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PROPOSAL

From:	Secretary-General of the European Commission, signed by Mr Jordi AYET PUIGARNAU, Director
date of receipt:	22 March 2018
To:	Mr Jeppe TRANHOLM-MIKKELSEN, Secretary-General of the Council of the European Union
No. Cion doc.:	COM(2018) 144 final - ANNEXES 1 to 7
Subject:	ANNEXES to the Proposal for a Regulation of the European Parliament and of the Council on persistent organic pollutants (recast)

Delegations will find attached document COM(2018) 144 final - ANNEXES 1 to 7.

Encl.: COM(2018) 144 final - ANNEXES 1 to 7



Brussels, 22.3.2018
COM(2018) 144 final

ANNEXES 1 to 7

ANNEXES

to the

**Proposal for a Regulation of the European Parliament and of the Council
on persistent organic pollutants (recast)**

↓ 757/2010 Art. 1 and Annex .1
 (adapted)
 →₁ 293/2016 Art. 1 and Annex
 →₂ 519/2012 Art. 1 and Annex
 .1(a)
 →₃ 519/2012 Art. 1 and Annex
 .1(b)
 →₄ 519/2012 Art. 1 and Annex .2
 →₅ 2030/2015 Art. 1 and Annex
 ⇒ new

ANNEX I

Part A — Substances listed in the Convention and in the Protocol as well as substances listed only in the Convention

Substance	CAS No	EC No	Specific exemption on intermediate use or other specification
Tetrabromodiphenyl ether C ₁₂ H ₆ Br ₄ O	☒ 40088-47-9 and others ☒	☒ 254-787-2 and others ☒	<p>1. For the purposes of this entry, Article 4(1)(b) shall apply to concentrations of Tetrabromodiphenyl ether equal to or below 10 mg/kg (0,001 % by weight) when it occurs in substances, preparations ☒ mixtures ☒ , articles or as constituents of the flame-retarded parts of articles.</p> <p>2. By way of derogation, the production, placing on the market and use of the following shall be allowed:</p> <p style="padding-left: 40px;">(a) without prejudice to subparagraph (b), articles and preparations ☒ mixtures ☒</p>

			<p>containing concentrations below 0,1 % of tetrabromodiphenyl ether by weight when produced partially or fully from recycled materials or materials from waste prepared for re-use;</p> <p>(b) electrical and electronic equipment within the scope of Directive 2002/95/EC of the European Parliament and Council¹.</p> <p>3. Use of articles already in use in the Union before 25 August 2010 containing Tetrabromodiphenyl ether as a constituent of such articles shall be allowed. Article 4(2), third and fourth subparagraphs shall apply in relation to such articles.</p>
Pentabromodiphenyl ether <chem>C12H5Br5O</chem>	☒ 32534-81-9 and others ☒	☒ 251-084-2 and others ☒	<p>1. For the purposes of this entry, Article 4(1)(b) shall apply to concentrations of pentabromodiphenyl</p>

¹ OJ L 37, 13.2.2003, p. 19.

			<p>ether equal to or below 10 mg/kg (0,001 % by weight) when it occurs in substances, preparations <input checked="" type="checkbox"/> mixtures <input checked="" type="checkbox"/> , articles or as constituents of the flame-retarded parts of articles.</p> <p>2. By way of derogation, the production, placing on the market and use of the following shall be allowed:</p> <p>(a) without prejudice to subparagraph (b), articles and preparations <input checked="" type="checkbox"/> mixtures <input checked="" type="checkbox"/> containing concentrations below 0,1 % of pentabromodiphenyl ether by weight when produced partially or fully from recycled materials or materials from waste prepared for re-use;</p> <p>(b) electrical and electronic equipment within the scope of Directive</p>
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			<p>2002/95/EC.</p> <p>3. Use of articles already in use in the Union before 25 August 2010 containing Pentabromodiphenyl ether as a constituent of such articles shall be allowed. Article 4(2), third and fourth subparagraphs shall apply in relation to such articles.</p>
<p>Hexabromodiphenyl ether C₁₂H₄Br₆O</p>	<p><input checked="" type="checkbox"/> 36483-60-0 and others <input type="checkbox"/></p>	<p><input checked="" type="checkbox"/> 253-058-6 and others <input type="checkbox"/></p>	<p>1. For the purposes of this entry, Article 4(1)(b) shall apply to concentrations of hexabromodiphenyl ether equal to or below 10 mg/kg (0,001 % by weight) when it occurs in substances, preparations <input checked="" type="checkbox"/> mixtures <input type="checkbox"/> , articles or as constituents of the flame-retarded parts of articles.</p> <p>2. By way of derogation, the production, placing on the market and use of the following shall be allowed:</p> <p>(a) without prejudice to subparagraph (b), articles and preparations <input checked="" type="checkbox"/> mixtures <input type="checkbox"/> containing concentrations below 0,1 % of</p>

