THE CONTROL LIST AND HOW TO USE IT

Kiev, Spring University, May 20-24, 2019

Scope of Control Lists

- The control list is a central element to all Regimes.
- The purpose of a control list is to set out what is subject to control.
- The export control regimes update their control lists on a regular basis:
  - New threats and risks (what are proliferators seeking?)
  - Feasibility of controls
  - Commercial and technological development (e.g. Emerging technologies)
  - Foreign availability of controlled technology (to some extent)
- In updating a control list, trade-offs must be made between these factors

1. Purpose of a single control list: the model of the EU list

- The European Union has developed **a "harmonized" list** that consolidates all the dual-use regime controls for items and technology into a single document .

- Adopting a common control list and numbering system **facilitates administration and enforcement of export controls**. It enables industry to know what is controlled and when to apply for a license.

- Over time, the EU control list has become **an international standard**. Many countries have adopted the EU list structure as a model for their own national lists : Singapore, Malaysia, Hong-Kong, etc...

Short review of control lists history

Control lists are considered as key elements of a trade control system today, but their role has varied over time.

- 1968: Non-proliferation Treaty did not contain a control list
- 1974: Zangger Committee published ‘trigger list’ to interpret NPT
- 1978: IAEA published Nuclear Suppliers group ‘trigger list’ on
- behalf of NSG members
- Australia Group; MTCR, NSG and Wassenaar developed their lists starting form the early 1990
- Chemical Weapons Convention (opened for signature 1993 and entered into force 1997)
- 2004: Resolution 1540 calls upon states to set up appropriate and effective controls…

5 control regimes and many lists

All five export control regimes maintain a control list as does the Chemical Weapons Convention (although Zangger and NSG trigger list are harmonised):

- **NSG**: Trigger List, Dual Use list
- **MTCR**: Annex 1 and Annex 2
- **Wassenaar Arrangement**: Military List and Dual-use List
- **Australia Group** : the AG has developed 5 control lists covering CW- as well as BW-related materials and equipment
- **Chemical Weapons Convention**

2. Structure of the EU single control list

- The EU Dual Use Control List consists of 10 categories of items to be controlled.
- A five digit numbering system is used to identify controlled goods. (e.g. 6A007 which covers gravity meters.)
- The list is designed so that you should only need to look in one entry to find your goods. However, there are some exceptions to this.

Outline of the EU control list

The WA dual-list provides the basis of the EU dual-use list, as follows :

- General Notes to Annex I
- Definitions (List of terms in “double quotation marks”)
- Acronyms and Abbreviations
- Category 0 Nuclear Materials, Facilities and Equipment
- Category 1 Special Materials and Related Equipment
- Category 2 Material Processing
- Category 3 Electronics
- Category 4 Computers
- Category 5 Telecommunications, Part 1 and Information Security, Part 2
- Category 6 Sensors and Lasers
- Category 7 Navigation and Avionics
- Category 8 Marine
- Category 9 Aerospace and Propulsion

First digit of EU classification indicates the category of controlled goods

Nature of the goods

The second character identifies the sub-category breakdown:

A Systems, Equipment, Components

B Test, Inspection and Production Equipment

C Materials

D Software

E Technology

Integration of regimes into Control List

The third digit indicates the regime that the control originates from:

001 – 099 : Wassenaar Arrangement

101 – 199 : Missile Technology Control Regime

201 – 299 : Nuclear Suppliers Group

301 – 399 : Australia Group

901 – 999 : Reserved for national controls

EU Dual-use Control List

The last two digits indicate the item controlled. These two digits will be the same for similar goods controlled by different regimes.

Isostatic presses are controlled by Wassenaar, MTCR and NSG.

Relevant control entries are:

2B004

2B104

2B204

An N.B. is used to guide users to relevant entries.

One example EU Dual-use Control List

Technical Categories

- *0 - Nuclear materials, facilities, and equipment*
- *1 – Special materials and related equipment*
- *2 - Materials processing*
- *3 - Electronics*
- *4 - Computers*
- *5 - Telecommunications and information security*
- *6 - Sensors and lasers*
- *7 - Navigation and avionics*
- *8 - Marine*
- *9 – Aerospace and propulsion.*

6 A 007

Multilateral & Unilateral Controls

000 – 099 Wassenaar Arrangement.
100 – 199 Missile Tech Control Reg.
200 – 299 Nuclear Suppliers Group.
300 – 399 Australia Group.
400 – 499 Chemical Weapons Conv.
500 – 899 Reserved.
900 – 999 Unilateral Controls.

