

**DEPARTMENT OF COMMERCE****Bureau of Export Administration****15 CFR Parts 742, 743, 746, 772 and 774**

[Docket No. 990625176-0029-02]

RIN 0694-AB86

**Revisions and Clarifications to the Export Administration Regulations; Commerce Control List****AGENCY:** Bureau of Export Administration, Commerce.**ACTION:** Final rule.

**SUMMARY:** On July 23, 1999, the Bureau of Export Administration (BXA) published a final rule (64 FR 40106) that revised the Commerce Control List (CCL) based on Wassenaar Arrangement review. The final rule revised certain entries controlled for national security reasons in Categories 1,2,3,4,5,6,7, and 9 to conform with changes in the Wassenaar Arrangement's List of Dual-Use Goods and Technologies. This final rule amends the CCL by making certain revisions and clarifications and, in some cases, inserts material inadvertently omitted from the July 23 final rule. This rule also makes corresponding changes to parts 742, 743, 746 and 772 of the Export Administration Regulations.

**DATES:** Effective Date: This rule is effective May 26, 2000.**FOR FURTHER INFORMATION CONTACT:** Kirsten Mortimer, Regulatory Policy Division, Office of Exporter Services, Bureau of Export Administration, Telephone: (202) 482-2440.

**SUPPLEMENTARY INFORMATION:** In July 1996, the United States and thirty-two other countries gave final approval to the establishment of a new multilateral export control arrangement, called the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies (Wassenaar Arrangement). The Wassenaar Arrangement contributes to regional and international security and stability by promoting transparency and greater responsibility in transfers of conventional arms and dual-use goods and technologies, thus preventing destabilizing accumulations of such items.

On January 15, 1998, the Bureau of Export Administration (BXA) published an interim rule (63 FR 2452) fulfilling U.S. commitments to the Wassenaar Arrangement by implementing the Wassenaar Arrangement of Dual-Use Goods and Technologies which is a list of dual-use items identified by Export Control Classification Numbers (ECCNs)

as being controlled for national security (NS) reasons in the Commerce Control List (CCL). On July 23, 1999, BXA published a final rule (64 FR 40106) that revised a number of these national security controlled entries on the CCL to conform with recent changes in the Wassenaar List of Dual-Use Goods and Technologies. This rule corrects a number of inadvertent errors to the EAR that appeared in the July 23 rule.

The changes are summarized as follows:

In part 742, changes are made to sections 742.8, 742.10, 746.7, and Supplement 2 to part 742 to cross-reference certain paragraph references relating to ECCN 5A991 to reflect the renumbering of these paragraph references in the July rule.

In part 743, changes are made to section 743.1 to cross-reference certain paragraph references relating to ECCN 5A001 to reflect the renumbering of these paragraph references in the July rule.

In part 772, where definition in the EAR are described, the definition for "positioning accuracy" is changed to clarify that the 1988 version of the ISO standard applies to this definition. This clarification is also made to the Notes to the Category 2B (Materials Processing—Test, Inspection, and Production Equipment) of the CCL.

ECCN 3B991 is amended by removing a paragraph which was incorrectly referenced twice.

ECCN 5A001 is amended by adding License Exception LVS eligibility to underwater communications systems.

ECCN 5A991 is amended by fixing incorrect paragraph references made in the July rule.

ECCN 5B001 is amended by revising the phrase "employing coherent transmission" to read "employing coherent optical transmission". The word "optical" was mistakenly left out of the July rule.

ECCN 5D001 is amended by putting the word "or" in the correct place within the List of Items controlled section. This mistake was inadvertently made in the July rule.

ECCN 5E001 is amended by putting the word "production" in the correct paragraph. This mistake was inadvertently made in the July rule.

ECCN 5E991 is amended by adding descriptions for certain technologies that were removed from national security controls in the July rule. These technologies were removed from ECCN 5E001 in the July rule, and should have been moved into ECCN 5D991, as they continue to be controlled for anti-terrorism reasons.

ECCN 6A003 is amended by adding a dash to the phrase "time-delay-and integration" to read "time-delay-and-integration". This corrects a typographical error in the July rule.

**Background**

Specifically this rule makes the following revisions to parts 742, 743, 746, 772 and 774 of the Export Administration Regulations:

(1) In paragraphs 742.8(a)(2), 742.10(a)(2) (Anti-Terrorism Controls), and 746.7(a)(2)(ii) (Embargoes), the phrase "ECCN 5A991.f" is corrected to read "ECCN 5A991.g". This corresponds to the changes agreed to and implemented by the Wassenaar Arrangement.

(2) In Supplement 2 to part 742 (Anti-Terrorism Controls; Iran, Syria and Sudan Contract Sanctity Dates and Related Topics), in paragraph (c)(29), the phrase "ECCN 5A001.c" is removed and the phrase "ECCN 5A991.c.1" is revised to read "ECCN 5A991.c". This corresponds to the changes agreed to and implemented by the Wassenaar Arrangement.

(3) In paragraph 743.1(c)(1)(v) (Special Reporting), the phrase "5A001.b.8" is corrected to read "5A001.b.3". This corresponds to the changes agreed to and implemented by the Wassenaar Arrangement.

(4) In part 772 (Definitions of Terms), the definition for "positioning accuracy" is amended by adding the parenthetical reference "(1988)" immediately following "ISO 230/2". This clarifies that the 1988 version of the ISO standard applies.

(5) In Category 2B (Materials Processing—Test, Inspection, and Production Equipment) of the CCL, the Notes for Category 2B section is amended by revising note 5 to add the parenthetical reference "(1988)" immediately following "ISO 230/2". This clarifies that the 1988 version of the ISO standard applies.

(6) Export Control Classification Number (ECCN) 3B991 is amended by removing paragraph b.2.f.5. These items are already covered in paragraph b.2.f.1 of ECCN 3B991.

(7) ECCN 5A001 is amended by adding License Exception LVS eligibility to paragraph b.1. This corrects the inadvertent removal of LVS eligibility for underwater communications systems.

