

Comprehensive Change Note Summary 2016

INTRODUCTION

This document summarises proposed amendments to Annexes I, II and IV of Council Regulation (EC) No. 428/2009 (as amended by Commission Delegated Regulation (EU) No 2016/1969) to implement the changes in the control lists of the various international flora on non-proliferation.

OVERVIEW

The changes implemented are a result of the review of the Wassenaar Arrangement (WA) Dual Use Lists, Missile Technology Control Regime (MTCR) Technical Annexes and Australia Group Common Control Lists during the course of 2015.

The summary of control text changes is for information purposes only and has no force in law.

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SUMMARY OF CHANGES FOR EACH SECTION OF ANNEX I:

Bracketed terms mean the definition, Note or control entry no longer appears in Annex.

| Contents, Notes & Acronyms | | |
|-------------------------------------|----|--|
| General "Information Security" Note | WA | New General "Information Security" Note added after the General Software Note. |

| Definition | | |
|-----------------------------|----|--|
| "Accuracy" | WA | Categories 3, 7, and 8 included. |
| "Circular Error Probable" | WA | New definition. |
| "Cryptography" | WA | 'fixed' changed to local definition; Technical Note modified including new Technical Note 2. |
| "FADEC Systems" | WA | Reference to Category 7 deleted. |
| ("Fixed") | WA | Definition deleted. |
| "Frequency switching time" | WA | Definition modified, including new paragraphs a. and b. |
| "Information security" | WA | Category references modified, and Nota Bene changed to Technical Note. |
| "Lasers" | WA | Reference to Category 1 made, and definition modified. |
| "Lighter-than-air vehicles" | WA | Double quotes around "airships". |
| ("Optical amplification") | WA | Definition deleted. |
| ("SHPL") | WA | Definition deleted. |
| ("System tracks") | WA | Definition deleted. |

| Category 0 | | |
|------------|------|---------------------|
| 0B001a | Edit | Minor edit to text. |

| Category 1 | | |
|------------------------|----|--|
| 1A001b | WA | Control on piezoelectric polymers and copolymers sheet and film removed. |
| 1A001c | WA | Control on seals, gaskets, valve seats, bladders, or diaphragms removed. |
| 1A002 Note 1 | WA | Double quotes around "composite" included. |
| 1A004a1 | WA | Control on respirators amended: Single quotes around 'biological agents'; Phrase "adapted for use in war" removed. |
| 1A004b1 | WA | Control on protective garments amended: Single quotes around 'biological agents'; Phrase "adapted for use in war" removed. |
| 1A004c1 | WA | Control on detection systems amended: Single quotes around 'biological agents'; Phrase "adapted for use in war" removed. |
| 1A004 Technical Note 1 | WA | Technical note amended: Single quotes around 'biological agents'; Phrase "adapted for use in war" removed. |

