Non-legislative acts

REGULATIONS


DECISIONS

* Council Decision (EU) 2019/2008 of 28 November 2019 on the position to be taken on behalf of the European Union at the International Maritime Organization during the 31st session of its Assembly on the adoption of amendments to resolution A.658(16) on Use and fitting of retro-reflective materials on life-saving appliances and the adoption of a resolution on Survey Guidelines under the Harmonized System of Survey and Certification (HSSC) ......................... 40

* Council Decision (CFSP) 2019/2009 of 2 December 2019 in support of Ukraine’s efforts to combat illicit trafficking in weapons, ammunition and explosives, in cooperation with the OSCE ........................................................................................................ 42


* Commission Implementing Decision (EU) 2019/2012 of 29 November 2019 on exemptions under Article 14 of Commission Regulation (EC) No 29/2009 laying down requirements on data link services for the single European sky (*) ................................................................. 95

(*) Text with EEA relevance.

Acts whose titles are printed in light type are those relating to day-to-day management of agricultural matters, and are generally valid for a limited period.
The titles of all other acts are printed in bold type and preceded by an asterisk.
II

(Non-legislative acts)

REGULATIONS

COMMISSION IMPLEMENTING REGULATION (EU) 2019/2007

of 18 November 2019

laying down rules for the application of Regulation (EU) 2017/625 of the European Parliament and of the Council as regards the lists of animals, products of animal origin, germinal products, animal by-products and derived products and hay and straw subject to official controls at border control posts

and amending Decision 2007/275/EC

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Council Directive 97/78/EC of 18 December 1997 laying down the principles governing the organisation of veterinary checks on products entering the Community from third countries (1), and in particular Article 3(5) thereof,


Whereas:

(1) Regulation (EU) 2017/625 establishes rules on the performance of official controls by the competent authorities of the Member States on animals and goods entering the Union in order to verify the compliance with Union agri-food chain legislation.

(2) Commission Delegated Regulation (EU) 2019/478 (3) amended Regulation (EU) 2017/625 by adding hay and straw and foodstuffs containing both products of plant origin and processed products of animal origin (‘composite products’) to the categories of goods in point (b) of Article 47(1) of that Regulation.

(3) In accordance with Regulation (EU) 2017/625, certain categories of animals and goods from third countries should always be presented at a border control post for official controls to be performed prior to their entry into the Union. In addition to animals, products of animal origin, germinal products, animal by-products, hay and straw and composite products are among the categories that should always be presented for official controls at border control posts.

(4) Regulation (EU) 2017/625 requires the Commission to establish lists of the different animals and products of animal origin, germinal products, animal by-products, hay and straw and composite products to be presented for official controls at border control posts with the indication of their respective Combined Nomenclature (CN) code provided for in Council Regulation (EEC) No 2658/87 (4).

(5) As derived products are a sub-category of animal by-products, they should be included in the lists and their CN codes should be indicated accordingly.

Commission Decision 2007/275/EC (*) lays down provisions concerning animals and products, including composite products, subject to veterinary checks at border inspection posts in accordance with Council Directives 91/496/EEC (*) and 97/78/EC. New conditions for the entry into the Union of composite products will apply from 21 April 2021 in accordance with Commission Delegated Regulation (EU) 2019/625 (†). It is therefore appropriate that until then the current rules laid down in Decision 2007/275/EC concerning composite products subject to official controls at border control posts continue to apply and that this Regulation does not apply to composite products. In order to avoid overlapping of legal provisions, this Regulation should amend Decision 2007/275/EC by limiting its scope of application to composite products.

In order to facilitate official controls by the competent authorities at border control posts in accordance with Regulation (EU) 2017/625, the list established in this Regulation should describe, in detail, the animals, products of animal origin, germinal products, animal by-products and derived products and hay and straw subject to such official controls.

In addition, for certain CN codes, this Regulation lists only part of the animals and products that fall under the relevant heading or subheading. In such cases, this Regulation should give additional details about the relevant animals and products which are subject to official controls at border control posts.

As the provisions of Regulation (EU) 2017/625 governing the matters covered by this Regulation apply from 14 December 2019, this Regulation should apply from the same date.

The measures provided for in this Regulation are in accordance with the opinion of the Standing Committee on Plants, Animals, Food and Feed.

HAS ADOPTED THIS REGULATION:

**Article 1**

**Subject matter and scope**

1. This Regulation establishes the lists of animals, products of animal origin, germinal products, animal by-products and derived products and hay and straw subject to official controls at border control posts in accordance with point (a) of the first subparagraph of Article 47(2) of Regulation (EU) 2017/625.

2. This Regulation shall not apply to composite products.

**Article 2**

**Definitions**

For the purposes of this Regulation, the following definitions shall apply:


2. ‘untreated pig bristles’ means untreated pig bristles as defined in point 33 of Annex I to Commission Regulation (EU) No 142/2011 (**);

**Footnotes:**


‘untreated feathers and parts of feathers’ means untreated feathers and parts of feathers as defined in point 30 of Annex I to Regulation (EU) No 142/2011;

‘untreated hair’ means untreated hair as defined in point 32 of Annex I to Regulation (EU) No 142/2011;

‘intermediate product’ means intermediate product as defined in point 35 of Annex I to Regulation (EU) No 142/2011;

‘treated hides and skins’ means treated hides and skins as defined in point 28 of Annex I to Regulation (EU) No 142/2011;

‘untreated wool’ means untreated wool as defined in point 31 of Annex I to Regulation (EU) No 142/2011.

Article 3

Official controls of animals and goods listed in Annex I

The animals and goods listed in Annex I to this Regulation shall be subject to official controls at border control posts in accordance with Regulation (EU) 2017/625.

Article 4

Amendments to Decision 2007/275/EC

Decision 2007/275/EC is amended as follows:

(1) the title is replaced by the following:

‘Commission Decision of 17 April 2007 concerning lists of composite products to be subject to controls at border control posts’;

(2) Article 1 is replaced by the following:

‘Article 1

Subject matter

This Decision lays down rules regarding the composite products to be subjected to official controls at border control posts upon entry into the Union.’;

(3) Article 3 is replaced by the following:

‘Article 3

Official controls of composite products listed in Annex I

1. The composite products listed in Annex I to this Decision shall be subjected to official controls at border control posts in accordance with Regulation (EU) 2017/625 of the European Parliament and of the Council (*).

2. Initial selection of composite products for official controls made on the basis of the Combined Nomenclature in Column (1) of Annex I shall be qualified by reference to the specific text or legislation cited in Column (3) of Annex I.

Article 4 is amended as follows:
  (a) the title is replaced by the following:
    ‘Composite products subject to official controls’;
  (b) the introductory phrase is replaced by the following:
    ‘The following composite products shall be subject to official controls’;

Article 6 is replaced by the following:

Derogation for certain composite products

1. By way of derogation from Article 3, the following composite products, not containing any meat products, shall not be subject to official controls:
   (a) composite products containing less than half of their substance of any other processed product provided such products are:
      (i) shelf-stable at ambient temperature or have clearly undergone in their manufacture a complete cooking or heat treatment process throughout their substance, so that any raw product is denatured;
      (ii) clearly identified as intended for human consumption;
      (iii) securely packaged or sealed in clean containers;
      (iv) accompanied by a commercial document and labelled in an official language of a Member State, so that that document and labelling together give information on the nature, quantity and number of packages of the composite products, the country of origin, the manufacturer, and the ingredient;
   (b) composite products listed in Annex II.

2. However, any milk product included in any composite products shall only be derived from countries listed in Annex I to Commission Regulation (EU) No 605/2010 (*), and treated as indicated in that Annex.


Annexes I and II are amended in accordance with Annex II to this Regulation.

Article 5

Entry into force and application

This Regulation shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Union.

It shall apply from 14 December 2019.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 18 November 2019.

For the Commission

The President

Jean-Claude JUNCKER
ANNEX I

LIST OF ANIMALS, PRODUCTS OF ANIMAL ORIGIN, GERMINAL PRODUCTS, ANIMAL BY-PRODUCTS AND
DERIVED PRODUCTS AND HAY AND STRAW SUBJECT TO OFFICIAL CONTROLS AT BORDER CONTROL
POSTS AS REFERRED TO IN ARTICLE 3

Notes:

1. General remarks

General remarks are added to certain Chapters to clarify, which animals or goods are covered in the relevant chapter. In
addition, where necessary, reference is made to specific requirements laid down in Commission Regulation (EU)
No 142/2011 (1).

2. Note to Chapter

The lists in this Annex are structured in Chapters which correspond to the relevant Chapters in the Combined
Nomenclature (CN) as laid down in Annex I to Council Regulation (EEC) No 2658/87 (2).

The Chapter notes are explanations, where necessary, extracted from the Notes to the individual Chapters of the CN.

3. Extract from the Explanatory Notes and the Classification Opinions of the Harmonized System

Additional information on the different Chapters has been extracted, where necessary, from the Explanatory Notes and
the Classification Opinions of the Harmonized System of the World Customs Organisation.

Tables:

4. Column (1) — CN code

This column indicates the CN code. The CN, established by Regulation (EEC) No 2658/87, is based on the International
Convention on Harmonized Commodity Description and Coding System (HS) drawn up by the Customs Cooperation
Council, now the World Customs Organisation (WCO), adopted by the International Convention, concluded in Brussels
on 14 June 1983 and approved on behalf of the European Economic Community by Council
Decision 87/369/EEC (3) (the HS Convention). The CN reproduces the headings and subheadings of the HS to six
digits, with only the seventh and eighth figures creating further subheadings which are specific to it.

Where a four digit code is used: Unless otherwise specified, all products prefixed with or covered by these four digits
shall be submitted to official controls at border control posts. In most of these cases, the relevant CN codes included in
the Traces system set up by Commission Decision 2004/292/EC (4), are broken down to the six or eight digit code.

Where only certain specified products under any four, six or eight digit code are required to be submitted to official
controls and no specific subdivision under this code exists in the CN, the code is marked ‘Ex’. In that case, the animals
and products covered by this Regulation are determined by the scope of the CN code and by that of the corresponding
description in column (2) and the qualification and explanation in column (3).

5. Column (2) — Description

The description of the goods is as laid down in the description column of the CN.

Without prejudice to the rules for the interpretation of the CN, the wording for the description of animals and products
in column (2) is considered to be of indicative value only, since the goods covered by this Regulation are determined by
CN codes.

Parliament and of the Council laying down health rules as regards animal by-products and derived products not intended for human
consumption and implementing Council Directive 97/78/EC as regards certain samples and items exempt from veterinary checks at

(2) Council Regulation (EEC) No 2658/87 of 23 July 1987 on the tariff and statistical nomenclature and on the Common Customs Tariff


6. Column (3) — Qualification and explanation

This column gives details of the animals or goods covered. Further information on the animals or goods covered in the different Chapters of the CN can be found in the Explanatory Notes to the Combined Nomenclature of the European Union (5).

Products derived from animal by-products covered by Regulation (EC) No 1069/2009 (6) of the European Parliament and of the Council and Regulation (EU) No 142/2011 are not specifically identified in Union law. Official controls shall be carried out on products that are partly processed but remain raw products to be further processed in an approved or registered establishment at destination. Official inspectors at border control posts shall assess and specify, when necessary, if a derived product is sufficiently processed to not require further official controls provided for in Union law.

CHAPTER 1

Live animals

Note to Chapter 1 (extract from the Notes to this Chapter of the CN)

‘1. This chapter covers all live animals, except:

(a) fish and crustaceans, molluscs and other aquatic invertebrates, of heading 0301, 0306, 0307 or 0308;

(b) cultures of micro-organisms and other products of heading 3002 and

(c) animals of heading 9508.’

Extract from the Harmonized System Explanatory Notes

‘Heading 0106 includes, inter alia, the following domestic or wild animals:

(A) Mammals

(1) Primates.

(2) Whales, dolphins and porpoises (mammals of the order Cetacea); manatees and dugongs (mammals of the order Sirenia); seals, sea lions and walruses (mammals of the suborder Pinnipedia).

(3) Other (such as reindeer, cats, dogs, lions, tigers, bears, elephants, camels (including dromedaries), zebras, rabbits, hares, deer, antelope (other than those of the sub-family Bovinae), chamois, foxes, minks, and other animals for fur farms).

(B) Reptiles (including snakes and turtles)

(C) Birds

(1) Birds of prey.

(2) Psittaciformes (including parrots, parakeets, macaws and cockatoos).

(3) Other (such as partridges, pheasants, quail, woodcocks, snipe, pigeons, grouse, ortolan, wild ducks, wild geese, thrushes, blackbirds, larks, finches, tits, humming birds, peacocks, swans, and other birds not specified in heading 0105).

(D) Insects, such as bees (whether or not travelling in boxes or cages or hives).

(E) Other, e.g. frogs.

This heading excludes animals forming part of circuses, menageries or other similar travelling animal shows (heading 95.08).’

(5) Explanatory Notes to the Combined Nomenclature of the European Union (OJ C 76, 4.3.2015, p. 1), as subsequently amended.

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0101</td>
<td>Live horses, asses, mules and hinnies</td>
<td>All</td>
</tr>
<tr>
<td>0102</td>
<td>Live bovine animals</td>
<td>All</td>
</tr>
<tr>
<td>0103</td>
<td>Live swine</td>
<td>All</td>
</tr>
<tr>
<td>0104</td>
<td>Live sheep and goats</td>
<td>All</td>
</tr>
<tr>
<td>0105</td>
<td>Live poultry, that is to say, fowls of the species Gallus domesticus, ducks, geese, turkeys and guinea fowls</td>
<td>All</td>
</tr>
<tr>
<td>0106</td>
<td>Other live animals</td>
<td>All, covers all animals from the following subheadings: 0106 11 00 (primates) 0106 12 00 (whales, dolphins and porpoises (mammals of the order Cetacea); manatees and dugongs (mammals of the order Sirenia); seals, sea lions and walruses (mammals of the suborder Pinnipedia) 0106 13 00 (camels and other camels (Camelidae)) 0106 14 (rabbits and hares) 0106 19 00 (other); mammals other than those of heading 0101, 0102, 0103, 0104, 0106 11, 0106 12, 0106 13 and 0106 14; covers dogs and cats 0106 20 00 (reptiles, including snakes and turtles) 0106 31 00 (birds; birds of prey) 0106 32 00 (birds: psittaciformes, including parrots, parakeets, macaws and cockatoos) 0106 33 00 (ostriches; emus (Dromaius novaehollandiae) 0106 39 (other); covers birds, other than those of heading 0105, 0106 31, 0106 32 and 0106 33, including pigeons. 0106 41 00 (bees) 0106 49 00 (other insects than bees) 0106 90 00 (other); all other live animals not covered elsewhere, other than mammals, reptiles, birds and insects. Live frogs whether for vivaria to be kept alive, or to be killed for human consumption, are covered by this heading.</td>
</tr>
</tbody>
</table>

CHAPTER 2

Meat and edible meat offal

Note to Chapter 2 (extract from the Notes to this Chapter of the CN)

1. This chapter does not cover:
   
   (a) Products of the kinds described in headings 0201 to 0208 or 0210 unfit or unsuitable for human consumption;
   
   (b) guts, bladders or stomachs of animals (heading 0504) or animal blood (heading 0511 or 3002); or
   
   (c) animal fat, other than the products of heading 0209 (Chapter 15).

..."
<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0202</td>
<td>Meat of bovine animals, frozen</td>
<td>All. However, raw material not intended or suitable for human consumption is not covered in this code.</td>
</tr>
<tr>
<td>0203</td>
<td>Meat of swine, fresh, chilled or frozen</td>
<td>All. However, raw material not intended or suitable for human consumption is not covered in this code.</td>
</tr>
<tr>
<td>0204</td>
<td>Meat of sheep or goats, fresh, chilled or frozen</td>
<td>All. However, raw material not intended or suitable for human consumption is not covered in this code.</td>
</tr>
<tr>
<td>0205 00</td>
<td>Meat of horses, asses, mules or hinnies, fresh, chilled or frozen</td>
<td>All. However, raw material not intended or suitable for human consumption is not covered in this code.</td>
</tr>
<tr>
<td>0206</td>
<td>Edible offal of bovine animals, swine, sheep, goats, horses, asses, mules or hinnies, fresh, chilled or frozen</td>
<td>All. However, raw material not intended or suitable for human consumption is not covered in this code.</td>
</tr>
<tr>
<td>0207</td>
<td>Meat and edible offal, of the poultry of heading 0105, fresh, chilled or frozen</td>
<td>All. However, raw material not intended or suitable for human consumption is not covered in this code.</td>
</tr>
<tr>
<td>0208</td>
<td>Other meat and edible meat offal, fresh, chilled or frozen</td>
<td>All. However, raw material not intended or suitable for human consumption is not covered in this code. This covers other raw material for the production of gelatine or collagen for human consumption. Covers all meat and edible meat offal from the following subheadings: 0208 10 (of rabbits or hares) 0208 30 00 (of primates) 0208 40 (of whales, dolphins and porpoises (mammals of the order Cetacea); of manatees and dugongs (mammals of the order Sirenia); of seals, sea lions and walruses (mammals of the suborder Pinnipedia)) 0208 50 00 (of reptiles, including snakes and turtles) 0208 60 00 (of camels and other camelids (Camelidae)) 0208 90 (other: of domestic pigeons; of game other than of rabbits or hares; etc.): covers meat of quails, reindeer or any other mammal species. Covers frogs' legs under CN code 0208 90 70.</td>
</tr>
<tr>
<td>0209</td>
<td>Pig fat, free of lean meat, and poultry fat, not rendered or otherwise extracted, fresh, chilled frozen, salted, in brine, dried or smoked</td>
<td>All, covers both fat and processed fat as described in column (2), even if suitable only for industrial use (not fit for human consumption).</td>
</tr>
<tr>
<td>0210</td>
<td>Meat and edible meat offal, salted, in brine, dried or smoked; edible flours and meals of meat or meat offal</td>
<td>All, covers meat, meat products and other products of animal origin. However, raw material not intended or suitable for human consumption is not covered in this code. Covers processed animal protein and dried pig ears for human consumption. Even when such dried pig ears are used as animal feed, the Annex to Commission Regulation (EC) No 1125/2006 (1) clarifies that they may be covered in 0210 99 49. However, dried offal and pig ears unfit for human consumption are in 0511 99 85.</td>
</tr>
</tbody>
</table>
Bones for human consumption are covered under heading 0506.

Sausages are covered under heading 1601.

Extracts and juices of meat are covered under heading 1603.

Greaves are covered under heading 2301.

(


CHAPTER 3

Fish and crustaceans, molluscs and other aquatic invertebrates

General remarks

This chapter covers both live fish for breeding and reproduction, live ornamental fish, and live fish or live crustaceans transported alive but imported for human consumption.

All products in this chapter are subject to official controls.

Notes to Chapter 3 (extract from the Notes to this Chapter of the CN)

1. This chapter does not cover:
   (a) mammals of heading 0106;
   (b) meat of mammals of heading 0106 (heading 0208 or 0210);
   (c) fish (including livers, roes and milt thereof) or crustaceans, molluscs or other aquatic invertebrates, dead and unfit or unsuitable for human consumption by reason of either their species or their condition (Chapter 5); flours, meals or pellets of fish or of crustaceans, molluscs or other aquatic invertebrates unfit for human consumption (heading 2301); or
   (d) caviar or caviar substitutes prepared from fish eggs (heading 1604)....

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0301</td>
<td>Live fish</td>
<td>All: covers trout, eels, carp, or any other species or any fish imported for breeding or reproduction. Live fish imported for immediate human consumption are treated for official controls purposes as if they were products. Covers ornamental fish in subheadings 0301 11 00 and 0301 19 00.</td>
</tr>
<tr>
<td>0302</td>
<td>Fish, fresh or chilled, excluding fish fillets and other fish meat of heading 0304</td>
<td>All: covers livers, milt and roes, fresh or chilled, in CN code 0302 91 00.</td>
</tr>
<tr>
<td>0303</td>
<td>Fish, frozen, excluding fish fillets and other fish meat of heading 0304</td>
<td>All: covers livers, milt and roes, frozen, in subheading 0303 91.</td>
</tr>
<tr>
<td>0304</td>
<td>Fish fillets and other fish meat (whether or not minced), fresh, chilled or frozen</td>
<td>All</td>
</tr>
<tr>
<td>0305</td>
<td>Fish, dried, salted or in brine; smoked fish, whether or not cooked before or during the smoking process; flours, meals and pellets of fish, fit for human consumption.</td>
<td>All, covers other fishery products such as flours, meals and pellets fit for human consumption made from fish; covers fish heads, tails and maws and other fishery products.</td>
</tr>
<tr>
<td>CN code</td>
<td>Description</td>
<td>Qualification and explanation</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>0306</td>
<td>Crustaceans, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine; smoked crustaceans, whether in shell or not, whether or not cooked before or during the smoking process; crustaceans, in shell, cooked by steaming or by boiling in water, whether or not chilled, frozen, dried, salted or in brine; flours, meals and pellets of crustaceans, fit for human consumption</td>
<td>All: live crustaceans imported for immediate human consumption are considered and treated for official controls purposes as if they were products. Covers ornamental sea monkeys and their cysts for use as pet animals; and all live ornamental crustaceans as provided for by Commission Regulation (EC) No 1251/2008 (1).</td>
</tr>
<tr>
<td>0307</td>
<td>Molluscs, whether in shell or not, live, fresh, chilled, frozen, dried, salted or in brine; smoked molluscs, whether in shell or not, whether or not cooked before or during the smoking process; flours, meals and pellets of molluscs, fit for human consumption</td>
<td>This covers molluscs that may have been cooked and then smoked. Other cooked molluscs are covered in heading 1605. Covers live ornamental molluscs as provided for by Regulation (EC) No 1251/2008. Live molluscs imported for immediate human consumption are considered and treated for official controls purposes as if they were products. Covers all from the subheadings 0307 11 to 0307 99, such as the following examples: 0307 60 (snails other than sea snails): covers terrestrial gastropods of the species Helix pomatia, Helix aspersa, Helix lucorum and species of the family Achatinidae. Covers live snails (including fresh water snails) for immediate human consumption and also snail meat for human consumption. Covers blanched or pre-processed snails. Further processed products are covered in heading 1605. 0307 91 00 (live, fresh, or chilled other molluscs, i.e. other than oysters, scallops, mussels (Mytilus spp., Perna spp.), cuttle fish, squid, octopus, sea snails, clams, cockles, ark shells, abalones (Haliotis spp.) and stromboid conchs (Strombus spp.): covers meat of sea water snail species, whether in shell or not. 0307 99 (other molluscs, other than live, fresh, chilled, or frozen, i.e. other than oysters, scallops, mussels (Mytilus spp., Perna spp.), cuttle fish, squid, octopus, sea snails, clams, cockles, ark shells, abalones (Haliotis spp.) and stromboid conchs (Strombus spp.): also including flours, meals and pellets thereof, fit for human consumption).</td>
</tr>
<tr>
<td>0308</td>
<td>Aquatic invertebrates other than crustaceans and molluscs, live, fresh, chilled, frozen, dried, salted or in brine; smoked aquatic invertebrates other than crustaceans and molluscs, whether or not cooked before or during the smoking process; flours, meals and pellets of aquatic invertebrates other than crustaceans and molluscs, fit for human consumption</td>
<td>All</td>
</tr>
</tbody>
</table>

CHAPTER 4

Dairy produce; birds’ eggs; natural honey; edible products of animal origin, not elsewhere specified or included

Notes to Chapter 4 (extract from the Notes to this Chapter of the CN)

1. The expression ‘milk’ means full-cream milk or partially or completely skimmed milk.

2. For the purposes of heading 0405:
   (a) the term ‘butter’ means natural butter, whey butter or recombined butter (fresh, salted or rancid, including canned butter) derived exclusively from milk, with a milkfat content of 80 % or more but not more than 95 % by weight, a maximum milk solids-not-fat content of 2 % by weight and a maximum water content of 16 % by weight. Butter does not contain added emulsifiers, but may contain sodium chloride, food colours, neutralising salts and cultures of harmless lactic-acid-producing bacteria;
   (b) the expression ‘dairy spreads’ means a spreadable emulsion of the water-in-oil type, containing milkfat as the only fat in the product, with a milkfat content of 39 % or more but less than 80 % by weight.

3. Products obtained by the concentration of whey and with the addition of milk or milkfat are to be classified as cheese in heading 0406 provided that they have the three following characteristics:
   (a) a milkfat content, by weight of the dry matter, of 5 % or more;
   (b) a dry matter content, by weight, of at least 70 % but not exceeding 85 %; and
   (c) they are moulded or capable of being moulded.

4. This chapter does not cover:
   (a) products obtained from whey, containing by weight more than 95 % lactose, expressed as anhydrous lactose calculated on the dry matter (heading 1702);
   (b) products obtained from milk by replacing one or more of its natural constituents (for example, butyric fats) by another substance (for example, oleic fats) (heading 1901 or 2106); or
   (c) albumins (including concentrates of two or more whey proteins, containing by weight more than 80 % whey proteins, calculated on the dry matter) (heading 3502) or globulins (heading 3504).

…”

Extracts from the Harmonized System Explanatory Notes

‘Heading 0408 covers whole eggs not in shell, and egg yolks of all birds. The products of this heading may be fresh, dried, cooked by steaming or by boiling in water, moulded (e.g. cylindrical ‘long eggs’), frozen or otherwise preserved. All these fall in the heading whether or not containing added sugar or other sweetening matter and whether for use as food or for industrial purposes (e.g., in tanning).

This heading does not cover:
(a) Oil of egg yolk (heading 1506).
(b) Egg preparations containing seasoning, spices or other additives (heading 2106).
(c) Lecithin (heading 2923).
(d) Separate egg white (egg albumin) (heading 3502).

…”

Heading 0409 covers honey produced by bees (Apis mellifera) or by other insects, centrifuged or in the comb or containing comb chunks, provided that neither sugar nor other substance has been added. Such honey may be designated by floral source, origin or colour.

Heading 0409 excludes artificial honey and mixtures of natural and artificial honey (heading 1702).

…”

Heading 0410 covers products of animal origin suitable for human consumption, not specified or included elsewhere in the Combined Nomenclature. This includes:
(a) Turtles' eggs. These are eggs laid by river or marine turtles; they may be fresh, dried or otherwise preserved.

Turtle-egg oil is excluded (heading 15.06).

(b) Salanganes' nests ('birds nests'). These consist of a substance secreted by the bird which solidifies rapidly on exposure to air.

The nests may be presented untreated, or they may have been cleaned to remove feathers, down, dust and other impurities in order to render them suitable for consumption. They are generally in the form of whitish strips or threads.

Salanganes' nests have a high protein content and are used almost exclusively to make soups or other food preparations.

Heading 0410 excludes animal blood, edible or not, liquid or dried (heading 0511 or 3002).'