			<p>hexabromodiphenyl ether by weight when produced partially or fully from recycled materials or materials from waste prepared for re-use;</p> <p>(b) electrical and electronic equipment within the scope of Directive 2002/95/EC.</p> <p>3. Use of articles already in use in the Union before 25 August 2010 containing Hexabromodiphenyl ether as a constituent of such articles shall be allowed. Article 4(2), third and fourth subparagraphs shall apply in relation to such articles.</p>
<p>Heptabromodiphenyl ether</p> <p>$C_{12}H_3Br_7O$</p>	<p><input checked="" type="checkbox"/> 68928-80-3 and others <input checked="" type="checkbox"/></p>	<p><input checked="" type="checkbox"/> 273-031-2 and others <input checked="" type="checkbox"/></p>	<p>1. For the purposes of this entry, Article 4(1)(b) shall apply to concentrations of heptabromodiphenyl ether equal to or below 10 mg/kg (0,001 % by weight) when it occurs in substances, preparations <input checked="" type="checkbox"/> mixtures <input checked="" type="checkbox"/> , articles or as constituents of the flame-retarded parts</p>

		<p>of articles.</p> <p>2. By way of derogation, the production, placing on the market and use of the following shall be allowed:</p> <p>(a) without prejudice to subparagraph (b), articles and preparations <input checked="" type="checkbox"/> mixtures <input checked="" type="checkbox"/> containing concentrations below 0,1 % of heptabromodiphenyl ether by weight when produced partially or fully from recycled materials or materials from waste prepared for re-use;</p> <p>(b) electrical and electronic equipment within the scope of Directive 2002/95/EC.</p> <p>3. Use of articles already in use in the Union before 25 August 2010 containing Heptabromodiphenyl ether as a constituent of such articles shall be allowed. Article</p>
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			4(2), third and fourth subparagraphs shall apply in relation to such articles.
<p>Perfluorooctane sulfonic acid and its derivatives (PFOS)</p> <p>$C_8F_{17}SO_2X$</p> <p>(X = OH, Metal salt (O-M⁺), halide, amide, and other derivatives including polymers)</p>	<p>☒ 1763-23-1</p> <p>2795-39-3</p> <p>29457-72-5</p> <p>29081-56-9</p> <p>70225-14-8</p> <p>56773-42-3</p> <p>251099-16-8</p> <p>4151-50-2</p> <p>31506-32-8</p> <p>1691-99-2</p> <p>24448-09-7</p> <p>307-35-7 and others ☒</p>	<p>☒ 217-179-8</p> <p>220-527-1</p> <p>249-644-6</p> <p>249-415-0</p> <p>274-460-8</p> <p>260-375-3</p> <p>223-980-3</p> <p>250-665-8</p> <p>216-887-4</p> <p>246-262-1</p> <p>206-200-6 and others ☒</p>	<p>1. For the purposes of this entry, Article 4(1)(b) shall apply to concentrations of PFOS equal to or below 10 mg/kg (0,001 % by weight) when it occurs in substances or in preparations ☒ mixtures ☒ .</p> <p>2. For the purposes of this entry, Article 4(1) (b) shall apply to concentrations of PFOS in semi-finished products or articles, or parts thereof, if the concentration of PFOS is lower than 0,1 % by weight calculated with reference to the mass of structurally or micro-structurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is lower than 1 µg/m² of the coated material.</p> <p>3. Use of articles already in use in the Union before 25 August 2010 containing PFOS as a constituent of such articles shall be allowed. Article 4(2), third and fourth subparagraphs shall apply in relation to such articles.</p>

		<p>4. Fire-fighting foams that were placed on the market before 27 December 2006 may be used until 27 June 2011.</p> <p>5. If the quantity released into the environment is minimised, production ⇒ manufacturing ⇐ and placing on the market is allowed for the following specific uses provided that Member States report to the Commission every four years on progress made to eliminate PFOS:</p> <ul style="list-style-type: none"> (a) until 26 August 2015, wetting agents for use in controlled electroplating systems; (b) photoresists or anti reflective coatings for photolithography processes; (c) photographic coatings applied to films, papers, or printing plates; (d) mist suppressants for non-decorative hard chromium
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			<p>(VI) plating in closed loop systems;</p> <p>(e) hydraulic fluids for aviation.</p> <p>Where derogations in points (a) to (e) above concern the production or use in an installation within the scope of Directive 2008/1/EC of the European Parliament and of the Council², the relevant best available techniques for the prevention and minimisation of emissions of PFOS described in the information published by the Commission pursuant to Article 17(2), second subparagraph, of Directive 2008/1/EC shall apply.</p> <p>As soon as new information on details of uses and safer alternative substances or technologies for the uses in points (b) to (e) becomes available, the Commission shall review the derogations in the second subparagraph so that:</p> <p>(i) the uses of PFOS will be phased out as soon as the use of safer alternatives is</p>
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² OJ L 24, 29.1.2008, p. 8.

