

Weapons of Mass Destruction (WMD) Iraq Survey Group Final Report

Biological Warfare Annex C

ISG Investigation of Iraq's Reported Mobile Biological Warfare Agent Production Capability Summary of Pre-OIF Intelligence on Iraq's Mobile BW Program

According to a chemical engineer whose reliability ISG now believes is highly questionable, Iraq developed a mobile BW capability designed to evade UN inspections and to provide Baghdad the ability to produce biological agents for offensive purposes. The chemical engineer stated that seven production units had been built, three of which had begun agent production runs. He identified six locations of the seven plants, as well as key engineers and personnel involved in the design, construction, and operation of the units (see [Figure 1](#)). Additional sources reported before OIF on the existence of a mobile biological capability in Iraq:

- An Iraqi civil engineer in a position to know the details of the program reported the existence of transportable facilities moving on trailers.
- An additional source reported that Iraq had manufactured mobile production systems mounted on road-trailer units and on rail cars.

Objectives of Investigation

Because Iraq's reported mobile BW agent production capability was a key element of the prewar assessment of Iraq's WMD programs, it was an important issue addressed by ISG, and the BW team tasked a variety of collectors and analysts against this intelligence issue with the intent to do the following:

- Locate and debrief Iraqis identified as being directly involved in the planning, design, manufacture, and operation of the BW agent production plants.
- Exploit the sites named as having an involvement in the program, as well as ancillary sites and companies connected to the cover story.

In the wake of ISG's investigation, ISG is unable to confirm the existence of a mobile BW agent production capability in Iraq. Key personnel in the mobile program were said to have been involved in both BW activities at Al Hakam and the design and construction of legitimate seed purification plants. Key findings include:

- All individuals that ISG questioned denied the existence of a mobile BW agent production capability.
- Individuals linked to sites that were part of the investigation deny that the sites were used by the military or intelligence services, or used to conceal specialized equipment, trucks, or railcars.
- Two key sites that reportedly housed production units bear physical features that ISG assesses prohibit their use in the manner described by the source.
- ISG has not been able to determine the involvement of other sites reported by the chemical engineer to have been linked to the mobile program largely due to post-OIF events at the sites, such as turnover of personnel and looting.
- While ISG established that the chemical engineer had access to both Iraq's seed purification project and BW program, there are concerns regarding his employment and whereabouts after 1995, which is the period that he claimed to have been involved in the mobile BW program.

Origins of Iraq's Mobile BW Program

Many of the key personnel that ISG investigated were employed at the Chemical Engineering and Design Center (CEDC), which later became part of the Sa'ad Center. By the very nature of their employment, these individuals were involved in both the design and construction of the single cell protein lines at Al Hakam—which could have been used for BW agent production—and the design and construction of legitimate seed purification plants. Background on these two programs:

- **BW Program.** Prior to the 1991 Gulf war, Iraq possessed a BW program that had researched, developed, produced, and weaponized agents. After the war, Baghdad effectively hid its offensive BW program from UNSCOM inspectors for nearly 5 years. Iraq claimed to have destroyed its BW agents and weapons completely in 1991, but UNSCOM was unable to verify this claim. By the departure of UNSCOM inspectors in 1998, Iraq's declared BW production capability in known fixed facilities had been dismantled.
- **Seed Purification Project.** Iraq's mobile BW program reportedly began amid the UN inspection process and operated under the cover of the seed purification project facilities. ISG investigations show that the seed project began in 1994 on orders of Husayn Kamil as part of Iraq's effort to improve and modernize its agricultural sector, and involved the creation of a total of ten legitimate, although inefficient and low quality, agricultural seed sorting and fungicide treatment systems that were designed to have a greater capacity and less of a health risk than seed purification plants available to Iraq at the time. The seed purification units were designed, fabricated, and installed by the CEDC. The designers considered producing a mobile system but decided on fixed plants installed in buildings. The final plant design was based on the reverse engineering of a German-manufactured seed purification plant in Tikrit. The seed purification project occurred in two phases, concluding in 1997 when all ten plants were transferred to the Mesopotamia State Company for Seeds, also known as the Al Nahraysn Company.

Denials of the Existence of Mobile BW

ISG identified nearly ninety individuals that could have been involved or were linked to sites or the source that became part of the investigation. Of these individuals, ISG located and debriefed over sixty. While many have corroborated some of the reporting on personnel and of the Sa'd Center and some legitimate activities the source claimed were cover activities, none have provided evidence to substantiate the claim of a mobile BW program. The levels of cooperation from these individuals vary considerably, ranging from active cooperation to denials and evasiveness:

- Most of the individuals identified as being involved in the mobile BW program were associated with the CEDC and responsible for both

the seed purification project and the single cell protein project that was the cover for the Al Hakam BW facility. ISG spoke to nearly all of these individuals and, while they have acknowledged their involvement in both of the projects, they have consistently denied the existence of a mobile BW program.