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0401</td>
<td>Milk and cream, not concentrated nor containing added sugar or other sweetening matter</td>
<td>All. Milk for animal feed is covered under this heading, whereas animal feed containing milk is covered in heading 2309. Milk for therapeutic/prophylactic uses is covered in heading 3001.</td>
</tr>
<tr>
<td>0402</td>
<td>Milk and cream, concentrated or containing added sugar or other sweetening matter</td>
<td>All.</td>
</tr>
<tr>
<td>0403</td>
<td>Buttermilk, curdled milk and cream, yogurt, kephir and other fermented or acidified milk and cream, whether or not concentrated or containing added sugar or other sweetening matter or flavoured or containing added fruit, nuts or cocoa</td>
<td>All, covers cream, flavoured or containing fruits, frozen and fermented milk, for human consumption. Ice cream is covered in heading 2105. Beverages containing milk flavoured with cocoa or other substances are covered in heading 2202.</td>
</tr>
<tr>
<td>0404</td>
<td>Whey, whether or not concentrated or containing added sugar or other sweetening matter; products consisting of natural milk constituents, whether or not containing added sugar or other sweetening matter, not elsewhere specified or included</td>
<td>All, covers milk products for infants. Covers in CN code 0404 10 48 bovine colostrum, in liquid form, defatted and de-caseinated, for human consumption, and in CN code 0404 90 21 spray-dried, reduced-fat colostrum powder which has not been de-caseinated, for human consumption.</td>
</tr>
<tr>
<td>0405</td>
<td>Butter and other fats and oils derived from milk; dairy spreads</td>
<td>All.</td>
</tr>
<tr>
<td>0406</td>
<td>Cheese and curd</td>
<td>All</td>
</tr>
<tr>
<td>0407</td>
<td>Birds' eggs, in shell, fresh, preserved or cooked</td>
<td>All, covers hatching eggs and specified pathogen free eggs (SPF), fertilised eggs for incubation (0407 11 and 0407 19). Covers fresh eggs (0407 21 to 0407 29) and other eggs (0407 90), not fit and fit for human consumption. Covers '100 year old eggs'. Egg albumin not fit and fit for human consumption is covered in heading 3502.</td>
</tr>
<tr>
<td>0408</td>
<td>Birds' eggs, not in shell, and egg yolks, fresh, dried, cooked by steaming or by boiling in water, moulded, frozen or otherwise preserved, whether or not containing added sugar or other sweetening matter</td>
<td>All: this heading covers egg products whether or not heat treated and products not fit for human consumption.</td>
</tr>
<tr>
<td>0409 00 00</td>
<td>Natural honey</td>
<td>All</td>
</tr>
<tr>
<td>CN code</td>
<td>Description</td>
<td>Qualification and explanation</td>
</tr>
<tr>
<td>---------</td>
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<td>-------------------------------</td>
</tr>
<tr>
<td>0410 00 00</td>
<td>Edible products of animal origin, not elsewhere specified or included</td>
<td>All This heading covers 'royal jelly' and propolis (used in manufacture for pharmaceutical products and food supplements) and other animal derived material for human consumption, except bones (which are covered in 0506). Insects or insect eggs for human consumption are covered in this CN code.</td>
</tr>
</tbody>
</table>

**CHAPTER 5**

**Products of animal origin, not elsewhere specified or included**

**General remarks**

Specific requirements for certain products in this chapter are laid down in Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011:

Row 7: pig bristles
Row 8: untreated wool and hair produced from animals other than those of the porcine species
Row 9: treated feathers, parts of feathers and down.

**Notes to Chapter 5 (extract from the Notes to this Chapter of the CN)**

1. This chapter does not cover:

   (a) edible products (other than guts, bladders and stomachs of animals, whole and pieces thereof, and animal blood, liquid or dried);
   (b) hides or skins (including furskins), other than goods of heading 0505 and parings and similar waste of raw hides or skins of heading 0511 (Chapter 41 or 43);
   (c) animal textile materials, other than horsehair and horsehair waste (Section XI); or
   (d) prepared knots or tufts for broom or brush making (heading 9603).

   ... 

3. Throughout the nomenclature, elephant, hippopotamus, walrus, narwhal and wild boar tusks, rhinoceros horns and the teeth of all animals are regarded as 'ivory'.

4. Throughout the nomenclature, the expression 'horsehair' means hair of the manes or tails of equine or bovine animals. Heading 0511 covers, inter alia, horsehair and horsehair waste, whether or not put up as a layer with or without supporting material.'

**Extract from the Harmonized System Explanatory Notes**

'Heading 0505 covers

(1) Skins and other parts of birds (e.g., heads, wings) with their feathers or down, and
(2) Feathers and parts of feathers (whether or not with trimmed edges), and down,
provided they are either unworked, or merely cleaned, disinfected or treated for preservation but not otherwise worked or mounted.

Heading 0505 also covers powder, meal and waste of feathers or parts of feathers.'
<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0502 10 00</td>
<td>Pigs’, hogs’ or boars’ bristles and hair and waste thereof</td>
<td>All, treated and untreated.</td>
</tr>
<tr>
<td>0504 00 00</td>
<td>Guts, bladders and stomachs of animals (other than fish), whole and pieces thereof, fresh, chilled, frozen, salted, in brine, dried or smoked</td>
<td>All, covers stomachs, bladders and intestines cleaned salted dried or heated of bovine, porcine, ovine, caprine, or of poultry origin.</td>
</tr>
<tr>
<td>ex 0505</td>
<td>Skins and other parts of birds, with their feathers or down, feathers and parts of feathers (whether or not with trimmed edges) and down, not further worked than cleaned, disinfected or treated for preservation; powder and waste of feathers or parts of feathers</td>
<td>All, including game trophies of birds, but excluding treated decorative feathers, treated feathers carried by travellers for their private use or consignments of treated feathers sent to private individuals for non-industrial purposes. Article 25(1)(b) of Regulation (EU) No 142/2011 prohibits the importation into and transit through the Union of untreated feathers and parts of feathers and down. Official controls are applicable for feathers independent from their treatment as referred to in point C of Chapter VII of Annex XIII to Regulation (EU) No 142/2011. Further specific requirements for game trophies are laid down in Section 5 of Chapter II of Annex XIV to Regulation (EU) No 142/2011. Section 6 of Chapter II of Annex XIV to Regulation (EU) No 142/2011 covers feathers used for stuffing, down, raw or other feathers.</td>
</tr>
<tr>
<td>0506</td>
<td>Bones and horn-cores, un-worked, defatted, simply prepared (but not cut to shape), treated with acid or de-gelatinised; powder and waste of these products</td>
<td>Covers bones used as dog chews and bones for the production of gelatine or of collagen, if derived from carcasses that have been slaughtered for human consumption. Bone flour for human consumption is covered under heading 0410. Specific requirements for such products not intended for human consumption are laid down in Row 6 (game trophies), in Row 11 (bones and bone products (excluding bone meal), horns and horn products (excluding horn meal) and hooves and hoof products (excluding hoof meal) for uses other than as feed material, organic fertiliser or soil improver) and in Row 12 (dog chews) of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
<tr>
<td>0507</td>
<td>Ivory, tortoise-shell, whalebone and whalebone hair, horns, antlers, hooves, nails, claws and beaks, un-worked or simply prepared but not cut to shape; powder and waste of these products</td>
<td>Covers treated game trophies from birds and ungulates being solely bones, horns, hooves, claws, antlers, teeth, hides or skins from third countries. Specific requirements for game trophies are laid down in Row 6 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
<tr>
<td>ex 0508 00 00</td>
<td>Coral and similar materials, unworked or simply prepared but not otherwise worked; shells of molluscs, crustaceans or echinoderms and cuttle-bone, unworked or simply prepared but not cut to shape, powder and waste thereof</td>
<td>Empty shells for food use and use as raw material for glucosamine. In addition, shells, including cuttle-bones, containing soft tissue and flesh as referred to in point (k)(i) of Article 10 of Regulation (EC) No 1069/2009 are covered.</td>
</tr>
<tr>
<td>CN code</td>
<td>Description</td>
<td>Qualification and explanation</td>
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<td>----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ex 0510 00 00</td>
<td>Ambergris, castoreum, civet and musk, cantharides, bile, whether or not dried; glands and other animal products used in the preparation of pharmaceutical products, fresh, chilled, frozen or otherwise provisionally preserved</td>
<td>Ambergris and cantharides are excluded. Glands, other animal products and bile are covered by this code. Dried glands and products are covered by heading 3001. Specific requirements may be laid down in Row 14 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011 for animal by-products for the manufacture of pet food other than raw pet food and of derived products for uses outside the feed chain (for pharmaceuticals and other technical products).</td>
</tr>
<tr>
<td>ex 0511</td>
<td>Animal products not elsewhere specified or included; dead animals of Chapter 1 or 3, unfit for human consumption</td>
<td>All. Covers genetic material (semen and embryos of animal origin such as of the bovine, ovine, caprine, equine and porcine species) and animal by-products of Categories 1 and 2 materials as referred to in Articles 8 and 9 of Regulation (EC) No 1069/2009. The following are examples of animal products falling within subheadings 0511 10 to 0511 99: 0511 10 00 (bovine semen). 0511 91 (products of fish or crustaceans, molluscs or other aquatic invertebrates) all, covers fish eggs for hatching, dead animals, animal by-products for the manufacture of pet food and for pharmaceuticals and other technical products. Covers dead animals referred to in Chapter 3, inedible or classed unfit for human consumption, for example, daphnids, known as water fleas, and other ostracoda or phyllopods, dried, for feeding aquarium fish; covers fish bait. ex 0511 99 10 (sinews or tendons; parings and similar waste of raw hides and skins). Official controls are necessary for hides and skins not treated as referred to in point C 2 of Chapter V of Annex XIII to Regulation (EU) No 142/2011, if in compliance with Article 41(3) of Regulation (EC) No 1069/2009. ex 0511 99 31 (raw natural sponges of animal origin) all, if for human consumption; if not for human consumption, only those intended for pet food. Specific requirements for non-human consumption are set out in Row 12 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011. ex 0511 99 39 (other than raw natural sponges of animal origin) all, if for human consumption; if not for human consumption, only those intended for pet food. Specific requirements for non-human consumption are set out in Row 12 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
</tbody>
</table>
CHAPTER 6

Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage

General remarks
This chapter covers mushroom spawn in a compost of sterilised manure of animal origin.

Extract from the Explanatory Notes to the CN

‘0602 90 10 Mushroom spawn:
Mushroom spawn is the term given to a net of fragile threads (Thallus or Mycelium), often found underground, which lives and grows on the surface of decomposing animal or vegetable matter and develops in the tissues themselves and produces mushrooms.

This subheading also includes a product consisting of mushroom spawn, not fully developed, placed in microscopic amounts on a layer of cereal grains enclosed in a compost of sterilized horse manure (a mixture of straw and horse dung).’

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 0602 90 10</td>
<td>Mushroom spawn</td>
<td>Only if containing processed manure of animal origin and specific rules are set out in Row 1 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
</tbody>
</table>

CHAPTER 12

Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 1212 99 95</td>
<td>Other vegetable products of a kind used primarily for human consumption, not elsewhere specified or included</td>
<td>Bee pollen</td>
</tr>
</tbody>
</table>
### CHAPTER 15

**Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes**

#### General remarks

All animal derived fats and oils. Specific requirements for the following products are set out in Annex XIV to Regulation (EU) No 142/2011:

1. rendered fats and fish oils in Row 3 of Table 1 in Section 1 of Chapter I;
2. rendered fats from Category 2 materials for certain purposes outside the feed chain for farmed animals (for example oleo chemical purposes) in Row 17 of Table 2 in Section 1 of Chapter II;
3. fat derivatives in Row 18 of Table 2 in Section 1 of Chapter II.

Fat derivatives include first stage products derived from fats and oils when in their pure state produced by a method set out in point 1 of Chapter XI of Annex XIII to Regulation (EU) No 142/2011. Derivatives mixed with other materials are subjected to official controls.

#### Notes to Chapter 15 (extract from the Notes to this Chapter of the CN)

1. This chapter does not cover:
   (a) pig fat or poultry fat on heading 0209;
   (b) cocoa butter, fat and oil (heading 1804);
   (c) edible preparations containing by weight more than 15 % of the products of heading 0405 (generally Chapter 21);
   (d) greaves (heading 2301) or residues of headings 2304 to 2306;
   ...

3. Heading 1518 does not cover fats or oils or their fractions, merely denatured, which are classified in the heading appropriate to the corresponding undenatured fats and oils and their fractions.

4. Soap stocks, oil foots and dregs, stearin pitch, glycerol pitch and wool grease residues fall in heading 1522.’

#### Extract from the Harmonized System Explanatory Notes

‘Heading 1516 covers animal and vegetable fats and oils, which have undergone a specific chemical transformation of a kind mentioned below, but have not been further prepared.

The heading also covers similarly treated fractions of animal or vegetable fats and oils.

Hydrogenation, which is effected by bringing the products into contact with pure hydrogen at a suitable temperature and pressure in the presence of a catalyst (usually finely divided nickel), raises the melting points of fats and increases the consistency of oils by transforming unsaturated glycerides (e.g. of oleic, linoleic, etc. acids) into saturated glycerides of higher melting points (e.g. of palmitic, stearic, etc. acids).
Heading 1518 covers inedible mixtures or preparations of animal or vegetable fats or oils or of fractions of different fats or oils of the Chapter, not elsewhere specified or included.

This part covers, inter alia, used deep-frying oil containing, for example, rape oil, soya-bean oil and a small quantity of animal fat, for use in the preparation of animal feeds.

The heading also includes hydrogenated, inter-esterified, re-esterified or elaidinised fats and oils or their fractions, where modification involves more than one fat or oil.

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1501</td>
<td>Pig fat (including lard) and poultry fat, other than that of heading 0209 or 1503</td>
<td>All</td>
</tr>
<tr>
<td>1502</td>
<td>Fats of bovine animals, sheep or goats, other than those of heading 1503</td>
<td>All</td>
</tr>
<tr>
<td>1503 00</td>
<td>Lard stearin, lard oil, oleostearin, oleo-oil and tallow oil, not emulsified or mixed or otherwise prepared</td>
<td>All</td>
</tr>
<tr>
<td>1504</td>
<td>Fats and oils and their fractions, of fish or marine mammals, whether or not refined, but not chemically modified</td>
<td>All, fish oils and oils from fishery products and marine mammals. Miscellaneous edible preparations are covered in general under heading 1517 or Chapter 21.</td>
</tr>
<tr>
<td>1505 00</td>
<td>Wool grease and fatty substances derived therefrom (including lanolin)</td>
<td>All, wool grease imported as rendered fat as set out in Annex XIV to Regulation (EU) No 142/2011, or lanolin imported as intermediate product.</td>
</tr>
<tr>
<td>1506 00 00</td>
<td>Other animal fats and oils and their fractions, whether or not refined, but not chemically modified</td>
<td>All Unsplit fats or oils, and also their initial fractions produced by a method set out in point 1 of Chapter XI of Annex XIII to Regulation (EU) No 142/2011.</td>
</tr>
<tr>
<td>1516 10</td>
<td>Animal fats and oils and their fractions, partly or wholly hydrogenated, inter-esterified, re-esterified or elaidinised, whether or not refined, but not further prepared</td>
<td>All: animal fats and oils. For official controls fat derivatives include first stage products derived from animal fats and oils when in their pure state produced by a method set out in point 1 of Chapter XI of Annex XIII to Regulation (EU) No 142/2011.</td>
</tr>
<tr>
<td>ex 1517</td>
<td>Margarine, edible mixtures or preparations of animal or vegetable fats or oils or of fractions of different fats or oils of this chapter, other than edible fats or oils or their fractions of heading 1516</td>
<td>Products of animal origin only.</td>
</tr>
<tr>
<td>ex 1518 00 91</td>
<td>Animal or vegetable fats and oils and their fractions, boiled, oxidised, dehydrated, sulphurised, blown, polymerised by heat in vacuum or in inert gas or otherwise chemically modified, excluding those of heading 1516</td>
<td>Animal origin only. Fat derivatives produced by a method set out in point 1 of Chapter XI of Annex XIII to Regulation (EU) No 142/2011. Specific requirements are set out in Row 17 (rendered fats) and Row 18 (fat derivatives) of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
<tr>
<td>ex 1518 00 95</td>
<td>Inedible mixtures or preparations of animal or of animal and vegetable fats and oils and their fractions</td>
<td>Only fats and oil preparations, rendered fats and derivatives derived from animals; including used cooking oil, intended to be used within the scope of Regulation (EC) No 1069/2009.</td>
</tr>
<tr>
<td>CN code</td>
<td>Description</td>
<td>Qualification and explanation</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ex 1518 00 99</td>
<td>Other</td>
<td>Only if containing fat from animal origin.</td>
</tr>
<tr>
<td>ex 1520 00 00</td>
<td>Glycerol, crude; glycerol waters and glycerol lyes</td>
<td>Animal origin only.</td>
</tr>
<tr>
<td>1521 90 91</td>
<td>Raw beeswax and other insect waxes</td>
<td>All, covers waxes in natural combs, raw beeswax for apiculture or technical purposes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Article 25(1)(c) of Regulation (EU) No 142/2011 prohibits the importation into and transit through the Union of beeswax in the form of honeycomb. Specific requirements for apiculture by-products are set out in Row 10 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
<tr>
<td>1521 90 99</td>
<td>Beeswax and other insect waxes, whether or not refined or coloured, other than raw</td>
<td>All, covers waxes, processed or refined, whether or not bleached or coloured, for apiculture or technical purposes. Specific requirements for apiculture by-products are set out in Row 10 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011. Apiculture by-products other than beeswaxes shall be submitted for official controls under CN code 0511 99 85 ‘Other’.</td>
</tr>
<tr>
<td>ex 1522 00</td>
<td>Degras; residues resulting from the treatment of fatty substances or animal or vegetable waxes</td>
<td>Animal origin only. Specific requirements are set out in Row 18 (fat derivatives) of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
</tbody>
</table>

**CHAPTER 16**

**Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates**

**Notes to Chapter 16 (extract from the Notes to this Chapter of the CN)**

1. This chapter does not cover meat, meat offal, fish, crustaceans, molluscs or other aquatic invertebrates prepared or preserved by the process specified in Chapter 2 or 3 or heading 0504.

2. Food preparations fall in this chapter provided that they contain more than 20 % by weight of sausage, meat, meat offal, blood, fish or crustaceans, molluscs or other aquatic invertebrates, or any combination thereof. In cases where the preparation contains two or more of the products mentioned above, it is classified in the heading of Chapter 16 corresponding to the component or components which predominate by weight. These provisions do not apply to the stuffed products of heading 1902 or to the preparations of heading 2103 or 2104.

For preparations containing liver, the provisions of the second sentence shall not apply in determining the subheadings within heading 1601 or 1602.

…”
<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1601 00</td>
<td>Sausages and similar products, of meat, meat offal or blood; food preparations based on these products</td>
<td>All, covers preserved meat in various forms.</td>
</tr>
<tr>
<td>ex 1602</td>
<td>Other prepared or preserved meat, meat offal or blood</td>
<td>Products of animal origin only.</td>
</tr>
<tr>
<td>ex 1603 00</td>
<td>Extracts and juices of meat, fish or crustaceans, molluscs or other aquatic invertebrates</td>
<td>Products of animal origin only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Covers meat extracts and meat concentrates, fish protein in gel form whether chilled or frozen, and also shark cartilage.</td>
</tr>
<tr>
<td>ex 1604</td>
<td>Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs</td>
<td>Products of animal origin only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Covers preparations of surimi in CN code 1604 20 05.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Covers canned fish and canned caviar in airtight containers, and also sushi (provided that they are not to be classified in a CN code referred to in Chapter 19).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>So-called fish skewers (raw fish meat or raw shrimps with vegetables presented on a wooden stick) are classified in CN code 1604 19 97.</td>
</tr>
<tr>
<td>ex 1605</td>
<td>Crustaceans, molluscs and other aquatic invertebrates, prepared or preserved</td>
<td>Products of animal origin only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Covers fully prepared or pre-prepared snails, canned crustaceans, or other aquatic invertebrates as well as mussel powder.</td>
</tr>
</tbody>
</table>

### CHAPTER 17

**Sugars and sugar confectionery**

**Notes to Chapter 17 (extract from the Notes to this Chapter of the CN)**

‘1. This chapter does not cover:

...’

(b) chemically pure sugars (other than sucrose, lactose, maltose, glucose and fructose) or other products of heading 2940;

...

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 1702</td>
<td>Other sugars, including chemically pure lactose, maltose, glucose and fructose, in solid form; sugar syrups not containing added flavouring or colouring matter; artificial honey, whether or not mixed with natural honey</td>
<td>Lactose. Sugars and artificial honey, where mixed with natural honey.</td>
</tr>
</tbody>
</table>
CHAPTER 18

Cocoa and cocoa preparations

Notes to Chapter 18 (extract from the Notes to this Chapter of the CN)

‘1. This chapter does not cover the preparations of heading 0403, 1901, 1904, 1905, 2105, 2202, 2208, 3003 or 3004.

2. Heading 1806 includes sugar confectionery containing cocoa and, subject to Note 1 to this Chapter, other food preparations containing cocoa.

…

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 1806</td>
<td>Chocolate and other food preparations containing cocoa</td>
<td>Products of animal origin only, for example dairy products.</td>
</tr>
</tbody>
</table>

CHAPTER 19

Preparations of cereals, flour, starch or milk; pastry cooks' products

Notes to Chapter 19 (extract from the Notes to this Chapter of the CN)

‘1. This chapter does not cover:

(a) except in the case of stuffed products of heading 1902, food preparations containing more than 20 % by weight of sausage, meat, meat offal, blood, fish, or crustaceans, molluscs or other aquatic invertebrates, or any combination thereof (Chapter 16):

…

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 1901</td>
<td>Food preparations of flour, groats, meal, starch or malt extract, not containing cocoa or containing less than 40 % by weight of cocoa calculated on a totally defatted basis, not elsewhere specified or included; food preparations of goods of headings 0401 to 0404, not containing cocoa or containing less than 5 % by weight of cocoa calculated on a totally defatted basis, not elsewhere specified or included</td>
<td>Products of animal origin only. Covers uncooked foodstuffs (e.g. pizzas) containing products of animal origin. Culinary preparations are covered by Chapters 16 and 21.</td>
</tr>
<tr>
<td>1902 11 00</td>
<td>Uncooked pasta, not stuffed or otherwise prepared, containing eggs</td>
<td>All</td>
</tr>
<tr>
<td>ex 1902 20 10</td>
<td>Stuffed pasta, whether or not cooked or otherwise prepared containing more than 20 % by weight of fish, crustaceans, molluscs or other aquatic invertebrates</td>
<td>Products of animal origin only.</td>
</tr>
<tr>
<td>ex 1902 20 30</td>
<td>Stuffed pasta, whether or not cooked or otherwise prepared containing more than 20 % by weight of sausages and the like, of meat and meat offal of any kind, including fats of any kind or origin</td>
<td>Products of animal origin only.</td>
</tr>
<tr>
<td>ex 1902 20 91</td>
<td>Cooked stuffed pasta</td>
<td>Products of animal origin only.</td>
</tr>
</tbody>
</table>
CHAPTER 20

Preparations of vegetables, fruit, nuts, or other parts of plants

Notes to Chapter 20 (extract from the Notes to this Chapter of the CN)

‘1. This chapter does not cover:

…

(b) food preparations containing more than 20 % by weight of sausage, meat, meat offal, blood, fish or crustaceans, molluscs or other aquatic invertebrates, or any combination thereof (Chapter 16).

…"

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 2001</td>
<td>Vegetables, fruit, nuts and other edible parts or plants, prepared or preserved by vinegar or acetic acid</td>
<td>Products of animal origin only.</td>
</tr>
<tr>
<td>ex 2004</td>
<td>Other vegetables prepared or preserved otherwise than by vinegar or acetic acid, frozen, other than products of heading 2006</td>
<td>Products of animal origin only.</td>
</tr>
<tr>
<td>ex 2005</td>
<td>Other vegetables prepared or preserved otherwise than by vinegar or acetic acid, not frozen, other than products of heading 2006</td>
<td>Products of animal origin only.</td>
</tr>
</tbody>
</table>

CHAPTER 21

Miscellaneous edible preparations

Notes to Chapter 21 (extract from the Notes to this Chapter of the CN)

‘1. This chapter does not cover:

…

(e) food preparations, other than the products described in 2103 or 2104, containing more than 20 % by weight of sausage, meat, meat offal, blood, fish or crustaceans, molluscs or other aquatic invertebrates, or any other combinations thereof (Chapter 16).

…
3. For the purposes of heading 2104, the expression ‘homogenised composite food preparations’ means preparations consisting of a finely homogenised mixture of two or more basic ingredients such as meat, fish, vegetables, fruits or nuts, put up for retail sale as infant food or for dietetic purposes, in containers of a net weight content not exceeding 250 g. For the application of this definition, no account is to be taken of small quantities of any ingredients which may be added to the mixture for seasoning, preservation or other purposes. Such preparations may contain a small quantity of visible pieces of ingredients.

Additional notes

5. Other food preparations presented in measured doses, such as capsules, tablets, pastilles and pills, and which are intended for use as food supplements are to be classified under heading 2106, unless elsewhere specified or included.

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>ex 2103 90 90</td>
<td>Sauces and preparations therefor; mixed condiments and mixed seasonings; mustard flour and meal and prepared mustard. — Other</td>
<td>Products of animal origin only.</td>
</tr>
<tr>
<td>ex 2104</td>
<td>Soups and broths and preparations therefor; homogenised composite food preparations</td>
<td>Products of animal origin only, including infant food in containers of a net weight content not exceeding 250 g.</td>
</tr>
<tr>
<td>ex 2105 00</td>
<td>Ice cream and other edible ice, whether or not containing cocoa</td>
<td>Products of animal origin only.</td>
</tr>
<tr>
<td>ex 2106 10</td>
<td>Protein concentrates and textured protein substances</td>
<td>Products of animal origin only; excluding food supplements packaged for the final consumer, containing small amounts (in total less than 20 %) of processed animal products (including glucosamine, chondroitin and/or chitosan) other than meat products.</td>
</tr>
<tr>
<td>ex 2106 90 51</td>
<td>Lactose syrup</td>
<td>Products of animal origin only; excluding food supplements packaged for the final consumer, containing small amounts (in total less than 20 %) of processed animal products (including glucosamine, chondroitin and/or chitosan) other than meat products.</td>
</tr>
<tr>
<td>ex 2106 90 92</td>
<td>Other food preparations not elsewhere specified or included, containing no milk fats, sucrose, isoglucose, glucose or starch or containing, by weight, less than 1.5 % milkfat, 5 % sucrose or isoglucose, 5 % glucose or starch</td>
<td>Products of animal origin only; excluding food supplements packaged for the final consumer, containing small amounts (in total less than 20 %) of processed animal products (including glucosamine, chondroitin and/or chitosan) other than meat products.</td>
</tr>
<tr>
<td>ex 2106 90 98</td>
<td>Other food preparations not elsewhere specified or included</td>
<td>Products of animal origin only; excluding food supplements packaged for the final consumer, containing small amounts (in total less than 20 %) of processed animal products (including glucosamine, chondroitin and/or chitosan) other than meat products.</td>
</tr>
</tbody>
</table>
CHAPTER 22

**Beverages, Spirits and Vinegar**

**Notes to Chapter 22 (extract from the Notes to this Chapter of the CN)**

‘…

3. For the purposes of heading 2202, the term ‘non-alcoholic beverages’ means beverages of an alcoholic strength by volume not exceeding 0.5 % vol. Alcoholic beverages are classified in headings 2203 to 2206 or heading 2208 as appropriate.

‘…’

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 2202 99 99</td>
<td>Other non-alcoholic beverages, not including fruit or vegetable juices of heading 2009 and containing 2 % or more by weight of fat obtained from the products of heading 0401 to 0404</td>
<td>Milk and dairy products only.</td>
</tr>
</tbody>
</table>

CHAPTER 23

**Residues and waste from the food industries; prepared animal fodder**

**Note to Chapter 23 (extract from the Notes to this Chapter of the CN)**

‘1. Heading 2309 includes products of a kind used in animal feeding, not elsewhere specified or included, obtained by processing vegetable or animal materials to such an extent that they have lost the essential characteristics of the original material, other than vegetable waste, vegetable residues and by-products of such processing.

‘…’

**Extract from the Harmonized System Explanatory Notes**

‘Greaves, the membraneous tissues remaining after pig or other animal fats have been rendered. They are used mainly in the preparation of animal foods (e.g., dog biscuits), but they remain in heading 2301 even if suitable for human consumption.’