			<p>technically and economically feasible,</p> <p>(ii) a derogation can only be continued for essential uses for which safer alternatives do not exist and where the efforts undertaken to find safer alternatives have been reported on,</p> <p>(iii) releases of PFOS into the environment have been minimised by applying best available techniques.</p> <p>➔₂</p> <p>6. Once standards are adopted by the European Committee for Standardisation (CEN) they shall be used as the analytical test methods for demonstrating the conformity of substances, preparations mixtures and articles to paragraphs 1 and 2. Any other analytical method for which the user can prove equivalent performance could be used as an alternative</p>
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			to the CEN standards. ←
DDT (1,1,1-trichloro-2,2-bis(4-chlorophenyl)ethane)	50-29-3	200-024-3	—
Chlordane	57-74-9	200-349-0	—
Hexachlorocyclohexanes, including lindane	58-89-9	200-401-2	—
	319-84-6	206-270-8	
	319-85-7	206-271-3	
	608-73-1	210-168-9	
Dieldrin	60-57-1	200-484-5	—
Endrin	72-20-8	200-775-7	—
Heptachlor	76-44-8	200-962-3	—
→ ₃ Endosulfan ←	→ ₃ 115-29-7 959-98-8 33213-65-9 ←	→ ₃ 204-079-4 ←	→ ₃ 1. Placing on the market and use of articles produced before or on 10 July 2012 containing endosulfan as a constituent of such articles shall be allowed until 10 January 2013. 2. Placing on the market and use of articles already in use before or on 10 July 2012 containing endosulfan as a constituent of such articles shall be allowed. 3. Article 4(2), third and fourth subparagraphs shall apply to articles referred to in paragraphs 1 and 2. ←
Hexachlorobenzene	118-74-1	200-273-9	—

Chlordecone	143-50-0	205-601-3	—
Aldrin	309-00-2	206-215-8	—
Pentachlorobenzene	608-93-5	210-172-5	—
Polychlorinated Biphenyls (PCB)	1336-36-3 and others	215-648-1 and others	Without prejudice to Directive 96/59/EC, articles already in use at the time of the entry into force of this Regulation are allowed to be used. ⇒ Member States shall identify and remove from use equipment (e.g. transformers, capacitors or other receptacles containing liquid stocks) containing more than 0,005 % PCBs and volumes greater than 0,05 dm ³ , as soon as possible but no later than 31 December 2025. ⇐
Mirex	2385-85-5	219-196-6	—
Toxaphene	8001-35-2	232-283-3	—
Hexabromobiphenyl	36355-01-8	252-994-2	—
→ ₁ Hexabromocyclododecane 'Hexabromocyclododecane' means: hexabromocyclododecane, 1,2,5,6,9,10-hexabromocyclododecane and its main diastereoisomers: alpha-hexabromocyclododecane ; beta-hexabromocyclododecane ; and gamma-hexabromocyclododecane ←	→ ₁ 25637-99-4, 3194-55-6, 134237-50-6, 134237-51-7, 134237-52-8 ←	→ ₁ 247-148-4, 221-695-9 ←	→ ₁ 1. For the purposes of this entry, Article 4(1)(b) shall apply to concentrations of hexabromocyclododecane equal to or below 100 mg/kg (0,01 % by weight) when it

			<p>occurs in substances, preparations <input checked="" type="checkbox"/> mixtures <input checked="" type="checkbox"/> , articles or as constituents of the flame-retarded parts of articles, subject to review by the Commission by 22 March 2019.</p> <p>2. The use of hexabromocyclododecane, whether on its own or in preparations <input checked="" type="checkbox"/> mixtures <input checked="" type="checkbox"/> , in the production of expanded polystyrene articles, and the production <input checked="" type="checkbox"/> manufacturing <input checked="" type="checkbox"/> and placing on the market of hexabromocyclododecane for such use, shall be allowed provided that such use has been authorised in accordance with Title VII of Regulation (EC) No 1907/2006 of the European Parliament and of the</p>
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			<p>Council³, or is the subject of an application for authorisation submitted by 21 February 2014 where a decision on that application has yet to be taken.</p> <p>The placing on the market and use of hexabromocyclododecane, whether on its own or in preparations <input checked="" type="checkbox"/> mixtures <input type="checkbox"/> , in accordance with this paragraph shall only be allowed until 26 November 2019 or, if earlier, the date of expiry of the review period specified in an authorisation decision or the date of withdrawal of that authorisation pursuant to</p>
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³ →₁ Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (OJ L 396, 30.12.2006, p. 1). ←

