

GLOSSARY

A

Airburst. Nuclear weapon explosion at such a height that the expanding fireball does not touch the earth's surface when the luminosity is a maximum.

ADA. Air defense artillery .

AI. Area of interest.

AO. Area of operations.

Area of interest. Geographical area from which information and intelligence are required to permit planning or successful conduct of the command's operation.

The AI is usually larger than the command's AO and battlespace; it includes any threat forces or characteristics of the battlefield environment that will significantly influence accomplishment of the command's mission.

Area of operations. Portion of a conflict area necessary for military operations.

AOs are geographical areas assigned to commanders for which they have responsibility and in which they have the authority to conduct military operations.

B

Battlespace. Components determined by the maximum capabilities of a unit to acquire and dominate the enemy, includes areas beyond the area of operations and varies over time according to how the commander positions his assets.

BDO. Battledress overgarment.

Beta particle. Charged particle of very small mass emitted spontaneously from the nuclei of certain radioactive elements. Most of the direct fission products emit (negative) beta particles. Physically, the beta particle is identical with an electron moving at high velocity.

BIDS. Biological integrated detection system .

Biological agent. Microorganisms and toxins that cause disease in man, plants, or animals or cause the deterioration of materials.

Biological defense. Methods, plans, and procedures involved in establishing and executing defensive measures against attacks using biological agents.

Biological weapons. Any item of material that projects, disperses, or disseminates a biological agent, including anthropoid vectors.

Blast wave. A pulse of air in which the pressure increases sharply at the front, accompanied by winds, and propagated from an explosion.

Blister agent. Chemical compound that injures the eyes and lungs and burns or blisters the skin.

Blood agent. Chemical compound that affects bodily function by preventing the normal transfer of oxygen from the blood to the body tissues. Also called cyanogen agent.

BOS. Battlefield operating system .

BW. Biological warfare .

C

C. Celsius.

CB. Chemical/biological .

CBDCCOM. Chemical and Biological Defense Command.

CCIR. Commander's critical information requirements.

CDM. Chemical downwind message.

Centigray. Unit of measurement for radioactivity.

cGy. Centigray.

cGyph. Centigray per hour.

Chemical agent. Chemical substance intended for use in military operations to kill, seriously injure, or incapacitate through its physiological actions. Excludes riot control agents, herbicides, smoke, and flame.

CI. Combat ineffective.

CINC. Commander-in-chief.

CMA. Chemical Manufacturers Association .

CMO. Civil-military operations .

COA. Course of action.

Collective protection. Use of shelters to provide a contamination-free environment for personnel and equipment.

Collective-protection shelter. A shelter, with filtered air, that provides a contamination-free environment for personnel/equipment and allows relief from increased protective postures.

Commander's critical information requirements. The information the commander needs to visualize the outcome of current operations. Includes information on both friendly and enemy forces.

Contamination. Deposit and/or absorption of radioactive, biological, or chemical agents on and by structures, areas, personnel, or objects; food and/or water made unfit for human consumption by the presence of environmental chemicals, chemical agents, radioactive elements, bacteria, or organisms.

Contamination avoidance. Individual and/or unit measures taken to avoid or minimize NBC attacks and reduce NBC hazard effects.

Course of action. A possible plan open to an individual or commander that would accomplish or is related to mission accomplishment. A COA is initially stated in broad terms with the details determined during staff wargaming.

CPE. Collective-protection equipment.

CSC. Combat stress control.

CW. Chemical warfare.

D

DAMPL. Department of the Army master priority list.

Decision point. An event, area, line, or point on the battlefield where tactical decisions are required resulting from the wargaming process before the operation order. Decision points do not dictate commander's decisions, they only indicate that a decision is required, and they indicate when/where the decision should be made to have the maximum effect on friendly or enemy courses of action.

Decontaminate. To break down, neutralize, or remove a chemical, biological or radioactive material.

Depleted uranium. Uranium with a concentration of Uranium-235 smaller than that found in nature (0.711 percent). It is largely obtained as by-product "tails" of the uranium enrichment process.