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2301</td>
<td>Flours, meals and pellets, of meat or meat offal, of fish or of crustaceans, molluscs or other aquatic invertebrates, unfit for human consumption; greaves</td>
<td>All, covers processed animal protein not for human consumption, meat meal not for human consumption, and greaves, whether or not for human consumption. Feather meal is covered in heading 0505. Specific requirements for processed animal protein are set out in Row 1 of Table 1 in Section 1 of Chapter I of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
<tr>
<td>ex 2309</td>
<td>Preparations of a kind used in animal feeding</td>
<td>All, if containing products of animal origin, except subheadings 2309 90 20 and 2309 90 91.</td>
</tr>
<tr>
<td>CN code</td>
<td>Description</td>
<td>Qualification and explanation</td>
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<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td></td>
<td>Covers, among other things, dog or cat food, put up for retail sale (subheading 2309 10), containing animal products and fish or marine mammal solubles (CN code 2309 90 10). Products for animal feeding purposes, including mixtures of meals (such as hoof and horn). This heading covers liquid milk, colostrum and products containing milk products, colostrum, or carbohydrates, all not fit for human consumption but for animal feeding. Covers pet food, dog chews and mixtures of meals, mixtures can include dead insects. Specific requirements for pet food including dog chews are set out in Row 12 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.</td>
<td></td>
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<tr>
<td></td>
<td>Covers egg products not for human consumption and other processed products of animal origin not for human consumption. Specific requirements for egg products are set out in Row 9 of Table 1 in Section 1 of Chapter I of Annex XIV to Regulation (EU) No 142/2011.</td>
<td></td>
</tr>
</tbody>
</table>

### CHAPTER 28

**Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes**

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>ex 2835 25 00</td>
<td>Calcium hydrogenorthophosphate ('dicalcium phosphate')</td>
<td>Animal origin only. Specific requirements for dicalcium phosphate are set out in Row 6 of Table 1 in Section 1 of Chapter I of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
<tr>
<td>ex 2835 26 00</td>
<td>Other phosphates of calcium</td>
<td>Tricalcium phosphate of animal origin only. Specific requirements for tricalcium phosphate are set out in Row 7 of Table 1 in Section 1 of Chapter I of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
</tbody>
</table>

### CHAPTER 29

**Organic chemicals**

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>ex 2922 49</td>
<td>Other Amino-acids, other than those containing more than one kind of oxygen function, and their esters; salts thereof</td>
<td>Animal origin only.</td>
</tr>
</tbody>
</table>
### CHAPTER 30

**Pharmaceutical products**

**General remarks**

Finished medicinal products, which are not covered by Regulation (EC) No 1069/2009 and (EU) No 142/2011, are excluded from the list. Intermediate products are included.

In heading 3001 (glands and other organs for organo-therapeutic uses, dried, whether or not powdered; extracts of glands or other organs or of their secretions for organo-therapeutic uses; heparin and its salts; other human or animal substances prepared for therapeutic or prophylactic uses, not elsewhere specified or included) only animal derived products of subheadings 3001 20 and 3001 90 are relevant for official controls. Refer to the following specific requirements in Annex XIV to Regulation (EU) No 142/2011:

1. Row 2 of Table 2 in Section 1 of Chapter II for blood products for technical products excluding from equidae, and
2. Row 3 of Table 2 in Section 1 of Chapter II for blood and blood products from equidae, and
3. Row 14 of Table 2 in Section 1 of Chapter II for animal by-products for the manufacture of pet food other than raw pet food and of derived products for uses outside the feed chain.

In heading 3002 (human blood; animal blood prepared for therapeutic, prophylactic or diagnostic uses; antisera, other blood fractions and immunological products, whether or not modified or obtained by means of biotechnological processes; vaccines, toxins, cultures of micro-organisms (excluding yeasts) and similar products) only subheadings 3002 12 and 3002 90 are relevant for official controls. Human blood of 3002 90 10 and vaccines of subheadings 3002 20 and 3002 30 do not need to be subjected to official controls.

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3001 20 90</td>
<td>Extracts of glands or other organs or of their secretions, other than of human origin</td>
<td>All; covers a product acting as a replacement for maternal colostrum and used in the feeding of calves,</td>
</tr>
<tr>
<td>ex 3001 90 91</td>
<td>Animal substances prepared for therapeutic or prophylactic uses: heparin and its salts</td>
<td>All animal products, which are destined for further processing, in accordance with Article 34(1) of Regulation (EC) No 1069/2009, for the manufacture of the derived products referred to in points (a) to (f) of Article 33 of that Regulation.</td>
</tr>
<tr>
<td>3001 90 98</td>
<td>Other animal substances than heparin and its salts prepared for therapeutic or prophylactic uses, not elsewhere specified or included</td>
<td>All. In addition to the glands and other organs mentioned in the Harmonized System Explanatory Notes to heading 3001, (A), this subheading covers the hypophysis, the suprarenal capsules and the thyroid gland; except those specified in Article 33 of Regulation (EC) No 1069/2009.</td>
</tr>
<tr>
<td>CN code</td>
<td>Description</td>
<td>Qualification and explanation</td>
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</tr>
<tr>
<td>ex 3002 12 00</td>
<td>Antisera and other blood fractions</td>
<td>Animal derived products only. Excludes finished medicinal products for the final consumer. Excludes antibodies and DNA. Under heading 3002, specific requirements are set out for animal by-products covered by Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011 and specified in the following Rows: Row 2: blood products other than from equidae; Row 3: blood and blood products from equidae.</td>
</tr>
<tr>
<td>3002 90 30</td>
<td>Animal blood prepared for therapeutic, prophylactic or diagnostic uses</td>
<td>All</td>
</tr>
<tr>
<td>ex 3002 90 50</td>
<td>Cultures of micro organisms</td>
<td>Only pathogens and cultures of pathogens for animals.</td>
</tr>
<tr>
<td>ex 3002 90 90</td>
<td>Other</td>
<td>Only pathogens and cultures of pathogens for animals.</td>
</tr>
<tr>
<td>ex 3006 92 00</td>
<td>Waste pharmaceuticals</td>
<td>Animal derived products only. Pharmaceutical waste, pharmaceutical products, which are unfit for their original intended purpose.</td>
</tr>
</tbody>
</table>

### CHAPTER 31

**Fertilisers**

**Notes to Chapter 31 (extract from the Notes to this Chapter of the CN)**

1. This chapter does not cover:
   a) animal blood of heading 0511;
   ...

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 3101 00 00</td>
<td>Animal or vegetable fertilisers, whether or not mixed together or chemically treated; fertilisers produced by the mixing or chemical treatment of animal or vegetable products</td>
<td>Only animal derived products in an un-adulterated form. Covers guano excluding mineralised guano. Covers manure mixed with processed animal protein, if used as fertiliser; but manure–chemical mixtures used as fertilisers are excluded (see heading 3105, which covers only mineral or chemical fertilisers). Specific requirements for processed manure, derived products from processed manure and guano from bats are set out in Row 1 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
<tr>
<td>ex 3105 10 00</td>
<td>Goods of this chapter in tablets or similar forms or in packages of a gross weight not exceeding 10 kg</td>
<td>Only fertilisers containing animal derived products. Specific requirements for processed manure, derived products from processed manure and guano from bats are set out in Row 1 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
</tbody>
</table>
CHAPTER 32

Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks

Notes to Chapter 32 (extract from the Notes to this Chapter of the CN)

3. Headings 3203, 3204, 3205 and 3206 apply also to preparations based on colouring matter (including, in the case of heading 3206, colouring pigments of heading 2530 or Chapter 28, metal flakes and metal powders), of a kind used for colouring any material or used as ingredients in the manufacture of colouring preparations. The headings do not apply, however, to pigments dispersed in non-aqueous media, in liquid or paste form, of a kind used in the manufacture of paints, including enamels (heading 3212), or to other preparations of headings 3207, 3208, 3209, 3210, 3212, 3213 or 3215.

...

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 3203</td>
<td>Colouring matter of animal origin (including dyeing extracts but excluding animal black), whether or not chemically defined, preparations as specified in note 3 to this chapter based on colouring matter of animal origin</td>
<td>Only colour dispersions in milk fat base, used in the food or feed production.</td>
</tr>
<tr>
<td>ex 3204</td>
<td>Synthetic organic colouring matter, whether or not chemically defined; preparations as specified in note 3 to this chapter based on synthetic organic colouring matter; synthetic organic products of a kind used as fluorescent brightening agents or as luminophores, whether or not chemically defined</td>
<td>Only colour dispersions in milk fat base, used in the food or feed production.</td>
</tr>
</tbody>
</table>

CHAPTER 33

Essential oils and resinoids; perfumery, cosmetic or toilet preparations

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 3302</td>
<td>Mixtures of odouriferous substances and mixtures (including alcoholic solutions) with a basis of one or more of these substances, of a kind used as raw materials in industry; other preparations based on odouriferous substances, of a kind used for the manufacture of beverages</td>
<td>Only flavourings in a milk fat base used for food or feed production.</td>
</tr>
</tbody>
</table>

CHAPTER 35

Albuminoidal substances; modified starches; glues; enzymes

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 3501</td>
<td>Casein, caseinates and other casein derivatives; casein glues</td>
<td>Casein for human consumption, animal feeding or technical purposes.</td>
</tr>
<tr>
<td>CN code</td>
<td>Description</td>
<td>Qualification and explanation</td>
</tr>
<tr>
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<td>(1)</td>
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<td>(2)</td>
<td></td>
<td></td>
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<tr>
<td>(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ex 3502</td>
<td>Albumins (including concentrates of two or more whey proteins, containing by weight more than 80% whey proteins, calculated on the dry matter), albuminates and other albumin derivatives</td>
<td>Covers products derived from eggs and derived from milk whether for human consumption or not for human consumption (including animal feed purposes). Specific requirements for milk, milk-based products and colostrums not for human consumption are set out in Row 4 of Table 1 in Section 1 of Chapter I of Annex XIV to Regulation (EU) No 142/2011 and for egg products not for human consumption in Row 9 of Table 1 in Section 1 of Chapter I of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
<tr>
<td>3503 00</td>
<td>Gelatine (including gelatine in rectangular (including square) sheets, whether or not surface-worked or coloured) and gelatine derivatives; isinglass; other glues of animal origin excluding casein glues of heading 3501</td>
<td>Covers gelatine for human consumption, for animal feed and technical use. Gelatine classified in heading 3913 (hardened proteins) and in 9602 (worked, unhardened gelatine and articles of unhardened gelatine), for example, empty capsules if not for food or animal consumption are excluded from official controls. Specific requirements are set out in Row 5 of Table 1 in Section 1 of Chapter I of Annex XIV to Regulation (EU) No 142/2011 for gelatine and hydrolysed protein not for human consumption and in Section 11 of Chapter II of Annex XIV to that Regulation for photo gelatine.</td>
</tr>
<tr>
<td>ex 3504 00</td>
<td>Peptones and their derivatives; other protein substances and their derivatives, not elsewhere specified or included; hide powder whether or not chromed</td>
<td>Covers collagen and hydrolysed proteins for human consumption, for animal feed and technical use. Covers protein based collagen products derived from hides, skins and tendons of animals, including bones in the case of pigs, poultry and fish. Covers hydrolysed proteins consisting of polypeptides, peptides or amino acids, and mixtures thereof, obtained by the hydrolysis of animal by-products. They are excluded from official controls when they are used as additives in food preparations (heading 2106). Covers any milk by-products for human consumption in case they are not covered in heading 0404. Specific requirements for collagen are set out in Row 8 and for gelatine and hydrolysed protein in Row 5 of Table 1 in Section 1 of Chapter I of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
<tr>
<td>ex 3507 10 00</td>
<td>Rennet and concentrates thereof</td>
<td>Rennet and concentrates for human consumption, deriving from animal products only.</td>
</tr>
</tbody>
</table>
### CHAPTER 38

**Miscellaneous chemical products**

**Notes to Chapter 38 (extract from the Notes to this Chapter of the CN)**

'...

4. Throughout the nomenclature, ‘municipal waste’ means waste of a kind collected from households, hotels, restaurants, hospitals, shops, office, etc., road and pavement sweepings, as well as construction and demolition waste. Municipal waste generally contains a large variety of material as such as plastics, rubber, wood, paper, textiles, glass, metals, food materials, broken furniture and other damaged or discarded articles.

'...

### CHARTER 38

**Miscellaneous chemical products**

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 3507 90 90</td>
<td>Other enzymes than rennet and concentrates thereof or lipoprotein lipase or aspergillus alkaline protease</td>
<td>Animal origin only.</td>
</tr>
</tbody>
</table>

### CHAPTER 39

**Plastics and articles thereof**

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 3822 00 00</td>
<td>Diagnostic or laboratory reagents on a backing, prepared diagnostic or laboratory reagents whether or not on a backing, other than those of heading 3002 or 3006; certified reference materials</td>
<td>Animal derived products only, except medical devices as defined in Article 1(2)(a) of Council Directive 93/42/EEC (1) and in vitro diagnostic medical devices as defined in Article 1(2)(b) of Directive 98/79/EC of the European Parliament and of the Council (2).</td>
</tr>
<tr>
<td>ex 3825 10 00</td>
<td>Municipal waste</td>
<td>Only catering waste containing animal products, if it falls within the scope of point (g) of Article 2(2) of Regulation (EC) No 1069/2009, except catering waste originating directly from means of transport operating internationally and disposed in line with Article 12 (d) of that Regulation. Used cooking oil intended to be used within the scope of Regulation (EC) No 1069/2009, for example, for organic fertiliser or biogas, can be covered by this CN code.</td>
</tr>
</tbody>
</table>


CHAPTER 41

Raw hides and skins (other than furskins) and leather

General remarks

Only hides and skins of ungulates covered in headings 4101, 4102, 4103 are to be subjected to official controls.

Specific requirements for hides and skins of ungulates are laid down in Row 4 and 5 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.

Notes to Chapter 41 (extract from the Notes to this Chapter of the CN)

1. This chapter does not cover:

   (a) parings or similar waste, of raw hides or skins (heading 0511);

   (b) birdskins or parts of birdskins, with their feathers or down, of heading 0505 or 6701; or

   (c) hides or skins, with the hair or wool on, raw, tanned or dressed (Chapter 43); the following are, however, to be classified in Chapter 41, namely, raw hides and skins with the hair or wool on, of bovine animals (including buffalo), of equine animals, of sheep or lambs (except Astrakhan, Broadtail, Caracul, Persian or similar lambs, Indian, Chinese, Mongolian or Tibetan lambs), of goats and kids (except Yemen, Mongolian or Tibetan goats and kids), of swine (including peccary), of chamois, of gazelle, of camels (including dromedaries), of reindeer, of elk, of deer, of roebucks or of dogs.

   ...

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 4101</td>
<td>Raw hides and skins of bovine (including buffalo) or equine animals (fresh, or salted, dried, limed, pickled or otherwise preserved, but not tanned, parchment-dressed or further prepared), whether or not dehaired or split</td>
<td>Only fresh, chilled or treated hides and skins, including dried, dry-salted, wet-salted, or preserved by a process other than by tanning or an equivalent process. Import without restrictions may be possible for treated hides and skins as referred to in point C 2 of Chapter V of Annex XIII to Regulation (EU) No 142/2011, if in compliance with Article 41(3) of Regulation (EC) No 1069/2009, in particular for ex 4101 20 80 and ex 4101 50 90.</td>
</tr>
</tbody>
</table>
ex 4102 Raw skins of sheep or lambs (fresh, or salted, dried, limed, pickled or otherwise preserved, but not tanned, parchment-dressed or further prepared), whether or not with wool on or split, other than those excluded by Note 1 (c) to this Chapter

Only fresh, chilled or treated hides and skins, including dried, dry-salted, wet-salted, or preserved by a process other than by tanning or an equivalent process. Import without restrictions may be possible for treated hides and skins as referred to in point C 2 of Chapter V of Annex XIII to Regulation (EU) No 142/2011, if in compliance with Article 41(3) of Regulation (EC) No 1069/2009, in particular for ex 4102 21 00 and ex 4102 29 00.

ex 4103 Other raw hides and skins (fresh, or salted, dried, limed, pickled or otherwise preserved, but not tanned, parchment-dressed or further prepared), whether or not dehaired or split, other than those excluded by Note 1 (b) or 1 (c) to this Chapter

Only fresh, chilled or treated hides and skins, including dried, dry-salted, wet-salted, or preserved by a process other than by tanning or an equivalent process. Import without restrictions may be possible for treated hides and skins as referred to in point C 2 of Chapter V of Annex XIII to Regulation (EU) No 142/2011, if in compliance with Article 41(3) of Regulation (EC) No 1069/2009, in particular for ex 4103 90 00.
CHAPTER 43

Furskins and artificial fur; manufactures thereof

Notes to Chapter 43 (extract from the Notes to this Chapter of the CN)

1. Throughout the nomenclature, references to ‘furskins’, other than raw furskins of heading 4301, apply to hides and skins of all animals which have been tanned or dressed with the wool on.

2. This chapter does not cover:
   (a) bird skins or parts of bird skins, with their feathers or down (heading 0505 or 6701);
   (b) raw hides or skins, with the hair or wool on, of Chapter 41 (see note 1(c) to that chapter);

Extract from the Harmonized System Explanatory Notes

‘Heading 4301: Furskins are regarded as raw and falling in this heading not only when in the natural state, but also if cleaned and preserved from deterioration, e.g., by drying or salting (wet or dry).’

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
</table>
| ex 4301 | Raw furskins (including heads, tails, paws and other pieces or cuttings, suitable for furriers’ use), other than raw hides and skins of headings 4101, 4102 or 4103 | All, excluding furskins treated in accordance with Chapter VIII of Annex XIII to Regulation (EU) No 142/2011, if in compliance with Article 41(3) of Regulation (EC) No 1069/2009. Covers the following subheadings:  
   — ex 4301 10 00 (of mink, whole, with or without head, tail or paws): specific requirements for derived products for uses outside the feed chain (fur) are set out in Row 14 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.  
   — ex 4301 30 00 (of lamb, the following: Astrakhan, Broadtail, Caracul, Persian and similar lamb, Indian, Chinese, Mongolian, or Tibetan lamb, whole, with or without head, tail, or paws): specific requirements for hides and skins of ungulates are set out in Row 5 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.  
   — ex 4301 60 00 (of fox, whole, with or without head, tail or paws): specific requirements for derived products for uses outside the feed chain (fur) are set out in Row 14 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.  
   — ex 4301 80 00 (other furskins, whole, with or without head, tail or paws): other than ungulates, for example marmots, wild felines, seals, nutria. Specific requirements for derived products for uses outside the feed chain (fur) are set out in Row 14 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011. |
CHAPTER 51

Wool, fine or coarse animal hair; horsehair yarn and woven fabric

General remarks
For headings 5101 to 5103 specific requirements for untreated wool and hair are set out in Row 8 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.

Note to Chapter 51 (extract from the Notes to this Chapter of the CN)
‘1. Throughout the nomenclature:
(a) ‘Wool’ means the natural fibre grown by sheep or lambs.
(b) ‘Fine animal hair’ means the hair of alpaca, llama, vicuna, camel (including dromedary), yak, angora, Tibetan, Kashmir or similar goats (but not common goats), rabbit, (including angora rabbit), hare, beaver, nutria or muskrat.
(c) ‘Coarse animal hair’ means the hair of animals not mentioned above, excluding brush-making hair and bristles (heading 0502) and horsehair (heading 0511).’

Extract from the Harmonized System Explanatory Notes
‘Throughout the Nomenclature the term ‘coarse animal hair’ means all other animal hair than ‘fine animal hair’ except wool (heading 5101), hair of the manes or tails of equine or bovine animals (classified as ‘horsehair’ heading 0511), pigs’, hogs’ or boars’ bristles or hair and badger hair or other brush-making hair (heading 0502) (see Note 1(c)).’

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 5101</td>
<td>Wool, not carded or combed</td>
<td>Untreated wool.</td>
</tr>
<tr>
<td>ex 5102</td>
<td>Fine or coarse animal hair, not carded or combed</td>
<td>Untreated hair, including coarse hair from the flanks of bovine or equine animals.</td>
</tr>
<tr>
<td>ex 5103</td>
<td>Waste of wool or of fine or coarse animal hair, including yarn waste but excluding garnetted stock</td>
<td>Untreated wool or hair.</td>
</tr>
</tbody>
</table>

CHAPTER 67

Prepared feathers and down and articles made of feathers or of down; artificial flowers; articles of human hair

Extract from the Harmonized System Explanatory Notes
‘Heading 6701 covers:
(A) Skins and other parts of birds with their feathers or down, feathers and down, and parts of feathers, which though not yet constituting made up articles, have undergone a process other than a simple treatment of cleaning, disinfection or preservation (see Explanatory Note to heading 0505): the goods of this heading may, for example, be bleached, dyed, curled or waved.'
(B) Articles made of skins or of other parts of birds with their feathers or down, articles made of feathers, of down or of parts of feathers, even if the feathers or down, etc., are unworked or merely cleaned, but not including articles made of scapes or quills. The heading therefore includes:

(1) Single feathers the quills of which have been wired or bound for use as, for example, millinery mounts, and also single composite feathers assembled from different elements.

(2) Feathers assembled in the form of clusters, and feathers or down assembled by glueing or fixing on textile fabric or other base.

(3) Trimmings made of birds, parts of birds, of feathers or down, for hats, boas, collars, capes or other articles of apparel or clothing accessories.

(4) Fans made of ornamental feathers, with frames of any material. However, fans with frames or precious metal are classified in heading 7113.'

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 6701 00 00</td>
<td>Skins and other parts of birds with their feathers or down, feathers, parts of feathers, down and articles thereof (other than goods of heading 0505 and worked quills and scapes)</td>
<td>Only skins and other parts of birds with their feathers or down, feathers and down, and parts of feathers. Articles of unworked or merely cleaned skins, feathers or down, and parts of feathers. Excluding treated decorative feathers, treated feathers carried by travellers for their private use or consignments of treated feathers sent to private individuals for non-industrial purposes. Specific requirements for feathers are set out in Row 9 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
</tbody>
</table>

CHAPTER 71

Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin

Harmonized System Classification Opinion 7101.21/1

‘Oysters unfit for human consumption, containing one or more cultured pearls, preserved in brine and put up in airtight metal containers.’

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 7101 21 00</td>
<td>Unworked cultured pearls</td>
<td>Includes oysters unfit for human consumption, containing one or more cultured pearls, preserved in brine or by different methods, packaged in airtight containers. Unworked cultured pearls as set out in Section 2 of Chapter IV of Annex XIV to Regulation (EU) No 142/2011 unless they are excluded from the scope of Regulation (EC) No 1069/2009 as provided for in point (l) of Article 2(2) of that Regulation.</td>
</tr>
</tbody>
</table>
CHAPTER 95

Toys, games and sports requisites; parts and accessories thereof

Extract from the Harmonized System Explanatory Notes

'Fairground amusements, travelling circuses, travelling menageries and travelling theatres fall in heading 9508 provided they comprise all the essential units required for their normal operation. The heading also includes items of auxiliary equipment provided they are presented with, and as components of, these various amusements, notwithstanding that when presented separately such items (e.g., tents, animals, musical instruments, power plants, motors, lighting fittings, seats and arms and ammunition) would fall in other headings of the Nomenclature.'

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 9508 10 00</td>
<td>Travelling circuses and travelling menageries</td>
<td>Live animals only.</td>
</tr>
<tr>
<td>ex 9508 90 00</td>
<td>Other: fairground amusements, travelling theatres</td>
<td>Live animals only.</td>
</tr>
</tbody>
</table>

CHAPTER 96

Miscellaneous manufactured articles

Extract from the Harmonized System Explanatory Notes

For the purposes of this heading, the expression “worked” refers to materials which have undergone processes extending beyond the simple preparations permitted in the heading for the raw material in question (see the Explanatory Notes to headings 05.05 to 05.08). The heading therefore covers pieces of ivory, rods, etc., cut to shape (including square or rectangular) or polished or otherwise worked by grinding, drilling, milling, turning, etc. However, pieces which are identifiable as parts of articles are excluded from this heading if such parts are covered by another heading of the Nomenclature. Thus, piano-key plates and plates for insertion in butts of firearms fall in headings 92.09 and 93.05 respectively. However, worked materials not identifiable as parts of articles remain classified in this heading (e.g., simple discs, plates or strips for inlaying, etc., or for subsequent use in the manufacture of piano-keys).

Heading 9602 includes sheets of unhardened gelatine cut to shape other than square or rectangular. Sheets cut to rectangular (including square) shape, whether or not surface worked, fall in heading 35.03 or in Chapter 49 (e.g., postcards)(see the Explanatory Note to heading 35.03). Articles of unhardened gelatine include, for example:

(i) Small discs for sticking billiard cue tips.
(ii) Capsules for pharmaceutical products and for mechanical lighter fuel.'

<table>
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<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
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</thead>
<tbody>
<tr>
<td>ex 9602 00 00</td>
<td>Worked, unhardened gelatine (except gelatine of heading 3503) and articles of unhardened gelatine</td>
<td>Empty capsules of unhardened gelatine for food or animal consumption; specific requirements are set out in Row 5 of Table 1 in Section 1 of Chapter I of Annex XIV to Regulation (EU) No 142/2011 for animal consumption.</td>
</tr>
</tbody>
</table>

CHAPTER 97

Works of art, collectors’ pieces and antiques

Extract from the Harmonized System Explanatory Notes

‘(A) The heading includes collections and collectors’ pieces of zoological, botanical, mineralogical or anatomical interest, such as:

(1) Dead animals of any species, preserved dry or in liquid; stuffed animals for collections.
(2) Blown or sucked eggs; insects in boxes, frames, etc. (other than mounted articles constituting imitation jewellery or trinkets); empty shells, other than those of a kind suitable for industrial use.

(3) Seeds or plants, dried or preserved in liquid; herbariums.

(4) Specimens of minerals (not being precious or semi-precious stones falling in Chapter 71); specimens of petrification.

(5) Osteological specimens (skeletons, skulls, bones).

(6) Anatomical and pathological specimens.‘

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 9705 00 00</td>
<td>Collections and collectors' pieces of zoological, botanical, mineralogical, anatomical, historical, archaeological, palaeontological, ethnographic or numismatic interest</td>
<td>Animal derived products only. Excludes game trophies and other preparations of any animal species having undergone a complete taxidermy treatment ensuring their preservation at ambient temperatures. Excludes game trophies and other preparations from other species than ungulates and birds (whether treated or untreated). Specific requirements for game trophies are set out in Row 6 of Table 2 in Section 1 of Chapter II of Annex XIV to Regulation (EU) No 142/2011.</td>
</tr>
</tbody>
</table>

**CHAPTER 99**

**Special CN codes**

**Statistical codes for certain specific movements of goods**

**General remarks**

This chapter covers goods originating from third countries and delivered to vessels and aircrafts within the European Union under customs transit procedure (T1).

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 9930 24 00</td>
<td>Goods of CN Chapters 1 to 24 delivered to vessels and aircraft</td>
<td>Products of animal origin destined for ship supply as provided for in Article 77 (1) (c) of Regulation (EU) 2017/625 of the European Parliament and of the Council (1).</td>
</tr>
<tr>
<td>ex 9930 99 00</td>
<td>Goods classified elsewhere delivered to vessels and aircraft</td>
<td>Products of animal origin destined for ship supply as provided for in Article 77 (1) (c) of Regulation (EU) 2017/625.</td>
</tr>
</tbody>
</table>

ANNEX II

Annexes I and II to Decision 2007/275/EC are amended as follows:

(1) Annex I is amended as follows:

(a) the title is replaced by the following:

‘List of composite products subject to official controls as referred to in Article 3’;

(b) the first sentence is replaced by the following:

‘This list sets out composite products according to the goods nomenclature in use in the Union to determine the selection of consignments that must be submitted to official controls at a border control post.’;

(c) in the notes to the table, point (1) is deleted;

(d) in the notes to the table, in point (4), the second paragraph is replaced by the following:

‘Where a four digit code is used: unless otherwise specified, all products prefixed with or covered by these four digits must be submitted to official controls at a border control post. In most of these cases, the relevant CN codes included in the Traces system referred to in Article 133(4) of Regulation (EU) 2017/625 are broken down to the six or eight digit code.’;

(e) in the notes to the table, point (6) is replaced by the following:

‘6. Column (3) — Qualification and explanation

This column gives details of the products covered. Further information on the composite products covered in the different Chapters of the CN can be found in the Explanatory Notes to the Combined Nomenclature of the European Union (*).’

