

Appendix I

Past storage, handling and deployment of chemical and biological munitions by Iraq

Chemical munitions

Filled munitions

1. The Muthanna State Establishment was the major contractor to the Ministry of Defence, solely responsible for the provision of all chemical munitions to Iraq's armed forces. It was subordinate to the Military Industrialization Commission, which was a part of the Ministry of Industry of Iraq. Prior to 1987, the Muthanna State Establishment was known as the State Establishment for Pesticide Production and was subordinate to the State Organization for Technical Industries, which was the predecessor of the Military Industrialization Commission. Its military code was Project 922.
2. According to Iraq's declarations, interviews with Iraqi officials and documents found in Iraq in the period from 1981 to 1991, the Muthanna State Establishment filled and delivered to the armed forces a total of some 130,000 of various types of chemical munition filled with chemical warfare agents. Those numbers did not include tens of thousands of mortar bombs filled with riot-control agents and smoke munitions also supplied by the Establishment.
3. According to Iraq's declarations, of the 130,000 munitions filled with chemical warfare agents, some 105,000 munitions were supplied to the armed forces during the Iran-Iraq war, in the period from 1981 to 1988, the first large-scale production phase. Of these, some 101,000 deployed munitions filled with about 3,000 tons of chemical warfare agents were used in combat by Iraq during the same period. The remaining 25,000 filled chemical munitions were delivered by the Muthanna State Establishment to the armed forces after the Iran-Iraq war, shortly prior to the 1991 Gulf War. The United Nations Monitoring, Verification and Inspection Commission (UNMOVIC) has no evidence that chemical munitions of any type were filled by Iraq with chemical agents after the adoption of Security Council resolution 687 (1991).
4. In the 1980s, the Muthanna State Establishment did not accumulate stocks of chemical munitions beyond the scope of specific orders from the Ministry of Defence. The temporary storage of chemical munitions prior to their shipment by trucks to the armed forces was carried out at reinforced concrete bunkers in the storage area at the Establishment and at dedicated storage areas controlled by it at two conventional ammunition depots, Muhammadiyat and Ukhaider. Chemical munitions were shipped to central and regional conventional ammunition depots and air bases and from there deployed further down to artillery units and air force regiments. After the deployment, the Establishment maintained responsibility for technical inspection and maintenance of chemical munitions in the possession of the armed forces.
5. Iraq did not provide details regarding specific military units involved in the deployment, handling and combat use of chemical munitions. It maintained that such issues were outside the scope of the Commission's verification mandate. However, in its general statements, Iraq acknowledged that regular military units in

theatres of operation involved in the use of conventional munitions were to receive and use chemical weapons if necessary under special directives. This suggested that even if chemical munitions were handled separately from conventional arms at ammunition depots, they could have been inadvertently mixed to a certain extent with conventional weapons at military units.

6. Defective or leaking chemical munitions were routinely recalled and handled by the Muthanna State Establishment. This resulted in the accumulation of hundreds of such filled defective munitions at the Establishment. According to documents found by the Commission in Iraq, some unused chemical munitions were also returned to the Establishment after the end of the Iran-Iraq war in August 1988. However, it remains unknown whether all unused chemical weapons left over after the Iran-Iraq war were collected and returned to the Establishment, since Iraq did not provide sufficient production, deployment, consumption and inventory records for chemical weapons (see S/1999/94).

7. The second large-scale chemical weapon production campaign took place in Iraq from April 1990 to January 1991. During that period, the Muthanna State Establishment produced and supplied the armed forces with some 25,000 chemical munitions referred to above (para. 3). According to Iraq's declarations, the weapons were deployed to 17 ammunition depots, airbases and airfields throughout Iraq. There was no evidence suggesting that they were further distributed to field military units, with the exception of 50 chemical warheads for the Al Hussein missiles deployed to the Technical Battalion of the Surface-to-Surface Missile Corps.

8. Immediately after the 1991 Gulf war, Iraq undertook to collect all chemical munitions delivered to the armed forces at designated areas controlled by the Muthanna State Establishment. Of the 25,000 chemical munitions delivered, over 2,000 were declared by Iraq to have been destroyed by coalition forces during the war. Another 500 munitions were declared to have been destroyed unilaterally by Iraq and some 22,000 munitions destroyed by Iraq under the supervision of United Nations inspectors in accordance with Security Council resolution 687 (1991) in the period from 1991 to 1994. However, during the collection of chemical weapons after the 1991 war, Iraq was not able to locate 500 chemical munitions (see S/1999/356).

9. Later, in 1997, 14 missing munitions filled with the chemical warfare agent mustard were found by UNSCOM having been abandoned at an ammunition depot in Iraq, used in the past as a munitions storage and distribution facility. In 2003, they were destroyed by Iraq under the supervision of United Nations inspectors (see S/2003/580).

10. On another occasion, over 1,000 chemical artillery rockets (of the 2,000 mentioned above) destroyed and damaged by the coalition were buried by Iraq in an open area in 1991. Later, in 1992, around 800 of those munitions were recovered and destroyed by Iraq under the supervision of United Nations inspectors. The recovered rockets were not usable because of poor condition and mechanical damage. However, many of them still contained viable chemical warfare agents. Inspectors continued to unearth additional munitions containing residues of such agents at the burial site up until 1998.

11. In addition to chemical munitions delivered by the Muthanna State Establishment to the armed forces, there were also hundreds of old chemical munitions remaining in its custody, consisting of old weapons left over after the

Iran-Iraq war and defective munitions not suitable for combat use. Most of these munitions were destroyed or damaged by the coalition through the aerial bombardment during the 1991 Gulf war.