(8) ECCN 5A991 is amended by revising the paragraph references for paragraphs c.10.c and c.10.d to read c.11 and c.12, respectively. ECCN 5A991 is also amended by revising the phrase "5A001" to read "5A991" in Notes 1

and 2 to paragraph b.7 and in the Note to paragraph c.9.

(9) ECCN 5B001 is amended by revising the phrase "employing coherent transmission" to read "employing coherent optical transmission" in paragraph b.2.c. This corrects an inadvertent omission and is consistent with the changes agreed to and implemented by the Wassenaar Arrangement.

(10) ECCN 5D001 is amended by adding the word "or" at the end of paragraph d.2.a and removing the word "or" at the end of paragraph d.4.b. This corrects an inadvertent omission and error and is consistent with the changes agreed to and implemented by the Wassenaar Arrangement.

(11) ECCN 5E001 is amended by adding the word "production" in paragraph c and removing the word "production" in the notes to paragraph c.2.e and c.4.b. This corrects an inadvertent omission and errors and is consistent with the changes agreed to and implemented by the Wassenaar Arrangement.

(12) ECCN 5E991 is amended by revising the entry heading by adding "and other 'technologies' as follows" and by revising the List of Items Controlled section to include paragraphs a.1 and a.2 for 'technology' for the processing and application of coatings to optical fiber specially designed to make it suitable for underwater use and "technology" for the "development" of equipment employing "Synchronous Digital Hierarchy" ("SDH") or "Synchronous Optical Network" ("SONET") techniques. These technologies were removed from ECCN 5E001 in the July 23 rule as they are no longer controlled for national security reasons, consistent with the changes agreed to and implemented by the Wassenaar Arrangement. However, anti-terrorism controls for these technologies should have been retained under ECCN 5E991. This rule corrects this inadvertent omission.

(13) ECCN 6A003 is amended by revising the phrase "time-delay-and integration" to read "time-delay-and-integration" in the note to paragraph b.4. This corrects a typographical error and is consistent with the changes agreed to and implemented by the Wassenaar Arrangement.

Although the Export Administration Act (EAA) expired on August 20, 1994, the President invoked the International Emergency Economic Powers Act and continued in effect, the Export Administration Regulations and, to the extent permitted by law, the provisions of the EAA in Executive Order 12924 of

August 19, 1994, as extended by the President's notices of August 15, 1995 (60 FR 42767), August 14, 1996 (61 FR 42527), August 13, 1997 (62 FR 43629), August 13, 1998 (63 FR 44121), and August 13, 1999 (64 FR 44101).

#### Rulemaking Requirements

1. This final rule has been determined to be not significant for purposes of E.O. 12866.

2. Notwithstanding any other provision of law, no person is required to, nor shall any person be subject to a penalty for failure to comply with a collection of information, subject to the Paperwork Reduction Act (PRA), unless that collection of information displays a currently valid OMB Control Number. This rule involves collection of information approved by the Office of Management and Budget under control numbers 0694-0106 and 0694-0088. This clarifies that the July 23, 1999 rule (64 FR 40106) referenced an incorrect collection of information number, 0694-0086, and instead should have referenced collection number 0694-0106.

3. This rule does not contain policies with Federalism implications sufficient to warrant preparation of a Federalism assessment under Executive Order 13132.

4. The provisions of the Administrative Procedure Act (5 U.S.C. 553) requiring notice of proposed rulemaking, the opportunity for public participation, and a delay in effective date, are inapplicable because this regulation involves a military and foreign affairs function of the United States (5 U.S.C. 553(a)(1)). Further, no other law requires that a notice of proposed rulemaking and an opportunity for public comment be given for this rule. Because a notice of proposed rulemaking and an opportunity for public comment are not required to be given for this rule under the Administrative Procedure Act or by any other law, the analytical requirements of the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) are not applicable. Accordingly, this rule is issued in final form. However, comments from the public are always welcome. Comments should be submitted to Kirsten Mortimer, Regulatory Policy Division, Office of Exporter Services, Bureau of Export Administration, Department of Commerce, P.O. Box 273, Washington, DC 20044.

#### List of Subjects

15 CFR Parts 742 and 772

Exports, Foreign trade.

#### 15 CFR Part 743

Administrative practice and procedure, Exports, Foreign trade, Reporting and recordkeeping requirements.

#### 15 CFR Part 746

Embargoes, Exports, Foreign Trade, Reporting and recordkeeping requirements.

#### 15 CFR Part 774

Exports, Foreign trade, Reporting and recordkeeping requirements.

Accordingly, parts 742, 743, 746, 772 and 774 of the Export Administration Regulations (15 CFR parts 730-799) are amended as follows:

1. The authority citation for 15 CFR Part 742 is revised to read as follows:

**Authority:** 50 U.S.C. app. 2401 *et seq.*; 50 U.S.C. 1701 *et seq.*; 18 U.S.C. 2510 *et seq.*; 22 U.S.C. 3201 *et seq.*; 42 U.S.C. 2139a; E.O. 12058, 43 FR 20947, 3 CFR, 1978 Comp., p. 179; E.O. 12851, 58 FR 33181, 3 CFR, 1993 Comp., p. 608; E.O. 12924, 59 FR 43437, 3 CFR, 1994 Comp., p. 917; E.O. 12938, 59 FR 59099, 3 CFR, 1994 Comp., p. 950; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; Notice of November 12, 1998, 63 FR 63589, 3 CFR, 1998 Comp., p. 305; Notice of August 10, 1999, 64 FR 44101, 3 CFR, 1999 Comp., p. 302.

2. The authority citation for 15 CFR part 743 is revised to read as follows:

**Authority:** 50 U.S.C. app. 2401 *et seq.*; 50 U.S.C. 1701 *et seq.*; E.O. 12924, 59 FR 43437, 3 CFR, 1994 Comp., p. 917; Notice of August 10, 1999, 64 FR 44101, 3 CFR, 1999 Comp., p. 302.