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(*) Explanatory Notes to the Combined Nomenclature of the European Union (OJ C 119, 29.3.2019, p. 1), as subsequently amended.);

(f) Chapters 1, 2, 3, 4, 5, 6, 12, 23, 28, 29, 30, 31, 32, 33, 35, 38, 39, 41, 42, 43, 51, 67, 71, 95, 96 and 97 are deleted;

(g) in Chapters 15, 16, 17, 18, 19, 20, 21 and 22, all entries in Column (3) — Qualification and explanation in the tables are replaced by the following:

‘Composite products only (see Articles 4 and 6 of this Decision).

For products other than composite products, see Annex I to Commission Implementing Regulation (EU) 2019/2007 (*).’

_____________


(h) Chapter 99 is replaced by the following:

‘CHAPTER 99

Special combined nomenclature codes

Sub-chapter II

Statistical codes for certain specific movements of goods

General remarks

This chapter covers composite products originating from third countries and delivered to vessels and aircraft within the European Union under customs transit procedure (T1).’
(2) Annex II is amended as follows:

(a) the title is replaced by the following:

‘List of composite products not subject to official controls as referred to in point (b) of Article 6(1)’;

(b) the first sentence is replaced by the following:

‘This list sets out composite products according to the goods nomenclature in use in the Union that do not need to be submitted to official controls at a border control post.’;

(c) in the notes relating to the table, in the entry ‘Column (1) — CN code’, the second paragraph is replaced by the following:

‘Where a four digit code is used: unless otherwise specified, all composite products prefixed with or covered by these four digits are not required to be submitted to official controls at a border control post.’;

(d) in the notes relating to the table, the entry ‘Column (2) — Explanation’ is replaced by the following:

‘Column (2) — Explanation

This column gives details of the composite products covered by the derogation from official controls at border control posts. When necessary, official staff at border control posts must assess the ingredients of a composite product and specify, if the animal product contained in the composite product is sufficiently processed so as to not require the official checks provided for in Union legislation.’

<table>
<thead>
<tr>
<th>CN code</th>
<th>Description</th>
<th>Qualification and explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ex 9930 24 00</td>
<td>Goods of CN Chapters 1 to 24 delivered to vessels and aircraft.</td>
<td>Composite products destined for ship supply as provided for in point (c) of Article 77(1) of Regulation (EU) 2017/625.</td>
</tr>
<tr>
<td>ex 9930 99 00</td>
<td>Goods classified elsewhere delivered to vessels and aircraft.</td>
<td>Composite products destined for ship supply as provided for in point (c) of Article 77(1) of Regulation (EU) 2017/625.</td>
</tr>
</tbody>
</table>
THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 100(2), in conjunction with Article 218(9) thereof,

Having regard to the proposal from the European Commission,

Whereas:

(1) Action by the Union in the sector of maritime transport should aim to protect the marine environment and improve maritime safety.

(2) The Assembly of the International Maritime Organization (IMO), during its 31st session from 25 November to 4 December 2019 (A 31), is expected to adopt amendments to resolution A.658(16) on Use and fitting of retro-reflective materials on life-saving appliances (‘Resolution A.658(16)’) and to adopt a resolution on Survey Guidelines under the Harmonized System of Survey and Certification (HSSC) (‘Survey Guidelines’).

(3) It is appropriate to establish the position to be taken on the Union’s behalf during A 31, as the amendments to Resolution A.658(16) and the resolution on Survey Guidelines will be capable of decisively influencing the content of Union law, namely Directive 2014/90/EU of the European Parliament and of the Council (1), Commission Implementing Regulation (EU) 2019/1397 (2) and Regulation (EC) No 391/2009 of the European Parliament and of the Council (3).

(4) The 101st session of the Maritime Safety Committee (‘MSC 101’), which took place in London from 5 to 14 June 2019, recalled that at its previous session, having considered IMO document MSC 100/19/4 proposing amendments to Resolution A.658(16), the Maritime Safety Committee had agreed to the deletion of the words ‘carbon arc’ in paragraph 4.10 of that resolution and had requested the IMO Secretariat to prepare a relevant draft IMO Assembly resolution for approval at MSC 101, with a view to submission to A 31 for adoption (MSC 100/20, paragraphs 19.14 and 19.15). MSC 101 then approved the draft IMO Assembly resolution on Amendments to Resolution A.658(16).

(5) The United States and the International Association of Classification Societies submitted an alternative proposal for the amendments to paragraph 4.10 of Resolution A.658(16) to A 31 (IMO document A 31/10/4).

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(6) The Sub-Committee on Implementation of IMO Instruments ('Sub-Committee') recalled at its 5th session that at its previous session it had established the Correspondence Group on the Review of the Survey Guidelines under the HSSC and the Non-exhaustive List of Obligations under Instruments Relevant to the IMO Instruments Implementation Code (III Code) to continue updating the Survey Guidelines to include the requirements deriving from amendments to relevant IMO instruments entering into force up to and including 31 December 2019, with a view to the submission of draft amended Survey Guidelines to A 31 for adoption. MSC 101 authorised the Sub-Committee to submit the outcome of its work directly to A 31 for adoption. At its 6th session, the Sub-Committee agreed to submit the draft amended Survey Guidelines to A 31 for consideration and adoption.

(7) The Union is not a member of the IMO, nor a contracting party to the relevant conventions and codes. The Council should therefore authorise the Member States to express the position of the Union at A 31 and to express their consent to be bound by the amendments and the resolution to be adopted by A 31, to the extent that those amendments and that resolution fall under the exclusive competence of the Union,

HAS ADOPTED THIS DECISION:

Art. 1

The position to be taken on the Union’s behalf at the 31st session of the Assembly of the International Maritime Organization (IMO) shall be to agree to:

(a) the adoption of amendments to resolution A.658(16) on Use and fitting of retro-reflective materials on life-saving appliances, as laid down in Annex 27 to IMO document MSC 101/24/Add.1, or alternatively of the amendments proposed in IMO document A 31/10/4; and

(b) the adoption of a resolution on Survey Guidelines under the Harmonized System of Survey and Certification (HSSC) and the revocation of resolution A.1120(30), as laid down in Annex 11 to IMO document III 6/15/Add.1.

Art. 2

1. The position to be taken on the Union’s behalf as set out in Art. 1 shall be expressed by the Member States, which are all members of the IMO, acting jointly in the interests of the Union.

2. Minor changes to the position referred to in Art. 1 may be agreed without further decision of the Council.

Art. 3

The Member States are hereby authorised to give their consent to be bound, in the interests of the Union, by the amendments referred to in Art. 1(a) and the resolution referred to in Art. 1(b), to the extent that those amendments and that resolution fall under the exclusive competence of the Union.

Art. 4

This Decision shall enter into force on the date of its adoption.

Done at Brussels, 28 November 2019.

For the Council

The President

T. HARAKKA
COUNCIL DECISION (CFSP) 2019/2009
of 2 December 2019
in support of Ukraine’s efforts to combat illicit trafficking in weapons, ammunition and explosives,
in cooperation with the OSCE

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on European Union, and in particular Articles 28(1) and 31(1) thereof,

Having regard to the proposal from the High Representative of the Union for Foreign Affairs and Security Policy,

Whereas:

(1) On 19 November 2018, the Council adopted the EU Strategy against illicit firearms, small arms & light weapons (SALW) and their ammunition ‘Securing Arms, Protecting Citizens’ (the ‘EU SALW Strategy’). The purpose of the EU SALW Strategy is to guide integrated, collective and coordinated European action to prevent and curb the illicit acquisition of SALW and their ammunition by terrorists, criminals and other unauthorised actors, and to promote accountability and responsibility with regard to the legal arms trade.

(2) At regional level, the EU SALW Strategy commits the Union and its Member States to provide assistance in strengthening law enforcement capabilities in order to identify, disrupt and prohibit trafficking networks and prevent firearms from reaching terrorists and criminals via the illicit market, inter alia, by blocking the illicit financing and transport of arms and enhancing the role of border police, customs and port authorities in tackling illicit arms flows by maritime transport.

(3) The EU SALW Strategy states that the current instability in Eastern Europe has raised the level of illicit trafficking of firearms in various countries in the region, such as Ukraine. This presents a significant long-term security threat to both Ukraine and the Union. Cooperation between the Union and Ukraine on this issue is thus of mutual interest. The Union is pursuing its bilateral engagement with Ukraine and other countries in the region and systematically integrates the fight against illicit SALW into any dialogue on security matters with partner countries in the neighbourhood.

(4) In May 2016, the State Border Guards Service of Ukraine requested the Secretariat of the Organisation for Security and Cooperation in Europe (OSCE) to carry out a needs assessment for combating the illicit trafficking in weapons, ammunition and explosives in and across Ukraine’s borders. The needs assessment was carried out with support from France and Germany and published in April 2018. The results of the needs assessment were confirmed by the main law-enforcement and security agencies in Ukraine during a high-level meeting organised in Kyiv on 7 June 2018.

(5) The State Border Guard Service of Ukraine, the State Fiscal Service/State Customs Service of Ukraine and the Ministry of Internal Affairs of Ukraine have officially, in written form, expressed interest and requested cooperation with the OSCE Secretariat and the OSCE Project Coordinator in Ukraine in supporting Ukraine’s efforts to combat illicit trafficking in weapons, ammunition and explosives in line with the results of the needs assessment.

(6) The Union’s border control related assistance to Ukraine, such as the Integrated Border Management Strategy supported by the Commission’s European Neighbourhood Instrument and the Union’s civilian Common Security and Defence Policy missions, namely the European Union Advisory Mission for Civilian Security Sector Reform Ukraine (EUAM Ukraine) and the European Union Border Assistance Mission to Moldova and Ukraine (EUBAM Moldova and Ukraine), and their support activities for border control do not include support specifically aimed at combating illicit trafficking in weapons, ammunition and explosives.
On 30 June 2018, the third United Nations Conference to Review Progress Made in the Implementation of the UN Programme of Action against illicit Small Arms and Light Weapons adopted an outcome document in which States renew their commitment to preventing and combating the diversion of small arms and light weapons. States reaffirmed their willingness to pursue international cooperation and to reinforce regional cooperation through improved coordination, consultation, information exchange and operational cooperation, involving relevant regional and sub-regional organisations, as well as law enforcement, border control and export- and import-licensing authorities.

The 2030 Agenda for Sustainable Development affirms that combating the illicit trade in small arms and light weapons is necessary for the achievement of many sustainable development goals, including those relating to peace, justice and strong institutions, poverty reduction, economic growth, health, gender equality and safe cities. Therefore, in Sustainable Development Goal 16.4, all States have committed to significantly reducing illicit financial and arms flows.

In his Agenda for Disarmament ‘Securing our Common Future’, that was presented on 24 May 2018, the UN Secretary-General called for addressing the excessive accumulation of and illicit trade in conventional arms and for supporting country-level approaches on small arms.

On 25 October 2012, the Council adopted Decision 2012/662/CFSP (1) in support of activities to reduce the risk of illicit trade in, and excessive accumulation of, Small Arms and Light Weapons in the region covered by the OSCE and, on 4 August 2017, the Council adopted Decision (CFSP) 2017/1424 (2) in support of OSCE activities to reduce the risk of illicit trafficking and excessive accumulation of small arms and light weapons and conventional ammunition in the former Yugoslav Republic of Macedonia and Georgia.

HAS ADOPTED THIS DECISION:

**Article 1**

1. The purpose of this Decision is to strengthen the capacities of the State Border Guard Service of Ukraine, the Ministry of Internal Affairs of Ukraine and the State Fiscal Service/State Customs Service of Ukraine in combating illicit trafficking in weapons, ammunition and explosives in Ukraine.

2. Pursuant to paragraph 1, the objectives of this Decision are the following:
   
   (a) to enhance capabilities of the State Border Guard Service, the Ministry of Internal Affairs and the State Fiscal Service/State Customs Service of Ukraine with respect to preventing and combating illicit trafficking in weapons, ammunition and explosives;

   (b) to enhance supervisory capacities of the Ministry of Internal Affairs with respect to their control of the manufacture, marking and record-keeping of weapons, ammunition and explosives corresponding to the needs identified in the needs assessment;

   (c) to enhance operational capacities of the Ministry of Internal Affairs and of the National Police of Ukraine, which reports to the Ministry of Internal Affairs, with respect to forensics, analysis, detection, tracing, and investigation of illicit trafficking in weapons, ammunition and explosives;

   (d) to enhance capacities of the Ministry of Internal Affairs for the improvement of legislative mechanisms for regulating and controlling the circulation and use of weapons, ammunition and explosives as well as raising public awareness on risks related to illegal possession, misuse and trafficking in weapons, ammunition and explosives corresponding to the needs identified in the needs assessment;

   (e) to enhance inter-agency coordination and cooperation resulting in developing strategic approach, data-collection and analysis in preventing and combatting illicit trafficking in weapons, ammunition and explosives in Ukraine corresponding to the needs identified in the needs assessment.


(2) Council Decision (CFSP) 2017/1424 of 4 August 2017 in support of OSCE activities to reduce the risk of illicit trafficking and excessive accumulation of small arms and light weapons and conventional ammunition in the former Yugoslav Republic of Macedonia and Georgia (OJ L 204, 5.8.2017, p. 82).
3. Pursuant to paragraph 2, the Union shall support the following actions:
   (a) enhancing the relevant normative and legislative framework;
   (b) the collection, compilation and sharing of relevant data, including the development and unification of electronic databases;
   (c) developing the capacities of relevant institutions;
   (d) providing training;
   (e) the acquisition of specialised equipment and infrastructure, including canine detection capacities;
   (f) the creation of platforms for enhanced national inter-agency coordination and the clarification of mandates, facilitating cooperation and information exchange;
   (g) raising awareness among the general public;
   (h) regional and international exchange and cooperation.

4. The beneficiaries of the project shall be the national authorities of Ukraine responsible for preventing and combating illicit trafficking in weapons, ammunition and explosives. The primarily targeted national authorities are: the State Border Guard Service, the Ministry of Internal Affairs and the National Police of Ukraine, which reports to the Ministry of Internal Affairs, and the State Fiscal Service/State Customs Service. Other mandated national authorities, such as the Security Service of Ukraine, shall be engaged on a case-by-case basis.

5. A detailed description of the project is set out in the Annex to this Decision.

Article 2

1. The High Representative of the Union for Foreign Affairs and Security Policy (‘HR’) shall be responsible for implementing this Decision.

2. The technical implementation of the project referred to in Article 1 (the ‘project’) shall be carried out by the OSCE Secretariat.

3. The OSCE Secretariat shall perform its tasks under the responsibility of the HR. For that purpose, the HR shall enter into the necessary arrangements with the OSCE Secretariat.

Article 3

1. The financial reference amount for the implementation of the project financed by the Union shall be EUR 5 151 579.

2. The expenditure financed by the reference amount set out in paragraph 1 shall be managed in accordance with the procedures and rules applicable to the general budget of the Union.

3. The Commission shall supervise the proper management of the expenditure referred to in paragraph 1. For that purpose, it shall conclude the necessary financing agreement with the OSCE Secretariat. The financing agreement shall stipulate that the OSCE Secretariat has to ensure the visibility of the Union’s contribution, appropriate to its size.

4. The Commission shall endeavour to conclude the financing agreement referred to in paragraph 3 as soon as possible after the entry into force of this Decision. It shall inform the Council of any difficulties in that process and of the date of conclusion of the financing agreement.

Article 4

1. The HR shall report to the Council on the implementation of this Decision on the basis of regular half-yearly narrative reports prepared by the OSCE Secretariat. Those reports shall form the basis of the evaluation to be carried out by the Council.

2. The Commission shall report on the financial aspects of the project referred to in Article 1.
Article 5

1. This Decision shall enter into force on the date of its adoption.

2. This Decision shall expire 36 months after the date of conclusion of the financing agreement referred to in Article 3 (3). However, it shall expire six months after the date of its entry into force if no agreement has been concluded within that period.

Done at Brussels, 2 December 2019.

For the Council
The President
M. OHISALO
1. Background

In recent years, Ukraine has been facing significant safety and security risks and challenges related to the spread of illicit weapons, ammunition and explosives (WAE) across its borders and on its territory. These have been in particular aggravated by the crisis in and around Ukraine and have been manifested in the illegal possession, misuse and trafficking in WAE.

Ukraine remains an area of concern and an important challenge in the EU Strategy against illicit firearms, small Arms & light weapons (SALW) and their ammunition (the ‘EU SALW Strategy’). The EU SALW Strategy states that ‘the current instability in Eastern Europe has raised the level of illicit trafficking of firearms in various countries in the region, such as Ukraine. This presents a significant long-term security threat to both Ukraine and the EU. Cooperation between the EU and Ukraine on this issue is thus of mutual interest. The EU is pursuing its bilateral engagement with Ukraine and other countries in the region and systematically integrates the fight against illicit SALW into any dialogue on security matters with partner countries in the neighbourhood.’.

Thus, with the reference to Eastern Neighbourhood in general and Ukraine in particular the EU SALW strategy sets out the following actions:

— ‘The EU and its Member States will integrate the fight against firearms/SALW trafficking in the context of the dialogue on security matters with partner countries in the neighbourhood, such as Ukraine;

— The EU and its Member States will establish channels of communication between EU and Ukrainian experts, identify a contact point to ensure smooth cooperation, raise awareness, share best practices and expertise, and identify training needs and other support measures to strengthen Ukraine’s capacities in the field; and

— The EU and its Member States will keep working on a permanent technical roundtable with Ukraine to address the pressing problem of the illicit traffic of firearms and the risks associated with such arms falling into the hands of terrorists and organised crime groups.’.

Based on the initial request of the State Border Guards Service of Ukraine (SBGS) made in May 2016, the OSCE Secretariat carried out the ‘Needs Assessment for Combatting the Illicit Trafficking in Weapons, Ammunition and Explosives in/and Across Ukraine’s Borders’ (the ‘needs assessment’). The needs assessment, published in April 2018, involved several WAE regulating, law-enforcement and security ministries and agencies. It revealed that the current approach to detecting and curbing illicit trafficking in WAE within and across Ukraine’s borders is proving challenging. The support in terms of human and technical resources development, clearly understood legislation and inter-agency level coordination, as well as international support and cooperation needs to be enhanced. The needs assessment also established the baseline for providing technical assistance and institutional support to develop the capacities of the Ukrainian authorities in their efforts to combat trafficking in WAE in a holistic and sustainable way.

On 7 June 2018, the main WAE regulating, law-enforcement and security ministries and agencies in Ukraine confirmed the results of the needs assessment at a high-level meeting organised in Kyiv. They reiterated clearly understood current and looming threats of illicit trafficking in WAE and commitments to improve the situation on the ground. This included endorsing the road-map, developed through the needs assessment, which supports an integrated, comprehensive and cooperative approach for effective capacities development and work of the system to combat illicit trafficking in WAE in Ukraine.

On 12 March 2019, the same authorities met at the second high-level meeting organised in Kyiv whereby the progress on discussing challenges, actual needs and initiatives related to combating illicit trafficking in WAE in Ukraine and across its borders has been clearly noted. Moreover, the national and international commitments to strengthen action have also been made at the meeting.
Several law-enforcement and security ministries and agencies have officially, in written form, expressed interest and requested cooperation with the OSCE Secretariat in supporting Ukraine's efforts to combat illicit trafficking in WAE, namely the SBGS in May 2016, the State Fiscal Service (SFS)/State Customs Service (SCS) in July 2018, and the Ministry of Internal Affairs of Ukraine in March 2019. These ministries and agencies have addressed the OSCE Project Coordinator in Ukraine to support practical implementation of project activities by mid-September 2019.

2. Overall objective
To strengthen the capacities of Ukrainian authorities in preventing and combating illicit trafficking in weapons, ammunition and explosives.

3. Description of Action
The action is based on the findings and recommendations of the OSCE Secretariat's 'Needs Assessment for Combatting the Illicit Trafficking in WAE in/and Across Ukraine's Borders'. Moreover, it was further developed in response to the explicit cooperation and assistance requests addressed to the OSCE Secretariat and the OSCE Project Coordinator in Ukraine (PCU) by the SBGS, the SFS and the Ministry of Internal Affairs of Ukraine. The requests were followed by comprehensive technical consultations between the OSCE and the mentioned state actors.

In close cooperation with the relevant Ukrainian authorities, the OSCE prepared three projects addressing various aspects of their mandates related to combating illicit trafficking in WAE. The projects are combined into a unified comprehensive programme with a view to strengthen the overall safety and security in Ukraine. The comprehensive programme supports the EU Strategy against illicit firearms, small arms & light weapons (SALW) and their ammunition (2018) in particular actions in the Eastern Neighbourhood.

3.1. Project 1: Supporting the State Border Guard Service of Ukraine in preventing and combating illicit trafficking in weapons, ammunition and explosives (WAE)

3.1.1. Objective
The project objective is to assist the State Border Guard Service of Ukraine (SBGS) to enhance their capacity in preventing and combating illicit trafficking in WAE.

3.1.2. Description
The SBGS is one of the law enforcement agencies in Ukraine mandated to combat illicit WAE trafficking. It is vested with the responsibilities to ensure inviolability of state borders and protection of sovereign rights of Ukraine within its exclusive (maritime) economic zone.

The project will aim to address verified capability gaps within the SBGS by means of: (a) training, technical and operational capacity development for preventing and combatting illicit trafficking of WAE; and (b) transfer of international good practices and information exchanges in particular in relation to EU Member States, Western Balkan partners and states in the neighbourhood.

3.1.3. Expected Result
Result 1: Enhanced SBGS capabilities in preventing and combating illicit trafficking in WAE
Indicators:
— increased competences (organisational, technical, knowledge) of project beneficiary SBGS personnel in the relevant educational and training institutions, analytics and investigation units, and operational units in support of preventing and combatting illicit trafficking of WAE and applied in the their regular work processes,
— cooperation measures and expert networking — in national, sub-regional and international contexts — contributing towards interoperability of project beneficiaries with their counterparts and applied in the regular work processes of project beneficiaries relevant units and institutions,
— documented findings of evaluations and quality management approaches are shared with and applied in practice and taken into consideration for capacity building purposes by project stakeholders (project beneficiaries — primary and secondary, donor community and OSCE).
3.1.4. Activities

3.1.4.1. Comprehensive Training Programme in preventing and combatting illicit trafficking in WAE for the SBGS corresponding to the needs identified in the needs assessment

The activity will include:

— comprehensive training programme in preventing and combatting illicit trafficking in WAE that will follow two-tier approach: (a) by developing and enhancing required knowledge, skills and attitudes of instructors and educators, i.e. train-the-trainer approach; and (b) by developing and enhancing subject matter expertise in niche areas such as risk analysis & profiling, criminal analysis, introduction of new and upgrades of technical means, technologies and procedures.

3.1.4.2. Equipment assistance programme in preventing and combating trafficking in WAE for the SBGS corresponding to the needs identified in the needs assessment

This activity will include:

— provision of a limited amount of fixed and mobile equipment, as well as other types of technical means and technologies in support of testing, evaluating and introducing new technological and procedural solutions in detection of illicit trafficking in WAE. The equipment will be provided to selected organisational structures within the SBGS, namely units of border control (focused on northern and north-western Ukraine), command structures and educational institutions. Moreover, the activity is integrated into comprehensive training programme, i.e. creates a broader train-and-equip initiative for the SBGS. The provided equipment will be in accordance with the needs identified in the needs assessment.

3.1.4.3. Canine assistance programme in preventing and combatting illicit trafficking in WAE for the SBGS corresponding to the needs identified in the needs assessment

This activity will include:

— organising exchange visits to familiarise relevant SBGS expert personnel and educators with international experiences and good practices in using canine capacities in combatting illicit trafficking in WAE and to support expert networking, and

— reviewing and updating training methodologies and operational procedures in using canine capacities in combatting illicit trafficking in WAE.

3.2. Project 2: Supporting the Ministry of Internal Affairs of Ukraine (MIA) and the National Police of Ukraine, which reports to the MIA, in preventing and combatting illicit trafficking of weapons, ammunition and explosives

3.2.1. Objective

The project objective is to assist the MIA and the NPU, which reports to the MIA, in preventing and combatting illicit trafficking in WAE.

3.2.2. Description

The MIA is one of the key national authorities in Ukraine that not only regulates and controls the licit use of the WAE, but executes operational and coordinative measures in preventing and combatting illicit trafficking in WAE either directly or through its subordinated agencies.

The project addresses verified capabilities gaps within the MIA to effectively prevent and combat illicit trafficking in WAE by supporting improvement of the MIA’s: (a) supervisory capacities in controls of the legal manufacture, marking and record-keeping of WAE; (b) operational capacities in forensics, analysing, detecting and investigating the illicit trafficking in WAE; (c) legislative mechanisms for regulating and controlling the legal circulation and use of WAE as well as raised awareness on illegal possession, misuse and trafficking in WAE; and (d) coordinative and cooperative mechanisms to support joint strategic and operational approaches in prevention and combatting illicit trafficking in WAE with the other relevant national agencies.

3.2.3. Expected Results

Result 1: Enhanced supervisory capacities of the MIA in their control of manufacture, marking and record-keeping of WAE corresponding to the needs identified in the needs assessment.
Indicators:

— Amendments and proposals to the national legislative framework, the MIA regulations and administrative procedures on control of manufacture, marking and record-keeping of WAE in Ukraine,

— Amendments and proposals to the national legislative framework, the MIA regulations and administrative procedures to prevent illicit manufacture of firearms through the use of 3-D printed parts, illicit re-activation of deactivated firearms, craft production of firearms and the illicit conversion of alarm or signal guns designed for blank ammunition or flerovt guns,

— Uniform electronic WAE classifier developed, tested, regulated for introduction to regular use within the MIA and other interested governmental entities as well as integrated into the MIA’s WAE registry.

Result 2: Enhanced operational capacities of the MIA and the NPU in forensics, analysis, detection, tracing, and investigation of illicit trafficking in WAE

Indicators:

— Improved policy, operational and technical capabilities related to illicit trafficking in WAE as well as increased knowledge, skills and attitudes of the MIA’s personnel related to forensic work, including the tracing of seized firearms and applied in the regular work processes,

— Improved policy, operational and technical capabilities of the NPU on countering and detection of illicit trafficking in WAE, including improvised explosives devices and illicit explosive materials, as well as increased knowledge, skills and attitudes of the NPU’s personnel and applied in the regular work processes.

Result 3: Enhanced capacities of the MIA for improvement of legislative mechanisms for regulating and controlling the circulation and use of WAE as well as raised public awareness on risks related to illegal possession, misuse and trafficking in WAE corresponding to the needs identified in the needs assessment.

Indicators:

— Clear understanding of perceptions, needs and thinking within Ukraine society and focused groups on regulating and controlling the circulation and use of firearms and other WAE issues,

— Enhanced awareness of Ukraine citizens on the risks posed by illegal possession, misuse and trafficking in WAE through the conduct of public awareness campaigns,

— Comprehensive assessment and gap analysis of the national legislative framework on regulating and controlling the circulation and use of WAE,

— Amendments and proposals to national legislative framework on regulating and controlling the circulation and use of WAE.

Result 4: Enhanced inter-agency coordination and cooperation resulting in developing strategic approach, data-collection and analysis in preventing and combatting illicit trafficking in WAE in Ukraine corresponding to the needs identified in the needs assessment.

Indicators:

— Effective implementation of coordination and cooperation mechanisms contributing towards harmonised planning, developing, implementing (including monitoring and controlling) and evaluating a joint strategic approach,

— Effective introduction and use of harmonised nation-wide statistical indicators about illicit trafficking in WAE in Ukraine,

— Recommendations for improvement of inter-agency coordination and cooperation handed-over to a national coordination body (NCB) in the field of SALW control developed through this project,

— Improved analytical capabilities and institutionalised illicit firearms data analysis.
3.2.4. Activities

3.2.4.1. Promotion and transfer of international and European standards and good practices for the control of manufacture, marking and record-keeping of WAE in Ukraine, including on the prevention of illicit manufacture of WAE including through illicit re-activation, conversion or other methods.