12. A bunker at the storage area of the Muthanna State Establishment containing hundreds of artillery rockets filled with nerve agents was destroyed in part through coalition aerial bombardment in 1991. Because of the collapsed roof of the structure it was not possible to determine the exact extent of the destruction of munitions, nor their exact quantity (Iraq claimed that there were 2,500 munitions in the bunker). In order to prevent further contamination of the area with nerve agents from damaged rockets, Iraq, under the supervision of United Nations inspectors, sealed the structure with reinforced concrete and brick walls covered with earth. In 1994, Iraq signed a protocol with the United Nations Special Commission (UNSCOM) by which it undertook to inspect the sealed bunker at least once a month to ensure that the seals were intact and the warning signs were not removed, damaged or defaced. Iraq also agreed to seek the approval of the United Nations inspectors prior to opening or entering the bunker as long as Security Council resolution 715 (1991) remained in force. There were also 16 other sealed structures and areas at the Muthanna State Establishment that contained potentially hazardous items and materials covered by the same protocol. UNMOVIC does not know whether these procedures have been followed up by the coalition forces after the withdrawal of UNMOVIC from Iraq in March 2003 or recently pursued by the Interim Government of Iraq.

Empty munitions

13. According to Iraq's declarations, in addition to munitions filled with chemical agents, there were 98,000 munitions acquired or produced by Iraq for chemical weapons purposes that remained unfilled up until 1991. Those empty munitions were kept at multiple storage areas in the vicinity of the Muthanna State Establishment under its custody and at several other military ammunition depots and some munitions production facilities in Iraq where they had been manufactured. Of the 98,000 munitions, 36,500 were claimed by Iraq to have been destroyed by the coalition through aerial bombardment during the 1991 war, 29,000 were declared to have been destroyed unilaterally by Iraq in the summer of 1991, 15,500 were converted by Iraq to conventional munitions by filling them with high explosives in 1995 and some 17,000 munitions were declared and destroyed by Iraq under the supervision of United Nations inspectors in the period from 1991 to 1994.

14. However, given the lack of physical evidence to support Iraq's declarations on the destruction of unfilled munitions by aerial bombardment and unilateral destruction, it was not possible to finalize their coherent numerical accounting (see S/1999/94). Thus, it was not surprising that, in the course of its inspections in Iraq in 2003, UNMOVIC found 18 unfilled chemical rockets at ammunition depots involved in the handling of similar weapons in the past. These were designated for destruction by UNMOVIC but the destruction did not take place owing to the withdrawal of UNMOVIC from Iraq in March 2003 (see S/2003/580).

Munitions prototypes

15. In addition, in the period from 1981 to 1991, the Muthanna State Establishment used some 1,000 other prototypes of chemical munitions for static and dynamic tests. Those tests were carried out in remote areas in the desert. Munitions for trials were filled with both chemical warfare agents and simulants. One such munition, a 155-mm binary artillery projectile, was referred to in the seventeenth UNMOVIC quarterly report (S/2004/435).

Observations

16. In general, given the large total quantities of chemical munitions produced and filled by Iraq with chemical warfare agents over the period of 10 years, several deployment and recollection campaigns, the dozens of facilities and units involved in the handling of those weapons and the existing gaps in the accounting for the munitions, it is not surprising that some munitions have been found by the coalition forces.

17. UNMOVIC has no specific details to ascertain conditions of the munitions found by the coalition forces. Depending on the munition model, types of chemical warfare agent, dates of their production and filling, storage conditions, some old Iraqi munitions could still retain high-purity chemical warfare agents, while others would contain degraded chemical warfare agents, binary components or only their residues.

Biological munitions

18. According to Iraq's declarations, interviews with Iraqi officials and documents supplied by Iraq, the number of biological munitions produced in a short period of time (1990-1991) were limited, if compared with the tens of thousands of chemical munitions delivered to the armed forces in the period of 10 years. Iraq declared that a total of 182 munitions (157 aerial bombs and 25 missile warheads) were filled with biological warfare agents by the Muthanna State Establishment from December 1990 to January 1991. However, owing to insufficient documentation for the filling of munitions with biological warfare agents, it was not possible to fully verify Iraq's statements regarding the total numbers of munitions filled with such agents.

19. In early 1991, missile warheads filled with biological warfare agents were deployed to the Technical Battalion of the Surface-to-Surface Missile Corps, where a test was performed to check their integration with missile airframes later stored at two locations. Biological bombs were dispatched to two other remote locations but, according to Iraq, remained under the control of the Technical Research Centre, Iraq's main biological warfare production and research organization.

20. In 1995, all filled biological munitions were declared by Iraq to have been destroyed unilaterally in the summer of 1991 at two remote locations. UNSCOM was able to confirm the destruction of some 25 missile warheads at one location through the evaluation of the excavated missile fragments and some biological forensic analysis of the fragments.

21. Iraq declared that the unilateral destruction of filled aerial bombs had taken place at one location, the Al Azziziyah firing range. In February-March 2003, to minimize the gap in the verification of Iraq's unilateral destruction, Iraq undertook further efforts to recover additional evidence of the destruction of biological bombs.

As at March 2003, different parts accounting for a total of 104 bombs, including 8 intact munitions, were unearthed by Iraq at the location of their unilateral destruction. Together with 24 bombs recovered earlier by UNSCOM, this made a total of 128 bombs out of 157 declared by Iraq (see S/2003/580). Since the ongoing excavation was interrupted after the withdrawal of UNMOVIC from Iraq, it is possible that more munitions and their parts and fragments could remain at the site. Any biological warfare agent found in such munitions would be inactive: sampling and analysis of excavated munitions carried out in 1997 and 2003 found no live agent.