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United Nations Monitoring, Verification and Inspection Commission

Note by the Secretary-General

The Secretary-General has the honour to transmit to the Security Council the twenty-sixth quarterly report on the activities of the United Nations Monitoring, Verification and Inspection Commission (UNMOVIC). It is submitted by the Acting Executive Chairman of UNMOVIC in accordance with paragraph 12 of Security Council resolution 1284 (1999).

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Twenty-sixth 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)

I. Introduction

1. The present report, which is the twenty-sixth submitted in accordance with paragraph 12 of Security Council resolution 1284 (1999), covers the activities of the United Nations Monitoring, Verification and Inspection Commission (UNMOVIC) during the period from 1 June to 31 August 2006.

II. Developments

2. During the period under review, the Acting Executive Chairman continued the practice of briefing the respective Presidents of the Security Council, representatives of Member States and officials of the Secretariat on the activities of UNMOVIC. The Acting Executive Chairman was invited to attend the Security Council retreat at Greentree, Long Island, New York, on 3 June. He also visited the Commission's field office in Larnaca, Cyprus, from 19 to 21 June, and held discussions with the Deputy Permanent Secretary at the Ministry of Foreign Affairs in Nicosia.

III. Other activities

Compendium

3. Work continues on the editing of a final version of the compendium and on the production of a version from which all proliferation and other sensitive information has been removed. The summary of the compendium was issued in document S/2006/420.

IV. Other issues

Chemical munitions recently found in Iraq

4. On 21 June, the Director of National Intelligence declassified key parts from a National Ground Intelligence Center report on the recovery of approximately 500 chemical munitions that contained degraded mustard or sarin nerve agent. The reports indicated that the munitions, recovered since 2003, were of pre-1991 Gulf war origin and that despite efforts to locate and destroy Iraq's chemical munitions, more were thought to still exist. The declassified points also indicate that, while agents degrade over time, chemical warfare agents remain hazardous and potentially lethal.

5. The Commission's previous report (S/2006/342) indicated that, from 1981 to 1991, Iraq had produced some 130,000 munitions filled with chemical agents (mostly used in the Iran-Iraq war or destroyed under United Nations supervision). It also indicated that the unilateral destruction of chemical munitions by Iraq left

uncertainties regarding the types and quantities of weapons it had destroyed. A residue of uncertainty also remains with respect to chemical munitions that were lost, according to Iraq, after the 1991 Gulf war. During the Iran-Iraq war, Iraqi regular military units in areas of operation received and used both conventional and chemical weapons. Because of the rapid relocation of many of those units after the war and the dozens of locations involved in the handling of the weapons, there is a possibility that chemical munitions had become inadvertently mixed with conventional weapons. Moreover, some chemical munitions filled with chemical warfare agents did not differ in their markings from standard conventional weapons, which made their identification as chemical munitions problematic, not only for United Nations inspectors and later personnel of the Iraq Survey Group, but also for Iraq.

6. Given that quantities of chemical weapons produced by Iraq prior to the 1991 Gulf war were dispersed to many locations throughout Iraq and the possibility that those unused during the war with the Islamic Republic of Iran were buried, lost or mixed with conventional munitions, it is not unexpected that the total accounting for these munitions remains uncertain and that some have been recently found in various locations. Moreover, it is possible that some additional chemical munitions may be found. Various data on past production, filling and storage of Iraqi chemical weapons suggest that any remaining mustard-filled artillery shells could still contain viable agent, as Iraq consistently produced mustard of high purity. It is less likely that any rocket warheads filled with nerve agents would still contain viable agent, as they are less robust than the artillery shells and their content was subject to degradation. However, because of the varying quality of the nerve agent produced, it is possible that, even degraded, it can still pose a health hazard associated with the toxic effects of chemical agents or their degradation products. A more detailed account of the knowledge held by UNMOVIC of the possible condition of any remaining Iraqi chemical warfare agents and associated munitions is attached as an annex to the present report.