3. The authority citation for 15 CFR part 746 is revised to read as follows:

**Authority:** 50 U.S.C. app. 2401 *et seq.*; 50 U.S.C. 1701 *et seq.*; 22 U.S.C. 287c; 22 U.S.C. 6004; E.O. 12854, 58 FR 36587, 3 CFR 1993 Comp., p. 614; E.O. 12918, 59 FR 28205, 3 CFR, 1994 Comp., p. 899; E.O. 12924, 59 FR 43437, 3 CFR, 1994 Comp., p.917; E.O. 13088, 63 FR 32109, 3 CFR, 1998 Comp., p. 191; E.O. 13121 of April 30, 1999, 64 FR 24021 (May 5, 1999); Notice of August 10, 1999, 64 FR 44101, 3 CFR, 1999 Comp., p. 302.

4. The authority citation for part 772 is revised to read as follows:

**Authority:** 50 U.S.C. app. 2401 *et seq.*; 50 U.S.C. 1701 *et seq.*; E.O. 12924, 59 FR 43437, 3 CFR, 1994 Comp., p. 917; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; Notice of August 10, 1999, 64 FR 44101, 3 CFR, 1999 Comp., p. 302.

5. The authority citation for part 774 is revised to read as follows:

**Authority:** 50 U.S.C. app. 2401 *et seq.*; 50 U.S.C. 1701 *et seq.*; 10 U.S.C. 7420; 10 U.S.C. 7430(e); 18 U.S.C. 2510 *et seq.*; 22 U.S.C. 287c, 22 U.S.C. 3201 *et seq.*; 22 U.S.C. 6004; 30 U.S.C. 185(s), 185(u); 42 U.S.C. 2139a; 42

U.S.C. 6212; 43 U.S.C. 1354; 46 U.S.C. app. 466c; 50 U.S.C. app. 5; E.O. 12924, 59 FR 43437, 3 CFR, 1994 Comp., p. 917; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; Notice of August 10, 1999, 64 FR 44101, 3 CFR, 1999 Comp., p. 302.

## PART 742—[AMENDED]

### § 742.8 [Amended]

6. § 742.8 is amended by revising “5A991.f” in paragraph (a)(2), to read “5A991.g”.

### § 742.10 [Amended]

7. § 742.10 is amended by revising “5A991.f” in paragraph (a)(2), to read “5A991.g”.

### Supplement to 742 [Amended]

8. Supplement No. 2 to part 742 is amended by revising the phrase “ECCNs 5A001.c and 5A991.c.1” in the introductory text of paragraph (c)(29) to read “ECCN 5A991.c”.

## PART 743—[AMENDED]

### § 743.1 [Amended]

9. § 743.1(c)(1)(v) is amended two places by revising “5A001.b.8”, to read “5A001.b.3”.

## PART 746—[AMENDED]

### § 746.7 [Amended]

10. § 746.7 is amended by revising, “5A991.f” in paragraph (a)(2)(ii), to read “5A991.g”.

## PART 772—[AMENDED]

11. Part 772 is amended by revising the phrase “with ISO/DIS 230/2” to read “with ISO/DIS 230/2 (1988)” in the definition for “positioning accuracy”.

## PART 774—[AMENDED]

### Supplement No. 1 to Part 774—The Commerce Control List

12. In Supplement No. 1 to part 774 (the Commerce Control List), Category 2—Materials Processing, at the beginning of Category 2B (Test, Inspection and Production Equipment), note 5 in “Notes for Category 2B” is amended by revising the phrase “in accordance with ISO 230/2” to read “in accordance with ISO 230/2 (1988)”.

13. In Supplement No. 1 to part 774 (the Commerce Control List), Category 3—Electronics, ECCN 3B991 is amended by revising the List of Items Controlled section, as follows:

### 3B991 Equipment not controlled by 3B001 for the manufacture of electronic components and materials, and specially designed components and accessories therefor.

\* \* \* \* \*

#### List of Items Controlled

*Unit:* Equipment in number.

*Related Controls:* N/A.

*Related Definitions:* N/A.

*Items:*

a. Equipment specially designed for the manufacture of electron tubes, optical elements and specially designed components therefor controlled by 3A001 or 3A991;

b. Equipment specially designed for the manufacture of semiconductor devices, integrated circuits and “assemblies”, as follows, and systems incorporating or having the characteristics of such equipment:

**Note:** 3B991.b also controls equipment used or modified for use in the manufacture of other devices, such as imaging devices, electro-optical devices, acoustic-wave devices.

b.1. Equipment for the processing of materials for the manufacture of devices and components as specified in the heading of 3B991.b, as follows:

**Note:** 3B991 does not control quartz furnace tubes, furnace liners, paddles, boats (except specially designed caged boats), bubblers, cassettes or crucibles specially designed for the processing equipment controlled by 3B991.b.1.

b.1.a. Equipment for producing polycrystalline silicon and materials controlled by 3C001;

b.1.b. Equipment specially designed for purifying or processing III/V and II/VI semiconductor materials controlled by 3C001, 3C002, 3C003, or 3C004, except crystal pullers, for which see 3B991.b.1.c below;

b.1.c. Crystal pullers and furnaces, as follows:

**Note:** 3B991.b.1.c does not control diffusion and oxidation furnaces.

b.1.c.1. Annealing or recrystallizing equipment other than constant temperature furnaces employing high rates of energy transfer capable of processing wafers at a rate exceeding 0.005 m<sup>2</sup> per minute;

b.1.c.2. “Stored program controlled” crystal pullers having any of the following characteristics:

b.1.c.2.a. Rechargeable without replacing the crucible container;

b.1.c.2.b. Capable of operation at pressures above 2.5×10<sup>5</sup> Pa; or b.1.c.2.c. Capable of pulling crystals of a diameter exceeding 100 mm;

b.1.d. “Stored program controlled” equipment for epitaxial growth having any of the following characteristics:

b.1.d.1. Capable of producing a layer thickness uniformity across the wafer of equal to or better than ±3.5%;

b.1.d.2. Rotation of individual wafers during processing; or

b.1.e. Molecular beam epitaxial growth equipment;

b.1.f. Magnetically enhanced “sputtering” equipment with specially designed integral load locks capable of transferring wafers in an isolated vacuum environment;

b.1.g. Equipment specially designed for ion implantation, ion-enhanced or photo-enhanced diffusion, having any of the following characteristics:

b.1.g.1. Patterning capability;

b.1.g.2. Beam energy (accelerating voltage) exceeding 200 keV;

b.1.g.3. Optimized to operate at a beam energy (accelerating voltage) of less than 10 keV; or

b.1.g.4. Capable of high energy oxygen implant into a heated “substrate”;

b.1.h. “Stored program controlled” equipment for the selective removal (etching) by means of anisotropic dry methods (e.g., plasma), as follows:

b.1.h.1. Batch types having either of the following:

b.1.h.1.a. End-point detection, other than optical emission spectroscopy types; or

b.1.h.1.b. Reactor operational (etching) pressure of 26.66 Pa or less;

b.1.h.2. Single wafer types having any of the following:

b.1.h.2.a. End-point detection, other than optical emission spectroscopy types;

b.1.h.2.b. Reactor operational (etching) pressure of 26.66 Pa or less; or

b.1.h.2.c. Cassette-to-cassette and load locks wafer handling;