DLA. Defense Logistics Agency.

Doctrinal template. A model based on postulated threat doctrine. They illustrate the disposition and activity of threat forces and assets (HVTs) conducting a particular operation unconstrained by the effects of the battlefield environment. They represent the application of threat doctrine under ideal conditions.

DOT. Departure of troops.

DPG. Defense planning guidance .

DU. Depleted uranium.

E

EAC. Echelons above corps.

EDM. Effective downwind message.

Electromagnetic pulse. A sharp pulse of radio frequency (long wavelength) electromagnetic radiation produced when an explosion occurs in an unsymmetrical environment, especially at or near the earth's surface or at high altitudes. The intense electric and magnetic fields can damage unprotected electrical and electronic equipment over a large area.

EMP. Electromagnetic pulse.

Event matrix. A description of the indicators and activity expected to occur in each NAI. It normally cross-references each NAI and indicator with the times they are expected to occur and the COAs they will confirm or deny. There is no prescribed format.

EVENTEMP. Event template.

Event template. A guide for collection planning. The template depicts the NAIs where activity or lack of activity will indicate which COA the threat has adopted.

F

F. Fahrenheit.

Fallout. Process or phenomenon of the descent to the earth's surface of particles contaminated with radioactive material from the radioactive cloud. Term is also applied in a collective sense to the contaminated particulate matter itself. The early or local fallout is defined as those particles that reach the earth within 24 hours after a nuclear explosion. The delayed fallout consists of the smaller particles that ascend into the upper troposphere and into the stratosphere and are carried by winds to all parts of the earth. The delayed fallout is brought to earth mainly by rain or snow over extended periods ranging from months to years.

Fission. The splitting of the nucleus of a heavy atom into two lighter nuclei. It is accompanied by the release of neutrons, gamma rays, and kinetic energy of the fission products. It is usually triggered by collision with a neutron, but in some cases can be induced by protons and other particles or gamma rays.

Fizzle. The initiation of the fission chain reaction in the fissile material of a nuclear weapon at any time before the designed criticality or the maximum compression or degree of assembly is attained. Also called "pre-initiation."

FRAGO. Fragmentary order .

FROG. Free rocket over ground.

FSO. Fire support officer.

Fuel processing plant. A plant where irradiated fuel elements are dissolved, waste materials removed, and reusable materials recovered.

Fusion. Process by which two light nuclei atoms, deuterium and/or tritium, combine to form a heavier nucleus with the release of a substantial amount of energy. Extremely high temperatures, resulting in highly energetic, fast-moving nuclei, are required to initiate fusion reactions.

G

Gamma radiation. Electromagnetic radiations of high photon energy originating in atomic nuclei and accompanying many nuclear reactions such as fission.

Physically, gamma rays are identical with X-rays of high energy.

GB. A nerve agent (Sarin); an organophosphate ester derivative of phosphoric acid.

Gold Seal biological laboratory.

GPO. Government Printing Office.

Ground zero. The point of detonation for an explosive device, usually used with regard to nuclear devices.

Gun-type weapon. A gun-barrel-shaped device in which two or more pieces of fissionable material, each less than a critical mass, are brought together very rapidly so as to form a supercritical mass that can explode as the result of a rapidly expanding fission chain reaction.

GZ. Ground zero.

H

Ha. Hectare; 10,000 square meters.

HD. Distilled mustard; a sulfur mustard agent.

Height of burst. Height above the earth's surface at which a bomb is detonated in the air.

High-altitude burst. A detonation at an altitude over 100,000 feet.

High-payoff target. Target whose loss to the threat will contribute to the success of the friendly COA.

High-value target. Assets the threat commander requires for the successful completion of a specific COA.

HN. Host nation.

HPT. High-payoff target.

HVT. High-value target.

Hydrogen bomb. A nuclear weapon that derives its energy largely from fusion, also known as a thermonuclear weapon.

I

IAW. In accordance with.