- Several key Iraqi engineers were debriefed. Each engineer denied both the creation of a mobile fermentation project and that the seed purification sites were used as legitimate cover for mobile BW agent production units. ISG officers found some of those interviewed to be less than forthcoming, but were unable to judge if the interviewees were withholding information on the alleged mobile BW project or some other project they did not want to reveal. Debriefings of High Value Detainees (HVDs) have not yielded any new insights into the existence of mobile BW agent production capabilities in Iraq.
- Personnel from Al Nasr Al Azim State Establishment, a company that produced fermentors, heat exchangers, and vessels for Al Hakam, have denied that they produced components for any mobile BW systems during the 1990s.
- Personnel from the Al Nahrayn Company denied that three of its sites housed mobile BW agent production units. ISG officers assess that the Al Nahrayn Company has usually been forthcoming and accommodating to requests for information and site visits. The current occupants of the As Suwayrah Store, Tikrit Industrial Facility, and Mosul Rail Station also deny that the facilities were utilized for transportable activities, as reported by the source. However, in the case of Tikrit, although the construction company that runs the site occupied the facility when the production units were allegedly present, current site personnel were hired after OIF and do not have historical knowledge of the facility.

Exploitation of Mobile BW Agent Production Sites

Since stand-up, ISG has exploited many sites in Iraq identified to have a connection to the mobile BW program, including the five reported production sites that remained intact after the war (Figure 2). Discrepancies remain between past descriptions of sites and physical features at the sites as found by ISG. Investigations of six additional sites have not uncovered links to the mobile BW program, which may be partially due to post-OIF activities, such as turnover of employees and looting of facilities.

Djerf-al-Nadaf Seed Purification Facility, Reported Mobile Site. ISG teams visited this site six times to examine its physical features and debrief site personnel. The teams determined that the facility is in fact operated by the Al Nahrayn Company and it's involved in seed purification. A high-bay building adjoining the primary warehouse of interest was built in 1994 and contains a legitimate two-story high seed purification unit. However, ISG also discovered differences between physical features present at the facility and those reported pre-OIF.

- ISG officers were unable to locate any evidence of reported vehicle entrances on the ends of the building that was said to have housed the BW production unit. In the course of inspections, ISG found that the building is constructed of continuous sheet metal; there were no indications that the metal on the ends of the building was altered to accommodate and then conceal the past existence of doors. The current site manager, who is a long-time employee at the site, and an engineer involved in the seed purification project, denied the past existence of the doors on the ends of the building.
- Two two-meter-high block walls around three sides of the building prevent vehicle access into the building through these reported vehicle entrances (Figure 3). ISG determined that the walls were constructed by 1997, which is when the BW production unit was reportedly on site.
- Reportedly a small building on-site was the location of the power supply for the mobile production units. An ISG examination of the reported power supply building revealed that the building consists of two small rooms, which site personnel explained were constructed for security personnel and technicians. These individuals said that the power supply for the site came from the local power grid. However, an external generator for electricity to certain places at the site cannot be ruled out.

ISG has determined that the primary warehouse has undergone some modifications since the date of information concerning a transportable BW connection to the facility. This indicates that the building was altered, thereby raising the possibility that other less detectable modifications have occurred:

- A one-meter high concrete wall was discovered around the internal perimeter of the building. Site personnel report that the wall was built in 1999 to prevent seeds from pressing against the sheet metal walls.

A tile floor was found in one corner of the building, indicating that a room had been present and removed. Site personnel indicate that an office was present in this location, but was removed in 1999 to accommodate the need for greater space required for the seed purification activities.

Al Ahrar Seed Purification Facility, Reported Mobile Site. ISG exploited the Al Ahrar seed purification facility, the primary candidate for the site in the An Numaniyah area that reportedly housed a mobile BW agent production unit. Exploitation revealed that, although it is operated by the Al Nahrayn Company and is part of the seed purification project, it most likely did not house mobile production units.

- The facility contains four adjoining warehouses, each large enough to accommodate semi trailers; however, it was determined that the doorways of the warehouses, assessed to have housed production units, are too short to accommodate tractor-trailers the size of the described mobile fermentation units (Figure 4). There were no signs that the doorways had been altered. In addition, site personnel deny the past presence of trailers with fermentation-like equipment. They stated that CEDC employees, including individuals allegedly involved in the mobile BW program had been to the site as part of the seed purification project. A high-bay building adjacent to the warehouses contains two legitimate seed processing units that are similar to the one unit located at the Djerf-al-Nadaf facility.

