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DOORS

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- Door made of steel (or 4.5 cm wood with 12 gauge steel plate)
- Frame anchored to building at 8 places
- Hinges welded to prevent pin removal
- Marked with UN Fire Division symbol
- Doors open OUTWARDS - cannot be rammed
- Light gauge handles break off easily - cannot be used to pull off door

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FIREFIGHTING EQUIPMENT

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- Easily seen and accessed
- Only fight fires to save lives
- Conduct periodic checks

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CONTRABAND NOTICES



- List forbidden items (cell phones, flame-producing items, etc.)
- Identify restricted areas



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FENCES AND BARRIERS

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Class 1 - Minimum Deterrence

Class 2 - Deterrent to Opportunist

Class 3 - Deter and Delay Resourceful
Intruder

Class 4 - Maximum Deterrence and Delay

- Zones clear of vegetation:
4 m inside; 10 m outside

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LOCKS

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- Must protect against manual manipulation (hammers, bars, etc.) for at least 15 minutes
- Must protect against powered tools (drills, saws, etc.) for at least 5 minutes

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AISLES

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- Aisles free of obstructions and wide enough for mechanical handling equipment (MHE)
- Aisle widths (50 cm minimum)
- Wall clearances (15 cm minimum)

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STACKS



- Store away from hot lights
(at least 15 cm between box and ceiling)
- Store away from walls - allows checking and air circulation (at least 15 cm between stack and wall)
- Banded for security - too heavy to pick up



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LOT NUMBERS

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- Keep ammunition stored in lots
- Lot # segregation by date
- Oldest lot # in front (issue first)
- Newest lot # in back
- Segregate lot by similar storage history
- Use to manage lot testing

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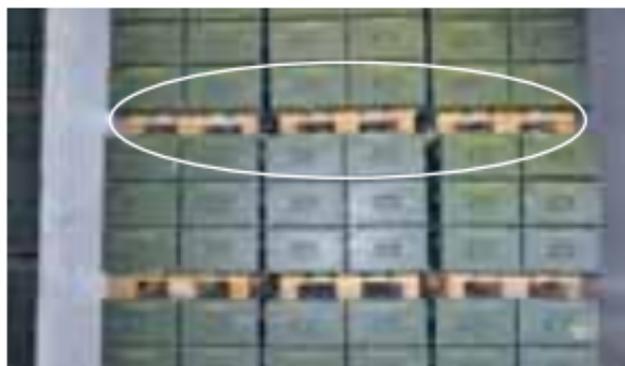
IATG 03.10, 03.20, 06.30

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DUNNAGE

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Wood or metal
10 cm height

- Provides air circulation
- Allows equipment access
- Improves stability of stack

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IATG 06.20, 06.30

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RACKS



- Bolted or welded together to form a unit too heavy to easily move
- Made of metal
- Lockable
- Easy to see weapon serial numbers





SECURITY POST



- Armed guard
- Entrance only to approved staff with a legitimate reason
- Maintain full records of authorizations and access
- Requires communications with safety personnel
- Intrusion Detection System in place



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BOXES

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- Inventory card on top of stack
- Loose rounds in brightly colored box
- Stored together by lot

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Office of Weapons Removal and Abatement (PM/WRA)



The Office of Weapons Removal and Abatement is a division of the U.S. Department of State's Bureau of Political-Military Affairs (PM/WRA). The Office develops, implements, and monitors policy, programs, and public engagement efforts to:

- Curb the illicit proliferation of conventional weapons of war such as light automatic weapons and rocket-propelled grenades
- Remove and destroy other materiel, such as landmines and excess stocks of munitions, which remain persistent threats to local populations and regional stability
- Create local, regional, and international conditions conducive to peace, stability, and prosperity



For more information please visit:
www.state.gov/t/pm/wra



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MASS EXPLOSIVE HAZARD

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- UN Hazard Classification
Storage Facility Markings
- Ensure items properly marked
- Ammunition that has a mass explosion hazard

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SEVERE PROJECTION HAZARD

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- UN Hazard Classification
Storage Facility Markings
- Ensure items properly marked
- Ammunition that has a projection hazard
but not a mass explosion hazard

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FIRE HAZARD

(Minor blast or projections)



- UN Hazard Classification
- Storage Facility Markings
- Ensure items properly marked
- Items burn vigorously
- Little or no possibility for extinguishing them in a storage situation



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NO SIGNIFICANT HAZARD

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- UN Hazard Classification
Storage Facility Markings
- Ensure items properly marked
- Fire hazard with no blast hazard and
virtually no fragmentation or toxic
hazard