ICW. In coordination with.

ICE. Individual chemical equipment.

Immunize. To increase resistance and/or protection from disease.

Improvised nuclear device. Term used to refer to any type of explosive device designed to cause a nuclear yield.

IND. Improvised nuclear device.

Indicators. Positive or negative evidence of threat activity or any characteristic of the AO which points toward threat vulnerabilities or the adoption or rejection by the threat of a particular capability, or which may influence the commander's COA selection. Indicators may result from previous actions or from threat failure to take action.

Intelligence preparation of the battlefield. Systematic, continuous process of analyzing the threat and environment in a specific geographic area. It is designed to support staff estimates and military decision making.

Intelligence requirement. A requirement for intelligence to fill a gap in the command's knowledge and understanding of the battlefield or threat forces. They are designed to reduce the uncertainties associated with successful completion of a specific friendly COA.

Ionization. Separation of a normally electrically neutral atom or molecule into electrically charged components.

IPB. Intelligence preparation of the battlefield.

IPE. Individual protective equipment.

IPL. Integrated priority list .

IR. Intelligence requirement.

J

JCS. Joint Chief of Staff.

K

Kilometer. Unit of linear measure equal to 1,000 meters or .62137 miles.

Kg. Kilogram.

Km. Kilometer.

Kmph. Kilometers per hour.

L

LLR. Low-level radiation.

Loading. The force on an object or structure or element of a structure. The loading due to blast is equal to the net pressure in excess of the ambient value multiplied by the area of the loaded object.

Low-level radiation. Exposure from radioactive sources that is higher than those routinely received by health physics workers and the general public and are in the range from background radiation to 70 cGy. The primary consequence of exposure may be induction of cancer in the longer-term post exposure. The hazard from LLR may result from alpha, beta, or gamma radiation.

LRBSDS. Long-range biological standoff detection system.

M

Mach stem (front). Shock front formed by the merging of the incident and reflected shock fronts from an explosion. Term is generally used with reference to a blast wave, propagated in the air, reflected at the earth's surface.

MCOO. Modified combined obstacle overlay.

METT-T. Mission, enemy, terrain, troops, and time available.

Mission, enemy, terrain, troops, and time available. Used to describe the factors that must be considered during the planning or execution of a tactical operation. Since these factors vary in any given situation, the term "METT-T" is a common way of denoting that the proper approach to a problem in any situation depends on these factors and their interrelationship in that specific situation.

Mission-oriented protective posture. A flexible system that provides the maximum NBC protection for the individual with the lowest risk possible and still maintains mission accomplishment.

Modified combined obstacle overlay. A product used to depict the battlefield's effects on military operations. It is normally based on a product depicting all obstacles to mobility, modified to also depict the following:

- Cross-country mobility classifications.
- Objectives.
- Avenues of approach and mobility corridors.
- Likely locations of counter-mobility obstacle systems.
- Defensible terrain.
- Likely engagement areas.
- Key terrain.

MOPP. Mission-oriented protective posture.

MRS. Multiple launch rockets.

MSDS. Material safety data sheets.

N

NAI. Named area of interest .

Named area of interest. Geographical area where information that will satisfy a specific information requirement can be collected. NAIs are usually selected to capture indications of threat COAs but also may be related to conditions of the battlefield.

NBC. Nuclear, biological, and chemical .

NBCWRS. NBC warning and reporting system .

NEO. Noncombatant evacuation operations .

Neutron. A neutral particle (no electrical charge) of approximately unit mass present in all atomic nuclei except those of ordinary hydrogen. Neutrons are required to initiate the fission process, and large numbers of neutrons are produced by both fission and fusion reactions in nuclear (or atomic) explosions.

NIGA. Neutron-induced gamma activity.

NIOSH. National Institute for Occupational Safety and Health.

NRC. National Response Center.

NTIS. National Technical Information Service.

Nuclear radiation. Particulate and electromagnetic radiation emitted from atomic nuclei in various nuclear processes. Of importance are alpha and beta particles, gamma rays, and neutrons.