			<p>Title VII of Regulation (EC) No 1907/2006.</p> <p>The placing on the market and use in buildings of expanded polystyrene articles, that contain hexabromocyclododecane as a constituent of such articles and are produced in accordance with the exemption in this paragraph, shall be allowed until 6 months after the date of expiry of that exemption. Such articles already in use by that date may continue to be used.</p> <p>3. Without prejudice to the exemption in paragraph 2, the placing on the market and use in buildings of expanded polystyrene articles and extruded polystyrene</p>
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			<p>articles that contain hexabromocyclododecane as a constituent of such articles and are produced before or on 22 March 2016 shall be allowed until 22 June 2016. Paragraph 6 shall apply as if such articles were produced pursuant to the exemption in paragraph 2.</p> <p>4. Articles that contain hexabromocyclododecane as a constituent of such articles and are already in use before or on 22 March 2016 may continue to be used and further placed on the market and paragraph 6 shall not apply. Article 4(2), third and fourth subparagraphs shall apply to such articles.</p> <p>5. The</p>
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			<p>placing on the market and use in buildings of imported expanded polystyrene articles that contain hexabromocyclododecane as a constituent of such articles shall be allowed until the date of expiry of the exemption in paragraph 2 and paragraph 6 shall apply as if such articles were produced pursuant to the exemption in paragraph 2. Such articles already in use by that date may continue to be used.</p> <p>6. Without prejudice to the application of other Union provisions on the classification, packaging and labelling of substances and mixtures, expanded polystyrene, in which</p>
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			hexabromocyclododecane is used pursuant to the exemption in paragraph 2, must be identifiable by labelling or other means throughout its life cycle. ←
⇒ Hexachlorobutadiene ←	⇒ 87-68-3 ←	⇒ 201-765-5 ←	<p>⇒ 1. Placing on the market and use of articles produced before or on 10 July 2012 containing hexachlorobutadiene as a constituent of such articles shall be allowed until 10 January 2013.</p> <p>2. Placing on the market and use of articles already in use before or on 10 July 2012 containing hexachlorobutadiene as a constituent of such articles shall be allowed.</p> <p>3. Article 4(2), third and fourth subparagraphs shall apply to articles referred to in paragraphs 1 and 2. ←</p>
⇒ Pentachlorophenol and its salts and esters ←	⇒ 87-86-5 and others ←	⇒ 201-778-6 and others ←	⇒ - ←

⇒ Polychlorinated naphthalenes ⁴ ⇐	⇒ 70776-03-3 and others ⇐	⇒ 274-864-4 and others ⇐	<p>⇒ 1. Placing on the market and use of articles produced before or on 10 July 2012 containing polychlorinated naphthalenes as a constituent of such articles shall be allowed until 10 January 2013.</p> <p>2. Placing on the market and use of articles already in use before or on 10 July 2012 containing polychlorinated naphthalenes as a constituent of such articles shall be allowed.</p> <p>3. Article 4(2), third and fourth subparagraphs shall apply to articles referred to in paragraphs 1 and 2. ⇐</p>
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Part B — Substances listed only in the Protocol

Substance	CAS No	EC No	Specific exemption on intermediate use or other specification
→ ₄ Hexachlorobutadiene ←	→ ₄ 87-68-3 ←	→ ₄ 201-765-5 ←	<p>→₄ 1. Placing on the market and use of articles produced before or on 10 July 2012 containing hexachlorobutadiene as a constituent of such articles shall be allowed until 10 January 2013.</p> <p>2. Placing on the market and use of articles already in use before or on 10 July 2012 containing hexachlorobutadiene as a constituent</p>

⁴ →₄ Polychlorinated naphthalenes means chemical compounds based on the naphthalene ring system, where one or more hydrogen atoms have been replaced by chlorine atoms. ←

			<p>of such articles shall be allowed.</p> <p>3. Article 4(2), third and fourth subparagraphs shall apply to articles referred to in paragraphs 1 and 2. ←</p>
<p>→₄ Polychlorinated naphthalenes ←</p>			<p>→₄ 1. Placing on the market and use of articles produced before or on 10 July 2012 containing polychlorinated naphthalenes as a constituent of such articles shall be allowed until 10 January 2013.</p> <p>2. Placing on the market and use of articles already in use before or on 10 July 2012 containing polychlorinated naphthalenes as a constituent of such articles shall be allowed.</p> <p>3. Article 4(2), third and fourth subparagraphs shall apply to articles referred to in paragraphs 1 and 2. ←</p>
<p>→₅ Alkanes C10-C13, chloro (short-chain chlorinated paraffins) (SCCPs) ←</p>	<p>→₅ 85535-84-8 ←</p>	<p>→₅ 287-476-5 ←</p>	<p>→₅ 1. By way of derogation, the production, placing on the market and use of substances or preparations mixtures containing SCCPs in concentrations lower than 1 % by weight or articles containing SCCPs in concentrations lower than 0,15 % by weight shall be allowed.</p> <p>2. Use shall be allowed in respect of:</p> <p>(a) conveyor belts in the mining industry and dam sealants containing SCCPs already in use before or on 4 December 2015; and</p> <p>(b) articles containing SCCPs other than those referred to in (a) already in use before or on 10 July 2012.</p> <p>3. Article 4(2) third and fourth subparagraphs shall apply to the articles referred</p>

			to in point 2 above. ←
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↓ Corrigendum, OJ L 229, 29.6.2004, p. 5

ANNEX II

LIST OF SUBSTANCES SUBJECT TO RESTRICTIONS

PART A – Substances listed in the Convention and in the Protocol

Substance	CAS No	EC No	Conditions of restriction

PART B – Substances listed only in the Protocol

Substance	CAS No	EC No	Conditions of restriction

ANNEX III

LIST OF SUBSTANCES SUBJECT TO RELEASE REDUCTION PROVISIONS

SUBSTANCE (CAS No)

Polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD/PCDF)

Hexachlorobenzene (HCB) (CAS No: 118-74-1)

Polychlorinated biphenyls (PCB)

Polycyclic aromatic hydrocarbons (PAHs)⁵

↓ 757/2010 Art. 1 and Annex .2

Pentachlorobenzene (CAS No 608-93-5)

⁵ For the purpose of emission inventories, the following four compound indicators shall be used: benzo(a)pyrene, benzo(b) fluoranthene, benzo(k)fluoranthene and indeno(1,2,3-cd)pyrene.