Product Groups

- A - Equipment, Assemblies and Components
- B - Production and Test Equipment
- C - Materials
- D - Software
- E - Technology

Defined terms

Throughout the Dual Use List, certain words take specific meanings. These are identified as **defined terms**.

Defined terms that are used in more than one entry are identified with “double quotes” around them. The definition can be found at the beginning of the List.

Defined terms that only appear in one entry have ‘single quotes’ around them and are defined within that entry under a ‘Technical Note.’

Defined Terms (examples)

"Information security" (4 5) is all the means and functions ensuring the accessibility, confidentiality or integrity of information or communications, excluding the means and functions intended to safeguard against malfunctions. This includes "cryptography", "cryptographic activation", 'cryptanalysis', protection against compromising emanations and computer security.

"**Unmanned Aerial Vehicle"** ("UAV") (9) means any

aircraft capable of initiating flight and sustaining controlled flight and navigation without any human presence on board.

EXPERTISE FRANCE

Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE

Federal Office for Economic Affairs and Export Control

KING'S College LONDON

Université de Liège

Terms and Definitions; examples

"Development" is related to all phases prior to serial production, such as: design, design research, design analyses, design concepts, assembly and testing of prototypes, pilot production schemes, design data, process of transforming design data into a product, configuration design, integration design, layouts.

"Production" means all production phases, such as: construction, production engineering, manufacture, integration, assembly (mounting),

inspection, testing, quality assurance.

"Use" means operation, installation (including on-site installation), maintenance (checking), repair, overhaul and refurbishing.

EXPERTISE FRANCE

Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE

Federal Office for Economic Affairs and Export Control

KING'S College LONDON

Université de Liège

Control language

The term ‘specially designed or modified’ is used widely in the control list:

‘Specially designed’ means the item was designed solely for a certain purpose

The Dual use list is a “positive list” compared to the military list is a negative list; i.e., a military item is controlled unless there is an exemption

Control language

Example for “specially designed”:

0B005

Plant specially designed for the fabrication of ″nuclear reactor″ fuel elements and specially designed or prepared equipment therefor.

Note:

A plant for the fabrication of ″nuclear reactor″ fuel elements includes equipment which:

a. Normally comes into direct contact with or directly processes or controls the production flow of nuclear materials;

b. Seals the nuclear materials within the cladding;

c. Checks the integrity of the cladding or the seal; or

d. Checks the finish treatment of the sealed fuel.

General Notes

Four types of Notes to Annex I:

- General Notes
- Nuclear Technology Note (NTN)
- General Technology Notes (GTN)
- General Software Notes (GSN).

General Notes to the Dual Use List

“Principal Element Note”

- Defines control status of listed components as part of unlisted goods
- Controlled when “Principle Element” and “easily removable”

Note stating that Annex I includes “used goods”

Nuclear Technology Note (NTN)

- Valid for Category 0 (special nuclear goods)
- Defines wide control as “technology directly associated with”
- Decontrol for “public domain” and “basic scientific research

General Notes to the Dual Use List

General Technology Note (GTN)

- Valid for Categories 1 to 9
- Defines control as “technology required for” (key technology)
- Decontrol for “public domain”, “basic scientific research” and “patent applications”.

General Software Note (GSN)

- Decontrol for “public domain”
- Decontrol for specific “mass market software” (not valid for Cat. 5, Part 2 “Information
- Security”; in Cat. 5, Part 2 the “Cryptography Note” decontrols specific “mass market goods”)

Notes

Three types of Notes are used in the lists:

- **Note** – Generally used to clarify the control status and, in most cases, to remove items from control
- **Technical Note** – Used to expand on the meaning of the control and often to explain terms in a control entry
- **N.B.** – Used as a “signpost” to direct the user to a different area of the control list

Technical Note

A Technical Note usually defines a word in the control text:

2A226 Valves having all of the following characteristics:

a. A 'nominal size' of 5 mm or greater;

b. Having a bellows seal; and

c. Wholly made of or lined with aluminium, aluminium alloy, nickel, or nickel alloy containing more than60 % nickel by weight.

