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## GLOSSARY

- 7075-T6 aluminum:** A very high strength aluminum alloy.
- al Husayn:** An Iraqi-produced variant of the Scud missile.
- Annex III to UNSCR 687 and 707:** An addendum to United Nations Security Council Resolutions 687 and 707 which outlines a list of nuclear and nuclear-related items, equipment, software, related technology, and other materials considered to be designed or prepared for the processing, use or production of special fissionable material (i.e., items for use exclusively in nuclear activities, whether military or civilian). These items are either prohibited to Iraq or are subject to certain controls; including reporting to the International Atomic Energy Agency, by Iraq and by any state exporting such items to Iraq.
- Anodize:** To coat a metallic surface with a protective coating.
- Atropine:** A nerve agent antidote.
- Beams gas centrifuge:** Centrifuge developed by Dr. Jesse W. Beams (a founder of the U.S. gas centrifuge program).
- Biological weapons agent:** A dangerous biological pathogen. The agent must still be weaponized in order to be effectively delivered to the intended target.
- Carbon fiber composite:** A group of fibrous materials made of carbon that is one of the strongest and stiffest reinforcements available; used in high performance applications that require high specific strength and or stiffness.
- Centrifuge:** A rapidly rotating cylinder that can be used for the enrichment of uranium. The spinning cylinder concentrates the heavier isotope (U-238) of the uranium hexafluoride gas along the cylinder's wall, while the lighter isotope (U-235 - enriched uranium) concentrates at the center of the cylinder where it can be drawn off separately.

<b>Centrifuge rotor:</b>	A thin-walled vertical cylinder made from a strong material which rotates at very high speeds.
<b>Centrifuge cascade:</b>	A number of centrifuges connected in series used to obtain highly enriched uranium.
<b>Chromic acid:</b>	A powerful oxidizing agent used to anodize metals and alloys.
<b>Cyclosarin/GF:</b>	A chemical warfare nerve agent.
<b>Defense contingency product:</b>	A DIA finished intelligence product intended to support a specific contingency, such as Operation Iraqi Freedom.
<b>Defense Intelligence Reference Document:</b>	Analytic reports produced by the DIA.
<b>Defensive biological warfare program:</b>	Effort to produce methods of protecting personnel from biological weapons, such as vaccines, antibiotics and protective clothing.
<b>Desert Fox:</b>	Codename for a series of air-strikes launched following the departure of United Nations weapons inspectors in 1998. The goal was to degrade Saddam Hussein's ability to make and use WMD and proscribed missiles, diminish his ability to wage war against his neighbors, and demonstrate the consequences of violating international obligations.
<b>Drone:</b>	A pilotless aircraft operated by remote control.
<b>Dual-use:</b>	Indicating potential use in both military and civilian applications. Examples include a fermenter that is useful for both making vaccines and biological warfare agents; or a chlorine supply which can be used to help purify water supplies or produce chemical weapons.
<b>Electronic jammer:</b>	Any active transmission device intended to disrupt enemy radio frequency signals.

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<b>Electromagnetic isotope separation (EMIS):</b>	A process of uranium enrichment in which ions, accelerated through a vacuum in a magnetic field separate into different trajectories based on the ion's mass and charge. Can be used to enrich uranium.
<b>Endemic:</b>	The constant presence of a disease or infectious agent within a given geographic area.
<b>Enriched uranium:</b>	Uranium which has been processed such that it contains a higher percentage of fissile uranium isotopes (mostly U-235) than is found in natural uranium ores.
<b>Executive Dissem:</b>	A CIA Directorate of Operations report with limited distribution.
<b>Fissile material:</b>	Material capable of being split by a low-energy neutron and, therefore, readily usable for the core of a nuclear weapon. The most common fissile materials used in the production of nuclear weapons are Uranium-235 and Plutonium-239.
<b>Gas centrifuge process:</b>	A uranium enrichment process in which a feed of uranium hexafluoride (UF <sub>6</sub> ) gas is enriched in a rapidly rotating cylinder. Each stage of a gas centrifuge enrichment plant consists of many gas centrifuge rotors.
<b>Gas centrifuge rotors:</b>	A long, thin vertical cylinder made from strong material (aluminum, maraging steel, or graphite fiber) which rotates at high speeds about its axis.
<b>Gaseous diffusion:</b>	A process for enriching uranium in which a feed of uranium hexafluoride (UF <sub>6</sub> ) gas is compressed and flows through a cascade of compressors, heat exchangers, and a diffuser that houses membranes. Some of the gas molecules contain U-235 (enriched uranium), others contain U-238 (depleted uranium). The molecules with U-235 pass preferentially through the membrane micropores to form an enriched product.
<b>Geiger counter:</b>	Radiation detection equipment.