↓ 1342/2014 Art. 1.1 and Annex I
(adapted)
→₁ 460/2016 Art. 1 and Annex

ANNEX IV

List of substances subject to waste management provisions set out in Article 7

Substance	CAS No	EC No	Concentration limit referred to in Article 7(4)(a)
Endosulfan	115-29-7 959-98-8 33213-65-9	204-079-4	50 mg/kg
Hexachlorobutadiene	87-68-3	201-765-5	100 mg/kg
Polychlorinated naphthalenes ⁶			10 mg/kg
Alkanes C10-C13, chloro (short-chain chlorinated paraffins) (SCCPs)	85535-84-8	287-476-5	10000 mg/kg
Tetrabromodiphenyl ether C ₁₂ H ₆ Br ₄ O	☒ 40088-47-9 and others ☒	☒ 254-787-2 and others ☒	Sum of the concentrations of tetrabromodiphenyl ether, pentabromodiphenyl ether, hexabromodiphenyl ether and heptabromodiphenyl ether: 1000 mg/kg
Pentabromodiphenyl ether C ₁₂ H ₅ Br ₅ O	☒ 32534-81-9 and others ☒	☒ 251-084-2 and others ☒	
Hexabromodiphenyl ether C ₁₂ H ₄ Br ₆ O	☒ 36483-60-0 and others ☒	☒ 253-058-6 and others ☒	
Heptabromodiphenyl ether C ₁₂ H ₃ Br ₇ O	☒ 68928-80-3 and others ☒	☒ 273-031-2 and others ☒	
Perfluorooctane sulfonic acid and its derivatives (PFOS)	☒ 1763-23-1 2795-39-3 29457-72-5	☒ 217-179-8 220-527-1 249-644-6	50 mg/kg

⁶ Polychlorinated naphthalenes means chemical compounds based on the naphthalene ring system, where one or more hydrogen atoms have been replaced by chlorine atoms.

C ₈ F ₁₇ SO ₂ X (X = OH, Metal salt (O-M ⁺), halide, amide, and other derivatives including polymers)	29081-56-9	249-415-0	
	70225-14-8	274-460-8	
	56773-42-3	260-375-3	
	251099-16-8		
	4151-50-2	223-980-3	
	31506-32-8	250-665-8	
	1691-99-2	216-887-4	
	24448-09-7	246-262-1	
	307-35-7 and others ☒	206-200-6 and others ☒	
Polychlorinated			15 µg/kg ⁷

⁷ The limit is calculated as PCDD and PCDF according to the following toxic equivalency factors (TEFs):

PCDD	TEF
PCDF	TEF
PCDD	TEF
2,3,7,8-TeCDD	1
1,2,3,7,8-PeCDD	1
1,2,3,4,7,8-HxCDD	0,1
1,2,3,6,7,8-HxCDD	0,1
1,2,3,7,8,9-HxCDD	0,1
1,2,3,4,6,7,8-HpCDD	0,01
OCDD	0,0003
2,3,7,8-TeCDF	0,1
1,2,3,7,8-PeCDF	0,03
2,3,4,7,8-PeCDF	0,3
1,2,3,4,7,8-HxCDF	0,1
1,2,3,6,7,8-HxCDF	0,1
1,2,3,7,8,9-HxCDF	0,1
2,3,4,6,7,8-HxCDF	0,1

dibenzo-p-dioxins and dibenzofurans (PCDD/PCDF)			
DDT (1,1,1-trichloro-2,2-bis (4-chlorophenyl)ethane)	50-29-3	200-024-3	50 mg/kg
Chlordane	57-74-9	200-349-0	50 mg/kg
Hexachlorocyclohexanes, including lindane	58-89-9 319-84-6 319-85-7 608-73-1	210-168-9 200-401-2 206-270-8 206-271-3	50 mg/kg
Dieldrin	60-57-1	200-484-5	50 mg/kg
Endrin	72-20-8	200-775-7	50 mg/kg
Heptachlor	76-44-8	200-962-3	50 mg/kg
Hexachlorobenzene	118-74-1	200-273-9	50 mg/kg
Chlordecone	143-50-0	205-601-3	50 mg/kg
Aldrin	309-00-2	206-215-8	50 mg/kg
Pentachlorobenzene	608-93-5	210-172-5	50 mg/kg
Polychlorinated Biphenyls (PCB)	1336-36-3 and others	215-648-1	50 mg/kg ⁸
Mirex	2385-85-5	219-196-6	50 mg/kg
Toxaphene	8001-35-2	232-283-3	50 mg/kg
Hexabromobiphenyl	36355-01-8	252-994-2	50 mg/kg
➔ ₁ Hexabromocyclo dodecane ⁹ ←	➔ ₁ 25637-99-4,	➔ ₁ 247-148-4	➔ ₁ 1000 mg/kg, subject to review by

1,2,3,4,6,7,8-HpCDF	0,01
1,2,3,4,7,8,9-HpCDF	0,01
OCDF	0,0003

⁸ Where applicable, the calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall apply.

