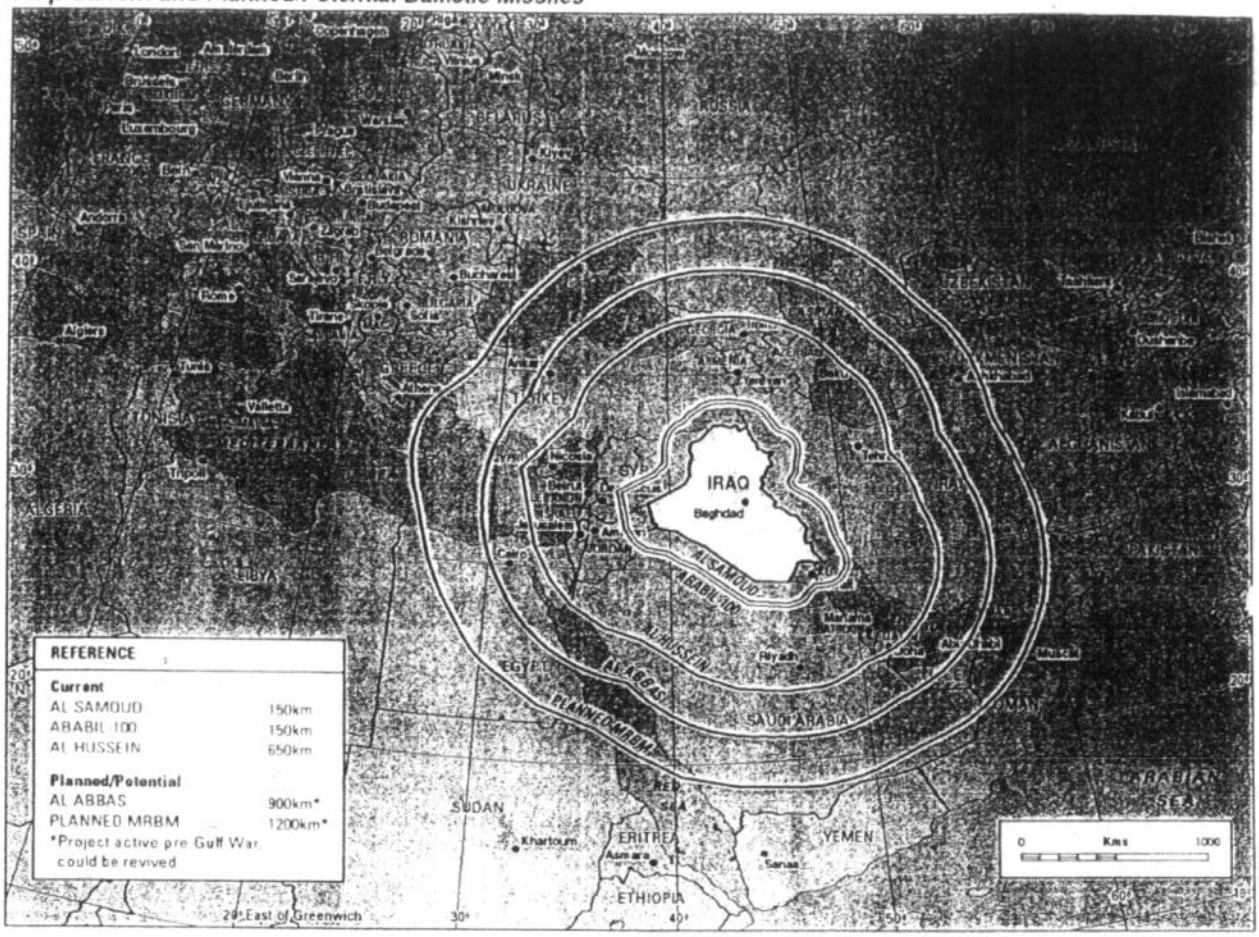
Iraq: Current and Planned/Potential Ballistic Missiles



NUCLEAR WEAPONS

Before the Gulf War, Iraqi plans for the development of a nuclear weapon were well advanced. Iraq was planning and constructing fissile material production facilities and work on a weapon design was underway. Their declared aim was to produce a weapon with a 20 kiloton yield, which would ultimately be delivered in a ballistic missile warhead.

Effect of a 20 kiloton nuclear device in a built up area
A detonation occurring over a city might flatten an area of approximately 3 square miles.

Within 1.6 miles of detonation, blast damage and radiation would cause 80% casualties, three-quarters of which would be fatal. Between 1.6 and 3.1 miles from the detonation, there would still be 10% casualties, 10% of which would be fatal injuries.

We assessed in 1991 that Iraq was less than three years away from possessing a nuclear weapon. After the Gulf War, Iraq's nuclear weapons infrastructure was dismantled by the IAEA. But we judge that Iraq is still working to achieve a nuclear weapons capability, **in breach of its NPT and IAEA obligations and UN Security Council Resolution 687**. Much of its former expertise has been retained. In the last year intelligence has indicated that specialists were recalled to work on a nuclear weapons programme in the autumn of 1998. But Iraq needs certain key equipment and materials for the production of fissile material, probably through uranium enrichment, which would be necessary before a nuclear bomb could be developed. Iraq is covertly attempting to acquire technology and materials with nuclear applications. This includes specialised aluminium, which is subject to international export

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controls because of its potential application in gas centrifuges used to enrich uranium, although it has uses in a range of other weapon systems.