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FIRE DIVISION 1

Mass Explosion

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- UN Hazard Classification
Storage Facility Markings
- Ensure items properly marked
- Damage from mass-detonating hazard materials is caused by concussion or blast, or by sympathetic detonation

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FIRE DIVISION 2

Projection Hazard



- UN Hazard Classification
Storage Facility Markings
- Ensure items properly marked
- Principle hazards are fragment and blast, either individually or in combination, depending on storage configuration, type of packing, and quantity





FIRE DIVISION 3

Fire Hazard
(Minor blast or projection)



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- UN Hazard Classification
Storage Facility Markings
- Ensure items properly marked
- Items burn vigorously
- Little or no possibility for extinguishing
them in a storage situation



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FIRE DIVISION 4

No Significant Hazard

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- UN Hazard Classification
Storage Facility Markings
- Ensure items properly marked
- Fire hazard with no blast hazard and virtually no fragmentation or toxic hazard beyond the fire hazard clearance specified for high-risk materials

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TEMPERATURES

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- Avoid extreme high or low temperatures (5-25 Celsius ideal)
- Avoid wide temperature variations
- Avoid high or low humidity
- Avoid vibration
- Avoid shock

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STANDARD OPERATING PROCEDURES



Should contain:

- Emergency response
- Security procedures
- Inventory management
- Training requirements
- Safety
- Surveillance and proof
- Risk management



TRANSPORT CONSIDERATIONS



- Technically safe to transport
- Inspect equipment and personnel
- Check documents
- Vehicle marking
- Original packaging, if possible
- Vehicles should be 50 m apart
- Provide security en route
- Coordinate with law enforcement if needed



UNPLANNED EXPLOSIONS AT MUNITIONS SITES (UEMS)



Causes:

- Ammunition deterioration
- Inappropriate infrastructure
- Handling errors
- External events (forest fires)
- Poor security

See Small Arms Survey Handbook No. 3
on UEMS





The Small Arms Survey

The Small Arms Survey is a global centre of excellence whose mandate is to generate impartial, evidence-based, and policy-relevant knowledge on all aspects of small arms and armed violence. It is the principal international source of expertise, information, and analysis on small arms and armed violence issues, and acts as a resource for governments, policy-makers, researchers, and civil society. It is located in Geneva, Switzerland, at the Graduate Institute of International and Development Studies.

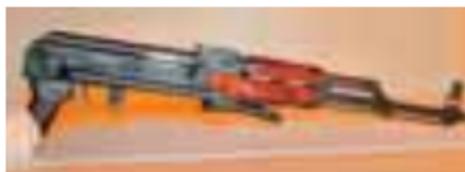
The Survey has an international staff with expertise in security studies, political science, law, economics, development studies, sociology, and criminology, and collaborates with a network of researchers, partner institutions, non-governmental organizations, and governments in more than 50 countries.

For more information please visit:
www.smallarmssurvey.org





TEMPORARY DISABLEMENT



Remove and secure:

- Bolts
- Breech blocks
- Grip stocks
- Trackers
- Guidance units
- Firing mechanism
- Critical components



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MECHANICAL DISMANTLING

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- Stockpile disposal of ammunition
- Verify destruction of EVERY component
- Requires special equipment
- Maintain records of parts
- Recycle or safely dispose of residue

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CONTAINED BURNING



- Stockpile disposal of Hazard Division 1.4 ONLY
- Requires specialized equipment; can be field fabricated
- Address environmental concerns
- Best for small arms ammunition
- Recycle or safely dispose of residue



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TORCH CUTTING

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- Stockpile disposal of weapons
- Typically requires minimum of two cuts per weapon
- Removes metal in the process
- Cut all similar weapons in the same pattern
- Remaining parts should be unusable as spare parts
- Recycle or safely dispose of residue

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OPEN BURNING

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- Stockpile disposal of weapons
- Highly symbolic technique
- Relatively inexpensive
- Requires high-intensity heat over prolonged period
- Field expedient technique, but does not guarantee weapon destruction
- Monitor for security and safety throughout

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MECHANICAL CUTTING

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- Stockpile disposal of weapons
- Requires special equipment
- Typically requires minimum of three cuts per weapon
- Removes metal in the process
- Cut all similar weapons in the same pattern
- Recycle or safely dispose of residue

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HYDRAULIC SHEARING OR BENDING



- Stockpile disposal of weapons
- Requires special equipment
- Can achieve high throughput rates
- Maintain destruction records
- Recycle or safely dispose of residue