Field offices

7. In early June, inspection-related equipment recovered as a result of the closure of the United Nations Canal compound in Baghdad was relocated to the UNMOVIC field office warehouse in Larnaca, Cyprus. All equipment from both the chemical and biological laboratories is being sorted, cleaned, inventoried, photographed and catalogued. Following the redeployment of assets in Iraq, UNMOVIC has sought authority to write-off or dispose of excess office equipment and communications gear, relocated to Kuwait, and for equipment determined to be destroyed or missing in Iraq. In mid-June, the field office in Cyprus dispatched various items of recovered IAEA equipment to Vienna, including air samplers, seals and small radiation sources used as standards.

8. The two remaining local UNMOVIC staff members in Baghdad began working at the United Nations headquarters in the international zone. Co-located with the staff of the United Nations Assistance Mission for Iraq, they maintain the Commission’s equipment located in Baghdad.

9. The Cyprus field office continues to provide supervision of the Baghdad local staff. Whenever appropriate, the staff of the field office has continued to work with Customs in Larnaca facilitating shipments of other United Nations agencies and

continues to support the United Nations Peacekeeping Force in Cyprus (UNFICYP) whenever necessary. In mid-July, the field office staff assisted UNFICYP in the evacuation work resulting from the situation in Lebanon. It has continued to assist a number of United Nations agencies operating from Cyprus.

Staffing

10. At the end of August 2006, UNMOVIC headquarters core staff at the Professional level totalled 34. The staff is drawn from 19 nationalities; eight are women.

Technical visits, meetings and workshops

11. The Chief of the Iraq desk of the Department of Safety and Security of the Secretariat requested UNMOVIC assistance in creating several maps of areas of concern to the United Nations in Iraq. The maps will also be used to brief United Nations management on specific incidents.

12. In June, three UNMOVIC experts attended the technology exhibit at the PharmTech annual conference in Sommerset, New Jersey, United States, to keep up to date with advances in process analytical technologies and to identify new technologies, manufacturers and providers of monitoring and inspection equipment.

13. In July, UNMOVIC experts attended a workshop in New York to discuss the United Nations mandate to investigate allegations of the use of chemical or biological weapons.

14. Also in July, an UNMOVIC expert was invited, at no cost to the Organization, to chair a session on the international response to the allegations of the use of biological weapons. The session was part of a conference held at King's College in London entitled "Identification, characterization and attribution of biological weapons use".

15. An UNMOVIC expert participated, at no cost to the Organization, in the seventh Experimental Advanced Course held by the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization in Croatia from 15 to 22 July. The course included an exercise in preparation for a possible request for an on-site inspection under the Treaty, once it enters into force. The UNMOVIC expert helped support the exercise in the identification of logistics requirements for on-site inspections and the planning of a curriculum for prospective members of a logistics team.

16. In August, an UNMOVIC expert was invited, at no cost to the Organization, by the Nuclear, Biological and Chemical Defence School in Vienna to lecture at a course on arms control in the nuclear, biological and chemical realm. The topics were related to the biological weapons area and the UNMOVIC experience from its verification activities in Iraq.

Training

17. The latest UNMOVIC training course for its roster personnel was conducted in France from 29 May to 7 June. It was devoted to technologies used in missile guidance and control systems and unmanned aerial vehicles, such as cruise missiles and drones.

18. The main objective of the course in France was to develop a better technical understanding of the technologies involved in the production of guidance and control systems and unmanned aerial vehicles and, on that basis, to elaborate technically sound and effective approaches to monitoring and inspections in such areas.

19. The course in France was the thirty-fifth training course conducted by UNMOVIC since its inception. A total of 18 experts from the UNMOVIC roster from 15 countries and one UNMOVIC staff member attended the course as trainees. The Commission is grateful to the Government of France for its support.

V. College of Commissioners

20. During the reporting period, the UNMOVIC College of Commissioners was not convened. However, in accordance with paragraph 5 of resolution 1284 (1999), the Commissioners were consulted on the contents of the present report. The next session of the College is planned for 20 and 21 November 2006.