**Notes:** 1. “Batch types” refers to machines not specially desired for production processing of single wafers. Such machines can process two or more wafers simultaneously with common process parameters, e.g., RF power, temperature, etch gas species, flow rates.

2. “Single wafer types” refers to machines specially designed for production processing of single wafers. These machines may use automatic wafer handling techniques to load a single wafer into the equipment for processing. The definition includes equipment that can load and process several wafers but where the etching parameters, e.g., RF power or end point, can be independently determined for each individual wafer.

b.1.i. “Chemical vapor deposition” (CVD) equipment, e.g., plasma-enhanced CVD (PECVD) or photo-enhanced CVD, for semiconductor device manufacturing, having either of the following capabilities, for deposition of oxides, nitrides, metals or polysilicon:

b.1.i.1. “Chemical vapor deposition” equipment operating below 10<sup>5</sup> Pa; or

b.1.i.2. PECVD equipment operating either below 60 Pa (450 millitorr) or having automatic cassette-to-cassette and load lock wafer handling;

**Note:** 3B991.b.1.i does not control low pressure “chemical vapor deposition” (LPCVD) systems or reactive “sputtering” equipment.

b.1.j. Electron beam systems specially designed or modified for mask making or semiconductor device processing having any of the following characteristics:

b.1.j.1. Electrostatic beam deflection;

b.1.j.2. Shaped, non-Gaussian beam profile;

b.1.j.3. Digital-to-analog conversion rate exceeding 3 MHz;

b.1.j.4. Digital-to-analog conversion accuracy exceeding 12 bit; *or*

b.1.j.5. Target-to-beam position feedback control precision of 1 micrometer or finer;

**Note:** 3B991.b.1.j does not control electron beam deposition systems or general purpose scanning electron microscopes.

b.1.k. Surface finishing equipment for the processing of semiconductor wafers as follows:

b.1.k.1. Specially designed equipment for backside processing of wafers thinner than 100 micrometer and the subsequent separation thereof; *or*

b.1.k.2. Specially designed equipment for achieving a surface roughness of the active surface of a processed wafer with a two-sigma value of 2 micrometer or less, total indicator reading (TIR);

**Note:** 3B991.b.1.k does not control single-side lapping and polishing equipment for wafer surface finishing.

b.1.l. Interconnection equipment which includes common single or multiple vacuum chambers specially designed to permit the integration of any equipment controlled by 3B991 into a complete system;

b.1.m. "Stored program controlled" equipment using "lasers" for the repair or trimming of "monolithic integrated circuits" with either of the following characteristics:

b.1.m.1. Positioning accuracy less than  $\pm 1$  micrometer; *or*

b.1.m.2. Spot size (kerf width) less than 3 micrometer.

b.2. Masks, mask "substrates", mask-making equipment and image transfer equipment for the manufacture of devices and components as specified in the heading of 3B991, as follows:

**Note:** The term "masks" refers to those used in electron beam lithography, X-ray lithography, and ultraviolet lithography, as well as the usual ultraviolet and visible photo-lithography.

b.2.a. Finished masks, reticles and designs therefor, except:

b.2.a.1. Finished masks or reticles for the production of unembargoed integrated circuits; *or*

b.2.a.2. Masks or reticles, having both of the following characteristics:

b.2.a.2.a. Their design is based on geometries of 2.5 micrometer or more; *and*

b.2.a.2.b. The design does not include special features to alter the intended use by means of production equipment or "software";

b.2.b. Mask "substrates" as follows:

b.2.b.1. Hard surface (*e.g.*, chromium, silicon, molybdenum) coated "substrates" (*e.g.*, glass, quartz, sapphire) for the preparation of masks having dimensions exceeding 125 mm x 125 mm; *or*

b.2.b.2. "Substrates" specially designed for X-ray masks;

b.2.c. Equipment, other than general purpose computers, specially designed for computer aided design (CAD) of semiconductor devices or integrated circuits;

b.2.d. Equipment or machines, as follows, for mask or reticle fabrication:

b.2.d.1. Photo-optical step and repeat cameras capable of producing arrays larger than 100 mm x 100 mm, or capable of

producing a single exposure larger than 6 mm x 6 mm in the image (*i.e.*, focal) plane, or capable of producing line widths of less than 2.5 micrometer in the photoresist on the "substrate";

b.2.d.2. Mask or reticle fabrication equipment using ion or "laser" beam lithography capable of producing line widths of less than 2.5 micrometer; *or*

b.2.d.3. Equipment or holders for altering masks or reticles or adding pellicles to remove defects;

**Note:** 3B991.b.2.d.1 and b.2.d.2 do not control mask fabrication equipment using photo-optical methods which was either commercially available before the 1st January, 1980, or has a performance no better than such equipment.

b.2.e. "Stored program controlled" equipment for the inspection of masks, reticles or pellicles with:

b.2.e.1. A resolution of 0.25 micrometer or finer; *and*

b.2.e.2. A precision of 0.75 micrometer or finer over a distance in one or two coordinates of 63.5 mm or more;

**Note:** 3B991.b.2.e does not control general purpose scanning electron microscopes except when specially designed and instrumented for automatic pattern inspection.

b.2.f. Align and expose equipment for wafer production using photo-optical or X-ray methods, including both projection image transfer equipment and step and repeat (direct step on wafer) or step and scan (scanner) equipment, capable of performing any of the following functions:

**Note:** 3B991.b.2.f does not control photo-optical contact and proximity mask align and expose equipment or contact image transfer equipment.

b.2.f.1. Production of a pattern size of less than 2.5 micrometer;

b.2.f.2. Alignment with a precision finer than  $\pm 0.25$  micrometer (3 sigma);

b.2.f.3. Machine-to-machine overlay no better than +0.3 micrometer; *or*

b.2.f.4. A light source wavelength shorter than 400 nm;

b.2.g. Electron beam, ion beam or X-ray equipment for projection image transfer capable of producing patterns less than 2.5 micrometer;

**Note:** For focussed, deflected-beam systems (direct write systems), see 3B991.b.1.j or b.10.

b.2.h. Equipment using "lasers" for direct write on wafers capable of producing patterns less than 2.5 micrometer.

b.3. Equipment for the assembly of integrated circuits, as follows:

b.3.a. "Stored program controlled" die bonders having all of the following characteristics:

b.3.a.1. Specially designed for "hybrid integrated circuits";

b.3.a.2. X-Y stage positioning travel exceeding 37.5 x 37.5 mm; *and*

b.3.a.3. Placement accuracy in the X-Y plane of finer than +10 micrometer;

b.3.b. "Stored program controlled" equipment for producing multiple bonds in a single operation (*e.g.*, beam lead bonders, chip carrier bonders, tape bonders);

b.3.c. Semi-automatic or automatic hot cap sealers, in which the cap is heated locally to a higher temperature than the body of the package, specially designed for ceramic microcircuit packages controlled by 3A001 and that have a throughput equal to or more than one package per minute.

**Note:** 3B991.b.3 does not control general purpose resistance type spot welders.

b.4. Filters for clean rooms capable of providing an air environment of 10 or less particles of 0.3 micrometer or smaller per 0.02832 m<sup>3</sup> and filter materials therefor.

14. In Supplement No. 1 to part 774 (the Commerce Control List), Category 5—Telecommunication and Information Security, Part I—Telecommunications is amended:

a. By revising the License Exceptions section for ECCN 5A001; and

b. By revising the List of Items Controlled section for ECCNs 5A991, 5B001, 5D001, and 5E001; and

c. By revising the entry heading and List of Items Controlled section for ECCN 5E991, as follows:

**5A001 Telecommunications systems, equipment, and components.**

\* \* \* \* \*

**License Exceptions**

LVS: N/A for 5A001.a and b.4

\$5000 for 5A001.b.1, b.2, b.3, b.5, and .d

\$3000 for 5A001.c

GBS: Yes, except 5A001.a and b.4

CIV: Yes, except 5A001.a, b.3 and b.4

\* \* \* \* \*

**5A991 Telecommunication equipment, not controlled by 5A001.**

\* \* \* \* \*

**List of Items Controlled**

*Unit:* \$ value.

*Related Controls:* N/A.

*Related Definitions:* N/A.

Items:

a. Any type of telecommunications equipment, not controlled by 5A001.a, specially designed to operate outside the temperature range from 219 K ( - 54 °C) to 397 K (124 °C).

b. Telecommunication transmission equipment and systems, and specially designed components and accessories therefor, having any of the following characteristics, functions or features:

**Note:** Telecommunication transmission equipment:

a. Categorized as follows, or combinations thereof:

1. Radio equipment (*e.g.*, transmitters, receivers and transceivers);
2. Line terminating equipment;
3. Intermediate amplifier equipment;
4. Repeater equipment;
5. Regenerator equipment;
6. Translation encoders (transcoders);
7. Multiplex equipment (statistical multiplex included);
8. Modulators/demodulators (modems);
9. Transmultiplex equipment (see CCITT Rec. G701);

10. "Stored program controlled" digital crossconnection equipment;

11. "Gateways" and bridges;

12. "Media access units"; *and*

b. Designed for use in single or multi-channel communication via any of the following:

1. Wire (line);

2. Coaxial cable;

3. Optical fiber cable;

4. Electromagnetic radiation; *or*

5. Underwater acoustic wave propagation.

b.1. Employing digital techniques, including digital processing of analog signals, and designed to operate at a "digital transfer rate" at the highest multiplex level exceeding 45 Mbit/s or a "total digital transfer rate" exceeding 90 Mbit/s;

**Note:** 5A991.b.1 does not control equipment specially designed to be integrated and operated in any satellite system for civil use.

b.2. Modems using the "bandwidth of one voice channel" with a "data signalling rate" exceeding 9,600 bits per second;

b.3. Being "stored program controlled" digital cross connect equipment with "digital transfer rate" exceeding 8.5 Mbit/s per port.

b.4. Being equipment containing any of the following:

b.4.a. "Network access controllers" and their related common medium having a "digital transfer rate" exceeding 33 Mbit/s; *or*

b.4.b. "Communication channel controllers" with a digital output having a "data signalling rate" exceeding 64,000 bit/s per channel;

**Note:** If any uncontrolled equipment contains a "network access controller", it cannot have any type of telecommunications interface, except those described in, but not controlled by 5A991.b.4.

b.5. Employing a "laser" and having any of the following characteristics:

b.5.a. A transmission wavelength exceeding 1,000 nm; *or*

b.5.b. Employing analog techniques and having a bandwidth exceeding 45 MHz;

**Note:** 5A991.b.5.b does not control commercial TV systems.

b.5.c. Employing coherent optical transmission or coherent optical detection techniques (also called optical heterodyne or homodyne techniques);

b.5.d. Employing wavelength division multiplexing techniques; *or*

b.5.e. Performing "optical amplification";

b.6. Radio equipment operating at input or output frequencies exceeding:

b.6.1. 31 GHz for satellite-earth station applications; *or*

b.6.2. 26.5 GHz for other applications;

**Note:** 5A991.b.6 does not control equipment for civil use when conforming with an International Telecommunications Union (ITU) allocated band between 26.5 GHz and 31 GHz.

b.7. Being radio equipment employing any of the following:

b.7.a. Quadrature-amplitude-modulation (QAM) techniques above level 4 if the "total digital transfer rate" exceeds 8.5 Mbit/s;

b.7.b. QAM techniques above level 16 if the "total digital transfer rate" is equal to or less than 8.5 Mbit/s; *or*

b.7.c. Other digital modulation techniques and having a "spectral efficiency" exceeding 3 bit/sec/Hz;

**Notes:** 1. 5A991.b.7 does not control equipment specially designed to be integrated and operated in any satellite system for civil use.