	3194-55-6, 134237-50-6, 134237-51-7, 134237-52-8 ←	221-695-9 ←	the Commission by 20.4.2019 ←
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⁹ →₁ ‘Hexabromocyclododecane’ means hexabromocyclododecane, 1,2,5,6,9,10-hexabromocyclododecane and its main diastereoisomers: alpha-hexabromocyclododecane, beta-hexabromocyclododecane and gamma-hexabromocyclododecane. ←

↓ Corrigendum, OJ L 229,
29.6.2004, p. 5 (adapted)
→₁ 304/2009 Art. 1 and Annex
.2(a)

ANNEX V

WASTE MANAGEMENT

PART 1 DISPOSAL AND RECOVERY UNDER ARTICLE 7(2)

The following disposal and recovery operations, as provided for in ~~Annex Annexes I IIA and IIB~~ of Directive ~~75/442/EEC~~ 2008/98/EC, are permitted for the purposes of Article 7(2), when applied in such a way as to ensure that the persistent organic pollutant content is destroyed or irreversibly transformed

D9		Physico-chemical treatment,
D10		Incineration on land, and
R1		Use principally as a fuel or other means to generate energy, excluding waste containing PCBs.
→ ₁ R4 ←	→ ₁ ←	<p>→₁ Recycling/reclamation of metals and metal compounds, under the following conditions: The operations are restricted to residues from iron- and steel-making processes such as dusts or sludges from gas treatment or mill scale or zinc-containing filter dusts from steelworks, dusts from gas cleaning systems of copper smelters and similar wastes and lead-containing leaching residues of the non-ferrous metal production. Waste containing PCBs is excluded. The operations are restricted to processes for the recovery of iron and iron alloys (blast furnace, shaft furnace and hearth furnace) and non-ferrous metals (Waelz rotary kiln process, bath melting processes using vertical or horizontal furnaces), provided the facilities meet as minimum requirements the emission limit values for PCDDs and PCDFs laid down in ☒ accordance with ☒ Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste¹⁰, whether or not the processes are subject to that Directive and without prejudice to the other provisions of ☒ the ☒ Directive 2000/76/EC where it applies and to the provisions of Directive 96/61/EC.</p> <p>←</p>

Pre-treatment operation prior to destruction or irreversible transformation pursuant to this Part of this Annex may be performed, provided that a substance listed in Annex IV that is isolated from the waste during the pre-treatment is subsequently disposed of in accordance with this Part of this Annex. →₁ Where only part of a product or waste, such as waste equipment, contains or is contaminated with persistent organic pollutants, it shall be separated and then

¹⁰ Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (OJ L 334, 17.12.2010, p. 17–119)

disposed of in accordance with the requirements of this Regulation. ◀ In addition, repackaging and temporary storage operations may be performed prior to such pre-treatment or prior to destruction or irreversible transformation pursuant to this part of this Annex.

↓ 172/2007 Art. 1 and Annex

PART 2 WASTES AND OPERATIONS TO WHICH ARTICLE 7(4)(B) APPLIES

The following operations are permitted for the purposes of Article 7(4)(b) in respect of the wastes specified, defined by the six-digit code as classified in Commission Decision 2000/532/EC¹¹

↓ 323/2007 Art. 1 and Annex

Pre-treatment operations prior to permanent storage pursuant to this part of this Annex may be performed, provided that a substance listed in Annex IV that is isolated from the waste during the pre-treatment is subsequently disposed of in accordance with Part 1 of this Annex. In addition, repackaging and temporary storage operations may be performed prior to such pre-treatment or prior to permanent storage pursuant to this part of this Annex.

↓ 460/2016 Art. 1 and Annex

Wastes as classified in Commission Decision 2000/532/EC		Maximum concentration limits of substances listed in Annex IV ¹²	Operation
10	WASTES FROM THERMAL PROCESSES	Alkanes C ₁₀ -C ₁₃ , chloro (short-chain chlorinated paraffins) (SCCPs): 10000 mg/kg; Aldrin: 5000 mg/kg; Chlordane: 5000 mg/kg;	Permanent storage shall be allowed only when all the following conditions are met: (1) The storage takes place in one of the following locations: – safe, deep, underground, hard rock formations, – salt mines,
10 01	Wastes from power stations and other combustion plants (except 19)	Chlordecone: 5000 mg/kg; DDT (1,1,1-trichloro-2,2-bis (4-chlorophenyl) ethane): 5000 mg/kg; Dieldrin: 5000 mg/kg; Endosulfan: 5000 mg/kg;	
10 01	Bottom ash, slag and	Endrin: 5000 mg/kg;	

¹¹ Commission Decision 2000/532/EC of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste (OJ L 226, 6.9.2000, p. 3). Decision last amended by Commission Decision 2014/955/EU of 18 December 2014 (OJ L 370, 30.12.2014)

¹² These limits apply exclusively to a landfill site for hazardous waste and do not apply to permanent underground storage facilities for hazardous waste, including salt mines.