Annex

Overview of the chemical munitions recently found in Iraq

1. The Iraqi chemical weapons stockpile consisted of chemical warfare agents filled into munitions and bulk containers. Iraq declared an overall production of some 3,850 tons of chemical agents during the past chemical weapons programme. Approximately 3,300 tons of mustard gas and the nerve agents tabun and sarin or a sarin/cyclosarin mixture were weaponized into about 130,000 munitions, out of which over 101,000 munitions were used during the Iran-Iraq war. The Iraqi chemical arsenal, produced before 1991, included the following delivery systems: 155-mm artillery projectiles, 122-mm rockets, missile warheads and a variety of aerial bombs. While most of the agents weaponized were filled into aerial bombs, the 122-mm rockets and 155-mm artillery projectiles were the most numerous munitions of the Iraqi chemical weapons arsenal. Iraq declared and inspectors confirmed that the 155-mm projectiles had been filled with mustard gas, while the 122-mm rockets were weaponized with sarin or a sarin/cyclosarin mixture. Iraq also declared that it had successfully developed and tested a limited number of binary artillery systems, including 155-mm and 152-mm shells for sarin but did not enter into serial production of such systems.

2. According to Iraq, during the Iran-Iraq war, munitions were filled with chemical agents days or weeks before their intended use and, after temporary storage at the Muthanna State Establishment, the primary Iraqi chemical weapons facility, they were delivered directly to designated military units. The chemical munitions were dispersed to dozens of locations throughout the territory of Iraq, where they could have been mixed with conventional munitions, abandoned, buried, lost or damaged. Iraq declared that the chemical munitions produced after the Iran-Iraq war (in 1990 and January 1991) had been distributed to 17 locations, including airbases and ammunition depots, throughout the country. Normally, artillery shells, aerial bombs and warheads filled with chemical agents were stored without their associated explosives. The explosive burster charge and fuse were inserted prior to use. The 122-mm rockets filled with nerve agents, however, were frequently stored complete with their explosive burster charge, fuse and with rocket motors attached.

Quality of Iraqi chemical warfare agents

3. According to Iraq, it carried out bulk production and weaponization of chemical warfare agents during the period from 1983 to January 1991 at the Muthanna State Establishment. The production capabilities of the Establishment consisted of both industrial-scale and pilot-scale plants, where chemical agents and their immediate precursors were manufactured. The chemical agents produced at the pilot plants were sometimes of better quality than the agents produced at the large-scale plants, as the pilot-scale processes were easier to control.

4. According to Iraq, the majority of mustard gas that it produced throughout the period of its chemical weapons programme was of high purity (90-95 per cent), although some of it formed a viscous tar (polymerized material) while in storage. Iraq was unable, however, to produce high-purity, stable nerve agents in bulk quantities. For example, the average purity of tabun produced was within the range of 50 to 60 per cent. Iraq stated that it abandoned the tabun programme in 1986 because it had decided to concentrate on the production of the more toxic agent,

sarin. On average, the purity of sarin and sarin-type agents produced by different methods both during and after the Iran-Iraq war was within the range of 45 to 60 per cent. Besides failing to achieve the production of high-purity nerve agents, the level of purity varied from batch to batch. Iraq explained that this variation and the failure to achieve production of high-purity tabun, sarin, cyclosarin and a sarin/cyclosarin mixture was due to both the poor quality of the immediate precursors used and to technical problems associated with the production steps. Iraq furthermore explained that the overall technological problems included its inability to remove solvents and impurities during the final stage of chemical agent production, and difficulties with the optimization of the configuration of production equipment and process parameters for agents and their immediate precursors.

5. Iraq monitored the quality of both bulk and weaponized chemical warfare agent. However, Iraq provided only a small part of its quality control records to inspectors, stating that the rest had been destroyed. Fragmentary information provided in those records indicates that the mustard filled in munitions or stored in bulk containers had a very low rate of degradation and was therefore suitable for long-term storage. The records for nerve agents show that sarin had a tendency to degrade to varying degrees over a few months of storage because of the presence of large quantities of impurities. The Iraqi data indicate that while sarin with an initial purity of 45 to 60 per cent degraded rapidly during the first two months of storage (by 25 to 30 per cent), it degraded further by only 3 to 5 per cent during the third and fourth months of storage. In the absence of more comprehensive quality control records, however, it is not possible to extrapolate degradation rates for Iraqi nerve agents over longer periods of time.