<b>High-speed balancing machine:</b>	A machine that spins component parts to high-rates of rotation and measures the amount and phase of imbalance on the part. It is used to test components for vibration or to correct imbalanced components.
<b>Hoop-stress:</b>	The circumferential stress in a cylindrical form subjected to internal or external pressure.
<b>Hydrostatic testing:</b>	Pressure tests used to test structural integrity. Often used to test the strength of missile airframes.
<b>INTELINK:</b>	The Top Secret classified Intelligence Community intranet.
<b>Magnetic suspension:</b>	Provides magnetic support for rotors. Often used in high-speed applications to reduce friction.
<b>Manhattan Project:</b>	Code name for the U.S. effort to build an atomic bomb during World War II.
<b>Maraging steel:</b>	A type of steel or iron-based alloy that is harder than normal steel and is strengthened by a process of martensitic transformation; used in electro-mechanical components where ultra-high strength is required.
<b>Mobile erector launcher:</b>	A type of missile launcher that requires a separate towing vehicle; typical configuration is the missile erector launcher on flat-bed trailer.
<b>Mujaheddin:</b>	A para-military force of Muslim guerilla warriors engaged in a <i>jihad</i> , or holy war.
<b>Mustard agent:</b>	A chemical warfare blister agent.
<b>Nerve agent:</b>	A family of chemical warfare agents which attack the nervous system.
<b>Nodong:</b>	A North Korean medium-range ballistic missile.
<b>Nuclear Suppliers Group:</b>	Group of nuclear suppliers that seeks to control exports of nuclear materials, equipment, and technology, both dual-use and specially designed and prepared equipment.

<b>Offensive biological warfare program:</b>	Effort to produce BW agents for delivery with the intent of killing or incapacitating.
<b>Oil For Food Program:</b>	Established under UNSCR 986; allowed Iraq to sell oil to finance the purchase of humanitarian goods.
<b>Ombudsman:</b>	An organizational appointee who investigates complaints by individuals against the organization.
<b>Oxidizer:</b>	A substance that oxidizes another substance.
<b>Phenol:</b>	A caustic, poisonous white soluble crystalline compound derived from benzene and used in resins, disinfectants, plastics, and pharmaceuticals; poisonous if taken internally.
<b>SA-2:</b>	A common surface-to-air missile system.
<b>Sarin:</b>	A highly toxic chemical nerve agent.
<b>Simulant:</b>	A usually benign substance with similar properties as chemical and/or biological warfare agents used in lieu of the actual agents. Often used to test weapons delivery systems.
<b>Telemetry:</b>	The science and technology of automatic data measurement and transmission, as by wire or radio, from remote sources, such as space vehicles, to a receiving station for recording and analysis.
<b>Tensile strength:</b>	The maximum amount of tensile stress or tension that can be applied to a metal before it ceases to be elastic. If too much force is applied the material will break, become plastic, or be unable to go back to its initial shape.
<b>U-2:</b>	Reconnaissance plane that is an intelligence collection platform.
<b>Uranium hexafluoride (UF6):</b>	A gas used in the uranium enrichment process.
<b>Ureenco:</b>	Name for the European consortium that developed the centrifuge process of uranium enrichment.



- Wahhabi:** Fundamentalist movement of the Sunni form of Islam.
- Weaponization:** Taking biological or chemical warfare agent and placing it in an effective delivery system, such as a spray tank system or artillery shell.
- Yellowcake:** A yellow or brown powder produced from naturally occurring uranium minerals as a result of milling uranium ore or processing uranium-bearing solutions; uranium oxide.
- Yield strength:** Stress that causes plastic deformation.
- Zippe centrifuge:** Type of gas centrifuge designed by German scientist Dr. Gernot Zippe. This centrifuge design has influenced all gas centrifuge designs.