Technical Note: For valves with different inlet and outlet diameters, the 'nominal size' in 2A226 refers to the smallest diameter.

EXPERTISE FRANCE

Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE

Federal Office for Economic Affairs and Export Control

KING'S College LONDON

Université de Liège

Example of a N.B.

- **An N.B. clarifies the control status and usually points to another entry that should be considered**

2B004 Hot "isostatic presses" having all of the following, and specially designed components and accessories therefor:

N.B.: See also 2B104 and 2B204

”In the public domain”

It refers to “technology” or “software” which has been made available without restrictions upon its further dissemination.

Note: Copyright restrictions do not remove “technology” or “software” from being “in the public domain”.

Editorial practices

- **a comma is used to separate the whole number from decimals:**

… equal to or less (better) than 1,4 µm

…. capable of achieving system accuracy of 3,33 % or less

- **whole numbers are presented in series of three, each series being separated by a thin space**. The text reproduced in this annex follows the above-described practice:

… between 50 cm and 2 000 cm

…. an ultimate tensile strength of 1 950 MPa

4. Control language

- Control list uses certain terms and language that have specific meanings

- Officers must understand how the entries are put together and the use of language to realize the full coverage of each control

Control language

‘As follows’ precedes specific items included in the control. After ‘as follows’ there will be a list of sub-heads :

Example:

1C009 Unprocessed fluorinated compounds **as follows:**

a. Copolymers of vinylidene fluoride having 75 % or more beta crystalline structure without stretching;

b. Fluorinated polyimides containing 10 % by weight or more of combined fluorine;

c. Fluorinated phosphazene elastomers containing 30 % by weight or more of combined fluorine.

Control language

Controls are often linked with an '**and,**' and the use of **all** in the heading means that all parameters have to be met.

Example:

1C010 ″Fibrous or filamentary materials″, which may be used in organic ″matrix″, metallic ″matrix″ or carbon ″matrix″ ″composite″ structures or laminates, as follows:

N.B.: SEE ALSO 1C210 AND 9C110.

a.Organic ″fibrous or filamentary materials″, **having all of the following**:

1. A ″specific modulus″ exceeding 12,7 × 106 m; and

2. A ″specific tensile strength″ exceeding 23,5 × 104 m;

Note: 1C010.a. does not control polyethylene.

Control language

Controls can also be linked with an '**or**,' which means that if any of the control parameters are met the item is controlled:

Example:

7A006 Airborne altimeters operating at frequencies other than 4,2 to 4,4 GHz inclusive and having any of the following:

a. "Power management"; **or**

b. Using phase shift key modulation.

Control Language

‘Except’ is important as it is used to define those items that do not come under the scope of a control and hence are released from it:

9A106.c. Systems or components, other than those specified in 9A006, usable in "missiles", as follows, specially designed for liquid rocket propulsion systems:

c. Thrust vector control sub-systems, except those designed for rocket systems that are not capable of delivering at least a 500 kg payload to a range of at least 300 km.

Example of a N.B.

2B001 Machine tools and any combination thereof, for removing (or cutting) metals, ceramics or ″composites″, which, according to the manufacturer's technical specification, can be equipped with electronic devices for ″numerical control″, and specially designed components as follows:

N.B.: SEE ALSO 2B201.

Acronyms and abbreviations (example)

ABEC	Annular Bearing Engineers Committee
AGMA	American Gear Manufacturers' Association
AHRS	Attitude and heading reference systems
AISI	American Iron and Steel Institute
ALU	Arithmetic logic unit
ANSI	American National Standards Institute
ASTM	The American Society for Testing and Materials
ATC	Air traffic control

Conclusion

- The EU dual-use list is very technical and a certain degree of technical knowledge is necessary in order to navigate through the list
- An understanding of the defined terms and control language is important in order to understand which items are subject to list based controls.
- Users of the Control List focus on the entry that specifies their items, but all Notes need to be taken into account to arrive at a proper classification.

EXPERTISE FRANCE
Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE
Federal Office for Economic Affairs and Export Control
KING'S College LONDON
Université de Liège