2. 5A991.b.7 does not control radio relay equipment for operation in an ITU allocated band:

a. Having any of the following:

a.1. Not exceeding 960 MHz; *or*

a.2. With a "total digital transfer rate" not exceeding 8.5 Mbit/s; *and*

b. Having a "spectral efficiency" not exceeding 4 bit/sec/Hz.

b.8. Providing functions of digital "signal processing" as follows:

b.8.a. Voice coding at rates less than 2,400 bit/s;

b.8.b. Employing circuitry that incorporates "user-accessible programmability" of digital "signal processing" circuits exceeding the limits of 4A003.b.

c. "Stored program controlled" switching equipment and related signalling systems, having any of the following characteristics, functions or features, and specially designed components and accessories therefor:

**Note:** Statistical multiplexers with digital input and digital output which provide switching are treated as "stored program controlled" switches.

c.1. "Data (message) switching" equipment or systems designed for "packet-mode operation" and assemblies and components therefor, n.e.s.

c.2. Containing "Integrated Services Digital Network" (ISDN) functions and having any of the following:

c.2.a. Switch-terminal (*e.g.*, subscriber line) interfaces with a "digital transfer rate" at the highest multiplex level exceeding 192,000 bit/s, including the associated signalling channel (*e.g.*, 2B+D); *or*

c.2.b. The capability that a signalling message received by a switch on a given channel that is related to a communication on another channel may be passed through to another switch.

**Note:** 5A991.c does not preclude the evaluation and appropriate actions taken by the receiving switch or unrelated user message traffic on a D channel of ISDN.

c.3. Routing or switching of "datagram" packets;

c.4. Routing or switching of "fast select" packets;

**Note:** The restrictions in 5A991.c.3 and c.4 do not apply to networks restricted to using only "network access controllers" or to "network access controllers" themselves.

c.5. Multi-level priority and pre-emption for circuit switching;

**Note:** 5A991.c.5 does not control single-level call preemption.

c.6. Designed for automatic hand-off of cellular radio calls to other cellular switches or automatic connection to a centralized subscriber data base common to more than one switch;

c.7. Containing "stored program controlled" digital crossconnect equipment

with "digital transfer rate" exceeding 8.5 Mbit/s per port.

c.8. "Common channel signalling" operating in either non-associated or quasi-associated mode of operation;

c.9. "Dynamic adaptive routing";

**Note:** 5A991.c.10 does not control packet switches or routers with ports or lines not exceeding the limits in 5A991.c.10.

c.10. Being packet switches, circuit switches and routers with ports or lines exceeding any of the following:

c.10.a. A "data signalling rate" of 64,000 bit/s per channel for a "communications channel controller"; *or*

**Note:** 5A991.c.10.a does not control multiplex composite links composed only of communication channels not individually controlled by 5A991.b.1.

c.10.b. A "digital transfer rate" of 33 Mbit/s for a "network access controller" and related common media;

c.11. "Optical switching";

c.12. Employing "Asynchronous Transfer Mode ("ATM") techniques.

d. Optical fibers and optical fiber cables of more than 50 m in length designed for single mode operation;

e. Centralized network control having all of the following characteristics:

e.1. Receives data from the nodes; *and*

e.2. Process these data in order to provide control of traffic not requiring operator decisions, and thereby performing "dynamic adaptive routing";

**Note:** 5A991.e does not preclude control of traffic as a function of predictable statistical traffic conditions.

f. Phased array antennae, operating above 10.5 GHz, containing active elements and distributed components, and designed to permit electronic control of beam shaping and pointing, except for landing systems with instruments meeting International Civil Aviation Organization (ICAO) standards (microwave landing systems (MLS)).

g. Mobile communications equipment, n.e.s., and assemblies and components therefor; *or*

h. Radio relay communications equipment designed for use at frequencies equal to or exceeding 19.7 GHz and assemblies and components therefor, n.e.s.

#### 5B001—Telecommunication test, inspection and production equipment, as follows (See List of Items Controlled).

\* \* \* \* \*

#### List of Items Controlled

*Unit:* Equipment in number; parts and accessories in \$ value.

*Related Controls:* See also 5B991.

*Related Definition:* N/A.

*Items:*

a. Equipment and specially designed components or accessories therefor, specially designed for the "development", "production" or "use" of equipment, functions or features controlled by 5A001, 5D001 or 5E001.

**Note:** 5B001.a. does not control optical fiber characterization equipment not using semiconductor "lasers".

b. Equipment and specially designed components or accessories therefor, specially designed for the "development" of any of the following telecommunication transmission or "stored program controlled" switching equipment:

b.1. Equipment employing digital techniques, including "Asynchronous Transfer Mode" ("ATM"), designed to operate at a "total digital transfer rate" exceeding 1.5 Gbit/s;

b.2. Equipment employing a "laser" and having any of the following:

b.2.a. A transmission wavelength exceeding 1750 nm;

b.2.b. Performing "optical amplification";

b.2.c. Employing coherent optical transmission or coherent optical detection techniques (also called optical heterodyne or homodyne techniques); or

b.2.d. Employing analogue techniques and having a bandwidth exceeding 2.5 GHz;

Note: 5B001.b.2.d. does not include equipment specially designed for the "development" of commercial TV systems.

b.3. Equipment employing "optical switching";

b.4. Radio equipment having any of the following:

b.4.a. Quadrature-amplitude-modulation (QAM) techniques above level 128; or

b.4.b. Operating at input or output frequencies exceeding 31 GHz; or

Note: 5B001.b.4.b. does not include equipment specially designed for the "development" of equipment designed or modified for operation in any ITU allocated band.

b.5. Equipment employing "common channel signalling" operating in either the non-associated mode of operation.