14 * ¹⁷	boiler dust from co-incineration containing hazardous substances	Heptachlor: 5000 mg/kg; Hexabromobiphenyl: 5000 mg/kg; Hexabromocyclododecane ¹³ : 1000 mg/kg; Hexachlorobenzene: 5000 mg/kg;	<p>– a landfill site for hazardous waste, provided that the waste is solidified or partly stabilised where technically feasible as required for classification of the waste in subchapter 19 03 of Decision 2000/532/E C.</p> <p>(2) The provisions of Council Directive 1999/31/EC¹⁵ and Council Decision 2003/33/EC¹⁶ were respected.</p> <p>(3) It has been demonstrated that the selected operation is environmentally preferable.</p>
10 01 16 *	Fly ash from co-incineration containing hazardous substances	Hexachlorobutadiene: 1000 mg/kg; Hexachlorocyclohexanes, including lindane: 5000 mg/kg; Mirex: 5000 mg/kg; Pentachlorobenzene: 5000 mg/kg;	
10 02	Wastes from the iron and steel industry	Perfluorooctane sulfonic acid and its derivatives (PFOS) (C ₈ F ₁₇ SO ₂ X) (X = OH, Metal salt (O-M ⁺), halide, amide, and other derivatives including polymers): 50 mg/kg;	
10 02 07 *	Solid wastes from gas treatment containing hazardous substances	Polychlorinated Biphenyls (PCB) ¹⁴ : 50 mg/kg; Polychlorinated dibenzo-p-dioxins and dibenzofurans: 5 mg/kg; Polychlorinated naphthalenes (*): 1000 mg/kg;	
10 03	Wastes from aluminium thermal metallurgy	Sum of the concentrations of tetrabromodiphenyl ether (C ₁₂ H ₆ Br ₄ O), pentabromodiphenyl ether (C ₁₂ H ₅ Br ₅ O), hexabromodiphenyl ether (C ₁₂ H ₄ Br ₆ O) and heptabromodiphenyl ether (C ₁₂ H ₃ Br ₇ O): 10000 mg/kg;	
10 03 04 *	Primary production slags	Toxaphene: 5000 mg/kg.	
10 03 08 *	Salt slags from secondary production		
10 03	Black drosses from		

¹⁷ Any waste marked with an asterisk ‘*’ is considered as hazardous waste pursuant to Directive 2008/98/EC and is subject to the provisions of that Directive.

¹³ ‘Hexabromocyclododecane’ means hexabromocyclododecane, 1,2,5,6,9,10-hexabromocyclododecane and its main diastereoisomers: alpha- hexabromocyclododecane, beta- hexabromocyclododecane and gamma- hexabromocyclododecane.

¹⁴ The calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall apply.

¹⁵ Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste (OJ L 182, 16.7.1999, p. 1).

¹⁶ Council Decision 2003/33/EC of 19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC (OJ L 11, 16.1.2003, p. 27).

09 *	secondary production		
10 03 19 *	Flue-gas dust containing hazardous substances		
10 03 21 *	Other particulates and dust (including ball-mill dust) containing hazardous substances		
10 03 29 *	Wastes from treatment of salt slags and black drosses containing hazardous substances		
10 04	Wastes from lead thermal metallurgy		
10 04 01 *	Slags from primary and secondary production		
10 04 02 *	Dross and skimmings from primary and secondary production		
10 04 04 *	Flue-gas dust		
10 04 05 *	Other particulates and dust		

10 04 06 *	Solid wastes from gas treatment		
10 05	Wastes from zinc thermal metallurgy		
10 05 03 *	Flue-gas dust		
10 05 05 *	Solid waste from gas treatment		
10 06	Wastes from copper thermal metallurgy		
10 06 03 *	Flue-gas dust		
10 06 06 *	Solid wastes from gas treatment		
10 08	Wastes from other non- ferrous thermal metallurgy		
10 08 08 *	Salt slag from primary and secondary production		
10 08 15 *	Flue-gas dust containing hazardous substances		
10 09	Wastes from casting of ferrous pieces		

10 09 09 *	Flue-gas dust containing hazardous substances		
16	WASTES NOT OTHERWIS E SPECIFIED IN THE LIST		
16 11	Waste linings and refractories		
16 11 01 *	Carbon- based linings and refractories from metallurgical processes containing hazardous substances		
16 11 03 *	Other linings and refractories from metallurgical processes containing hazardous substances		
17	CONSTRU CTION AND DEMOLITI ON WASTES (INCLUDIN G EXCAVAT ED SOIL FROM CONTAMI		

	NATED SITES)		
17 01	Concrete, bricks, tiles and ceramics		
17 01 06 *	Mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing hazardous substances		
17 05	Soil (including excavated soil from contaminate d sites), stones and dredging spoil		
17 05 03 *	Soil and stones containing hazardous substances		
17 09	Other construction and demolition wastes		
17 09 02 *	Construction and demolition wastes containing PCB, excluding PCB containing equipment		
17	Other		