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| 1A004 Technical Note 3 | WA | New Technical Note 3, with local definition for 'biological agents'. |
| 1C001b Notes a and b | WA | Minor amendment to control on EM absorbing material. |
| 1C002 Note | WA | Note amended to control on certain metal alloys. |
| 1C006a | WA | Control on hydraulic fluids deleted. |
| 1C006 Tech Note | WA | Technical Note deleted. |
| 1C008a2 Tech Note 1 | WA | Reference added to 1C008f materials. |
| 1C009a | WA | Control on copolymers of vinylidene fluoride deleted. |
| 1C111a4e | MTCR | Inclusion of CAS number to Ethylene dihydrazine |
| 1C111a4i | MTCR | Inclusion of CAS numbers and amended to naming structure to Dimethylhydrazinium azide |
| 1C111a4p | MTCR | Inclusion of CAS numbers and amended to naming structure to Diethylhydrazine nitrate (DEHN) |
| 1C111a6a | Edit | Correction in Annex to DMAZ |
| 1C111b4 | MTCR | Inclusion of CAS numbers to Polybutadiene-acrylic acid-acrylonitrile |
| 1C111c6e | Edit | CAS number for Pentyl ferrocene removed. |
| 1C111c6l | Edit | CAS number for Acetyl ferrocene removed. |
| 1C350.29 | Edit | Minor edit to chemical name. |
| 1C350.64 | AG | Addition of Diethylamine (109-89-7). |
| 1C351a9 | AG | Renamed to Crimean-Congo hemorrhagic fever virus. |
| 1C351a10 | AG | Removal of fever from Dengue virus. |
| 1C351a13 | AG | Renamed to Ebolavirus: all members of the Ebolavirus genus. |
| 1C351a14 | AG | Renamed to Foot-and-mouth. |
| 1C351a15 | AG | Renamed to Goatpox. |
| 1C351a19 | AG | Renamed Suid herpesvirus 1. |
| 1C351a20 | AG | Renamed to Classic swine fever virus (Hog cholera virus). |
| 1C351a23 | AG | Renamed to Kyasanur Forest disease virus |
| 1C351a25 | AG | Renamed to Lassa virus. |
| 1C351a31 | AG | Renamed to Marburgvirus: all members of the Marburgvirus genus. |
| 1C351a32 | AG | Renamed to Monkeypox virus. |
| 1C351a38 | AG | Renamed to Peste-des-petits-ruminants virus. |
| 1C351a39 | AG | Renamed to Swine vesicular disease virus. |
| 1C351a47 | AG | Renamed to Sheeppox virus. |
| 1C351a48 | AG | Renamed to Sin Nombre virus. |
| 1C351a49 | Edit | Minor amendment to St. Louis encephalitis virus |
| 1C351a50 | AG | Renamed to Porcine Teschovirus. |
| 1C351a51 | AG | Renamed to Tick-borne encephalitis virus (Far Eastern subtype). |
| 1C351a57 | AG | New control for Severe acute respiratory syndrome-related coronavirus (SARS-related coronavirus). |
| 1C351a58 | AG | New control for Reconstructed 1918 influenza virus. |
| 1C351d17 | AG | Renamed to Modeccin toxin. |
| 1C351d18 | AG | Renamed to Volkensin toxin. |
| 1C351d19 | AG | Renamed to Viscum Album Lectin 1 (Viscumin). |
| 1E001 | WA | Consequential change to reflect removal of 1A001b and 1A001c. |
| 1E002f Note | WA | Double quotes around "aircraft" included. |

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| Category 2 | | |
|------------------------------|------|---|
| 2B Technical Notes 3, 5b & 7 | Edit | Number of corrections to text included. |
| 2B001a & Note 1 & 2 | WA | Control entry for machine tools for turning rewritten, including new Note 2. |
| 2B001b1 | WA | Control entry for machine tools for milling rewritten to use unidirectional positioning repeatability. |
| 2B001b2a | WA | Control parameters changed 5-axes milling machines control. |
| 2B006b1 Note | WA | Note to control for linear displacement measuring instruments amended. |
| 2B006b1c2 & 3 | WA | Sub-entry for control on laser measuring systems amended. |
| 2B006b2 Note | WA | Note to control on angular displacement measuring instruments amended. |
| 2B007a Technical Note | Edit | Minor amendment to Technical Note. |
| 2B008a N.B. | Edit | Nota Bene to linear position feedback units amended. |
| 2B201 Technical Note | Edit | Minor amendment to Technical Note. |
| 2B201a, b & c | Edit | Minor amendments to text. |
| 2B201 Note 3 | Edit | New Note added to align with NSG Regime. |
| 2B206c | Edit | New control entry 2B206c created to remove possible gap in controls as a result of 2B006b1c amendment. |
| 2B352d | AG | Control heading for cross flow filtration equipment amended. |
| 2B352d1b Tech Note | Edit | Editorial correction. |
| 2B352e | AG | Control entry on steam sterilisable freeze drying equipment rewritten to include gas or vapour sterilisable freeze drying equipment. |
| 2B352f2 & Note 1 & 2 | AG | Control entry on biological safety cabinets expanded to include biocontainment chambers, and characteristics of all items of interest; 2 new Notes added. |
| 2B352g | AG | Control entry on chambers designed for aerosol challenge testing completely rewritten, with focus on aerosol inhalation equipment. |