This activity will include:

— providing one customised specialist training sessions for policy-makers and leading experts from the MIA, including Licensing Department, Scientific and research centre of crime and criminology, National Police and other law-enforcement agencies, and

— feasibility study on marking of firearms in Ukraine’s law-enforcement agencies and in civilian ownership focusing on post-production and import marking.

3.2.4.2. Development and roll-out of the uniform electronic WAE classifier and its integration into WAE registry

This activity will include:

— development and testing uniform electronic WAE classifier, and

— technical support to the roll-out and training on the uniform electronic WAE classifier into the MIA’s WAE registry (up to 25 training events).

3.2.4.3. Promotion of good practices and knowledge transfer in the field of forensics and investigations of illicit trafficking in WAE

This activity will include:

— providing two customised specialist training sessions for leading experts from the MIA, including Scientific and research centre of crime and criminology and National Police and other law-enforcement agencies as state customs service and general prosecutor’s office. The indicative list of training sessions will include: firearms import marking requirements and techniques; securing the crime scene (police first responders); inspecting the crime scene and securing, packaging and inspecting the evidence (crime technicians); supporting domestic and international tracing (laboratory technicians); and developing, understanding and disseminating ballistic intelligence related to firearms criminality.

3.2.4.4. Promotion of good practices, knowledge transfer and equipment assistance programme in countering and detection of illicit trafficking in WAE for the NPU

This activity will include:

— providing one customised specialist training sessions for leading experts from the National Police and other law-enforcement agencies such as SBGS and SFS/SCS of Ukraine as well as connecting with the European EMPACT firearms network of national law enforcement officers, and

— procurement of limited amount of technical equipment for the NPU’s Criminal Investigative Units in support of new methodologies and technological solutions on countering and detection of illicit trafficking in WAE.

3.2.4.5. Country-wide public opinion survey, attitude study and public awareness and communication campaigns on risks related to illegal possession, misuse and trafficking in WAE.

This activity will include:

— conducting research and analysis of public opinion on illegal possession, misuse and trafficking in WAE,

— in-depth attitude study with focused group discussions on illegal possession, misuse and trafficking in WAE, and

— public awareness and communication campaigns on legal regulations and risks related to illegal possession, misuse and trafficking in WAE and impact analysis.
3.2.4.6. Promoting improvement of legislative mechanisms for regulating and controlling the circulation and use of WAE and its implementation.

This activity will include:

— comprehensive assessment and gap analysis of the current legislation and regulations on management and control of the circulation and use of WAE, including international agreements and legislations, translation support, and evaluation of its practical implementation, and

— provide expert assistance on legislation design and drafting for regulating and controlling the circulation and use of WAE including considering harmonisation of legislation and regulatory issues with the international regulations and standards of relevance for Ukraine.

3.2.4.7. Promoting development of strategic approach in prevention and combatting illicit trafficking in WAE in Ukraine

This activity will include:

— raising awareness, providing advice and expert support for establishing a permanent, inter-agency NCB in the field of SALW control consisting of the relevant mandated national authorities in Ukraine (6 formal meetings); the NCB will be developed through this project and will be chaired by the MIA, and

— mapping and maintaining registry of all SALW related initiatives in Ukraine including on donor community resources.

3.2.4.8. Promoting development of inter-agency data-collection, analysis and dissemination system on illicit ownership, misuse and illicit trafficking in WAE

This activity will include:

— promotion of a common methodology for the compilation, mapping, comparison and use of official statistics, joint and cross comparable performance indicators, and a joint format necessary for automated information sharing on illicit ownership, misuse and illicit trafficking in WAE, and

— providing two training sessions on data collection and analysis, including risk and threat assessment,

— providing assistance for the elaboration of an analytical report on trafficking methods and routes aggregated from the collected data among Ukrainian agencies,

— promoting disaggregated data-collection and inter-agency data sharing among relevant mandated national authorities.

3.3. Project 3: Supporting the State Fiscal Service/State Customs Service of Ukraine (SFS/SCS) in preventing and combatting illicit trafficking of WAE

3.3.1. Objective

The project objective is to assist the SFS/SCS to enhance their capacity in preventing and combatting illicit trafficking of WAE.

3.3.2. Description

The SFS/SCS is mandated to prevent and counteract smuggling and to fight against violations of customs regulations at the points of passage through the state border of Ukraine, in the territories of sea and river ports, airports, at railway stations and other places determined by the Customs Code of Ukraine. This includes measures to prevent and counteract illicit trafficking in WAE.

The project will aim to address verified capability gaps within the SFS in: (a) training, technical and operational capabilities in combatting illicit trafficking of weapons, ammunition and explosives; and (b) transfer of international good practices and information exchanges in particular in relation to EU Member States, Western Balkan partners and states in the neighbourhood.
3.3.3. Expected Results

Result 1: Enhanced SFS/SCS capacities in preventing and combatting illicit trafficking of WAE

Indicators:

— Increased competencies of the project beneficiary personnel in the relevant educational and training institutions, analytics and investigation units, and operational units in support of combatting illicit trafficking of WAE and applied in the regular work processes,

— Increased organisational and technical capacities of the project beneficiaries in the relevant educational and training institutions, analytics and investigation units, and operational units in support of combatting illicit trafficking of WAE and applied in the regular work processes,

— Cooperation measures and expert networking — in national, sub-regional and international contexts — contributing towards interoperability of project beneficiaries with their counterparts and applied in regular work processes of the project beneficiary's relevant units and institutions,

— Documented findings of evaluations and quality management approaches are shared with and applied in practice and taken into consideration for capacity building purposes by project stakeholders (project beneficiaries — primary and secondary, donor community and OSCE).

3.3.4. Activities

3.3.4.1. Comprehensive Training Programme in combatting illicit trafficking of WAE for SFS/SCS corresponding to the needs identified in the needs assessment.

This activity will include:

— comprehensive training programme in preventing and combatting illicit trafficking of WAE that will follow two-tier approach: (a) by developing and enhancing required knowledge skills and attitudes of instructors and educators, i.e. train-the-trainer approach; and (b) by developing and enhancing subject matter expertise in niche areas such as violation of customs legislation, service dogs teams, trainings on new and upgraded of technical means, technologies and procedures.

3.3.4.2. Equipment assistance programme in preventing and combating trafficking of WAE for SFS/SCS corresponding to the needs identified in the needs assessment.

This activity will include:

— provision of limited amount of fixed and mobile equipment, as well as other types of technical means and technologies in support of testing, evaluating and introducing new technological and procedural solutions in detection of illicit trafficking in WAE. The equipment will be provided to selected organisational structures within the SFS/SCS main apparatus, territorial authorities (focused on northern, north-western and western Ukraine) and specialised departments. Moreover, the activity is fluidly integrated into a comprehensive training programme, i.e. creates a broader train-and-equip initiative for the SFS/SCS, and

— technical support to training programme implementation, adjustment and integration into regular training curricula.

3.3.4.3. Canine assistance programme in preventing and combatting illicit WAE for SFS/SCS

This activity will include:

— organising exchange visits to familiarise relevant SFS/SCS expert personnel and educators with international experiences and good practices in using canine capacities in combatting illicit trafficking in WAE, and to support expert networking,

— reviewing and updating training methodologies and operational procedures in using canine capacities in preventing and combatting illicit trafficking in WAE,

— technical support for training and mobile solutions to support canine operations in combatting illicit trafficking in WAE.

4. Project management and administrative support for the implementation of the action

Dedicated project personnel in the OSCE Secretariat and in the office of the OSCE Project Coordinator in Ukraine will coordinate and manage the implementation of the action and its related projects' activities as set out in Section 3. The dedicated project personnel — organised in project management and implementation teams — will further support development of the collaborative framework between Ukrainian partners as well as cooperation and coordination with the international community.
The dedicated project personnel will perform the following tasks:

— managing projects through all steps of the project cycle,
— carrying out day-to-day financial oversight of the projects,
— providing technical and legal expertise, supporting projects’ procurements,
— engaging and coordinating with other international organisations and programmes,
— carrying out quality assurance and quality control of the approved projects’ deliverables,
— Supporting the Ukrainian authorities in developing new national measures to strengthen capacities and collective efforts in preventing and combating illicit trafficking of WAE.

5. Gender

In order to increase the effectiveness of WAE control policies and to ensure that their implementation improves security for both women and men, the gender perspective will be integrated into the actions supported by this decision and addressed through technical advice and expertise, development of knowledge products and training.

6. Beneficiaries

The direct beneficiaries of the action will be the national authorities of Ukraine responsible for preventing and combating illicit trafficking in WAE. Primarily targeted national authorities are: MIA, including its expert and licensing services, NPU, SBGS and SFS/SCS. Other mandated national authorities — such as Security Service of Ukraine — will be engaged on case by case basis.

The indirect beneficiaries of the action will be the populations in Ukraine and its European neighbourhood that are at risk by the use of illicit WAE in criminal activities, terrorism and violent misuse.

The EU and its Member States will also be indirect beneficiaries of the project as they will benefit from the feedback of the Ukrainian authorities on the identified trafficking routes of illicit weapons.

7. Union visibility

OSCE shall take all appropriate measures to publicise the fact that the action has been funded by the Union. Such measures will be carried out in accordance with the Commission’s Communication and Visibility Manual for European Union External Actions. OSCE will thus ensure the visibility of the Union’s contribution with appropriate branding and publicity, highlighting the role of the Union, ensuring the transparency of its actions and raising awareness of the reasons for the Decision as well as Union support for the Decision and the results of this support. Material produced by the project will prominently display the European Union flag in accordance with Union guidelines for the accurate use and reproduction of the flag.

Given that planned activities vary greatly in scope and character, a range of promotional tools will be used, including: traditional media; websites; social media; and informational and promotional materials including infographics, leaflets, newsletters, press releases and others, as appropriate. Publications, public events, campaigns, equipment and construction works procured under the project will be branded accordingly. To further amplify the impact by raising awareness among various national governments and the public, the international community and local and international media, each of the project target groups will be addressed using the appropriate language.

8. Duration

Based on the experience of implementing Decision (CFSP) 2017/1424, and taking into consideration the broad scope of the action, the number of beneficiaries and the number and the complexity of planned activities, the timeframe for implementation is 36 months.

9. Technical implementing entity

The technical implementation of this Decision will be entrusted to the OSCE Secretariat-Conflict Prevention Centre (CPC) and the OSCE PCU. The OSCE will implement the activities under this Decision in coordination and cooperation with other international organisations and agencies, in particular with a view to ensuring effective synergies and avoiding duplications of activities.
10. Steering Committee

The Steering Committee for this project will be composed of representatives of the High Representative, of the EU Delegation in Kiev and of the implementing entity referred to in paragraph 6 of this Annex. The implementing entity, thereby helped by the Steering Committee will ensure that the implementation of the project happens in coordination with the EU's other related assistance to Ukraine, such as the Integrated Border Management Strategy (supported by the Commission's European Neighbourhood Instrument), the regional cooperation with the Western Balkans in the field of SALW-control implemented by UNDP/SEESAC (supported by Council Decisions (CFSP) 2018/1788 (1) and (CFSP) 2016/2356 (2)), the EU-UA law enforcement cooperation in the field of firearms trafficking (supported by the Commission's DG HOME, Europol and EMPACT firearms), the work of Conflict Armament Research in Ukraine (supported by Council Decision (CFSP) 2017/2283 (3)), the EU’s Common Security and Defence Policy missions EUAM Ukraine and EUBAM Moldova and Ukraine and their support activities for border control, and the International Organisation on Migration’s (IOM) work on Disarmament, Demobilisation and Reintegration of ex-fighters (supported by the Commission’s Instrument contributing to Stability and Peace). The Steering Committee will on a regular basis invite representatives of the Ukrainian governmental partners. The Steering Committee can also invite representatives of entities involved in projects in Ukraine that have a similar or related objective. The Steering Committee will review the implementation of this Decision regularly, at least once every 6 months, including by the use of electronic means of communication.

11. Reporting

Reporting, narrative as well as financial, shall cover the whole of the action described in the relevant contribution-specific agreement and its attached budget, regardless of whether this action is wholly financed or co-financed by the Council Decision.

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(1) Council Decision (CFSP) 2018/1788 of 19 November 2018 in support of the South-Eastern and Eastern Europe Clearinghouse for the Control of Small Arms and Light Weapons (SEESAC) for the implementation of the Regional Roadmap on combating illicit arms trafficking in the Western Balkans (OJ L 293, 20.11.2018, p. 11).
COMMISSION IMPLEMENTING DECISION (EU) 2019/2010

of 12 November 2019

establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for waste incineration

(notified under document C(2019) 7987)

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (1), and in particular Article 13(5) thereof,

Whereas:

(1) Best available techniques (BAT) conclusions are the reference for setting permit conditions for installations covered by Chapter II of Directive 2010/75/EU and competent authorities should set emission limit values which ensure that, under normal operating conditions, emissions do not exceed the emission levels associated with the best available techniques as laid down in the BAT conclusions.

(2) The forum composed of representatives of Member States, the industries concerned and non-governmental organisations promoting environmental protection, established by Commission Decision of 16 May 2011 (2), provided the Commission on 27 February 2019 with its opinion on the proposed content of the BAT reference document for waste incineration. That opinion is publicly available.

(3) The BAT conclusions set out in the Annex to this Decision are the key element of that BAT reference document.

(4) The measures provided for in this Decision are in accordance with the opinion of the Committee established by Article 75(1) of Directive 2010/75/EU,

HAS ADOPTED THIS DECISION:

Article 1

The best available techniques (BAT) conclusions for waste incineration, as set out in the Annex, are adopted.

Article 2

This Decision is addressed to the Member States.

Done at Brussels, 12 November 2019.

For the Commission

Karmenu VELLA

Member of the Commission

ANNEX

BEST AVAILABLE TECHNIQUES (BAT) CONCLUSIONS FOR WASTE INCINERATION

SCOPE

These BAT conclusions concern the following activities specified in Annex I to Directive 2010/75/EU:

5.2. Disposal or recovery of waste in waste incineration plants:
   (a) for non-hazardous waste with a capacity exceeding 3 tonnes per hour;
   (b) for hazardous waste with a capacity exceeding 10 tonnes per day.

5.2. Disposal or recovery of waste in waste co-incineration plants:
   (a) for non-hazardous waste with a capacity exceeding 3 tonnes per hour;
   (b) for hazardous waste with a capacity exceeding 10 tonnes per day;
   whose main purpose is not the production of material products and where at least one of the following conditions is fulfilled:
   — only waste, other than waste defined in Article 3(31)(b) of Directive 2010/75/EU, is combusted;
   — more than 40 % of the resulting heat release comes from hazardous waste;
   — mixed municipal waste is combusted.

5.3. (a) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving the treatment of slags and/or bottom ashes from the incineration of waste.

5.3. (b) Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day involving the treatment of slags and/or bottom ashes from the incineration of waste.

5.1. Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving the treatment of slags and/or bottom ashes from the incineration of waste.

These BAT conclusions do not address the following:

— Pre-treatment of waste prior to incineration. This may be covered by the BAT conclusions for Waste Treatment (WT).
— Treatment of incineration fly ashes and other residues resulting from flue-gas cleaning (FGC). This may be covered by the BAT conclusions for Waste Treatment (WT).
— Incineration or co-incineration of exclusively gaseous waste, other than that resulting from the thermal treatment of waste.
— Treatment of waste in plants covered by Article 42(2) of Directive 2010/75/EU.

Other BAT conclusions and reference documents which could be relevant for the activities covered by these BAT conclusions are the following:

— Waste Treatment (WT);
— Economics and Cross-Media Effects (ECM);
— Emissions from Storage (EFS);
— Energy Efficiency (ENE);
— Industrial Cooling Systems (ICS);
— Monitoring of Emissions to Air and Water from IED Installations (ROM);
— Large Combustion Plants (LCP);
DEFINITIONS
For the purposes of these BAT conclusions, the following general definitions apply:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General terms</strong></td>
<td></td>
</tr>
<tr>
<td>Boiler efficiency</td>
<td>Ratio between the energy produced at the boiler output (e.g. steam, hot water) and the waste's and auxiliary fuel's energy input to the furnace (as lower heating values).</td>
</tr>
<tr>
<td>Bottom ash treatment plant</td>
<td>Plant treating slags and/or bottom ashes from the incineration of waste in order to separate and recover the valuable fraction and to allow the beneficial use of the remaining fraction. This does not include the sole separation of coarse metals at the incineration plant.</td>
</tr>
<tr>
<td>Clinical waste</td>
<td>Infectious or otherwise hazardous waste arising from healthcare institutions (e.g. hospitals).</td>
</tr>
<tr>
<td>Channelled emissions</td>
<td>Emissions of pollutants into the environment through any kind of duct, pipe, stack, chimney, funnel, flue, etc.</td>
</tr>
<tr>
<td>Continuous measurement</td>
<td>Measurement using an automated measuring system permanently installed on site.</td>
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<tr>
<td>Diffuse emissions</td>
<td>Non-channelled emissions (e.g. of dust, volatile compounds, odour) into the environment, which can result from 'area' sources (e.g. tankers) or 'point' sources (e.g. pipe flanges).</td>
</tr>
<tr>
<td>Existing plant</td>
<td>A plant that is not a new plant.</td>
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<tr>
<td>Fly ashes</td>
<td>Particles from the combustion chamber or formed within the flue-gas stream that are transported in the flue-gas.</td>
</tr>
<tr>
<td>Hazardous waste</td>
<td>Hazardous waste as defined in Article 3(2) of Directive 2008/98/EC of the European Parliament and of the Council (1)</td>
</tr>
<tr>
<td>Incineration of waste</td>
<td>The combustion of waste, either alone or in combination with fuels, in an incineration plant.</td>
</tr>
<tr>
<td>Incineration plant</td>
<td>Either a waste incineration plant as defined in Article 3(40) of Directive 2010/75/EU or a waste co-incineration plant as defined in Article 3(41) of Directive 2010/75/EU, covered by the scope of these BAT conclusions.</td>
</tr>
<tr>
<td>Major plant upgrade</td>
<td>A major change in the design or technology of a plant with major adjustments or replacements of the process and/or abatement technique(s) and associated equipment.</td>
</tr>
<tr>
<td>Municipal solid waste</td>
<td>Solid waste from households (mixed or separately collected) as well as solid waste from other sources that is comparable to household waste in nature and composition.</td>
</tr>
<tr>
<td>New plant</td>
<td>A plant first permitted following the publication of these BAT conclusions or a complete replacement of a plant following the publication of these BAT conclusions.</td>
</tr>
<tr>
<td>Other non-hazardous waste</td>
<td>Non-hazardous waste that is neither municipal solid waste nor sewage sludge.</td>
</tr>
<tr>
<td>Part of an incineration plant</td>
<td>For the purposes of determining the gross electrical efficiency or the gross energy efficiency of an incineration plant, a part of it may refer for example to: — an incineration line and its steam system in isolation; — a part of the steam system, connected to one or more boilers, routed to a condensing turbine; — the rest of the same steam system that is used for a different purpose, e.g. the steam is directly exported.</td>
</tr>
</tbody>
</table>
### General terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Periodic measurement</td>
<td>Measurement at specified time intervals using manual or automated methods.</td>
</tr>
<tr>
<td>Residues</td>
<td>Any liquid or solid waste which is generated by an incineration plant or by a bottom ash treatment plant.</td>
</tr>
<tr>
<td>Sensitive receptor</td>
<td>Area which needs special protection, such as:</td>
</tr>
<tr>
<td></td>
<td>— residential areas;</td>
</tr>
<tr>
<td></td>
<td>— areas where human activities are carried out (e.g. neighbouring workplaces, schools, daycare centres, recreational areas, hospitals or nursing homes).</td>
</tr>
<tr>
<td>Sewage sludge</td>
<td>Residual sludge from the storage, handling and treatment of domestic, urban or industrial waste water. For the purposes of these BAT conclusions, residual sludges constituting hazardous waste are excluded.</td>
</tr>
<tr>
<td>Slags and/or bottom ashes</td>
<td>Solid residues removed from the furnace once wastes have been incinerated.</td>
</tr>
<tr>
<td>Valid half-hourly average</td>
<td>A half-hourly average is considered valid when there is no maintenance or malfunction of the automated measuring system.</td>
</tr>
</tbody>
</table>


### Pollutants and parameters

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>As</td>
<td>The sum of arsenic and its compounds, expressed as As.</td>
</tr>
<tr>
<td>Cd</td>
<td>The sum of cadmium and its compounds, expressed as Cd.</td>
</tr>
<tr>
<td>Cd+Tl</td>
<td>The sum of cadmium, thallium and their compounds, expressed as Cd+Tl.</td>
</tr>
<tr>
<td>CO</td>
<td>Carbon monoxide.</td>
</tr>
<tr>
<td>Cr</td>
<td>The sum of chromium and its compounds, expressed as Cr.</td>
</tr>
<tr>
<td>Cu</td>
<td>The sum of copper and its compounds, expressed as Cu.</td>
</tr>
<tr>
<td>Dioxin-like PCBs</td>
<td>PCBs showing a similar toxicity to the 2,3,7,8-substituted PCDD/PCDF according to the World Health Organization (WHO).</td>
</tr>
<tr>
<td>Dust</td>
<td>Total particulate matter (in air).</td>
</tr>
<tr>
<td>HCl</td>
<td>Hydrogen chloride.</td>
</tr>
<tr>
<td>HF</td>
<td>Hydrogen fluoride.</td>
</tr>
<tr>
<td>Hg</td>
<td>The sum of mercury and its compounds, expressed as Hg.</td>
</tr>
<tr>
<td>Loss on ignition</td>
<td>Change in mass as a result of heating a sample under specified conditions.</td>
</tr>
<tr>
<td>N₂O</td>
<td>Dinitrogen monoxide (nitrous oxide).</td>
</tr>
<tr>
<td>NH₃</td>
<td>Ammonia.</td>
</tr>
<tr>
<td>NH₄-N</td>
<td>Ammonium nitrogen, expressed as N, includes free ammonia (NH₃) and ammonium (NH₄⁺).</td>
</tr>
<tr>
<td>Ni</td>
<td>The sum of nickel and its compounds, expressed as Ni.</td>
</tr>
<tr>
<td>NOₓ</td>
<td>The sum of nitrogen monoxide (NO) and nitrogen dioxide (NO₂), expressed as NO₂.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Pb</td>
<td>The sum of lead and its compounds, expressed as Pb.</td>
</tr>
<tr>
<td>PBDD/F</td>
<td>Polychlorinated dibenzo-p-dioxins and furans.</td>
</tr>
<tr>
<td>PCBs</td>
<td>Polychlorinated biphenyls.</td>
</tr>
<tr>
<td>PCDD/F</td>
<td>Polychlorinated dibenzo-p-dioxins and furans.</td>
</tr>
<tr>
<td>Sb</td>
<td>The sum of antimony and its compounds, expressed as Sb.</td>
</tr>
<tr>
<td>Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V</td>
<td>The sum of antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel, vanadium and their compounds, expressed as Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V.</td>
</tr>
<tr>
<td>SO₂</td>
<td>Sulphur dioxide.</td>
</tr>
<tr>
<td>Sulphate (SO₄²⁻)</td>
<td>Dissolved sulphate, expressed as SO₄²⁻.</td>
</tr>
<tr>
<td>TOC</td>
<td>Total organic carbon, expressed as C (in water); includes all organic compounds.</td>
</tr>
<tr>
<td>TOC content (in solid residues)</td>
<td>Total organic carbon content. The quantity of carbon that is converted into carbon dioxide by combustion and which is not liberated as carbon dioxide by acid treatment.</td>
</tr>
<tr>
<td>TSS</td>
<td>Total suspended solids. Mass concentration of all suspended solids (in water), measured via filtration through glass fibre filters and gravimetry.</td>
</tr>
<tr>
<td>TI</td>
<td>The sum of thallium and its compounds, expressed as TI.</td>
</tr>
<tr>
<td>TVOC</td>
<td>Total volatile organic carbon, expressed as C (in air).</td>
</tr>
<tr>
<td>Zn</td>
<td>The sum of zinc and its compounds, expressed as Zn.</td>
</tr>
</tbody>
</table>


ACRONYMS

For the purposes of these BAT conclusions, the following acronyms apply:

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS</td>
<td>Environmental management system</td>
</tr>
<tr>
<td>FDBR</td>
<td>Fachverband Anlagenbau (from the previous name of the organisation: Fachverband Dampfkessel-, Behälter- und Rohrleitungsbau)</td>
</tr>
<tr>
<td>FGC</td>
<td>Flue-gas cleaning</td>
</tr>
<tr>
<td>OTNOC</td>
<td>Other than normal operating conditions</td>
</tr>
<tr>
<td>SCR</td>
<td>Selective catalytic reduction</td>
</tr>
<tr>
<td>SNCR</td>
<td>Selective non-catalytic reduction</td>
</tr>
<tr>
<td>I-TEQ</td>
<td>International toxic equivalent according to the North Atlantic Treaty Organization (NATO) schemes</td>
</tr>
<tr>
<td>WHO-TEQ</td>
<td>Toxic equivalent according to the World Health Organization (WHO) schemes</td>
</tr>
</tbody>
</table>
GENERAL CONSIDERATIONS

Best Available Techniques

The techniques listed and described in these BAT conclusions are neither prescriptive nor exhaustive. Other techniques may be used that ensure at least an equivalent level of environmental protection.

Unless otherwise stated, these BAT conclusions are generally applicable.

Emission levels associated with the best available techniques (BAT-AELs) for emissions to air

Emission levels associated with the best available techniques (BAT-AELs) for emissions to air given in these BAT conclusions refer to concentrations, expressed as mass of emitted substances per volume of flue-gas or of extracted air under the following standard conditions: dry gas at a temperature of 273.15 K and a pressure of 101.3 kPa, and expressed in mg/Nm$^3$, µg/Nm$^3$, ng I-TEQ/Nm$^3$ or ng WHO-TEQ/Nm$^3$.

The reference oxygen levels used to express BAT-AELs in this document are shown in the table below.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Reference oxygen level (OR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incineration of waste</td>
<td>11 dry vol-%</td>
</tr>
<tr>
<td>Bottom ash treatment</td>
<td>No correction for the oxygen level</td>
</tr>
</tbody>
</table>

The equation for calculating the emission concentration at the reference oxygen level is:

$$E_R = \frac{21 - O_R}{21 - O_M} \times E_M$$

Where:

- $E_R$: emission concentration at the reference oxygen level $O_R$;
- $O_R$: reference oxygen level in vol-%;
- $E_M$: measured emission concentration;
- $O_M$: measured oxygen level in vol-%.

For averaging periods, the following definitions apply:

<table>
<thead>
<tr>
<th>Type of measurement</th>
<th>Averaging period</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Half-hourly average</td>
<td>Average value over a period of 30 minutes</td>
</tr>
<tr>
<td></td>
<td>Daily average</td>
<td>Average over a period of one day based on valid half-hourly averages</td>
</tr>
<tr>
<td>Periodic</td>
<td>Average over the sampling period</td>
<td>Average value of three consecutive measurements of at least 30 minutes each (1)</td>
</tr>
<tr>
<td></td>
<td>Long-term sampling period</td>
<td>Value over a sampling period of 2 to 4 weeks</td>
</tr>
</tbody>
</table>

(1) For any parameter where, due to sampling or analytical limitations, 30-minute sampling/measurement and/or an average of three consecutive measurements is inappropriate, a more suitable procedure may be employed. For PCDD/F and dioxin-like PCBs, one sampling period of 6 to 8 hours is used in the case of short-term sampling.