5D001 "Software", as described in the List of Items Controlled.

\* \* \* \* \*

List of Items Controlled

Unit: \$ value.

Related Controls: See also 5D991.

Related Definitions: N/A.

Items:

a. "Software" specially designed or modified for the "development", "production" or "use" of equipment, functions or features controlled by 5A001 or 5B001.

b. "Software" specially designed or modified to support "technology" controlled by 5E001.

c. Specific "software" as follows:

c.1. "Software" specially designed or modified to provide characteristics, functions or features of equipment controlled by 5A001 or 5B001;

c.2. "Software" which provides the capability of recovering "source code" of telecommunications "software" controlled by 5D001;

c.3. "Software", other than in machine-executable form, specially designed for "dynamic adaptive routing".

d. "Software" specially designed or modified for the "development" of any of the following telecommunication transmission or "stored program controlled" switching equipment:

d.1. Equipment employing digital techniques, including "Asynchronous Transfer Mode" ("ATM"), designed to operate at a "total digital transfer rate" exceeding 1.5 Gbit/s;

d.2. Equipment employing a "laser" and having any of the following:

d.2.a. A transmission wavelength exceeding 1750 nm; or

d.2.b. Employing analogue techniques and having a bandwidth exceeding 2.5 GHz;

Note: 5D001.d.2.b does not include "software" specially designed or modified for the "development" of commercial TV systems.

d.3. Equipment employing "optical switching"; or

d.4. Radio equipment having any of the following:

d.4.a. Quadrature-amplitude-modulation (QAM) techniques above level 128; or

d.4.b. Operating at input or output frequencies exceeding 31 GHz.

Note: 5D001.d.4.b does not include "software" specially designed or modified for the "development" of equipment designed or modified for operation in any ITU allocated band.

5E001 "Technology", (see List of Items Controlled).

\* \* \* \* \*

List of Items Controlled

Unit: \$ value.

Related Controls: See also 5E101 and 5E991.

Related Definitions: N/A.

Items:

a. "Technology" according to the General Technology Note for the "development", "production" or "use" (excluding operation) of equipment, functions or features or "software" controlled by 5A001, 5B001 or 5D001.

b. Specific "technologies", as follows:

b.1. "Required" "technology" for the "development" or "production" of telecommunications equipment specially designed to be used on board satellites;

b.2. "Technology" for the "development" or "use" of "laser" communication techniques with the capability of automatically acquiring and tracking signals and maintaining communications through exoatmosphere or sub-surface (water) media;

b.3. "Technology" for the "development" of digital cellular radio systems;

b.4. "Technology" for the "development" of "spread spectrum" or "frequency agility" (frequency hopping) techniques.

c. "Technology" according to the General Technology Note for the "development" or "production" of any of the following telecommunication transmission or "stored program controlled" switching equipment, functions or features:

c.1. Equipment employing digital techniques, including "Asynchronous Transfer Mode" ("ATM"), designed to operate at a "total digital transfer rate" exceeding 1.5 Gbit/s;

c.2. Equipment employing a "laser" and having any of the following:

c.2.a. A transmission wavelength exceeding 1750 nm;

c.2.b. Performing "optical amplification" using praseodymium-doped fluoride fiber amplifiers (PDFFA);

c.2.c. Employing coherent optical transmission or coherent optical detection techniques (also called optical heterodyne or homodyne techniques);

c.2.d. Employing wavelength division multiplexing techniques exceeding 8 optical carriers in a single optical window; or

c.2.e. Employing analogue techniques and having a bandwidth exceeding 2.5 GHz;

Note: 5E001.c.2.e does not include "technology" for the "development" of commercial TV systems.

c.3. Equipment employing "optical switching"; or

c.4. Radio equipment having any of the following:

c.4.a. Quadrature-amplitude-modulation (QAM) techniques above level 128; or

c.4.b. Operating at input or output frequencies exceeding 31 GHz; or

Note: 5E001.c.4.b does not include "technology" for the "development" of equipment designed or modified for operation in any ITU allocated band.

c.5. Equipment employing "common channel signalling" operating in either non-associated or quasi-associated mode of operation.

5E991 "Technology" for the "Development", "Production" or "Use" of Equipment Controlled by 5A991 or 5B991, or "Software" Controlled by 5D991, and Other "Technologies" as Follows (see List of Items Controlled)

\* \* \* \* \*

List of Items Controlled

Unit: \$ value.

Related Controls: N/A.

Related Definitions: N/A.

Items:

a. Specific "technologies" as follows:

a.1. "Technology" for the processing and application of coatings to optical fiber specially designed to make it suitable for underwater use;

a.2. "Technology" for the "development" of equipment employing "Synchronous Digital Hierarchy" ("SDH") or "Synchronous Optical Network" ("SONET") techniques.

15. In Supplement No. 1 to part 774 (the Commerce Control List), Category 6—Sensors and Lasers, ECCN 6A003 is amended by revising the List of Items Controlled section, as follows:

6A003 Cameras

\* \* \* \* \*

List of Items Controlled

Unit: Number.

Related Controls: See also 6A203. See 8A002.d and .e for cameras specially designed or modified for underwater use.

Related Definitions: N/A.

Items:

a. Instrumentation cameras, as follows:

a.1. High-speed cinema recording cameras using any film format from 8 mm to 16 mm inclusive, in which the film is continuously advanced throughout the recording period,

and that are capable of recording at framing rates exceeding 13,150 frames/s;

**Note:** 6A003.a.1 does not control cinema recording cameras designed for civil purposes.

a.2. Mechanical high speed cameras, in which the film does not move, capable of recording at rates exceeding 1,000,000 frames/s for the full framing height of 35 mm film, or at proportionately higher rates for lesser frame heights, or at proportionately lower rates for greater frame heights;

a.3. Mechanical or electronic streak cameras having writing speeds exceeding 10 mm/μs;

a.4. Electronic framing cameras having a speed exceeding 1,000,000 frames/s;

a.5. Electronic cameras, having all of the following:

a.5.a. An electronic shutter speed (gating capability) of less than 1 μs per full frame; and

a.5.b. A read out time allowing a framing rate of more than 125 full frames per second.