| Category 3 | | |
|-------------------|------|--|
| 3A001 | WA | Change in chapeau for control of electronic components. |
| 3A001a5a2 | WA | ADC control parameter increased from 300 to 500 million words per second. |
| 3A001a5a3 | WA | ADC control parameter changed to go from 12 bit, to 12 bit or more, but less than 14 bit. |
| 3A001a5a4 | WA | ADC control parameter changed from more than 12 bit to 14 bit or more, equal to or less than 14 to less than 16 bit, and output rate greater than 125 to 250 million words per second. |
| 3A001a5a5 | WA | ADC control parameter changed to a resolution of 16 bit or more, and an output rate greater than 20 million to output rate greater than 65 million. |
| 3A001a7 | Edit | Minor amendment to text. |
| 3A001b | WA | Control heading for microwave and millimetre items amended. |
| 3A001b4f1 | Edit | Amendment to align with Regime text. |
| 3A001b4 Note 2 | Edit | Amendment to align with regime text. |

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| 3A001b8 | Edit | Correction to remove minor typo. |
| 3A001e1b | WA | Control parameter for control on 'cells' increased from 300 to 350 Wh/kg. |
| 3A001f | WA | Text amended to rotary type position encoder control |
| 3A001h Note 2 | Edit | Minor amendment to text. |
| 3A002 | WA | Chapeau modified to include "electronic assemblies" and modules in addition to the previous controlled equipment. |
| 3A002a5 | WA | Control on waveform digitisers deleted; |
| 3A002a6 & Tech Note 1 & 2 | WA | Control entry for digital recorders rewritten, including paragraphs a and b.; Original Technical Note deleted; 2 new Technical Notes 1 and 2 added. |
| 3A002d3d & e | Edit | Minor correction. |
| 3A002h, N.B., Tech Note & Note | WA | New control entry for "electronic assemblies", modules, or equipment created; including Nota Bene, Technical Note and Note |
| 3A232b | Edit | Minor amendment to align with regime text. |
| 3B001c | WA | Control entry for anisotropic plasma dry etching equipment has been deleted. |
| 3B001e1 | WA | Control entry central wafer handling systems amended |
| 3B001e2 Tech Note 1 | WA | Technical Note amended |
| 3B001f3 | WA | Control entry for equipment specially designed for mask making rewritten. |
| 3B001f4 | WA | New control entry for equipment specially designed for device processing using direct writing methods. |
| 3D001 | WA | Consequential change to reflect creation of 3A002h. |
| 3D004 | Edit | Text amended to align with regime text. |
| 3D002 | Edit | Regime reference amended. |
| 3E001 Note 1 | Edit | Note amended for consistency. |
| 3E002a Tech Note | WA | Technical Note amended |
| 3E002c | WA | Control parameter for technology for microprocessors amended. |
| 3E002 Notes 1, 2 & 3 | WA | Note to 3E002c replaced with Note 1 to 3E002; Existing Note 1 and 2 renumbered. |

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| Category 4 | | |
| (Note 3) | WA | Note deleted. |
| 4A003 Note 1 | WA | Reference to equipment designed for "signal processing" has been removed. |
| 4A003b | WA | Control parameter for digital computers increased from 8.0 to 12.5 Weighted TeraFLOPS. |
| 4A003c Note 1 | WA | Note amended. |
| 4A003e & N.B. | WA | Control on equipment performing analogue-to-digital conversions exceeding the limits specified by 3A001a5 has been deleted.; Nota Bene for "electronic assemblies" included. |
| 4D001b1 | WA | Control parameter increased from 1.0 to 6.0 Weighted TeraFLOPS. |
| 4E001b1 | WA | Control parameter increased from 1.0 to 6.0 Weighted TeraFLOPS. |