When waste is co-incinerated together with non-waste fuels, the BAT-AELs for emissions to air given in these BAT conclusions apply to the entire flue-gas volume generated.
Emission levels associated with the best available techniques (BAT-AELs) for emissions to water

Emission levels associated with the best available techniques (BAT-AELs) for emissions to water given in these BAT conclusions refer to concentrations (mass of emitted substances per volume of waste water), expressed in mg/l or ng l-TEQ/l.

For waste water from FGC, the BAT-AELs refer either to spot sampling (for TSS only) or to daily averages, i.e. 24-hour flow-proportional composite samples. Time-proportional composite sampling can be used provided that sufficient flow stability is demonstrated.

For waste water from bottom ash treatment, the BAT-AELs refer to either of the following two cases:
— in the case of continuous discharges, daily average values, i.e. 24-hour flow-proportional composite samples;
— in the case of batch discharges, average values over the release duration taken as flow-proportional composite samples, or, provided that the effluent is appropriately mixed and homogeneous, a spot sample taken before discharge.

The BAT-AELs for emissions to water apply at the point where the emission leaves the installation.

Energy efficiency levels associated with the best available techniques (BAT-AEELs)

The BAT-AEELs given in these BAT conclusions for the incineration of non-hazardous waste other than sewage sludge and of hazardous wood waste are expressed as:
— gross electrical efficiency in the case of an incineration plant or part of an incineration plant that produces electricity using a condensing turbine;
— gross energy efficiency in the case of an incineration plant or part of an incineration plant that:
  — produces only heat, or
  — produces electricity using a back-pressure turbine and heat with the steam leaving the turbine.

This is expressed as follows:

<table>
<thead>
<tr>
<th>Gross electrical efficiency</th>
<th>( \eta_e = \frac{W_e}{Q_{th}} \times (Q_{b} / (Q_{b} - Q_{i})) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross energy efficiency</td>
<td>( \eta_h = \frac{W_e + Q_{hc} + Q_{de} + Q_{i}}{Q_{th}} )</td>
</tr>
</tbody>
</table>

Where:
— \( W_e \): electrical power generated, in MW;
— \( Q_{hc} \): thermal power supplied to the heat exchangers on the primary side, in MW;
— \( Q_{de} \): directly exported thermal power (as steam or hot water) less the thermal power of the return flow, in MW;
— \( Q_{b} \): thermal power produced by the boiler, in MW;
— \( Q_{i} \): thermal power (as steam or hot water) that is used internally (e.g. for flue-gas reheating), in MW;
— \( Q_{th} \): thermal input to the thermal treatment units (e.g. furnaces), including the waste and auxiliary fuels that are used continuously (excluding for example for start-up), in MW, expressed as the lower heating value.

The BAT-AEELs given in these BAT conclusions for the incineration of sewage sludge and of hazardous waste other than hazardous wood waste are expressed as boiler efficiency.
BAT-AEELs are expressed as a percentage.

The monitoring associated with the BAT-AEELs is given in BAT 2.

Content of unburnt substances in bottom ashes/slags

The content of unburnt substances in the slags and/or bottom ashes is expressed as a percentage of the dry weight, either as the loss on ignition or as the TOC mass fraction.

1. BAT CONCLUSIONS

1.1. Environmental management systems

BAT 1. In order to improve the overall environmental performance, BAT is to elaborate and implement an environmental management system (EMS) that incorporates all of the following features:

(i) commitment, leadership and accountability of the management, including senior management, for the implementation of an effective EMS;

(ii) an analysis that includes the determination of the organisation's context, the identification of the needs and expectations of interested parties, the identification of characteristics of the installation that are associated with possible risks for the environment (or human health) as well as of the applicable legal requirements relating to the environment;

(iii) development of an environmental policy that includes the continuous improvement of the environmental performance of the installation;

(iv) establishing objectives and performance indicators in relation to significant environmental aspects, including safeguarding compliance with applicable legal requirements;

(v) planning and implementing the necessary procedures and actions (including corrective and preventive actions where needed), to achieve the environmental objectives and avoid environmental risks;

(vi) determination of structures, roles and responsibilities in relation to environmental aspects and objectives and provision of the financial and human resources needed;

(vii) ensuring the necessary competence and awareness of staff whose work may affect the environmental performance of the installation (e.g. by providing information and training);

(viii) internal and external communication;

(ix) fostering employee involvement in good environmental management practices;

(x) establishing and maintaining a management manual and written procedures to control activities with significant environmental impact as well as relevant records;

(xi) effective operational planning and process control;

(xii) implementation of appropriate maintenance programmes;

(xiii) emergency preparedness and response protocols, including the prevention and/or mitigation of the adverse (environmental) impacts of emergency situations;

(xiv) when (re)designing a (new) installation or a part thereof, consideration of its environmental impacts throughout its life, which includes construction, maintenance, operation and decommissioning;

(xv) implementation of a monitoring and measurement programme; if necessary, information can be found in the Reference Report on Monitoring of Emissions to Air and Water from IED Installations;

(xvi) application of sectoral benchmarking on a regular basis;

(xvii) periodic independent (as far as practicable) internal auditing and periodic independent external auditing in order to assess the environmental performance and to determine whether or not the EMS conforms to planned arrangements and has been properly implemented and maintained;

(xviii) evaluation of causes of nonconformities, implementation of corrective actions in response to nonconformities, review of the effectiveness of corrective actions, and determination of whether similar nonconformities exist or could potentially occur;
(xix) periodic review, by senior management, of the EMS and its continuing suitability, adequacy and effectiveness;

(xx) following and taking into account the development of cleaner techniques.

Specifically for incineration plants and, where relevant, bottom ash treatment plants, BAT is also to incorporate the following features in the EMS:

(xxii) for incineration plants, waste stream management (see BAT 9);

(xxiii) for bottom ash treatment plants, output quality management (see BAT 10);

(xxiv) a residues management plan including measures aiming to:

(a) minimise the generation of residues;

(b) optimise the reuse, regeneration, recycling of, and/or energy recovery from the residues;

(c) ensure the proper disposal of residues;

(xxv) for incineration plants, an OTNOC management plan (see BAT 18);

(xxvi) for bottom ash treatment plants, diffuse dust emissions management (see BAT 23);

(xxvii) an odour management plan where an odour nuisance at sensitive receptors is expected and/or has been substantiated (see Section 2.4);

(xxviii) a noise management plan (see also BAT 37) where a noise nuisance at sensitive receptors is expected and/or has been substantiated (see Section 2.4).

Note

Regulation (EC) No 1221/2009 establishes the European Union eco-management and audit scheme (EMAS), which is an example of an EMS consistent with this BAT.

Applicability

The level of detail and the degree of formalisation of the EMS will generally be related to the nature, scale and complexity of the installation, and the range of environmental impacts it may have (determined also by the type and the amount of waste processed).

1.2. Monitoring

BAT 2. BAT is to determine either the gross electrical efficiency, the gross energy efficiency, or the boiler efficiency of the incineration plant as a whole or of all the relevant parts of the incineration plant.

Description

In the case of a new incineration plant or after each modification of an existing incineration plant that could significantly affect the energy efficiency, the gross electrical efficiency, the gross energy efficiency, or the boiler efficiency is determined by carrying out a performance test at full load.

In the case of an existing incineration plant that has not carried out a performance test, or where a performance test at full load cannot be carried out for technical reasons, the gross electrical efficiency, the gross energy efficiency, or the boiler efficiency can be determined taking into account the design values at performance test conditions.

For the performance test, no EN standard is available for the determination of the boiler efficiency of incineration plants. For grate-fired incineration plants, the FDBR guideline RL 7 may be used.

BAT 3. BAT is to monitor key process parameters relevant for emissions to air and water including those given below.
Stream/Location Parameter(s) Monitoring

Flue-gas from the incineration of waste Flow, oxygen content, temperature, pressure, water vapour content Continuous measurement

Combustion chamber Temperature

Waste water from wet FGC Flow, pH, temperature

Waste water from bottom ash treatment plants Flow, pH, conductivity

BAT 4. BAT is to monitor channelled emissions to air with at least the frequency given below and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.

<table>
<thead>
<tr>
<th>Substance/Parameter</th>
<th>Process</th>
<th>Standard(s) (1)</th>
<th>Minimum monitoring frequency (2)</th>
<th>Monitoring associated with</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOX</td>
<td>Incineration of waste</td>
<td>Generic EN standards</td>
<td>Continuous</td>
<td>BAT 29</td>
</tr>
<tr>
<td>NH3</td>
<td>Incineration of waste when SNCR and/or SCR is used</td>
<td>Generic EN standards</td>
<td>Continuous</td>
<td>BAT 29</td>
</tr>
<tr>
<td>N2O</td>
<td>— Incineration of waste in fluidised bed furnace</td>
<td>EN 21258 (1)</td>
<td>Once every year</td>
<td>BAT 29</td>
</tr>
<tr>
<td></td>
<td>— Incineration of waste when SNCR is operated with urea</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO</td>
<td>Incineration of waste</td>
<td>Generic EN standards</td>
<td>Continuous</td>
<td>BAT 29</td>
</tr>
<tr>
<td>SO2</td>
<td>Incineration of waste</td>
<td>Generic EN standards</td>
<td>Continuous</td>
<td>BAT 27</td>
</tr>
<tr>
<td>HCl</td>
<td>Incineration of waste</td>
<td>Generic EN standards</td>
<td>Continuous</td>
<td>BAT 27</td>
</tr>
<tr>
<td>HF</td>
<td>Incineration of waste</td>
<td>Generic EN standards</td>
<td>Continuous (1)</td>
<td>BAT 27</td>
</tr>
<tr>
<td>Dust</td>
<td>Bottom ash treatment</td>
<td>EN 13284-1</td>
<td>Once every year</td>
<td>BAT 26</td>
</tr>
<tr>
<td></td>
<td>Incineration of waste</td>
<td>Generic EN standards and EN 13284-2</td>
<td>Continuous</td>
<td>BAT 25</td>
</tr>
<tr>
<td>Metals and metalloids except mercury (As, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Tl, V)</td>
<td>Incineration of waste</td>
<td>EN 14385</td>
<td>Once every six months</td>
<td>BAT 25</td>
</tr>
<tr>
<td>Hg</td>
<td>Incineration of waste</td>
<td>Generic EN standards and EN 14884</td>
<td>Continuous (1)</td>
<td>BAT 31</td>
</tr>
<tr>
<td>TVOC</td>
<td>Incineration of waste</td>
<td>Generic EN standards</td>
<td>Continuous</td>
<td>BAT 30</td>
</tr>
<tr>
<td>PBDD/F</td>
<td>Incineration of waste (1)</td>
<td>No EN standard available</td>
<td>Once every six months</td>
<td>BAT 30</td>
</tr>
</tbody>
</table>
### Substance/Parameter

<table>
<thead>
<tr>
<th>Substance/Parameter</th>
<th>Process</th>
<th>Standard(s) (*)</th>
<th>Minimum monitoring frequency ($)</th>
<th>Monitoring associated with</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCDD/F</td>
<td>Incineration of waste</td>
<td>EN 1948-1, EN 1948-2, EN 1948-3</td>
<td>Once every six months for short-term sampling</td>
<td>BAT 30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No EN standard available for long-term sampling, EN 1948-2, EN 1948-3</td>
<td>Once every month for long-term sampling ($)</td>
<td>BAT 30</td>
</tr>
<tr>
<td>Dioxin-like PCBs</td>
<td>Incineration of waste</td>
<td>EN 1948-1, EN 1948-2, EN 1948-4</td>
<td>Once every six months for short-term sampling ($)</td>
<td>BAT 30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No EN standard available for long-term sampling, EN 1948-2, EN 1948-4</td>
<td>Once every month for long-term sampling ($) ($)</td>
<td>BAT 30</td>
</tr>
<tr>
<td>Benzo[a]pyrene</td>
<td>Incineration of waste</td>
<td>No EN standard available</td>
<td>Once every year</td>
<td>BAT 30</td>
</tr>
</tbody>
</table>

(*) Generic EN standards for continuous measurements are EN 15267-1, EN 15267-2, EN 15267-3 and EN 14181. EN standards for periodic measurements are given in the table or in the footnotes.

($) For periodic monitoring, the monitoring frequency does not apply where plant operation would be for the sole purpose of performing an emission measurement.

(‡) If continuous monitoring of N₂O is applied, the generic EN standards for continuous measurements apply.

(¶) The continuous measurement of HF may be replaced by periodic measurements with a minimum frequency of once every six months if the HCl emission levels are proven to be sufficiently stable. No EN standard is available for the periodic measurement of HF.

(§) For plants incinerating wastes with a proven low and stable mercury content (e.g. mono-streams of waste of a controlled composition), the continuous monitoring of emissions may be replaced by long-term sampling (no EN standard is available for long-term sampling of Hg) or periodic measurements with a minimum frequency of once every six months. In the latter case the relevant standard is EN 13211.

(‖) The monitoring only applies to the incineration of waste containing brominated flame retardants or to plants using BAT 31 (d) with continuous injection of bromine.

(‘) The monitoring does not apply if the emission levels are proven to be sufficiently stable.

(‘‘) The monitoring does not apply where the emissions of dioxin-like PCBs are proven to be less than 0,01 ng WHO-TEQ/Nm³.

---

**BAT 5.** BAT is to appropriately monitor channelled emissions to air from the incineration plant during OTNOC.

**Description**

The monitoring can be carried out by direct emission measurements (e.g. for the pollutants that are monitored continuously) or by monitoring of surrogate parameters if this proves to be of equivalent or better scientific quality than direct emission measurements. Emissions during start-up and shutdown while no waste is being incinerated, including emissions of PCDD/F, are estimated based on measurement campaigns, e.g. every three years, carried out during planned start-up/shutdown operations.

**BAT 6.** BAT is to monitor emissions to water from FGC and/or bottom ash treatment with at least the frequency given below and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.
<table>
<thead>
<tr>
<th>Substance/Parameter</th>
<th>Process</th>
<th>Standard(s)</th>
<th>Minimum monitoring frequency</th>
<th>Monitoring associated with</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total organic carbon (TOC)</td>
<td>FGC</td>
<td>EN 1484</td>
<td>Once every month</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bottom ash treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total suspended solids (TSS)</td>
<td>FGC</td>
<td>EN 872</td>
<td>Once every day (1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bottom ash treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>As</td>
<td>FGC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cd</td>
<td>FGC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cr</td>
<td>FGC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cu</td>
<td>FGC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mo</td>
<td>FGC</td>
<td>Various EN standards available (e.g. EN ISO 11885, EN ISO 15586 or EN ISO 17294-2)</td>
<td>Once every month</td>
<td></td>
</tr>
<tr>
<td>Ni</td>
<td>FGC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pb</td>
<td>FGC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bottom ash treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sb</td>
<td>FGC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tl</td>
<td>FGC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zn</td>
<td>FGC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hg</td>
<td>FGC</td>
<td>Various EN standards available (e.g. EN ISO 12846 or EN ISO 17852)</td>
<td>Once every month</td>
<td></td>
</tr>
<tr>
<td>Ammonium-nitrogen (NH₄-N)</td>
<td>Bottom ash treatment</td>
<td>Various EN standards available (e.g. EN ISO 11732, EN ISO 14911)</td>
<td>Once every month (1)</td>
<td></td>
</tr>
<tr>
<td>Chloride (Cl)</td>
<td>Bottom ash treatment</td>
<td>Various EN standards available (e.g. EN ISO 10304-1, EN ISO 15682)</td>
<td>Once every month (1)</td>
<td></td>
</tr>
<tr>
<td>Sulphate (SO₄²⁻)</td>
<td>Bottom ash treatment</td>
<td>EN ISO 10304-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCDD/F</td>
<td>FGC</td>
<td>No EN standard available</td>
<td>Once every month (1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bottom ash treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) The monitoring frequency may be at least once every six months if the emissions are proven to be sufficiently stable.

(1) The daily 24-hour flow-proportional composite sampling measurements may be substituted by daily spot sample measurements.

BAT 7. BAT is to monitor the content of unburnt substances in slags and bottom ashes at the incineration plant with at least the frequency given below and in accordance with EN standards.
BAT 8. For the incineration of hazardous waste containing POPs, BAT is to determine the POP content in the output streams (e.g. slags and bottom ashes, flue-gas, waste water) after the commissioning of the incineration plant and after each change that may significantly affect the POP content in the output streams.

**Description**

The POP content in the output streams is determined by direct measurements or by indirect methods (e.g. the cumulated quantity of POPs in the fly ashes, dry FGC residues, waste water from FGC and related waste water treatment sludge may be determined by monitoring the POP contents in the flue-gas before and after the FGC system) or based on studies representative of the plant.

**Applicability**

Only applicable for plants that:

— incinerate hazardous waste with POP levels prior to incineration exceeding the concentration limits defined in Annex IV to Regulation (EC) No 850/2004 and amendments; and

— do not meet the process description specifications of Chapter IV.G.2 point (g) of the UNEP technical guidelines UNEP/CHW.13/6/Add.1/Rev.1.

### 1.3. General environmental and combustion performance

BAT 9. In order to improve the overall environmental performance of the incineration plant by waste stream management (see BAT 1), BAT is to use all of the techniques (a) to (c) given below, and, where relevant, also techniques (d), (e) and (f).

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>Determination of the types of waste that can be incinerated</td>
</tr>
<tr>
<td></td>
<td>Based on the characteristics of the incineration plant, identification of the types of waste which can be incinerated in terms of, for example, the physical state, the chemical characteristics, the hazardous properties, and the acceptable ranges of calorific value, humidity, ash content and size.</td>
</tr>
<tr>
<td>(b)</td>
<td>Set-up and implementation of waste characterisation and pre-acceptance procedures</td>
</tr>
<tr>
<td></td>
<td>These procedures aim to ensure the technical (and legal) suitability of waste treatment operations for a particular waste prior to the arrival of the waste at the plant. They include procedures to collect information about the waste input and may include waste sampling and characterisation to achieve sufficient knowledge of the waste composition. Waste pre-acceptance procedures are risk-based considering, for example, the hazardous properties of the waste, the risks posed by the waste in terms of process safety, occupational safety and environmental impact, as well as the information provided by the previous waste holder(s).</td>
</tr>
</tbody>
</table>
(c) Set-up and implementation of waste acceptance procedures

Acceptance procedures aim to confirm the characteristics of the waste, as identified at the pre-acceptance stage. These procedures define the elements to be verified upon the delivery of the waste at the plant as well as the waste acceptance and rejection criteria. They may include waste sampling, inspection and analysis. Waste acceptance procedures are risk-based considering, for example, the hazardous properties of the waste, the risks posed by the waste in terms of process safety, occupational safety and environmental impact, as well as the information provided by the previous waste holder(s). The elements to be monitored for each type of waste are detailed in BAT 11.

(d) Set-up and implementation of a waste tracking system and inventory

A waste tracking system and inventory aims to track the location and quantity of waste in the plant. It holds all the information generated during waste pre-acceptance procedures (e.g. date of arrival at the plant and unique reference number of the waste, information on the previous waste holder(s), pre-acceptance and acceptance analysis results, nature and quantity of waste held on site including all identified hazards), acceptance, storage, treatment and/or transfer off site. The waste tracking system is risk-based considering, for example, the hazardous properties of the waste, the risks posed by the waste in terms of process safety, occupational safety and environmental impact, as well as the information provided by the previous waste holder(s). The waste tracking system includes clear labelling of wastes that are stored in places other than the waste bunker or sludge storage tank (e.g. in containers, drums, bales or other forms of packaging) such that they can be identified at all times.

(e) Waste segregation

Wastes are kept separated depending on their properties in order to enable easier and environmentally safer storage and incineration. Waste segregation relies on the physical separation of different wastes and on procedures that identify when and where wastes are stored.

(f) Verification of waste compatibility prior to the mixing or blending of hazardous wastes

Compatibility is ensured by a set of verification measures and tests in order to detect any unwanted and/or potentially dangerous chemical reactions between wastes (e.g. polymerisation, gas evolution, exothermal reaction, decomposition) upon mixing or blending. The compatibility tests are risk-based considering, for example, the hazardous properties of the waste, the risks posed by the waste in terms of process safety, occupational safety and environmental impact, as well as the information provided by the previous waste holder(s).

BAT 10. In order to improve the overall environmental performance of the bottom ash treatment plant, BAT is to include output quality management features in the EMS (see BAT 1).

Description

Output quality management features are included in the EMS, so as to ensure that the output of the bottom ash treatment is in line with expectations, using existing EN standards where available. This also allows the performance of the bottom ash treatment to be monitored and optimised.
BAT 11. In order to improve the overall environmental performance of the incineration plant, BAT is to monitor the waste deliveries as part of the waste acceptance procedures (see BAT 9(c)) including, depending on the risk posed by the incoming waste, the elements given below.

<table>
<thead>
<tr>
<th>Waste type</th>
<th>Waste delivery monitoring</th>
</tr>
</thead>
</table>
| Municipal solid waste and other non-hazardous waste | — Radioactivity detection  
— Weighing of the waste deliveries  
— Visual inspection  
— Periodic sampling of waste deliveries and analysis of key properties/substances (e.g. calorific value, content of halogens and metals/metalloids). For municipal solid waste, this involves separate unloading. |
| Sewage sludge | — Weighing of the waste deliveries (or measuring the flow if the sewage sludge is delivered via pipeline)  
— Visual inspection, as far as technically possible  
— Periodic sampling and analysis of key properties/substances (e.g. calorific value, content of water, ash and mercury) |
| Hazardous waste other than clinical waste | — Radioactivity detection  
— Weighing of the waste deliveries  
— Visual inspection, as far as technically possible  
— Control and comparison of individual waste deliveries with the declaration of the waste producer  
— Sampling of the content of:  
— all bulk tankers and trailers  
— packed waste (e.g. in drums, intermediate bulk containers (IBCs) or smaller packaging)  
and analysis of:  
— combustion parameters (including calorific value and flashpoint)  
— waste compatibility, to detect possible hazardous reactions upon blending or mixing of wastes, prior to storage (BAT 9(f))  
— key substances including POPs, halogens and sulphur, metals/metalloids |
| Clinical waste | — Radioactivity detection  
— Weighing of the waste deliveries  
— Visual inspection of the packaging integrity |

BAT 12. In order to reduce the environmental risks associated with the reception, handling and storage of waste, BAT is to use both of the techniques given below.

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
</tr>
</thead>
</table>
| (a)       | Improperable surfaces with an adequate drainage infrastructure  
Depending on the risks posed by the waste in terms of soil or water contamination, the surface of the waste reception, handling and storage areas is made impermeable to the liquids concerned and fitted with an adequate drainage infrastructure (see BAT 32). The integrity of this surface is periodically verified, as far as technically possible. |
| (b)       | Adequate waste storage capacity  
Measures are taken to avoid accumulation of waste, such as:  
— the maximum waste storage capacity is clearly established and not exceeded, taking into account the characteristics of the wastes (e.g. regarding the risk of fire) and the treatment capacity:  
— the quantity of waste stored is regularly monitored against the maximum allowed storage capacity:  
— for wastes that are not mixed during storage (e.g. clinical waste, packed waste), the maximum residence time is clearly established. |
BAT 13. In order to reduce the environmental risk associated with the storage and handling of clinical waste, BAT is to use a combination of the techniques given below.

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Automated or semi-automated waste handling</td>
<td>Clinical wastes are unloaded from the truck to the storage area using an automated or manual system depending on the risk posed by this operation. From the storage area the clinical wastes are fed into the furnace by an automated feeding system.</td>
</tr>
<tr>
<td>(b) Incineration of non-reusable sealed containers, if used</td>
<td>Clinical waste is delivered in sealed and robust combustible containers that are never opened throughout storage and handling operations. If needles and sharps are disposed of in them, the containers are puncture-proof as well.</td>
</tr>
<tr>
<td>(c) Cleaning and disinfection of reusable containers, if used</td>
<td>Reusable waste containers are cleaned in a designated cleaning area and disinfected in a facility specifically designed for disinfection. Any leftovers from the cleaning operations are incinerated.</td>
</tr>
</tbody>
</table>

BAT 14. In order to improve the overall environmental performance of the incineration of waste, to reduce the content of unburnt substances in slags and bottom ashes, and to reduce emissions to air from the incineration of waste, BAT is to use an appropriate combination of the techniques given below.

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Waste blending and mixing</td>
<td>Waste blending and mixing prior to incineration includes for example the following operations: — bunker crane mixing; — using a feed equalisation system; — blending of compatible liquid and pasty wastes. In some cases, solid wastes are shredded prior to mixing.</td>
<td>Not applicable where direct furnace feeding is required due to safety considerations or waste characteristics (e.g. infectious clinical waste, odorous wastes, or wastes that are prone to releasing volatile substances). Not applicable where undesired reactions may occur between different types of waste (see BAT 9(f)).</td>
</tr>
<tr>
<td>(b) Advanced control system</td>
<td>See Section 2.1</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(c) Optimisation of the incineration process</td>
<td>See Section 2.1</td>
<td>Optimisation of the design is not applicable to existing furnaces.</td>
</tr>
</tbody>
</table>

Table 1

**BAT-associated environmental performance levels for unburnt substances in slags and bottom ashes from the incineration of waste**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>BAT-AEPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOC content in slags and bottom ashes (1)</td>
<td>Dry wt-%</td>
<td>1–3 (2)</td>
</tr>
<tr>
<td>Loss on ignition of slags and bottom ashes (1)</td>
<td>Dry wt-%</td>
<td>1–5 (2)</td>
</tr>
</tbody>
</table>

(1) Either the BAT-AEPL for TOC content or the BAT-AEPL for the loss on ignition applies.
(2) The lower end of the BAT-AEPL range can be achieved when using fluidised bed furnaces or rotary kilns operated in slagging mode.
The associated monitoring is in BAT 7.

BAT 15. In order to improve the overall environmental performance of the incineration plant and to reduce emissions to air, BAT is to set up and implement procedures for the adjustment of the plant's settings, e.g. through the advanced control system (see description in Section 2.1), as and when needed and practicable, based on the characterisation and control of the waste (see BAT 11).

BAT 16. In order to improve the overall environmental performance of the incineration plant and to reduce emissions to air, BAT is to set up and implement operational procedures (e.g. organisation of the supply chain, continuous rather than batch operation) to limit as far as practicable shutdown and start-up operations.

BAT 17. In order to reduce emissions to air and, where relevant, to water from the incineration plant, BAT is to ensure that the FGC system and the waste water treatment plant are appropriately designed (e.g. considering the maximum flow rate and pollutant concentrations), operated within their design range, and maintained so as to ensure optimal availability.

BAT 18. In order to reduce the frequency of the occurrence of OTNOC and to reduce emissions to air and, where relevant, to water from the incineration plant during OTNOC, BAT is to set up and implement a risk-based OTNOC management plan as part of the environmental management system (see BAT 1) that includes all of the following elements:

— identification of potential OTNOC (e.g. failure of equipment critical to the protection of the environment ('critical equipment')), of their root causes and of their potential consequences, and regular review and update of the list of identified OTNOC following the periodic assessment below;

— appropriate design of critical equipment (e.g. compartmentalisation of the bag filter, techniques to heat up the flue-gas and obviate the need to bypass the bag filter during start-up and shutdown, etc.);

— set-up and implementation of a preventive maintenance plan for critical equipment (see BAT 1(xii));

— monitoring and recording of emissions during OTNOC and associated circumstances (see BAT 5);

— periodic assessment of the emissions occurring during OTNOC (e.g. frequency of events, duration, amount of pollutants emitted) and implementation of corrective actions if necessary.

1.4. **Energy efficiency**

BAT 19. In order to increase the resource efficiency of the incineration plant, BAT is to use a heat recovery boiler.

*Description*

The energy contained in the flue-gas is recovered in a heat recovery boiler producing hot water and/or steam, which may be exported, used internally, and/or used to produce electricity.

*Applicability*

In the case of plants dedicated to the incineration of hazardous waste, the applicability may be limited by:

— the stickiness of the fly ashes;

— the corrosiveness of the flue-gas.