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OPEN DETONATION

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- Stockpile disposal
- Requires environmental impact analysis
- Ensure perimeter security
- Survey after operation to confirm destruction
- Effective for larger calibre and unstable munitions
- Requires highly trained personnel
- Requires large land area

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MELTING OR SHREDDING

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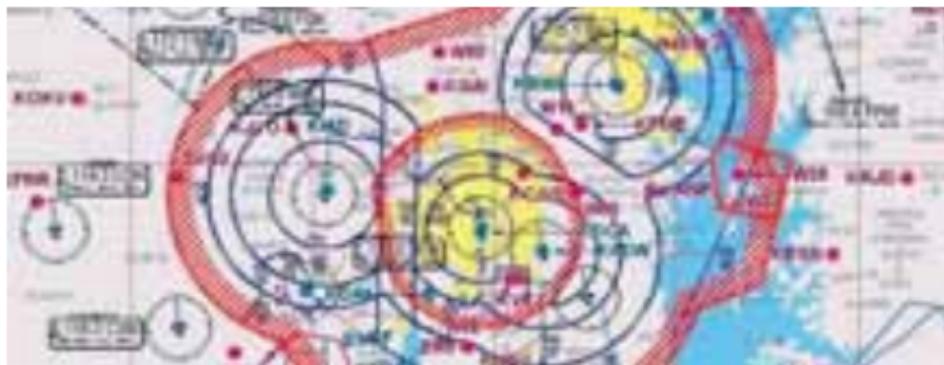
- Stockpile disposal of weapons
- Remove non-metal parts
- Furnace reduces weapons to molten steel
- Suitable only if equipment exists
- Destruction is absolute
- Maintain destruction records
- Recycle or safely dispose of residue

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FLIGHT RESTRICTIONS



- Flight altitude (2000 m minimum)
- Used for storage areas and open detonation zones
- Establish process to report violations
- Ensure public safety





RESOURCE RECOVERY



- Stockpile disposal of weapons and ammunition
- Disassemble ordnance to use components
- New infrastructure can be cost-prohibitive
- Industrial capacity and infrastructure required
- High explosive has commercial use
- Address environmental concerns
- Recycle or safely dispose of residue



IATG 10.10 and ISACS 05.50





INVENTORY MANAGEMENT



- Identifies unserviceable stocks
- Tracks lot numbers
- Traces suspect lots
- Tracks malfunctions
- Improves reliability
- Reduces accidents
- Enables forecasting
- Manages chemical testing program





The Regional Approach to Stockpile Reduction (RASR) Initiative

The RASR Initiative is a long-term, coordinated, regional approach to address the threats posed by excess, unstable, loosely secured or otherwise at-risk stockpiles.

RASR encourages affected governments and relevant organizations to develop a pro-active and coordinated approach to secure and destroy conventional weapons and ammunition, by building local capacity, sharing best practices and lessons learned, and synchronizing resources in order to maximize their efficiency.

The ultimate aim of the RASR Initiative is to prevent UEMS and diversion.

For more information please visit:
www.rasrinitiative.org



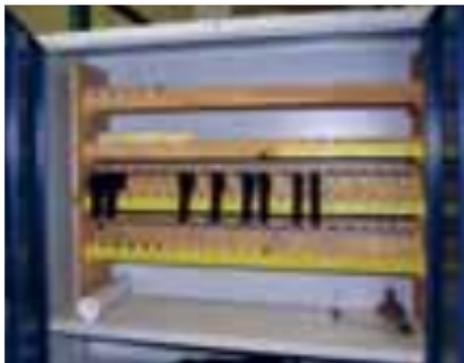
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CUSTODY AND RECEIPT

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EQUIPMENT RECEIPT (DA FORM 3749)	
1. UNIT Defense Threat Reduction Agency	2. RECEIPT NO. 0012345
3. STOCK NO. 1234-00-0076-0012	4. SERIAL NO. 0012345
5. ITEM DESCRIPTION Fused, Iron, Barrels, M89	
6. I hereby acknowledge receipt of this equipment from the unit arms room (Building 2345, room 123) of this unit.	
7. NAME SMITH, John P.	8. SOCIAL SECURITY NO. 000-00-0000
9. SIGNATURE Johnny P. Smith	10. GRADE PFC

DA FORM 3749, JAN 82 Edition of Aug 71 is obsolete.