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| Category 5 Part 1 | | |
| Note 1 | Edit | Remove “lasers” from Note to align with WA. |
| (Note 1 N.B.2) | WA | Nota Bene deleted. |
| 5A001d | WA | Control entry on “electronically steerable phased array antennae” has been rewritten to include sub-paragraphs 1 to 4. |
| 5B001b2b | WA | Control on telecommunications equipment performing “optical amplification” using Praseodymium Doped Fluoride Fibre Amplifiers, has been removed. |
| 5B001b4 | WA | Control parameter on Quadrature-Amplitude-Modulation techniques increased from 256 to 1 024. |
| 5D001d4 | WA | Control parameter on Quadrature-Amplitude-Modulation techniques increased from 256 to 1 024. |
| 5E001c2b | WA | Control on equipment performing “optical amplification” using Praseodymium Doped Fluoride Fibre Amplifiers, has been removed. |
| 5E001c4a | WA | Control parameter on Quadrature-Amplitude-Modulation techniques increased from 256 to 1 024. |
| Category 5 Part 2 | | |
| Note 1 | WA | Note on control status of information security equipment deleted. |
| Note 3 | WA | New control entries 5A003 and 5A004 included in Cryptography Note. |
| Note 3 Tech Note | WA | New control entries 5A003 and 5A004 included in Cryptography Note Technical Note. |
| Note 1b to the CN | WA | Note amended. |
| 5A002 | WA | Chapeau amended for information security equipment; many sub-controls have been moved or deleted |
| 5A002a | WA | Control entry heading amended. |
| (5A002a2) | WA | Control moved to 5A004 |
| (5A002a3) | WA | Blank entry deleted. |
| (5A002a4) | WA | Control moved to 5A003b |
| (5A002a5) | | Control moved to 5A002e |
| (5A002a6) | | Control moved to 5A002d |
| (5A002a7) | WA | Control on non-cryptographic information and communications technology (ICT) security systems and devices that have been evaluated and certified by a national authority deleted. |
| (5A002a8) | | Control moved to 5A003a |
| (5A002a9) | WA | Control moved to 5A002c |
| 5A002 Note | WA | Edit to text to refer to 5A002a; Blank Notes b, c and h deleted. |
| 5A002 Note a1a | WA | Consequential change to Note a |
| 5A002 Note a2 | Edit | Minor edit for consistency. |
| 5A002 Note b & Tech Note | WA | Note d renamed Note b, and consequential changes to Tech Note |
| 5A002 Note c | WA | Note e renamed to Note c |
| 5A002 Note d | WA | Note f renamed to Note d |
| 5A002 Note e | WA | Note g renamed to Note e, and consequential changes. |
| 5A002 Note f | WA | Note I renamed Note f |
| 5A002 Note g | WA | Note j renamed Note g, and consequential changes. |
| 5A002 Note h | WA | Note k renamed Note h, and consequential changes. |

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| 5A002 Note i | WA | Note l renamed Note i |
| 5A002 Note j | WA | Note m renamed Note j |
| 5A002b | WA | Control on cryptographic activation items amended. |
| 5A002c & Tech Note | WA | 5A002a9 control on systems designed or modified to use or perform "quantum cryptography" renumbered 5A002c. |
| 5A002d, d.1. & d2. | WA | 5A002a6 control on systems designed to use cryptographic techniques to generate channelising codes, scrambling codes or network identification codes renumbered 5A002d. |
| 5A002e | WA | 5A002a5 control on systems designed to use cryptographic techniques to generate the spreading code for "spreading spectrum" systems renumbered 5A002e. |
| 5A003a & Note | WA | 5A002a8 control on communications cable systems designed or modified using mechanical, electrical or electronic means to detect surreptitious intrusion renumbered 5A003a |
| 5A003b | WA | 5A002a4 control on systems designed to reduce compromising emanations renumbered 5A003b |
| 5A004, Note & Tech Note | WA | 5A002a2 control on equipment performing 'cryptanalytic functions' renumbered 5A004. |
| 5B002a | WA | Consequential change to include entries 5A003 and 5A004. |
| 5B002b | WA | Consequential change to include entries 5A003 and 5A004; Text edit to include <of> in front of "software". |
| 5D002a | WA | Consequential change to include entries 5A003 and 5A004; Text edit to include <of> in front of "software". |
| 5D002c1 | WA | Consequential change to include entries 5A003 and 5A004. |
| 5D002d | WA | Cryptographic activation control text revised. |
| 5E002a | WA | Consequential change to include entries 5A003 and 5A004; Text edit to include <of> in front of "software". |
| 5E002b | WA | Cryptographic activation control text revised |