BAT 20. In order to increase the energy efficiency of the incineration plant, BAT is to use an appropriate combination of the techniques given below.
<table>
<thead>
<tr>
<th>Technique Description</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Drying of sewage sludge</td>
<td>Applicable within the constraints associated with the availability of low-grade heat.</td>
</tr>
<tr>
<td>After mechanical dewatering, sewage sludge is further dried, using for example low-grade heat, before it is fed to the furnace. The extent to which sludge can be dried depends on the furnace feeding system.</td>
<td></td>
</tr>
<tr>
<td>(b) Reduction of the flue-gas flow</td>
<td>For existing plants, the applicability of flue-gas recirculation may be limited due to technical constraints (e.g. pollutant load in the flue-gas, incineration conditions).</td>
</tr>
<tr>
<td>The flue-gas flow is reduced through, e.g.: — improving the primary and secondary combustion air distribution; — flue-gas recirculation (see Section 2.2). A smaller flue-gas flow reduces the energy demand of the plant (e.g. for induced draught fans).</td>
<td></td>
</tr>
<tr>
<td>(c) Minimisation of heat losses</td>
<td>Integral furnace-boilers are not applicable to rotary kilns or to other furnaces dedicated to the high-temperature incineration of hazardous waste.</td>
</tr>
<tr>
<td>Heat losses are minimised through, e.g.: — use of integral furnace-boilers, allowing for heat to also be recovered from the furnace sides; — thermal insulation of furnaces and boilers; — flue-gas recirculation (see Section 2.2); — recovery of heat from the cooling of slags and bottom ashes (see BAT 20 (i)).</td>
<td></td>
</tr>
<tr>
<td>(d) Optimisation of the boiler design</td>
<td>Applicable to new plants and to major retrofits of existing plants.</td>
</tr>
<tr>
<td>The heat transfer in the boiler is improved by optimising, for example, the: — flue-gas velocity and distribution; — water/steam circulation; — convection bundles; — on-line and off-line boiler cleaning systems in order to minimise the fouling of the convection bundles.</td>
<td></td>
</tr>
<tr>
<td>(e) Low-temperature flue-gas heat exchangers</td>
<td>Applicable within the constraints of the operating temperature profile of the FGC system. In the case of existing plants, the applicability may be limited by a lack of space.</td>
</tr>
<tr>
<td>Special corrosion-resistant heat exchangers are used to recover additional energy from the flue-gas at the boiler exit, after an ESP, or after a dry sorbent injection system.</td>
<td></td>
</tr>
<tr>
<td>(f) High steam conditions</td>
<td>Applicable to new plants and to major retrofits of existing plants, where the plant is mainly oriented towards the generation of electricity. The applicability may be limited by: — the stickiness of the fly ashes; — the corrosiveness of the flue-gas.</td>
</tr>
<tr>
<td>The higher the steam conditions (temperature and pressure), the higher the electricity conversion efficiency allowed by the steam cycle. Working at high steam conditions (e.g. above 45 bar, 400 °C) requires the use of special steel alloys or refractory cladding to protect the boiler sections that are exposed to the highest temperatures.</td>
<td></td>
</tr>
</tbody>
</table>
(g) Cogeneration
Cogeneration of heat and electricity where the heat (mainly from the steam that leaves the turbine) is used for producing hot water/steam to be used in industrial processes/activities or in a district heating/cooling network.

Applicable within the constraints associated with the local heat and power demand and/or availability of networks.

(h) Flue-gas condenser
A heat exchanger or a scrubber with a heat exchanger, where the water vapour contained in the flue-gas condenses, transferring the latent heat to water at a sufficiently low temperature (e.g. return flow of a district heating network). The flue-gas condenser also provides co-benefits by reducing emissions to air (e.g. of dust and acid gases). The use of heat pumps can increase the amount of energy recovered from flue-gas condensation.

Applicable within the constraints associated with the demand for low-temperature heat, e.g. by the availability of a district heating network with a sufficiently low return temperature.

(i) Dry bottom ash handling
Dry, hot bottom ash falls from the grate onto a transport system and is cooled down by ambient air. Energy is recovered by using the cooling air for combustion.

Only applicable to grate furnaces. There may be technical restrictions that prevent retrofitting to existing furnaces.

Table 2

BAT-associated energy efficiency levels (BAT-AEELs) for the incineration of waste (%)

<table>
<thead>
<tr>
<th>BAT-AEEL</th>
<th>Municipal solid waste, other non-hazardous waste and hazardous wood waste</th>
<th>Hazardous waste other than hazardous wood waste (†)</th>
<th>Sewage sludge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gross electrical efficiency (‡) (†)</td>
<td>Gross energy efficiency (†)</td>
<td>Boiler efficiency</td>
</tr>
<tr>
<td>Existing plant</td>
<td>20–35</td>
<td></td>
<td>60–70 (†)</td>
</tr>
</tbody>
</table>

(†) The BAT-AEEL only applies where a heat recovery boiler is applicable.
(‡) The BAT-AEELs for gross electrical efficiency only apply to plants or parts of plants producing electricity using a condensing turbine.
(†) The higher end of the BAT-AEEL range can be achieved when using BAT 20(j).
(‡) The BAT-AEELs for gross energy efficiency only apply to plants or parts of plants producing only heat or producing electricity using a back-pressure turbine and heat with the steam leaving the turbine.
(†) A gross energy efficiency exceeding the higher end of the BAT-AEEL range (even above 100 %) can be achieved where a flue-gas condenser is used.
(†) For the incineration of sewage sludge, the boiler efficiency is highly dependent on the water content of the sewage sludge as fed into the furnace.

The associated monitoring is in BAT 2.
1.5. **Emissions to air**

1.5.1. **Diffuse emissions**

**BAT 21.** In order to prevent or reduce diffuse emissions from the incineration plant, including odour emissions, BAT is to:

— store solid and bulk pasty wastes that are odorous and/or prone to releasing volatile substances in enclosed buildings under controlled subatmospheric pressure and use the extracted air as combustion air for incineration or send it to another suitable abatement system in the case of a risk of explosion;

— store liquid wastes in tanks under appropriate controlled pressure and duct the tank vents to the combustion air feed or to another suitable abatement system;

— control the risk of odour during complete shutdown periods when no incineration capacity is available, e.g. by:

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Enclose and cover</td>
<td>Enclose/encapsulate potentially dusty operations (such as grinding, screening)</td>
<td>Installing the equipment in a closed building may not be applicable to mobile treatment devices.</td>
</tr>
<tr>
<td>equipment</td>
<td>and/or cover conveyors and elevators. Enclosure can also be accomplished by</td>
<td></td>
</tr>
<tr>
<td></td>
<td>installing all of the equipment in a closed building.</td>
<td></td>
</tr>
</tbody>
</table>

**BAT 22.** In order to prevent diffuse emissions of volatile compounds from the handling of gaseous and liquid wastes that are odorous and/or prone to releasing volatile substances at incineration plants, BAT is to introduce them into the furnace by direct feeding.

**Description**

For gaseous and liquid wastes delivered in bulk waste containers (e.g. tankers), direct feeding is carried out by connecting the waste container to the furnace feeding line. The container is then emptied by pressurising it with nitrogen or, if the viscosity is low enough, by pumping the liquid.

For gaseous and liquid wastes delivered in waste containers suitable for incineration (e.g. drums), direct feeding is carried out by introducing the containers directly in the furnace.

**Applicability**

May not be applicable to the incineration of sewage sludge depending, for example, on the water content and on the need for pre-drying or mixing with other wastes.

**BAT 23.** In order to prevent or reduce diffuse dust emissions to air from the treatment of slags and bottom ashes, BAT is to include in the environmental management system (see BAT 1) the following diffuse dust emissions management features:

— identification of the most relevant diffuse dust emission sources (e.g. using EN 15445);

— definition and implementation of appropriate actions and techniques to prevent or reduce diffuse emissions over a given time frame.

**BAT 24.** In order to prevent or reduce diffuse dust emissions to air from the treatment of slags and bottom ashes, BAT is to use an appropriate combination of the techniques given below.
<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Limit height of discharge</td>
<td>Match the discharge height to the varying height of the heap, automatically if possible (e.g. conveyor belts with adjustable heights).</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(c) Protect stockpiles against prevailing winds</td>
<td>Protect bulk storage areas or stockpiles with covers or wind barriers such as screening, walling or vertical greenery, as well as correctly orienting the stockpiles in relation to the prevailing wind.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(d) Use water sprays</td>
<td>Install water spray systems at the main sources of diffuse dust emissions. The humidification of dust particles aids dust agglomeration and settling. Diffuse dust emissions at stockpiles are reduced by ensuring appropriate humidification of the charging and discharging points, or of the stockpiles themselves.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(e) Optimise moisture content</td>
<td>Optimise the moisture content of the slags/bottom ashes to the level required for efficient recovery of metals and mineral materials while minimising the dust release.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(f) Operate under sub-atmospheric pressure</td>
<td>Carry out the treatment of slags and bottom ashes in enclosed equipment or buildings (see technique a) under sub-atmospheric pressure to enable treatment of the extracted air with an abatement technique (see BAT 26) as channelled emissions.</td>
<td>Only applicable to dry-discharged and other low-moisture bottom ashes.</td>
</tr>
</tbody>
</table>

1.5.2. Channelled emissions

1.5.2.1. Emissions of dust, metals and metalloids

BAT 25. In order to reduce channelled emissions to air of dust, metals and metalloids from the incineration of waste, BAT is to use one or a combination of the techniques given below.

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Bag filter</td>
<td>See Section 2.2</td>
<td>Generally applicable to new plants. Applicable to existing plants within the constraints associated with the operating temperature profile of the FGC system.</td>
</tr>
<tr>
<td>(b) Electrostatic precipitator</td>
<td>See Section 2.2</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>Technique</td>
<td>Description</td>
<td>Applicability</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td>(c) Dry sorbent injection</td>
<td>See Section 2.2. Not relevant for the reduction of dust emissions. Adsorption of metals by injection of activated carbon or other reagents in combination with a dry sorbent injection system or a semi-wet absorber that is used to reduce acid gas emissions.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(d) Wet scrubber</td>
<td>See Section 2.2. Wet scrubbing systems are not used to remove the main dust load but, installed after other abatement techniques, to further reduce the concentrations of dust, metals and metalloids in the flue-gas.</td>
<td>There may be applicability restrictions due to low water availability, e.g. in arid areas.</td>
</tr>
<tr>
<td>(e) Fixed- or moving-bed adsorption</td>
<td>See Section 2.2. The system is used mainly to adsorb mercury and other metals and metalloids as well as organic compounds including PCDD/F, but also acts as an effective polishing filter for dust.</td>
<td>The applicability may be limited by the overall pressure drop associated with the FGC system configuration. In the case of existing plants, the applicability may be limited by a lack of space.</td>
</tr>
</tbody>
</table>

**Table 3**

**BAT-associated emission levels (BAT-AELs) for channelled emissions to air of dust, metals and metalloids from the incineration of waste**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>BAT-AEL</th>
<th>Averaging period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust &lt; 2–5 (\textsuperscript{1})</td>
<td>Daily average</td>
<td></td>
</tr>
<tr>
<td>Cd+Tl 0,005–0,02</td>
<td>Average over the sampling period</td>
<td></td>
</tr>
<tr>
<td>Sb+As+Pb+Cr+Co+Cu+Mn+Ni+V 0,01–0,3</td>
<td>Average over the sampling period</td>
<td></td>
</tr>
</tbody>
</table>

\(\textsuperscript{1}\) For existing plants dedicated to the incineration of hazardous waste and for which a bag filter is not applicable, the higher end of the BAT-AEL range is 7 mg/Nm\(^3\).

The associated monitoring is in BAT 4.

BAT 26. In order to reduce channelled dust emissions to air from the enclosed treatment of slags and bottom ashes with extraction of air (see BAT 24(f)), BAT is to treat the extracted air with a bag filter (see Section 2.2).
Table 4

BAT-associated emission levels (BAT-AELs) for channelled dust emissions to air from the enclosed treatment of slags and bottom ashes with extraction of air

<table>
<thead>
<tr>
<th>Parameter</th>
<th>BAT-AEL</th>
<th>Averaging period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust</td>
<td>2–5</td>
<td>Average over the sampling period</td>
</tr>
</tbody>
</table>

The associated monitoring is in BAT 4.

1.5.2.2. Emissions of HCl, HF and SO₂

BAT 27. In order to reduce channelled emissions of HCl, HF and SO₂ to air from the incineration of waste, BAT is to use one or a combination of the techniques given below.

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Wet scrubber</td>
<td>See Section 2.2</td>
<td>There may be applicability restrictions due to low water availability, e.g. in arid areas.</td>
</tr>
<tr>
<td>(b) Semi-wet absorber</td>
<td>See Section 2.2</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(c) Dry sorbent injection</td>
<td>See Section 2.2</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(d) Direct desulphurisation</td>
<td>See Section 2.2</td>
<td>Only applicable to fluidised bed furnaces.</td>
</tr>
<tr>
<td>(e) Boiler sorbent injection</td>
<td>See Section 2.2</td>
<td>Generally applicable.</td>
</tr>
</tbody>
</table>

BAT 28. In order to reduce channelled peak emissions of HCl, HF and SO₂ to air from the incineration of waste while limiting the consumption of reagents and the amount of residues generated from dry sorbent injection and semi-wet absorbers, BAT is to use technique (a) or both of the techniques given below.

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Optimised and automated reagent dosage</td>
<td>The use of continuous HCl and/or SO₂ measurements (and/or of other parameters that may prove useful for this purpose) upstream and/or downstream of the FGC system for the optimisation of the automated reagent dosage.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(b) Recirculation of reagents</td>
<td>The recirculation of a proportion of the collected FGC solids to reduce the amount of unreacted reagent(s) in the residues. The technique is particularly relevant in the case of FGC techniques operating with a high stoichiometric excess.</td>
<td>Generally applicable to new plants. Applicable to existing plants within the constraints of the size of the bag filter.</td>
</tr>
</tbody>
</table>
Table 5

BAT-associated emission levels (BAT-AELs) for channelled emissions to air of HCl, HF and SO2 from the incineration of waste

<table>
<thead>
<tr>
<th>Parameter</th>
<th>BAT-AEL (mg/Nm³)</th>
<th>Averaging period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New plant</td>
<td>Existing plant</td>
</tr>
<tr>
<td>HCl</td>
<td>&lt; 2–6 (¹)</td>
<td>&lt; 2–8 (¹)</td>
</tr>
<tr>
<td>HF</td>
<td>&lt; 1</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>SO₂</td>
<td>5–30</td>
<td>5–40</td>
</tr>
</tbody>
</table>

(¹) The lower end of the BAT-AEL range can be achieved when using a wet scrubber; the higher end of the range may be associated with the use of dry sorbent injection.

The associated monitoring is in BAT 4.

1.5.2.3. Emissions of NOₓ, N₂O, CO and NH₃

BAT 29. In order to reduce channelled NOₓ emissions to air while limiting the emissions of CO and N₂O from the incineration of waste and the emissions of NH₃ from the use of SNCR and/or SCR, BAT is to use an appropriate combination of the techniques given below.

<table>
<thead>
<tr>
<th>Technique Description</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Optimisation of the incineration process</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(b) Flue-gas recirculation</td>
<td>For existing plants, the applicability may be limited due to technical constraints (e.g. pollutant load in the flue-gas, incineration conditions).</td>
</tr>
<tr>
<td>(c) Selective non-catalytic reduction (SNCR)</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(d) Selective catalytic reduction (SCR)</td>
<td>In the case of existing plants, the applicability may be limited by a lack of space.</td>
</tr>
<tr>
<td>(e) Catalytic filter bags</td>
<td>Only applicable to plants fitted with a bag filter.</td>
</tr>
<tr>
<td>(f) Optimisation of the SNCR/SCR design and operation</td>
<td>Only applicable where SNCR and/or SCR is used for the reduction of NOₓ emissions.</td>
</tr>
<tr>
<td>(g) Wet scrubber</td>
<td>There may be applicability restrictions due to low water availability, e.g. in arid areas.</td>
</tr>
</tbody>
</table>
### Table 6

**BAT-associated emission levels (BAT-AELs) for channelled NO\textsubscript{X} and CO emissions to air from the incineration of waste and for channelled NH\textsubscript{3} emissions to air from the use of SNCR and/or SCR**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>BAT-AEL ((\text{mg/Nm}^3))</th>
<th>Averaging period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New plant</td>
<td>Existing plant</td>
</tr>
<tr>
<td>NO\textsubscript{X}</td>
<td>50–120 (\dagger)</td>
<td>50–150 (\dagger) (\ddagger)</td>
</tr>
<tr>
<td>CO</td>
<td>10–50</td>
<td>10–50</td>
</tr>
<tr>
<td>NH\textsubscript{3}</td>
<td>2–10 (\dagger)</td>
<td>2–10 (\dagger) (\ddagger)</td>
</tr>
</tbody>
</table>

\(\dagger\) The lower end of the BAT-AEL range can be achieved when using SCR. The lower end of the BAT-AEL range may not be achievable when incinerating waste with a high nitrogen content (e.g. residues from the production of organic nitrogen compounds).

\(\ddagger\) The higher end of the BAT-AEL range is 180 \text{mg/Nm}^3 where SCR is not applicable.

\(\dagger\) For existing plants fitted with SNCR without wet abatement techniques, the higher end of the BAT-AEL range is 15 \text{mg/Nm}^3.

The associated monitoring is in BAT 4.

#### 1.5.2.4. Emissions of organic compounds

**BAT 30.** In order to reduce channelled emissions to air of organic compounds including PCDD/F and PCBs from the incineration of waste, BAT is to use techniques (a), (b), (c), (d), and one or a combination of techniques (e) to (l) given below.

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Optimisation of the incineration process</td>
<td>See Section 2.1. Optimisation of incineration parameters to promote the oxidation of organic compounds including PCDD/F and PCBs present in the waste, and to prevent their and their precursors’ (re) formation.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(b) Control of the waste feed</td>
<td>Knowledge and control of the combustion characteristics of the waste being fed into the furnace, to ensure optimal and, as far as possible, homogeneous and stable incineration conditions.</td>
<td>Not applicable to clinical waste or to municipal solid waste.</td>
</tr>
<tr>
<td>(c) On-line and off-line boiler cleaning</td>
<td>Efficient cleaning of the boiler bundles to reduce the dust residence time and accumulation in the boiler, thus reducing PCDD/F formation in the boiler. A combination of on-line and off-line boiler cleaning techniques is used.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>Technique</td>
<td>Description</td>
<td>Applicability</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td>(d) Rapid flue-gas cooling</td>
<td>Rapid cooling of the flue-gas from temperatures above 400 °C to below 250 °C before dust abatement to prevent the de novo synthesis of PCDD/F. This is achieved by appropriate design of the boiler and/or with the use of a quench system. The latter option limits the amount of energy that can be recovered from the flue-gas and is used in particular in the case of incinerating hazardous wastes with a high halogen content.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(e) Dry sorbent injection</td>
<td>See Section 2.2. Adsorption by injection of activated carbon or other reagents, generally combined with a bag filter where a reaction layer is created in the filter cake and the solids generated are removed.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(f) Fixed- or moving-bed adsorption</td>
<td>See Section 2.2.</td>
<td>The applicability may be limited by the overall pressure drop associated with the FGC system. In the case of existing plants, the applicability may be limited by a lack of space.</td>
</tr>
<tr>
<td>(g) SCR</td>
<td>See Section 2.2. Where SCR is used for NOx abatement, the adequate catalyst surface of the SCR system also provides for the partial reduction of the emissions of PCDD/F and PCBs. The technique is generally used in combination with technique (e), (f) or (i).</td>
<td>In the case of existing plants, the applicability may be limited by a lack of space.</td>
</tr>
<tr>
<td>(h) Catalytic filter bags</td>
<td>See Section 2.2</td>
<td>Only applicable to plants fitted with a bag filter.</td>
</tr>
<tr>
<td>(i) Carbon sorbent in a wet scrubber</td>
<td>PCDD/F and PCBs are adsorbed by carbon sorbent added to the wet scrubber, either in the scrubbing liquor or in the form of impregnated packing elements. The technique is used for the removal of PCDD/F in general, and also to prevent and/or reduce the re-emission of PCDD/F accumulated in the scrubber (the so-called memory effect) occurring especially during shutdown and start-up periods.</td>
<td>Only applicable to plants fitted with a wet scrubber.</td>
</tr>
</tbody>
</table>
Table 7

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>BAT-AEL</th>
<th>Averaging period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>New plant</td>
<td>Existing plant</td>
</tr>
<tr>
<td>TVOC</td>
<td>mg/Nm³</td>
<td>&lt; 3–10</td>
<td>&lt; 3–10</td>
</tr>
<tr>
<td>PCDD/F (¹)</td>
<td>ng I-TEQ/Nm³</td>
<td>&lt; 0,01–0,04</td>
<td>&lt; 0,01–0,06</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt; 0,01–0,06</td>
<td>&lt; 0,01–0,08</td>
</tr>
<tr>
<td>PCDD/F + dioxin-like PCBs (³)</td>
<td>ng WHO-TEQ/Nm³</td>
<td>&lt; 0,01–0,06</td>
<td>&lt; 0,01–0,08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt; 0,01–0,08</td>
<td>&lt; 0,01–0,1</td>
</tr>
</tbody>
</table>

(¹) Either the BAT-AEL for PCDD/F or the BAT-AEL for PCDD/F + dioxin-like PCBs applies.
(²) The BAT-AEL does not apply if the emission levels are proven to be sufficiently stable.

The associated monitoring is in BAT 4.

1.5.2.5. Emissions of mercury

BAT 31. In order to reduce channelled mercury emissions to air (including mercury emission peaks) from the incineration of waste, BAT is to use one or a combination of the techniques given below.

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Wet scrubber (low pH)</td>
<td>See Section 2.2. A wet scrubber operated at a pH value around 1. The mercury removal rate of the technique can be enhanced by adding reagents and/or adsorbents to the scrubbing liquor, e.g.: — oxidants such as hydrogen peroxide to transform elemental mercury to a water-soluble oxidised form; — sulphur compounds to form stable complexes or salts with mercury; — carbon sorbent to adsorb mercury, including elemental mercury. When designed for a sufficiently high buffer capacity for mercury capture, the technique effectively prevents the occurrence of mercury emission peaks.</td>
<td>There may be applicability restrictions due to low water availability, e.g. in arid areas.</td>
</tr>
<tr>
<td>(b) Dry sorbent injection</td>
<td>See Section 2.2. Adsorption by injection of activated carbon or other reagents, generally combined with a bag filter where a reaction layer is created in the filter cake and the solids generated are removed.</td>
<td>Generally applicable.</td>
</tr>
</tbody>
</table>
Table 8

BAT-associated emission levels (BAT-AELs) for channelled mercury emissions to air from the incineration of waste

(µg/Nm³)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>BAT-AEL (1)</th>
<th>Averaging period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New plant</td>
<td>Existing plant</td>
</tr>
<tr>
<td>Hg</td>
<td>&lt; 5–20 (2)</td>
<td>&lt; 5–20 (²)</td>
</tr>
<tr>
<td></td>
<td>1–10</td>
<td>1–10</td>
</tr>
</tbody>
</table>

(1) Either the BAT-AEL for daily average or average over the sampling period or the BAT-AEL for long-term sampling period applies. The BAT-AEL for long-term sampling may apply in the case of plants incinerating waste with a proven low and stable mercury content (e.g. mono-streams of waste of a controlled composition).

(2) The lower end of the BAT-AEL ranges may be achieved when:
   — incinerating wastes with a proven low and stable mercury content (e.g. mono-streams of waste of a controlled composition), or
   — using specific techniques to prevent or reduce the occurrence of mercury peak emissions while incinerating non-hazardous waste. The higher end of the BAT-AEL ranges may be associated with the use of dry sorbent injection.
As an indication, the half-hourly average mercury emission levels will generally be:

— $< 15–40 \mu g/Nm^3$ for existing plants;
— $< 15–35 \mu g/Nm^3$ for new plants.

The associated monitoring is in BAT 4.

1.6. **Emissions to water**

BAT 32. In order to prevent the contamination of uncontaminated water, to reduce emissions to water, and to increase resource efficiency, BAT is to segregate waste water streams and to treat them separately, depending on their characteristics.

**Description**

Waste water streams (e.g. surface run-off water, cooling water, waste water from flue-gas treatment and from bottom ash treatment, drainage water collected from the waste reception, handling and storage areas (see BAT 12 (a))) are segregated to be treated separately based on their characteristics and on the combination of treatment techniques required. Uncontaminated water streams are segregated from waste water streams that require treatment.

When recovering hydrochloric acid and/or gypsum from the scrubber’s effluent, the waste waters arising from the different stages (acidic and alkaline) of the wet scrubbing system are treated separately.

**Applicability**

Generally applicable to new plants.

Applicable to existing plants within the constraints associated with the configuration of the water collection system.

BAT 33. In order to reduce water usage and to prevent or reduce the generation of waste water from the incineration plant, BAT is to use one or a combination of the techniques given below.

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Waste-water-free FGC techniques</td>
<td>Use of FGC techniques that do not generate waste water (e.g. dry sorbent injection or semi-wet absorber, see Section 2.2).</td>
<td>May not be applicable to the incineration of hazardous waste with a high halogen content.</td>
</tr>
<tr>
<td>(b) Injection of waste water from FGC</td>
<td>Waste water from FGC is injected into the hotter parts of the FGC system.</td>
<td>Only applicable to the incineration of municipal solid waste.</td>
</tr>
<tr>
<td>(c) Water reuse/recycling</td>
<td>Residual aqueous streams are reused or recycled. The degree of reuse/recycling is limited by the quality requirements of the process to which the water is directed.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(d) Dry bottom ash handling</td>
<td>Dry, hot bottom ash falls from the grate onto a transport system and is cooled down by ambient air. No water is used in the process.</td>
<td>Only applicable to grate furnaces. There may be technical restrictions that prevent retrofitting to existing incineration plants.</td>
</tr>
</tbody>
</table>

BAT 34. In order to reduce emissions to water from FGC and/or from the storage and treatment of slags and bottom ashes, BAT is to use an appropriate combination of the techniques given below, and to use secondary techniques as close as possible to the source in order to avoid dilution.
<table>
<thead>
<tr>
<th>Technique</th>
<th>Typical pollutants targeted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary techniques</td>
<td></td>
</tr>
<tr>
<td>(a) Optimisation of the incineration process (see BAT 14) and/or of the FGC system (e.g. SNCR/SCR, see BAT 29(f))</td>
<td>Organic compounds including PCDD/F, ammonia/ammonium</td>
</tr>
<tr>
<td>Secondary techniques (1)</td>
<td></td>
</tr>
<tr>
<td>(b) Equalisation</td>
<td>All pollutants</td>
</tr>
<tr>
<td>(c) Neutralisation</td>
<td>Acids, alkalis</td>
</tr>
<tr>
<td>(d) Physical separation, e.g. screens, sieves, grit separators, primary settlement tanks</td>
<td>Gross solids, suspended solids</td>
</tr>
<tr>
<td>Physico-chemical treatment</td>
<td></td>
</tr>
<tr>
<td>(e) Adsorption on activated carbon</td>
<td>Organic compounds including PCDD/F, mercury</td>
</tr>
<tr>
<td>(f) Precipitation</td>
<td>Dissolved metals/metalloids, sulphate</td>
</tr>
<tr>
<td>(g) Oxidation</td>
<td>Sulphide, sulphite, organic compounds</td>
</tr>
<tr>
<td>(h) Ion exchange</td>
<td>Dissolved metals/metalloids</td>
</tr>
<tr>
<td>(i) Stripping</td>
<td>Purgeable pollutants (e.g. ammonia/ammonium)</td>
</tr>
<tr>
<td>(j) Reverse osmosis</td>
<td>Ammonia/ammonium, metals/metalloids, sulphate, chloride, organic compounds</td>
</tr>
<tr>
<td>Final solids removal</td>
<td></td>
</tr>
<tr>
<td>(k) Coagulation and flocculation</td>
<td>Suspended solids, particulate-bound metals/metalloids</td>
</tr>
<tr>
<td>(l) Sedimentation</td>
<td></td>
</tr>
<tr>
<td>(m) Filtration</td>
<td></td>
</tr>
<tr>
<td>(n) Flotation</td>
<td></td>
</tr>
</tbody>
</table>

(1) The descriptions of the techniques are given in Section 2.3.