So long as sanctions continue to hinder the import of such crucial goods, Iraq would find it difficult to produce a nuclear weapon. After the lifting of sanctions we assess that Iraq would need at least five years to produce a weapon. Progress would be much quicker if Iraq was able to buy suitable fissile material.

CHEMICAL AND BIOLOGICAL WEAPONS

Iraq made frequent use of a variety of **chemical weapons** during the Iran-Iraq War. Iraq used significant quantities of mustard, tabun and sarin resulting in over 20,000 Iranian casualties. In 1988 Saddam also used mustard and nerve agents against the Kurds in northern Iraq, killing 200-300 people and injuring thousands more. Iraq's military maintains the capability to use these weapons. Iraq admitted in 1991 to the production of blister agent (mustard) and nerve agents (tabun, sarin, and cyclosarin).

Effects of chemical agents

Mustard is a liquid agent that causes burns and blisters to exposed skin. It attacks and damages the eyes, mucous membranes, lungs, skin, and blood-forming organs. When inhaled, mustard damages the respiratory tract; when ingested, it causes vomiting and diarrhoea.

Tabun, sarin and VX are all nerve agents of which VX is the most toxic. They all damage the nervous system, producing muscular spasms and paralysis. As little as 10 milligrammes of VX on the skin can cause death.

A chemical weapon is the agent combined with a means of dispersing it.

After years of denial Iraq admitted to producing about 4 tons of VX nerve agent, but only after the defection of Saddam's son-in-law, Hussein Kamil in 1995. Iraq maintains that the chemical weapons programme was halted in January 1991 and all agents under its control were destroyed by the summer of 1991. However, there are inconsistencies in Iraqi documentation on destruction. UN weapons inspectors have been unable to account for:

- up to 360 tons of bulk chemical warfare agent;
- up to 3000 tons of precursor agent including approximately 600 tons of key precursor chemicals used in VX production;
- over 30,000 special munitions.

We cannot be sure whether these have been destroyed or remain at the disposal of the Iraqi government. But we judge that Iraq retains some production equipment and at least small amounts of chemical agent precursors.

Following four years of pressure from weapons inspectors and the information provided by Hussein Kamil, Iraq finally admitted to the existence of a **biological weapons** programme in 1995. Iraq admitted to:

- producing anthrax spores, botulinum toxin and aflatoxin and to working on a number of other agents;
- weaponising some agents, which included the filling of warheads for its Al Hussein ballistic missiles;
- testing spraying devices for agents.

Iraq has claimed that all its biological agents and weapons have been destroyed, although no convincing proof of this has been offered. UN inspectors could not account for large quantities of growth media procured for biological agent production, enough to produce over three times the amount of anthrax Iraq admits to having manufactured. Reports that Iraq has conducted

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research on smallpox and a number of toxins cannot be corroborated. Iraq is assessed to be self-sufficient in the technology required to produce biological weapons.

We assess that Iraq has a covert chemical and biological weapons programme, **in breach of UN Security Council Resolution 687**. All the necessary expertise has been **retained**. Iraq appears to be refurbishing sites formally associated with its chemical and biological weapons programmes. This includes a facility near Habbaniyah. Iraq is assessed to have some chemical and biological agents available, either from pre-Gulf War stocks or more recent production. We judge Iraq has the capability to produce the chemical agents:

- sulphur mustard, tabun, sarin, cyclosarin, and VX.

and the biological agents:

- anthrax, botulinum toxin, and aflatoxin.

Effects of biological agents

Anthrax

Anthrax is a disease caused by the bacterium Bacillus anthracis. Inhalation anthrax is the manifestation of the disease likely to be expected in biological warfare. The symptoms may vary. If the dose is large (8,000 to 10,000 spores) death is common. The incubation period for anthrax is 1 to 7 days, with most cases occurring within 2 days of exposure.

Botulinum toxin

Botulinum toxin is a neurotoxin produced by the bacterium Clostridium botulinum and is one of the most toxic substances known to man. The first symptoms of botulinum toxin A poisoning may appear as early as 1 hour post exposure or as long as 8 days after exposure, with the incubation period between 12 and 22 hours. Paralysis leads to death by suffocation.

Aflatoxin

Aflatoxins are fungal toxins, which are potent carcinogens. Aflatoxin contaminated food products can cause liver inflammation and cancer.

A biological weapon is the agent combined with a means of dispersing it.

Iraq retains conventional delivery means for chemical and biological weapons such as free fall bombs and missile warheads. But given Iraq's admission of testing spray devices, we judge that the modification of the L-29 jet trainer could allow it to be used for the delivery of chemical and biological agents. The L-29 was subject to UNSCOM inspection for this reason.

Strategies to conceal and protect key parts of the chemical and biological weapons programmes from a military attack or a UN inspection have been developed. These include the:

- use of transportable laboratories;
- use of covert facilities;
- dispersal of equipment when a threat is perceived.

Some of these techniques also apply to the nuclear and missile programmes. In particular we know that the Iraqi leadership has recently ordered the dispersal of its most sensitive WMD equipment and material.

CONCLUSION

- **Iraq retains some prohibited missile systems.**
- **Iraq is developing longer-range ballistic missiles capable of delivering weapons of mass destruction throughout the Middle East and Gulf Region.**
- **Iraq is seeking a nuclear weapons capability.**
- **Iraq has a chemical and biological weapons capability.**

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