6. While the purity of nerve agents produced were effective enough for immediate use on the battlefield during the Iran-Iraq war, they were not suitable for long-term storage. Following the war with the Islamic Republic of Iran, Iraq focused on the improvement of the purity of agents (which in itself would improve their shelf life) as well as on the development of more powerful agents that were also suitable for longer-term storage, including binary sarin and the chemical nerve agent VX. Iraq declared that its VX programme had been unsuccessful and limited only to an experimental phase. It furthermore declared that, in total, 3.9 tons of VX had been manufactured. According to Iraq, the VX produced with a purity of between 18 and 41 per cent degraded rapidly and therefore had never been considered for stabilization or weaponization. The progress achieved by Iraq with its nerve agent programme after the Iran-Iraq war, including the extent of VX-related activities, cannot be fully evaluated due to the absence of evidence, such as the original production records for the period 1989-1990. No additional or new information on this aspect of the Iraqi chemical weapons programme was provided in the September 2004 report of the Iraq Survey Group led by the United States.

Findings of the United Nations

7. A survey by the United Nations Special Commission of the Iraqi chemical weapons arsenal remaining in 1991 revealed that the overall conditions of filled munitions remaining after the Gulf war varied from site to site. While some locations had well-preserved chemical munitions, at other places they were corroded and leaking. The survey also indicated that many of the 122-mm rockets were leaking, and at some locations severely damaged.

8. The screening of samples of chemical agents taken by the Special Commission from various types of munitions and storage containers during the period 1991-1994 showed that the nerve agents had degraded to various levels and that the agent content was generally below 10 per cent and sometimes below 1 per cent. In a few cases, the purity of nerve agents remained around 20 to 30 per cent, and in one case inspectors identified tabun with a purity of 44 per cent.

9. The destruction process for most of the nerve agent-filled rockets was complicated due to the combined hazard of leaking agent and the presence of explosives. It was also observed that, whether 122-mm rockets had been filled with agents directly into their metal casing or filled into special containers inside the rockets, high internal pressure was created as the sarin and cyclosarin degraded. In 1998, an inspection team involved in the excavation and destruction of more than 200 122-mm rockets formerly filled with sarin/cyclosarin still detected the presence of nerve agents in the rockets.

10. The Special Commission found that most of the 155-mm mustard shells that had survived bombardment during the 1991 Gulf war were in relatively good condition. Samples of chemical agent from various types of munitions and storage containers taken during the period 1991-1994 confirmed the presence of high-purity mustard (typically around 90 per cent). While conducting chemical weapons destruction operations at Muthanna, inspectors also observed that many mustard-filled munitions (bombs and artillery projectiles) contained both good quality agent and polymerized material, in varying proportions. In February 2003, UNMOVIC safely destroyed 10 mustard-filled projectiles and a few litres of mustard agent. The destruction of this material had been scheduled for late 1998 by the Special Commission, but had not been completed before its withdrawal from Iraq in December 1998. Laboratory analysis of samples taken from those projectiles confirmed the contents as high-purity mustard (above 90 per cent).

11. During its inspection activities in Iraq, UNMOVIC identified 18 122-mm rocket warheads designed for use with chemical agent, 14 of which were empty, while the others contained liquid residues, mainly water. No chemical agents nor their respective degradation products were identified. All of the empty warheads were well preserved and suitable for filling with the chemical agent.

12. According to the report of the Iraq Survey Group, in addition to the munitions identified by UNMOVIC, during the period from March 2003 to September 2004, a further 53 chemical munitions (11 155-mm, 41 122-mm and one 152-mm binary) had been found by the Group. They were identified as part of the Iraqi pre-1991 stock, and analysis of the liquid residue in the munitions indicated the presence of degraded chemical agents (mustard, sarin/cyclosarin and binary sarin), their degradation products and impurities. The key parts of a National Ground Intelligence Center report, declassified by the Director of National Intelligence for the Permanent Select Committee on Intelligence of the House of Representatives, mentioned the recovery of approximately 500 chemical munitions in Iraq since 2003, which contained degraded mustard or sarin nerve agent. However, the declassified parts gave no details regarding the purity of the agents.