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| Category 6 | | |
| 6A001a1d2 | WA | Positioning accuracy replaced with <Determined position error> in control for acoustic systems. |
| 6A001a1e2 | WA | Positioning accuracy replaced with <Determined position error> in control for active individual sonars. |
| 6A001a2d1 | WA | Heading sensor control amended. |
| 6A001b1b | WA | Correlation-velocity and Doppler-velocity sonar log equipment control amended. |
| 6A001b2 | WA | Doppler-velocity sonar log equipment control amended. |
| 6A002a3 Note 2 | WA | New decontrol added for non-"space-qualified" "focal plane arrays", to cover thermopile arrays having less than 5130 elements. |
| 6A003 (Nota Bene) | WA | Note on television and film-based photographic still cameras deleted as a consequential change of deletions in Category 8. |
| 6A004a2 Note | WA | New Note added for mirrors specially designed to direct solar radiation for terrestrial heliostat installations. |
| 6A004a3 Note | WA | New Note added for mirrors specially designed to direct solar radiation for terrestrial heliostat installations. |
| 6A004d2a3 | WA | Sub-paragraph to control for Steering, tracking, stabilisation and resonator alignment equipment amended. |
| 6A004d2b | WA | Sub-paragraph to control on resonator alignment equipment |

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| | | amended. |
| 6A005b6a2 | WA | Average power parameter amended for laser control. |
| 6A005b6b2 | WA | Average power parameter amended for laser control. |
| 6A005c1 Note | WA | Note amended. |
| 6A005d1d1d | WA | New Note on control of epitaxially-fabricated monolithic devices. |
| 6A005d1d2d | WA | New Note on control of epitaxially-fabricated monolithic devices. |
| 6A005e3 | WA | Control on MLD control amended |
| 6A005e3c | WA | Sub-paragraphs on MLD control amended |
| 6A005f3 | WA | Double quotes around "accuracy". |
| 6A005g1, g2, g3 & Tech Note | WA | Sub-paragraphs and Technical Note for control on Laser acoustic detection equipment amended. |
| 6A007a | WA | Gravity meters control amended |
| 6A007b1 & b2 | WA | Sub-paragraphs on control gravity meters amended |
| 6A008a2 | WA | Sub-paragraphs on control radars amended |
| 6A008j3 | WA | Sub-paragraphs on control LIDAR amended |
| 6A008 Technical Note 2 | WA | Technical Note amended. |
| 6A108b2b | Edit | Minor amendment. |
| 6A203b3 | Edit | Minor amendment. |
| 6B004a | WA | Control on optical equipment for measuring reflectance amended |
| 6B007 | WA | Equipment to align gravity meters amended. |
| 6C005b1 & b2 | WA | Sub-entries for laser material amended. |
| 6E003a2 | WA | Control on optical fabrication "technology" amended. |
| 6E101 Note | Edit | Note amended to remove from control technology for the use of non-MTCR items |
| 6E201 Note | Edit | Note added to remove from control technology for the use of non-NSG cameras. |