Table 9

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Process</th>
<th>Unit</th>
<th>BAT-AEL (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total suspended solids (TSS)</td>
<td>FGC Bottom ash treatment</td>
<td></td>
<td>10–30</td>
</tr>
<tr>
<td>Total organic carbon (TOC)</td>
<td>FGC Bottom ash treatment</td>
<td></td>
<td>15–40</td>
</tr>
<tr>
<td>Metals and metalloids</td>
<td>FGC</td>
<td>mg/l</td>
<td></td>
</tr>
<tr>
<td>As</td>
<td>FGC</td>
<td></td>
<td>0.01–0.05</td>
</tr>
<tr>
<td>Cd</td>
<td>FGC</td>
<td></td>
<td>0.005–0.03</td>
</tr>
<tr>
<td>Cr</td>
<td>FGC</td>
<td></td>
<td>0.01–0.1</td>
</tr>
<tr>
<td>Cu</td>
<td>FGC</td>
<td></td>
<td>0.03–0.15</td>
</tr>
<tr>
<td>Hg</td>
<td>FGC</td>
<td></td>
<td>0.001–0.01</td>
</tr>
<tr>
<td>Ni</td>
<td>FGC</td>
<td></td>
<td>0.03–0.15</td>
</tr>
</tbody>
</table>
### Table 10

**BAT-AELs for indirect emissions to a receiving water body**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Process</th>
<th>Unit</th>
<th>BAT-AEL (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Metals and metalloids</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>As</td>
<td>FGC</td>
<td>mg/l</td>
<td>0.01–0.05</td>
</tr>
<tr>
<td>Cd</td>
<td>FGC</td>
<td></td>
<td>0.005–0.03</td>
</tr>
<tr>
<td>Cr</td>
<td>FGC</td>
<td></td>
<td>0.01–0.1</td>
</tr>
<tr>
<td>Cu</td>
<td>FGC</td>
<td></td>
<td>0.03–0.15</td>
</tr>
<tr>
<td>Hg</td>
<td>FGC</td>
<td></td>
<td>0.001–0.01</td>
</tr>
<tr>
<td>Ni</td>
<td>FGC</td>
<td></td>
<td>0.03–0.15</td>
</tr>
<tr>
<td>Pb</td>
<td>FGC</td>
<td></td>
<td>0.02–0.06</td>
</tr>
<tr>
<td>Sb</td>
<td>FGC</td>
<td></td>
<td>0.02–0.9</td>
</tr>
<tr>
<td>Tl</td>
<td>FGC</td>
<td></td>
<td>0.005–0.03</td>
</tr>
<tr>
<td>Zn</td>
<td>FGC</td>
<td></td>
<td>0.01–0.5</td>
</tr>
<tr>
<td>PCDD/F</td>
<td>FGC</td>
<td>ng l-TEQ/l</td>
<td>0.01–0.05</td>
</tr>
</tbody>
</table>

(1) The averaging periods are defined in the General considerations.

(2) The BAT-AELs may not apply if the downstream waste water treatment plant is designed and equipped appropriately to abate the pollutants concerned, provided this does not lead to a higher level of pollution in the environment.

The associated monitoring is in BAT 6.

### 1.7. Material efficiency

**BAT 35.** In order to increase resource efficiency, BAT is to handle and treat bottom ashes separately from FGC residues.

**BAT 36.** In order to increase resource efficiency for the treatment of slags and bottom ashes, BAT is to use an appropriate combination of the techniques given below based on a risk assessment depending on the hazardous properties of the slags and bottom ashes.
<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Screening and sieving</td>
<td>Oscillating screens, vibrating screens and rotary screens are used for an initial classification of the bottom ashes by size before further treatment.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(b) Crushing</td>
<td>Mechanical treatment operations intended to prepare materials for the recovery of metals or for the subsequent use of those materials, e.g. in road and earthworks construction.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(c) Aeralic separation</td>
<td>Aeralic separation is used to sort the light, unburnt fractions commingled in the bottom ashes by blowing off light fragments. A vibrating table is used to transport the bottom ashes to a chute, where the material falls through an air stream that blows uncombusted light materials, such as wood, paper or plastic, onto a removal belt or into a container, so that they can be returned to incineration.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(d) Recovery of ferrous and non-ferrous metals</td>
<td>Different techniques are used, including: — magnetic separation for ferrous metals; — eddy current separation for non-ferrous metals; — induction all-metal separation.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(e) Ageing</td>
<td>The ageing process stabilises the mineral fraction of the bottom ashes by uptake of atmospheric CO₂ (carbonation), draining of excess water and oxidation. Bottom ashes, after the recovery of metals, are stored in the open air or in covered buildings for several weeks, generally on an impermeable floor allowing for drainage and run-off water to be collected for treatment. The stockpiles may be wetted to optimise the moisture content to favour the leaching of salts and the carbonation process. The wetting of bottom ashes also helps prevent dust emissions.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(f) Washing</td>
<td>The washing of bottom ashes enables the production of a material for recycling with minimal leachability of soluble substances (e.g. salts).</td>
<td>Generally applicable.</td>
</tr>
</tbody>
</table>
1.8. **Noise**

BA T 37. In order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to use one or a combination of the techniques given below.

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Appropriate location of equipment and buildings</td>
<td>Noise levels can be reduced by increasing the distance between the emitter and the receiver and by using buildings as noise screens.</td>
<td>In the case of existing plants, the relocation of equipment may be restricted by a lack of space or by excessive costs.</td>
</tr>
<tr>
<td>(b) Operational measures</td>
<td>These include: — improved inspection and maintenance of equipment; — closing of doors and windows of enclosed areas, if possible; — operation of equipment by experienced staff; — avoidance of noisy activities at night, if possible; — provisions for noise control during maintenance activities.</td>
<td>Generally applicable.</td>
</tr>
<tr>
<td>(c) Low-noise equipment</td>
<td>This includes low-noise compressors, pumps and fans.</td>
<td>Generally applicable when existing equipment is replaced or new equipment is installed.</td>
</tr>
<tr>
<td>(d) Noise attenuation</td>
<td>Noise propagation can be reduced by inserting obstacles between the emitter and the receiver. Appropriate obstacles include protection walls, embankments and buildings.</td>
<td>In the case of existing plants, the insertion of obstacles may be restricted by a lack of space.</td>
</tr>
<tr>
<td>(e) Noise-control equipment/infrastructure</td>
<td>This includes: — noise-reducers; — equipment insulation; — enclosure of noisy equipment; — soundproofing of buildings.</td>
<td>In the case of existing plants, the applicability may be limited by a lack of space.</td>
</tr>
</tbody>
</table>

2. **DESCRIPTIONS OF TECHNIQUES**

2.1. **General techniques**

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced control system</td>
<td>The use of a computer-based automatic system to control the combustion efficiency and support the prevention and/or reduction of emissions. This also includes the use of high-performance monitoring of operating parameters and of emissions.</td>
</tr>
<tr>
<td>Optimisation of the incineration process</td>
<td>Optimisation of the waste feed rate and composition, of the temperature, and of the flow rates and points of injection of the primary and secondary combustion air to effectively oxidise the organic compounds while reducing the generation of NOx.</td>
</tr>
<tr>
<td>Technique</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>Optimisation of the design and operation of the furnace (e.g. flue-gas temperature and turbulence, flue-gas and waste residence time, oxygen level, waste agitation).</td>
<td></td>
</tr>
</tbody>
</table>

### 2.2. Techniques to reduce emissions to air

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bag filter</td>
<td>Bag or fabric filters are constructed from porous woven or felted fabric through which gases are passed to remove particles. The use of a bag filter requires the selection of a fabric suitable for the characteristics of the flue-gas and the maximum operating temperature.</td>
</tr>
<tr>
<td>Boiler sorbent injection</td>
<td>The injection of magnesium- or calcium-based absorbents at a high temperature in the boiler post-combustion area, to achieve partial abatement of acid gases. The technique is highly effective for the removal of SO₂ and HF, and provides additional benefits in terms of flattening emission peaks.</td>
</tr>
<tr>
<td>Catalytic filter bags</td>
<td>Filter bags are either impregnated with a catalyst or the catalyst is directly mixed with organic material in the production of the fibres used for the filter medium. Such filters can be used to reduce PCDD/F emissions as well as, in combination with a source of NH₃, to reduce NOₓ emissions.</td>
</tr>
<tr>
<td>Direct desulphurisation</td>
<td>The addition of magnesium- or calcium-based absorbents to the bed of a fluidised bed furnace.</td>
</tr>
<tr>
<td>Dry sorbent injection</td>
<td>The injection and dispersion of sorbent in the form of a dry powder in the flue-gas stream. Alkaline sorbents (e.g. sodium bicarbonate, hydrated lime) are injected to react with acid gases (HCl, HF and SO₂). Activated carbon is injected or co-injected to adsorb in particular PCDD/F and mercury. The resulting solids are removed, most often with a bag filter. The excess reactive agents may be recirculated to decrease their consumption, possibly after reactivation by maturation or steam injection (see BAT 28(b)).</td>
</tr>
<tr>
<td>Electrostatic precipitator</td>
<td>Electrostatic precipitators (ESPs) operate such that particles are charged and separated under the influence of an electrical field. Electrostatic precipitators are capable of operating under a wide range of conditions. The abatement efficiency may depend on the number of fields, residence time (size), and upstream particle removal devices. They generally include between two and five fields. Electrostatic precipitators can be of the dry or of the wet type depending on the technique used to collect the dust from the electrodes. Wet ESPs are typically used at the polishing stage to remove residual dust and droplets after wet scrubbing.</td>
</tr>
<tr>
<td>Fixed- or moving-bed adsorption</td>
<td>The flue-gas is passed through a fixed- or a moving-bed filter where an adsorbent (e.g. activated coke, activated lignite or a carbon-impregnated polymer) is used to adsorb pollutants.</td>
</tr>
<tr>
<td>Technique</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Flue-gas recirculation</td>
<td>Recirculation of a part of the flue-gas to the furnace to replace a part of the fresh combustion air, with the dual effect of cooling the temperature and limiting the $O_2$ content for nitrogen oxidation, thus limiting the NO$_x$ generation. It implies the supply of flue-gas from the furnace into the flame to reduce the oxygen content and therefore the temperature of the flame. This technique also reduces the flue-gas energy losses. Energy savings are also achieved when the recirculated flue-gas is extracted before FGC, by reducing the gas flow through the FGC system.</td>
</tr>
<tr>
<td>Selective catalytic reduction (SCR)</td>
<td>Selective reduction of nitrogen oxides with ammonia or urea in the presence of a catalyst. The technique is based on the reduction of NO$_x$ to nitrogen in a catalytic bed by reaction with ammonia at an optimum operating temperature that is typically around 200–450 °C for the high-dust type and 170–250 °C for the tail-end type. In general, ammonia is injected as an aqueous solution; the ammonia source can also be anhydrous ammonia or a urea solution. Several layers of catalyst may be applied. A higher NO$_x$ reduction is achieved with the use of a larger catalyst surface, installed as one or more layers. 'In-duct' or 'slip' SCR combines SNCR with downstream SCR which reduces the ammonia slip from SNCR.</td>
</tr>
<tr>
<td>Selective non-catalytic reduction (SNCR)</td>
<td>Selective reduction of nitrogen oxides to nitrogen with ammonia or urea at high temperatures and without catalyst. The operating temperature window is maintained between 800 °C and 1 000 °C for optimal reaction. The performance of the SNCR system can be increased by controlling the injection of the reagent from multiple lances with the support of a (fast-reacting) acoustic or infrared temperature measurement system so as to ensure that the reagent is injected in the optimum temperature zone at all times.</td>
</tr>
<tr>
<td>Semi-wet absorber</td>
<td>Also called semi-dry absorber. An alkaline aqueous solution or suspension (e.g. milk of lime) is added to the flue-gas stream to capture the acid gases. The water evaporates and the reaction products are dry. The resulting solids may be recirculated to reduce reagent consumption (see BAT 28(b)). This technique includes a range of different designs, including flash-dry processes which consist of injecting water (providing for fast gas cooling) and reagent at the filter inlet.</td>
</tr>
<tr>
<td>Wet scrubber</td>
<td>Use of a liquid, typically water or an aqueous solution/suspension, to capture pollutants from the flue-gas by absorption, in particular acid gases, as well as other soluble compounds and solids. To adsorb mercury and/or PCDD/F, carbon sorbent (as a slurry or as carbon-impregnated plastic packing) can be added to the wet scrubber. Different types of scrubber designs are used, e.g. jet scrubbers, rotation scrubbers, Venturi scrubbers, spray scrubbers and packed tower scrubbers.</td>
</tr>
</tbody>
</table>
### 2.3. Techniques to reduce emissions to water

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adsorption on activated carbon</td>
<td>The removal of soluble substances (solutions) from the waste water by transferring them to the surface of solid, highly porous particles (the adsorbent). Activated carbon is typically used for the adsorption of organic compounds and mercury.</td>
</tr>
<tr>
<td>Precipitation</td>
<td>The conversion of dissolved pollutants into insoluble compounds by adding precipitants. The solid precipitates formed are subsequently separated by sedimentation, flotation or filtration. Typical chemicals used for metal precipitation are lime, dolomite, sodium hydroxide, sodium carbonate, sodium sulphide and organosulphides. Calcium salts (other than lime) are used to precipitate sulphate or fluoride.</td>
</tr>
<tr>
<td>Coagulation and flocculation</td>
<td>Coagulation and flocculation are used to separate suspended solids from waste water and are often carried out in successive steps. Coagulation is carried out by adding coagulants (e.g. ferric chloride) with charges opposite to those of the suspended solids. Flocculation is carried out by adding polymers, so that collisions of microfloc particles cause them to bond thereby producing larger flocs. The flocs formed are subsequently separated by sedimentation, air flotation or filtration.</td>
</tr>
<tr>
<td>Equalisation</td>
<td>Balancing of flows and pollutant loads by using tanks or other management techniques.</td>
</tr>
<tr>
<td>Filtration</td>
<td>The separation of solids from waste water by passing it through a porous medium. It includes different types of techniques, e.g. sand filtration, microfiltration and ultrafiltration.</td>
</tr>
<tr>
<td>Flotation</td>
<td>The separation of solid or liquid particles from waste water by attaching them to fine gas bubbles, usually air. The buoyant particles accumulate at the water surface and are collected with skimmers.</td>
</tr>
<tr>
<td>Ion exchange</td>
<td>The retention of ionic pollutants from waste water and their replacement by more acceptable ions using an ion exchange resin. The pollutants are temporarily retained and afterwards released into a regeneration or backwashing liquid.</td>
</tr>
<tr>
<td>Neutralisation</td>
<td>The adjustment of the pH of the waste water to a neutral value (approximately 7) by the addition of chemicals. Sodium hydroxide (NaOH) or calcium hydroxide (Ca(OH)₂) is generally used to increase the pH whereas sulphuric acid (H₂SO₄), hydrochloric acid (HCl) or carbon dioxide (CO₂) is used to decrease the pH. The precipitation of some substances may occur during neutralisation.</td>
</tr>
<tr>
<td>Oxidation</td>
<td>The conversion of pollutants by chemical oxidising agents to similar compounds that are less hazardous and/or easier to abate. In the case of waste water from the use of wet scrubbers, air may be used to oxidise sulphite (SO₃²⁻) to sulphate (SO₄²⁻).</td>
</tr>
<tr>
<td>Reverse osmosis</td>
<td>A membrane process in which a pressure difference applied between the compartments separated by the membrane causes water to flow from the more concentrated solution to the less concentrated one.</td>
</tr>
</tbody>
</table>
### 2.4. Management techniques

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sedimentation</td>
<td>The separation of suspended solids by gravitational settling.</td>
</tr>
<tr>
<td>Stripping</td>
<td>The removal of purgeable pollutants (e.g. ammonia) from waste water by contact with a high flow of a gas current in order to transfer them to the gas phase. The pollutants are subsequently recovered (e.g. by condensation) for further use or disposal. The removal efficiency may be enhanced by increasing the temperature or reducing the pressure.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour management plan</td>
<td>The odour management plan is part of the EMS (see BAT 1) and includes: (a) a protocol for conducting odour monitoring in accordance with EN standards (e.g. dynamic olfactometry according to EN 13725 to determine the odour concentration); it may be complemented by measurement/estimation of odour exposure (e.g. according to EN 16841-1 or EN 16841-2) or estimation of odour impact; (b) a protocol for response to identified odour incidents, e.g. complaints; (c) an odour prevention and reduction programme designed to identify the source(s), to characterise the contributions of the sources, and to implement prevention and/or reduction measures.</td>
</tr>
<tr>
<td>Noise management plan</td>
<td>The noise management plan is part of the EMS (see BAT 1) and includes: (a) a protocol for conducting noise monitoring; (b) a protocol for response to identified noise incidents, e.g. complaints; (c) a noise reduction programme designed to identify the source(s), to measure/estimate noise exposure, to characterise the contributions of the source(s) and to implement prevention and/or reduction measures.</td>
</tr>
<tr>
<td>Accident management plan</td>
<td>An accident management plan is part of the EMS (see BAT 1) and identifies hazards posed by the installation and the associated risks and defines measures to address these risks. It considers the inventory of pollutants present or likely to be present which could have environmental consequences if they escape. It can be drawn up using for example FMEA (Failure Mode and Effects Analysis) and/or FMECA (Failure Mode, Effects and Criticality Analysis). The accident management plan includes the setting up and implementation of a fire prevention, detection and control plan, which is risk-based and includes the use of automatic fire detection and warning systems, and of manual and/or automatic fire intervention and control systems. The fire prevention, detection and control plan is relevant in particular for: — waste storage and pre-treatment areas; — furnace loading areas;</td>
</tr>
<tr>
<td>Technique</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>— electrical control systems;</td>
<td>— explosion and fire prevention;</td>
</tr>
<tr>
<td>— bag filters;</td>
<td>— fire extinguishing;</td>
</tr>
<tr>
<td>— fixed adsorption beds.</td>
<td>— knowledge of chemical risks (labelling, carcinogenic substances, toxicity, corrosion, fire).</td>
</tr>
</tbody>
</table>
COMMISSION IMPLEMENTING DECISION (EU) 2019/2011
of 28 November 2019
amending Implementing Decision (EU) 2016/2009 approving the vaccination programmes against lumpy skin disease submitted by the Member States by prolonging its period of application
(notified under document C(2019) 8580)
(Only the Bulgarian, Croatian and Greek texts are authentic)
(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Council Directive 89/662/EEC of 11 December 1989 concerning veterinary checks in intra-Community trade with a view to the completion of the internal market (1), and in particular Article 9(4) thereof,

Having regard to Council Directive 90/425/EEC of 26 June 1990 concerning veterinary checks applicable in intra-Union trade in certain live animals and products with a view to the completion of the internal market (2), and in particular Article 10(4) thereof,

Having regard to Council Directive 92/119/EEC of 17 December 1992 introducing general Community measures for the control of certain animal diseases and specific measures relating to swine vesicular disease (3), and in particular Article 19 (1)(a) and(3)(a) and Article 19(6) thereof,

Whereas:

(1) Directive 92/119/EEC lays down general control measures to be applied in the event of an outbreak of certain animal diseases, including lumpy skin disease (LSD). These control measures include the establishment of protection and surveillance zones around the infected holding, and they also provide for emergency vaccination in the case of an outbreak of LSD in addition to other control measures.

(2) In August 2015, LSD was confirmed in Greece for the first time. In 2016, there were cases of LSD in Bulgaria and additional cases in Greece, as well as in a number of neighbouring third countries.

(3) In response to these outbreaks of LSD, the affected Member States, namely Greece and Bulgaria, as well as the affected neighbouring third countries, implemented mass vaccination programmes of their live bovine animals and captive wild ruminants. In 2016 and 2017, Croatia, where LSD has not occurred to date, also implemented a mass vaccination programme against LSD, as a preventive measure, in view of the epidemiological situation in neighbouring Member States and third countries. The vaccination programmes against LSD in Greece, Bulgaria and Croatia were approved by Commission Implementing Decision (EU) 2016/2009 (4), and those three Member States are duly listed in the Annex to that act as having approved vaccination programmes against LSD.

(4) In 2017, LSD was present to a lesser extent in South-East Europe, with a large scale recurrence in Albania, and a few additional sporadic outbreaks in Greece and North Macedonia. In 2018 and to date in 2019, there has been a steady improvement of the LSD epidemiological situation and no case of LSD has been reported in any Member State or in any neighbouring third country in South-East Europe, excluding Turkey. During the same period, annual mass vaccination against LSD has continued in all the Member States and in neighbouring third countries in South-East Europe that had been affected by LSD.

In view of the favourable epidemiological situation, Croatia stopped preventive vaccination against LSD since the beginning of 2018 and replaced it with systematic disease surveillance. This surveillance confirmed the absence of LSD during 2018. As a result, Commission Implementing Decision (EU) 2016/2008 (1) was amended by Commission Implementing Decisions (EU) 2019/81 (2), in order to delete that Member State from the list of Member States with ‘free zones with vaccination’ status in Annex I to Implementing Decision (EU) 2016/2008. In addition, Implementing Decision (EU) 2016/2009 was amended by Commission Implementing Decision (EU) 2019/82 (3), in order to delete Croatia from the list of Member States with an approved vaccination programme against LSD.

(6) According to the rules of the World Organisation for Animal Health (OIE), where LSD vaccination is discontinued in a country or a zone thereof, it takes a minimum period of 8 months before LSD–free status may be regained, in the case of preventive vaccination, or a minimum period of 14 months, in the case of vaccination in response to an occurrence of LSD. Hence, the measures laid down in Implementing Decision (EU) 2016/2009 should remain in place for a minimum period of 8 months or 14 months, depending on the zone, before LSD-free status can be restored.

(7) Implementing Decision (EU) 2016/2009 applies until 31 December 2019, and accordingly the current measures in relation to LSD in Greece and Bulgaria laid down in that act will no longer apply after that date. Given the current epidemiological situation and the minimum time required to regain LSD-free status, it is necessary to prolong the period of application of these measures for an appropriate period of time.

(8) Regulation (EU) 2016/429 of the European Parliament and of the Council (4) lays down rules for the prevention and control of certain listed diseases, including LSD. As that Regulation is to apply from 21 April 2021, the period of application of Implementing Decision (EU) 2016/2009 should be prolonged until 20 April 2021.

(9) Implementing Decision (EU) 2016/2009 should therefore be amended accordingly.

(10) The measures provided for in this Decision are in accordance with the opinion of the Standing Committee on Plants, Animals, Food and Feed,

HAS ADOPTED THIS DECISION:

Article 1

In Article 2 of Implementing Decision (EU) 2016/2009, the date ‘31 December 2019’ is replaced by the date ‘20 April 2021’.

Article 2

This Decision is addressed to the Republic of Bulgaria, the Hellenic Republic and the Republic of Croatia.

Done at Brussels, 28 November 2019.

For the Commission
Vytenis ANDRIUKAITIS
Member of the Commission

COMMISSION IMPLEMENTING DECISION (EU) 2019/2012
of 29 November 2019
on exemptions under Article 14 of Commission Regulation (EC) No 29/2009 laying down requirements on data link services for the single European sky

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,


Having regard to Commission Regulation (EC) No 29/2009 of 16 January 2009 laying down requirements on data link services for the single European sky (2), and in particular Article 14 thereof,

Whereas:

(1) Under Article 14 of its Regulation (EC) No 29/2009, the Commission is to examine requests submitted by the Member States for exemptions from the requirements of Article 3(2) for aircraft types/models combinations reaching the end of their production life and being produced in limited numbers and for aircraft types/models combinations for which re-engineering costs would be disproportionate due to old design.

(2) The exemptions should maintain the objective laid down in recital (8) of Regulation (EC) No 29/2009 that at least 75 % of flights should be equipped with data link capability.

(3) The Commission received Member States’ requests for exemptions and consulted the parties concerned. Following the examination of those requests carried out by the Commission on the basis of the criteria set out in Article 14(3) of Regulation (EC) No 29/2009, exemptions should be granted.


(5) The measures provided for in this Decision are in accordance with the opinion of the Committee referred to in Article 127(1) of Regulation (EU) 2018/1139,

HAS ADOPTED THIS DECISION:

Article 1

The following aircraft types/models combinations shall be permanently exempted from the requirements of Article 3(2) of Regulation (EC) No 29/2009:

(a) aircraft types/models combinations specified in Annex I;

(b) aircraft types/models combinations specified in Annex II having the first individual certificate of airworthiness issued prior to 5 February 2020.

(2) OJ L 13, 17.1.2009, p. 3.
Article 2

The following aircraft types/models combinations shall be exempted from the requirements of Article 3(2) of Regulation (EC) No 29/2009 until 5 February 2022:

(a) aircraft types/models combinations specified in Annex II having the first individual certificate of airworthiness issued on or after 5 February 2020;

(b) aircraft types/models combinations specified in Annex III.

Article 3

Decision C(2011) 2611 final and Implementing Decision C(2011) 9074 final are repealed.

Article 4

This Decision shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Union.

Done at Brussels, 29 November 2019.

For the Commission

The President

Jean-Claude JUNCKER
**ANNEX I**

**EXEMPTIONS REFERRED TO IN POINT (a) OF ARTICLE 1**

<table>
<thead>
<tr>
<th>Aircraft type/series/model</th>
<th>Manufacturer</th>
<th>ICAO type designator</th>
</tr>
</thead>
<tbody>
<tr>
<td>AN-12 all</td>
<td>Antonov</td>
<td>AN12</td>
</tr>
<tr>
<td>AN-124 100</td>
<td>Antonov</td>
<td>A124</td>
</tr>
<tr>
<td>IL-76 all</td>
<td>Ilyushin</td>
<td>IL76</td>
</tr>
<tr>
<td>A300 all</td>
<td>Airbus</td>
<td>A30B, A306, A3ST</td>
</tr>
<tr>
<td>A306</td>
<td>Airbus</td>
<td>A310</td>
</tr>
<tr>
<td>A310 all</td>
<td>Airbus</td>
<td>A319, A320, A321</td>
</tr>
<tr>
<td>A319/-320/-321 with a first Certificate of Airworthiness issued between 1 January 1995 and 5 July 1999 inclusive</td>
<td>Airbus</td>
<td>A342, A343, A345, A346</td>
</tr>
<tr>
<td>A340 all</td>
<td>Airbus</td>
<td>A319, A320, A321</td>
</tr>
<tr>
<td>A342</td>
<td>Airbus</td>
<td>A319, A320, A321</td>
</tr>
<tr>
<td>A343</td>
<td>Airbus</td>
<td>A319, A320, A321</td>
</tr>
<tr>
<td>A345</td>
<td>Airbus</td>
<td>A319, A320, A321</td>
</tr>
<tr>
<td>A346</td>
<td>Airbus</td>
<td>A319, A320, A321</td>
</tr>
<tr>
<td>A318-112</td>
<td>Airbus</td>
<td>A318</td>
</tr>
<tr>
<td>AVRO LINER (RJ-100)</td>
<td>AVRO</td>
<td>RJ1H</td>
</tr>
<tr>
<td>AVRO LINER (RJ-85)</td>
<td>AVRO</td>
<td>RJ85</td>
</tr>
<tr>
<td>BA146-301</td>
<td>British Aerospace</td>
<td>B463</td>
</tr>
<tr>
<td>B717-200</td>
<td>Boeing</td>
<td>B712</td>
</tr>
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### ANNEX II

**EXEMPTIONS REFERRED TO IN POINT (b) OF ARTICLE 1 AND POINT (A) OF ARTICLE 2**

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