09 03 *	construction and demolition wastes (including mixed wastes) containing hazardous substances		
19	WASTES FROM WASTE MANAGEM ENT FACILITIE S, OFF- SITE WASTE WATER TREATME NT PLANTS AND THE PREPARAT ION OF WATER INTENDED FOR HUMAN CONSUMP TION AND WATER FROM INDUSTRI AL USE		
19 01	Wastes from incineration or pyrolysis of waste		
19 01 07 *	Solid wastes from gas treatment		
19 01 11 *	Bottom ash and slag containing hazardous		

	substances		
19 01 13 *	Fly ash containing hazardous substances		
19 01 15 *	Boiler dust containing hazardous substances		
19 04	Vitrified waste and waste from vitrification		
19 04 02 *	Fly ash and other flue- gas treatment wastes		
19 04 03 *	Non-vitrified solid phase		

The maximum concentration limit of polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD and PCDF) shall be calculated according to the following toxic equivalency factors (TEFs):

PCDD	TEF
2,3,7,8-TeCDD	1
1,2,3,7,8-PeCDD	1
1,2,3,4,7,8-HxCDD	0,1
1,2,3,6,7,8-HxCDD	0,1
1,2,3,7,8,9-HxCDD	0,1
1,2,3,4,6,7,8-HpCDD	0,01
OCDD	0,0003
PCDF	TEF

2,3,7,8-TeCDF	0,1
1,2,3,7,8-PeCDF	0,03
2,3,4,7,8-PeCDF	0,3
1,2,3,4,7,8-HxCDF	0,1
1,2,3,6,7,8-HxCDF	0,1
1,2,3,7,8,9-HxCDF	0,1
2,3,4,6,7,8-HxCDF	0,1
1,2,3,4,6,7,8- HpCDF	0,01
1,2,3,4,7,8,9- HpCDF	0,01
OCDF	0,0003



ANNEX VI

Repealed Regulation with list of its successive amendments

Regulation (EC) No 850/2004 of the European Parliament and of the Council (OJ L 158, 30.4.2004, p. 7)	
Council Regulation (EC) No 1195/2006 (OJ L 217, 8.8.2006, p. 1)	
Council Regulation (EC) No 172/2007 (OJ L 55, 23.2.2007, p. 1)	
Commission Regulation (EC) No 323/2007 (OJ L 85, 27.3.2007, p. 3)	
Regulation (EC) No 219/2009 of the European Parliament and of the Council (OJ L 87, 31.3.2009, p. 109)	Only point 3.7 of the Annex
Commission Regulation (EC) No 304/2009 (OJ L 96, 15.4.2009, p. 33)	
Commission Regulation (EU) No 756/2010 (OJ L 223, 25.8.2010, p. 20)	
Commission Regulation (EU) No 757/2010 (OJ L 223, 25.8.2010, p. 29)	
Commission Regulation (EU) No 519/2012 (OJ L 159, 20.6.2012, p. 1)	
Commission Regulation (EU) No 1342/2014 (OJ L 363, 18.12.2014, p. 67)	
Commission Regulation (EU) 2015/2030 (OJ L 298, 14.11.2015, p. 1)	
Commission Regulation (EU) 2016/293 (OJ L 55, 2.3.2016, p. 4)	
Commission Regulation (EU) 2016/460 (OJ L 80, 31.3.2016, p. 17)	

ANNEX VII

CORRELATION TABLE

Regulation (EC) No 850/2004	This Regulation
Article 1(1)	Article 1
Article 2, introductory wording	Article 2, introductory wording
Article 2, pts. (a) to (d)	Article 2, pts. (a) to (d)
—	Article 2, pts. (e) and (f)
Article 2, pt. (e)	Article 2, pt. (g)
Article 2, pt. (f)	Article 2, pt. (h)
Article 2, pt. (g)	Article 2, pt. (i)
—	Article 2, pt. (j)
Article 3	Article 3
Article 4(1)(a)	Article 4(1)(a)
Article 4(1)(b)	Article 4(1)(b)
Article 1(2)	Article 4(1)(c)
Article 4(2)	Article 4(2)
Article 4(3)(a)	Article 4(3)(a)
Article 4(3)(b)	Article 4(3)(b)
—	Article 4(3)(c)
Article 1(2)	Article 4(4)
Article 5	Article 5
Article 6	Article 6
Article 7(1)	Article 7(1)
Article 7(2)	Article 7(2)
Article 7(3)	Article 7(3)
Article 7(4)	Article 7(4)

Article 7(5)	Article 7(5)
Article 7(6)	Article 7(6)
Article 7(7)	–
–	Article 8
Article 8	Article 9
Article 9	Article 10
Article 10	Article 11
Article 11	Article 12
Article 12(1)	Article 13(1)(a)
Article 12(3)(a)	Article 13(1)(b)
Article 12(3)(b)	Article 13(1)(c)
–	Article 13(1)(d)
Article 12(3)(c)	Article 13(1)(e)
Article 12(2)	Article 13(1)(f)
–	Article 13(2)
Article 12(4)	–
Article 12(5)	Article 13(3)
Article 12(6)	–
–	Article 13(4)
–	Article 13(5)
Article 13	Article 14
Article 14	Article 15
–	Article 16
–	Article 17
–	Article 18
Article 15	Article 19

Article 16	Article 20
Article 17	—
Article 18	—
—	Article 21
Article 19	Article 22
Annexes I to V	Annexes I to V
—	Annex VI
—	Annex VII