Nuclear reactor. A device in which a controlled, self-sustaining nuclear chain reaction can be maintained with the use of cooling to remove generated heat. Types include power reactors, research and test reactors, and production reactors.

Nuclear weapon. A device that releases nuclear energy in an explosive manner as the result of nuclear chain reactions involving the fission or fusion, or both, of atomic nuclei.

Nuclear yield. The energy released in the detonation of a nuclear weapon expressed in kilotons or megatons of trinitrotoluene (TNT) required to produce the same energy release. Yields are categorized as:

Very low: less than one kiloton.

Low: 1 kiloton to 10 kilotons.

Medium: over 10 kilotons to 50 kilotons.

High: over 50 kilotons to 500 kilotons.

Very high: over 500 kilotons.

Nucleus. Small, central, positively charged region of an atom which carries essentially all the mass. Except for hydrogen (which is a single proton), all atomic nuclei contain both protons and neutrons.

O

OJCS. Office, Joint Chief of Staff.

OPLAN. Operations plan.

OPORD. Operations order.

P

PAO. Public Affairs Office .

Parts per million. Measure of proportion by weight; equivalent to a unit weight of solute per million unit weights of solution.

PD. Performance degraded.

PIR. Priority intelligence requirement.

Proton. A particle of mass carrying a unit positive charge; it is identical physically with the nucleus of the ordinary hydrogen atom.

ppm. Parts per million.

Priority intelligence requirement. An intelligence requirement associated with a decision that will affect the overall success of the command's mission. PIRs are a subset of intelligence requirements of a higher priority than information requirements. PIRs are prioritized among themselves and may change in priority over the course of the operation's conduct. Only the commander designates PIRs.

Psychological operations. A planned psychological activity in peace and war directed towards enemy, friendly, and neutral audiences, in order to create attitudes and behavior favorable to the achievement of political and military objectives.

PSYOPS. Psychological operations.

R

Radii of vulnerability. The radius of the circle within which friendly troops will be exposed to a risk equal to, or greater than, the emergency risk criterion (5 percent combat ineffectiveness) and/or within which material will be subjected to a 5 percent probability of the specified degree of damage.

Radioactivity. The spontaneous emission of radiation, generally alpha or beta particles, often accompanied by gamma rays from the nuclei of an unstable isotope. As a result of this emission the radioactive isotope decays into the isotope of a different (called a daughter) element which may also be radioactive. Ultimately, a stable (nonradioactive) end product is formed.

Radiological dispersal device. Any device that is intended to spread radioactive material. An improvised nuclear device can be a radiological dispersal device if the explosion does not cause a nuclear yield, but "fizzles," spreading radioactive materials.

Rainout. Removal of radioactive particles from a nuclear cloud by precipitation when the cloud is within a rain cloud.

Reconnaissance. A mission undertaken to obtain information by visual observation, or other detection methods, about the activities and resources of an enemy or potential enemy, or about the meteorologic, hydrographic, or

geographic characteristics of a particular area. Reconnaissance differs from surveillance primarily in duration of the mission.

Residual nuclear radiation. Nuclear radiation, mainly beta particles and gamma rays, which persists for some time following a nuclear (or atomic) explosion.

The radiation is emitted mainly by the fission products and other bomb residues in the fallout, and to some extent by earth and water constituents, and other materials, in which radioactivity has been induced by the capture of neutrons.

RDD. Radiological dispersal device.

RFI. Request for information.

ROTA. Release other than attack.

R&S. Reconnaissance and surveillance.

RV. Radii of vulnerability.

S

SASO. Stability and support operations.

SCBA. Self-contained breathing apparatus.

Shielding. Any material or obstruction that absorbs or attenuates radiation and thus tends to protect personnel or materials from explosion effects.

Shock front. The fairly sharp boundary between the pressure disturbance created by an explosion and the ambient atmosphere, water, or earth. It constitutes the front of the shock or blast wave.

SIR. Specific information requirement.