- Requires daily sight counts
- Facilitates serial number inventories
- Use of receipt cards for each weapon
- Proper record-keeping promotes good inventory management

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ISACS 05.20 and 05.30

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INVENTORY MANAGEMENT

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- Serial Number Inventory
- Conduct monthly inventory
- Regular independent audits
- Recorded, filed, and audited by higher command

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SECURITY SYSTEMS

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- Change codes regularly
- Conduct weekly testing
- Ensure back-up power in case of electrical failure

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IATG 09.10 and ISACS 05.20

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SITE MAINTENANCE

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- Establish and enforce a site maintenance program
- Clean debris
- Cut vegetation to reduce fire hazard
- Prevent vermin from entering

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RISK MANAGEMENT



Probability	Hazard Severity		
	Catastrophic	Major	Minor
Likely	High	High	Medium
Occasional	High	Medium	Low
Unlikely	Medium	Medium	Low

When evaluating materiel for storage or destruction, prioritize items into risk categories such as:

- Degree of utility
- Potential casualty or damage effect
- Adaptability
- Portability and potential for theft



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RISK CATEGORY 1

(Recommended)

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- ONLY man-portable missiles and rockets in a ready-to-fire configuration
- Replacement rockets and missiles for the above

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RISK CATEGORY 2

(Recommended)



- Light automatic weapons, to include medium machine guns
- Hand or rifle grenades
- Mines
- Explosives and demolition depots



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RISK CATEGORY 3

(Recommended)

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- Grip stocks for MANPADS
- Guidance or trackers for missiles
- Mortar tubes
- Rocket and missile launchers > 50kg
- Flame throwers
- Explosive-filled projectiles
- Incendiary grenades



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RISK CATEGORY 4

(Recommended)

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- Semi-automatic rifles
- Handguns
- Recoilless rifles
- Ammunition
- Fuzes
- Illumination grenades
- Riot-control agents

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QUANTITY-DISTANCE PRINCIPLES



Determine size and location of stockpiles based on three factors:

- Net Explosive Weight
- Type of explosive
- Separation distance





AMMUNITION SURVEILLANCE

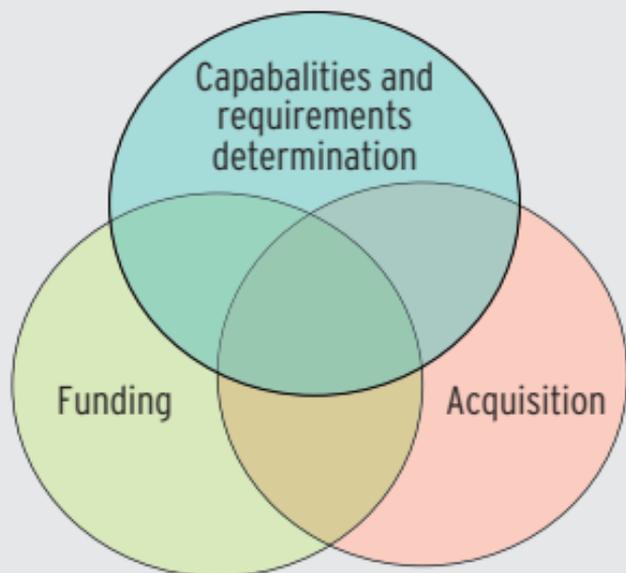


- Inspect visually
- Consider disassembly requirements
- Conduct chemical analysis
- Perform functional testing of components
- Live-fire a representative sample by lot number





STOCKPILE MANAGEMENT



- Assess current capabilities, projected goals, and where to improve first





International Ammunition Technical Guidelines (IATG)

Comprehensive guidelines designed to improve conventional ammunition stockpile management by assisting states' efforts to establish national standards and operating procedures consistent with international requirements and accepted best practices.

The UN SaferGuard Programme oversees the implementation of the IATG and provides assistance to States upon request through a Quick Response Mechanism. It also provides a web-based toolkit with applications to support IATG implementation.

For more information please visit:
www.un.org/disarmament/un-saferguard/





ABOUT THESE CARDS

These cards are designed to aid visual identification of a selection of Physical Security and Stockpile Management (PSSM), as well as destruction issues. Technical advice and photographic material were kindly contributed by the following agencies:





RESOURCES ON THE WEB



For more information on the importance of Physical Security and Stockpile Management (PSSM), and safe surplus destruction, access the following websites:

- ✦ www.bicc.de
- ✦ www.gichd.org
- ✦ www.itf-fund.si
- ✦ www.maginternational.org
- ✦ www.msag.es
- ✦ www.msiac.nato.int
- ✦ www.nspa.nato.int
- ✦ www.osce.org
- ✦ www.racviac.org
- ✦ www.rasrinitiative.org
- ✦ www.seesac.org
- ✦ www.smallarmsurvey.org
- ✦ www.state.gov/t/pm/wra
- ✦ www.smallarmsstandards.org
- ✦ www.un.org/disarmament/un-safeguard