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| Category 7 | | |
| 7A003 Technical Note 2 | WA | Tech note for local definition of 'CEP' deleted; "Circular Error Probable" changed to a global definition. |
| 7A003a1, 2 & 3 | WA | Sub-paragraphs for control on inertial measurement equipment amended. |
| 7A003b | WA | Sub-control on inertial measurement equipment amended. |
| 7A003c | WA | Sub-control on inertial measurement equipment amended. |
| 7A004a | WA | Control on star trackers amended. |
| 7A008 | WA | Control on sonar navigation equipment amended. |
| 7A101 Tech Note 2 | Edit | Minor amendment. |
| 7A103a Note | Edit | Note amended. |
| 7A103c | Edit | Abbreviation for CEP removed to avoid confusion with global version. |
| 7A116 | Edit | Control chapeaux amended to include "missiles" to align with intention of MTCR control. |
| 7A116a | MTCR | Control entry on flight control systems changed to include pneumatic flight control systems, including fly-by-light systems; |
| 7B001 Technical Note 1 | WA | Double quotes around "aircraft" in Technical Note. |
| 7B002a & b | WA | Sub-controls for equipment to characterize mirrors for ring laser gyros amended |
| 7D104 & Note | MTCR | New control for "software" specially designed or modified for |

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| | | the operation or maintenance of 7A117 “guidance sets”. |
| 7E004a7 | WA | Control on technology for DBRN systems amended |
| 7E004b1 | WA | Control on technology for photonic based sensing amended. |
| 7E004b7b4 | WA | Control on technology for stable control flight amended. |
| 7E004b8a & b | WA | Sub-paragraphs for control on technology for fly-by-wire amended. |
| 7E004c2 | WA | Sub-control on “technology” for the “development” of helicopter systems amended. |

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| Category 8 | | |
| 8A001 N.B. | WA | Note changed to Nota Bene; reference to Category 5, Part 2 removed. |
| 8A001e2 | WA | Sub-control for control on ocean salvage systems amended. |
| 8A002d | WA | Control entry for underwater vision systems has been re-written, with entries 8A002d1a, 8A002d1b, and 8A002d1c deleted. |
| 8A002e | WA | Control on photographic still cameras deleted. |

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| Category 9 | | |
| 9A001a Note 1 | WA | Note to aero gas turbine engines amended |
| 9A001b | WA | Control for Mach 1 aero engines amended |
| 9A004d | WA | Consequential change on list of references in “spacecraft payloads” control as a result of Category 5 Part 2 restructure. |
| 9A105 | MTCR | Control amended to include gel propellant rocket motors. |
| 9A105a | MTCR | Control on liquid propellant rocket engines changed to include gel propellant rocket motors/propulsion systems. |
| 9A105b | MTCR | Control on liquid propellant rocket engines changed to include gel propellant rocket motors/propulsion systems. |
| 9A106a & b | Edit | Liquid rocket component control amended to align with regime intentions. |
| 9C108 | Edit | Missile insulation material control amended to align with regime intention. |
| 9B001b | WA | Control on equipment , tooling or fixtures specially designed for manufacturing gas turbine engine blades rewritten to include sub-entries 1, 2, and 3. |
| 9B106a & a1 | Edit | Environmental chamber control amended to align with regime text. |
| 9D103 | Edit | Minor changes to text. |
| 9D104a | MTCR | New control entry 9D104a created for “software” specially designed or modified for the “use” of goods specified. |
| 9D104b | MTCR | New control entry 9D104b created for “software” specially designed or modified for the operation or maintenance of subsystems or equipment specified. |
| 9D105 | MTCR & Edit | Control on software which coordinates the functions of more than one subsystem amended; Reference to control corrected from 9D003e to 9D004e. |
| 9E003h Note | WA | Note to FADAC technology control amended. |
| 9E003j & N.B. | WA | Control on technology for wing folding systems and Nota Bene amended. |

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SUMMARY OF CHANGES FOR EACH SECTION OF ANNEX IV:

| Annex IV | | |
|-----------------|------|--|
| 5A004 | WA | To align with new 5A004 control for cryptanalytic equipment |
| 5D002c1 | WA | To align with amended Category 5 Part 2. |
| 5E002a | WA | To align with amended Category 5 Part 2. |
| 3E201 | Edit | Referenced control entries corrected. |
| 6A203 | Edit | Consequential change due to NSG camera amendment - retains control on mechanical cameras only. |

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