Situation template. Depictions of assumed threat dispositions, based on threat doctrine and the effects of the battlefield, if the threat should adopt a particular COA. In effect, they are the doctrinal templates depicting a particular operation modified to account for the effects of the battlefield environment and the threat's current situation.

SOP. Standing operating procedures.

SOR. Specific order or request.

Specific information requirement. Statement that describes the information required to answer all or part of an intelligence requirement. Generally, each intelligence requirement generates sets of SIRs.

Specific order or request. The order or request that generates planning and execution of a collection mission or analysis of data base information. SORs sent to subordinate commands are orders. SORs sent to other commands are requests.

SSM. Surface-to-surface missile.

SRD. Secret restricted data.

Surface burst. The explosion of a nuclear (or atomic) weapon at the surface of the land or water at a height above the surface less than the radius of the fireball at maximum luminosity. An explosion in which the weapon is detonated

actually on the surface (or within $5W^{1/3}$, where W is the explosion yield in kilotons, above or below the surface) is called a contact surface burst or true surface burst.

Surveillance. The systematic observation of airspace or surface areas by visual, aural, photographic, or other means. Surveillance differs from reconnaissance primarily in duration of the mission.

T

TAI. Target area of interest.

Target area of interest. The geographical area where HVTs can be acquired and engaged by friendly forces. Not all TAIs will form part of the friendly COA; only TAIs associated with HPTs are of interest to the staff. These are identified during staff planning and wargaming.

TEL. Transporter-erector-launchers.

TGD. Thickened Soman .

Thermal energy. The energy emitted from the fireball (or other heated region) as thermal radiation.

Thermal radiation. Electromagnetic radiation emitted (in two pulses from an airburst) from the fireball as a consequence of its very high temperature. It consists essentially of ultraviolet, visible, and infrared radiations.

Threat course of action model. A model of one COA available to the threat. It consists of a graphic depiction (situation template), a description (narrative or matrix), and a listing of assets important to the success of the COA (HVTs).

Threat model. A model of the threat force's doctrine and TTPs for the conduct of a particular operation. Threat models are based on the study of all available information, structured by the order of battle factors, of the particular threat force under consideration. Ideally, threat models consider all battle operating systems in detail and are usually prepared prior to deployment.

TIC. Toxic industrial chemicals.

Time phase line. A line used to represent the movement of forces or the flow of an operation over time. It usually represents the location of forces at various increments of time, such as lines that show unit locations at 2-hour intervals.

Toxic industrial chemicals. Any chemical hazard that is toxic and/or lethal and that is not designed specifically for military purposes, however, may be employed as a chemical warfare agent.

TPL. Time phase line.

TRE. Transient radiation effects.

TREE. Transient radiation effects on electronics.

TTP. Tactics, techniques, and procedures.

U

Underwater burst. Explosion of a nuclear (or atomic) weapon with its center beneath the water's surface.

UJTL. Universal joint task list.

V

VX. A nerve agent; very persistent and similar to GB in mechanism and effects.

W

Washout. The removal of radioactive particles from a nuclear cloud by precipitation when this cloud is below a rain (or snow) cloud. See rainout.

Weapons of mass destruction. In arms control usage, weapons that are capable of a high order of destruction and/or of being used to destroy large numbers of people. Can be nuclear, chemical, biological, and radiological weapons, but the means of transporting or propelling the weapons is excluded where such means are separable and divisible parts of the weapons.

WMD. Weapons of mass destruction.

X

X-rays. Electromagnetic radiations of high energy having wavelengths shorter than those in the ultraviolet region, that is, less than 10^{-6} cm.

Y

Yield. The total effective energy released in a nuclear (or atomic) explosion. It is usually expressed in terms of the equivalent tonnage of TNT required to produce the same energy release in an explosion. The total energy yield is manifested as nuclear radiation, thermal radiation, and shock (blast) energy, the actual distribution being dependent upon the medium in which the explosion occurs and also upon the type of weapon and the time after detonation.