b. Imaging cameras, as follows:

**Note:** 6A003.b does not control television or video cameras specially designed for television broadcasting.

b.1. Video cameras incorporating solid state sensors, having any of the following:

b.1.a. More than  $4 \times 10^6$  "active pixels" per solid state array for monochrome (black and white) cameras;

b.1.b. More than  $4 \times 10^6$  "active pixels" per solid state array for color cameras incorporating three solid state arrays; or

b.1.c. More than  $12 \times 10^6$  "active pixels" for solid state array color cameras incorporating one solid state array;

b.2. Scanning cameras and scanning camera systems, having all of the following:

b.2.a. Linear detector arrays with more than 8,192 elements per array; and

b.2.b. Mechanical scanning in one direction;

b.3. Imaging cameras incorporating image intensifier tubes having the characteristics listed in 6A002.a.2.a;

b.4. Imaging cameras incorporating "focal plane arrays" having the characteristics listed in 6A002.a.3.

**Note:** 6A003.b.4 does not control imaging cameras incorporating linear "focal plane arrays" with twelve elements or fewer, not employing time-delay-and-integration with the element, designed for any of the following:

a. Industrial or civilian intrusion alarm, traffic or industrial movement control or counting systems;

b. Industrial equipment used for inspection or monitoring of heat flows in buildings, equipment or industrial processes;

c. Industrial equipment used for inspection, sorting or analysis of the properties of materials;

d. Equipment specially designed for laboratory use; or

e. Medical equipment.

Dated: May 18, 2000.

**R. Roger Majak,**

*Assistant Secretary for Export Administration.*

[FR Doc. 00-13252 Filed 5-25-00; 8:45 am]

**BILLING CODE 3510-33-P**

## SECURITIES AND EXCHANGE COMMISSION

### 17 CFR Part 232

[Release Nos. 33-7858; 34-42789; 35-27177; 39-2385; IC-24455]

**RIN 3235-AG96**

### Adoption of Updated EDGAR Filer Manual

**AGENCY:** Securities and Exchange Commission.

**ACTION:** Final rule.

**SUMMARY:** The Commission is adopting revisions to the EDGAR Filer Manual and is providing for their incorporation by reference into the Code of Federal Regulations. In conjunction with the transition to the new capabilities made available in EDGAR Release 7.0, we will be redesignating the components of the Filer Manual into three parts: Volume I discusses the old (Legacy) EDGAR filing system; Volume II discusses modernized EDGAR and all its new features; and the N-SAR Supplement discusses the filing of N-SAR documents. Today, we are adopting new provisions to the Filer Manual that describe the modernized EDGAR system implemented in EDGAR Release 7.0. These new provisions are designated as Volume II of the EDGAR Manual.

**EFFECTIVE DATE:** May 30, 2000. The revisions to the EDGAR Filer Manual (Release 7.0), contained in Volume II—Modernized EDGARLink, will be effective on May 30, 2000. The incorporation by reference of the EDGAR Filer Manual is approved by the Director of the Federal Register as of May 30, 2000.

**FOR FURTHER INFORMATION CONTACT:** In the Office of Information Technology, Richard Heroux at (202) 942-8800; for questions concerning investment company filings, Ruth Armfield Sanders, Senior Special Counsel, or Shaswat K. Das, Attorney, Division of Investment Management, at (202) 942-0978; and for questions concerning Corporation Finance company filings, Herbert Scholl, Office Chief, EDGAR and Information Analysis, Division of Corporation Finance, at (202) 942-2930.

**SUPPLEMENTARY INFORMATION:** Today we are adopting a new Volume II of the

EDGAR Filer Manual ("Filer Manual"), which describes the technical formatting requirements for the preparation and submission of electronic filings through the Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system.<sup>1</sup> Volume II describes the requirements for filing using the new EDGARLink.<sup>2</sup>

Previously, the EDGAR Manual was composed of two parts. With the addition of Volume II, the EDGAR Manual will consist of three parts because we will be maintaining two separate software applications for the preparation and transmission of filings until at least November 1, 2000. We are doing this to provide filers abundant time to transition to the new modernized system.

Volume II of the Manual contains all the new technical specifications for filers to submit filings using the new modernized EDGAR system available in Release 7.0. The specifications include features that will be available for the first time to filers using the new EDGARLink software, such as expanded hyperlinks, graphics, and filing over the Internet.

We also plan shortly to adopt revised versions of the remaining parts of the Manual. These revisions will reflect the limited changes effected by EDGAR Release 7.0 to the Legacy EDGAR systems and Form N-SAR filing. Until we do, the provisions of EDGAR Manual Release 6.75 and N-SAR Supplement for Release 6.1 will continue to apply to filers using the Legacy EDGAR system and to filers filing Form N-SAR.

Filers must comply with the applicable provisions of the Filer Manual in order to assure the timely acceptance and processing of filings made in electronic format.<sup>3</sup> Filers should consult the Filer Manual in conjunction with our rules governing mandated electronic filing when preparing documents for electronic submission.<sup>4</sup>

<sup>1</sup> We originally adopted the Filer Manual on April 1, 1993, with an effective date of April 26, 1993. Release No. 33-6986 (Apr. 1, 1993) (58 FR 18638). We implemented the most recent update to the Filer Manual on January 24, 2000. See Release No. 33-7789 (January 20, 2000) (65 FR 3123).

<sup>2</sup> This is the Filer Assistance software we provide filers filing on the EDGAR system.

<sup>3</sup> See Rule 301 Regulation S-T (17 CFR 232.301).

<sup>4</sup> See Release Nos. 33-6977 (Feb. 23, 1993) (58 FR 14628), IC-19284 (Feb. 23, 1993) (58 FR 14848), and 35-25746 (Feb. 23, 1993) (58 FR 14999), and 33-6980 (Feb. 23, 1993) (58 FR 15009) in which we comprehensively discuss the rules we adopted to govern mandated electronic filing. See also Release No. 33-7122 (Dec. 19, 1994) (59 FR 67752), in which we made the EDGAR rules final and applicable to all domestic registrants; Release No. 33-7427 (July 1, 1997) (62 FR 36450), in which we