Investigations of the four remaining reported production sites have yielded no evidence of their involvement in the mobile BW program

- ***Tikrit Industrial Facility Northwest, Reported Mobile Site.*** This site was a reported location of two transportable BW plants using the cover of seed purification. ISG exploitation of the site revealed that the warehouse, which is currently used as a storehouse for a construction company, was large enough to accommodate tractor trailers (Figure 5). However, ISG found no evidence to suggest that the building is or was equipped with false walls for concealment of any such units. In addition, the site personnel explained that the facility had been a plastics factory from the 1980s until the construction company took over the grounds. Although they had no first-hand historical knowledge of the site, the site personnel stated that the facility had no connection to seed purification and had not been used as a hide site for tractor trailers.
- ***Plant Protection Division As Suwayrah Stores, Reported Mobile Site.*** The As Suwayrah Stores was identified as the most probable candidate for the site in the Al 'Aziziyah-Sarabadi area. ISG exploitation of the site determined that the facility is a pesticide storage site with no association with the seed purification project. Measurements of the suspect warehouses indicate that the facility is large enough to conceal a mobile BW agent production unit; however, ISG has not been able to confirm if such a unit had been present in the past. Site personnel, who had been hired after OIF, had no historical knowledge of the activities at the facility; however Plant Protection Division Management with historical knowledge of the site deny that the facility was used to hide vehicles or production equipment.
- ***Mosul Rail Yards, Reported Mobile Site.*** The locomotive repair station at the Mosul rail yards reportedly was the location of the single rail-mounted BW agent production unit. While this site is not directly involved in the seed purification project, the current Director General of the Al Nahrayn Seed Company stated that the company was ordered to conceal seed purification equipment in the rail

station during the 1998 Desert Fox campaign. An ISG inspection of the facility revealed that it is capable of accommodating rail cars. However, long-time employees at the rail yard stated that the repair station had never been used to conceal unusual equipment, railcars, or trucks.

- **Huwayjah Agricultural Facility, Reported Mobile Site.** This site, which reportedly housed a BW production unit in the late 1990s, was completely destroyed by looters between 10 May and 26 November 2003. Al Nahrayn officials confirmed that their site in Huwayjah had been destroyed by looters and deny the past presence of mobile platforms for BW agent production. They stated that, while this site was an agricultural processing facility, it had no connection to the seed purification project.

ISG exploited three additional sites, but were unable to ascertain their link to the mobile BW program due to post-OIF activities, such as turnover of site personnel and looting:

- **Al Mishraq Sulfur Facility, Possible Reported Dispersal Site.** ISG assesses that the Al Mishraq Sulfur Facility could have been a dispersal site for the rail mounted BW production unit housed in Mosul. ISG exploitation of this site revealed no evidence of the unit, and site personnel claimed that they had never seen rail cars with fermentation-like equipment in them.
- **Habbaniyah Barracks, Reported Dispersal Site.** Reportedly, containers of BW material from the mobile units were concealed from UN inspectors by burial at the Habbaniyah Barracks. ISG exploited the site to find evidence to support this claim; however, looters had removed, among other things, a fence that reportedly would have provided a marking to assist in locating the burial site.
- **Baghdad Unidentified Facility 'Ali Ad Dayyan.** This site, also known as Buetha, is along the Tigris just south of Baghdad and was reported to have been associated with the BW program personnel. ISG exploited the site and determined that it had been an orange grove and chicken farm at one time but could not confirm an association with the mobile BW program. However, locals stated that it had belonged to the Iraqi Government until 1998.

Other Leads

In addition to information now judged unreliable from a key source, ISG also has sought to vet the reporting by other sources who indicated before OIF that Iraq had a mobile capability. ISG has not been able to corroborate this reporting, and these individuals are believed to be now outside of Iraq. Since it began its investigation, ISG also received information on a possible BW mobile capability from two other sources separate from those mentioned by the pre-OIF sources, but neither lead has confirmed the existence of a mobile BW agent production capability:

- Nu'man 'Ali Muhammad Al Tikriti, director of the M16 section of the IIS, made a reference to the MIC in 2000 having at least one transportable facility for work on either biological or chemical warfare agents, according to a former IIS officer. Nu'man denies knowledge of any attempts by Iraq to manufacture or use mobile facilities for a BW or CW program.
- A former senior officer in the Iraqi Army told us that he heard from his nephew, who was involved in making weapons, that Iraq had "portable biological factories or laboratories" making BW agents in 1998. Debriefings of the nephew have determined that he had hearsay information regarding movement of prohibited BW-related equipment to evade UNSCOM inspections. He claimed to have had no knowledge of a mobile BW agent production capability.

Individuals Debriefed

ISG has debriefed key individuals and visited key sites regarding the planning, design, manufacture, and operation of the reported transportable BW agent production plants.

Some of these individuals were key players directly involved with running the BW program, whereas others were either heads or associated with specific areas of the BW program. ISG interviewed key figures, such as the suspected head of the BW program, the former Deputy Minister of Agriculture, the National Monitoring Directorate representative to the Ministry of Industrialization and Minerals, the director of the MIC, the former Minister of Industrialization and Minerals, the Minister of Transportation and Communication that had involvement in the BW program, and other important individuals that had suspected involvement with Iraq's BW program.

In the area of mobile production equipment and facilities, there were a number of key individuals interviewed. Some of these individuals included the Director of IIS Directorate of Criminology M16 that reportedly discussed mobile platforms in 2000, the director of a possible dispersal site for rail mobile units, managers of a reported mobile BW agent production site, and a former military officer who allegedly knew that Iraq had "portable biological factories or laboratories" making BW agents in 1998.