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⁽¹⁾ Text with EEA relevance.

II

(Non-legislative acts)

REGULATIONS

COMMISSION IMPLEMENTING REGULATION (EU) 2020/2006

of 8 December 2020

operating deductions from fishing quotas available for certain stocks in 2020 on account of overfishing of other stocks in the previous years and amending Implementing Regulation (EU) 2020/1247

THE EUROPEAN COMMISSION,

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

Having regard to Council Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Union control system for ensuring compliance with the rules of the common fisheries policy, amending Regulations (EC) No 847/96, (EC) No 2371/2002, (EC) No 811/2004, (EC) No 768/2005, (EC) No 2115/2005, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007, (EC) No 676/2007, (EC) No 1098/2007, (EC) No 1300/2008, (EC) No 1342/2008 and repealing Regulations (EEC) No 2847/93, (EC) No 1627/94 and (EC) No 1966/2006 ⁽¹⁾, and in particular Article 105(1), (2), (3) and (5) thereof,

Whereas:

- (1) Fishing quotas for the year 2019 have been established by Council Regulations (EU) 2018/1628 ⁽²⁾, (EU) 2018/2025 ⁽³⁾, (EU) 2018/2058 ⁽⁴⁾ and (EU) 2019/124 ⁽⁵⁾.
- (2) Fishing quotas for the year 2020 have been established by Council Regulations (EU) 2018/2025, (EU) 2019/1838 ⁽⁶⁾, (EU) 2019/2236 ⁽⁷⁾ and (EU) 2020/123 ⁽⁸⁾.
- (3) Pursuant to Article 105(1) of Regulation (EC) No 1224/2009, when the Commission has established that a Member State has exceeded the fishing quotas which have been allocated to it, the Commission is to operate deductions from future fishing quotas of that Member State.

⁽¹⁾ OJ L 343, 22.12.2009, p. 1.

⁽²⁾ Council Regulation (EU) 2018/1628 of 30 October 2018 fixing for 2019 the fishing opportunities for certain fish stocks and groups of fish stocks applicable in the Baltic Sea and amending Regulation (EU) 2018/120 as regards certain fishing opportunities in other waters (OJ L 272, 31.10.2018, p. 1).

⁽³⁾ Council Regulation (EU) 2018/2025 of 17 December 2018 fixing for 2019 and 2020 the fishing opportunities for Union fishing vessels for certain deep-sea fish stocks (OJ L 325, 20.12.2018, p. 7).

⁽⁴⁾ Council Regulation (EU) 2018/2058 of 17 December 2018 fixing for 2019 the fishing opportunities for certain fish stocks and groups of fish stocks in the Black Sea (OJ L 329, 27.12.2018, p. 8).

⁽⁵⁾ Council Regulation (EU) 2019/124 of 30 January 2019 fixing for 2019 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters (OJ L 29, 31.1.2019, p. 1).

⁽⁶⁾ Council Regulation (EU) 2019/1838 of 30 October 2019 fixing for 2020 the fishing opportunities for certain fish stocks and groups of fish stocks applicable in the Baltic Sea and amending Regulation (EU) 2019/124 as regards certain fishing opportunities in other waters (OJ L 281, 31.10.2019, p. 1).

⁽⁷⁾ Council Regulation (EU) 2019/2236 of 16 December 2019 fixing for 2020 the fishing opportunities for certain fish stocks and groups of fish stocks applicable in the Mediterranean and Black Seas (OJ L 336, 30.12.2019, p. 14).

⁽⁸⁾ Council Regulation (EU) 2020/123 of 27 January 2020 fixing for 2020 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters (OJ L 25, 30.1.2020, p. 1).

- (4) Commission Implementing Regulation (EU) 2020/1247 ⁽⁹⁾ has established deductions from fishing quotas available for certain stocks in 2020 on account of overfishing in the previous years.
- (5) For certain Member States, namely Denmark, Spain and France, certain deductions could not be operated by Implementing Regulation (EU) 2020/1247 from quotas allocated for the overfished stocks because quotas for these stocks are not available for those Member States in the year 2020.
- (6) Article 105(5) of Regulation (EC) No 1224/2009 provides that, if it is not possible to operate deductions on the overfished stock in the year following the overfishing because the Member State concerned has no available quota for that stock, deductions may be operated on other stocks in the same geographical area or with the same commercial value, following consultations with the Member States concerned. According to Commission Communication 2012/C 72/07 containing Guidelines for deduction of quotas under Article 105(1), (2) and (5) of Regulation (EC) No 1224/2009 ⁽¹⁰⁾ ('the Guidelines') such deductions should be preferably operated in the following year or years from quotas allocated for stocks fished by the same fleet as the fleet that overfished the quota.
- (7) The Member States concerned have been consulted as regards certain deductions from quotas allocated for stocks other than those which have been overfished.
- (8) Moreover, certain deductions provided for by Implementing Regulation (EU) 2020/1247 exceed the adapted quota available in the year 2020 and, as a consequence, cannot be entirely operated in that year. According to the Guidelines, the remaining amounts should be deducted from the adapted quotas available in subsequent years until the full overfished amount is paid back.
- (9) Furthermore, the Spanish fisheries authorities discovered that the 2019 catch figures used for the calculation of the overfishing for bigeye tuna in the Atlantic Ocean (BET/ATLANT) were incorrect and that its quota was actually exceeded by a lower amount than that taken into account for the deductions established by Implementing Regulation (EU) 2020/1247. The catch figures, quota consumption rate, overfished quantities, and deduction from the 2020 Spanish quota for bigeye tuna in the Atlantic Ocean provided for by Implementing Regulation (EU) 2020/1247 should therefore be adjusted.
- (10) In 2019, Portugal overfished its quota for albacore in the Atlantic Ocean, North of 5° N (ALB/AN05N). On 14 July 2020, Portugal requested to spread the deduction due over two years. According to point 3(c) of the Guidelines, spreading a deduction over two or more years may be accepted where this is provided for under specific international rules (such as those of regional fisheries management organisations) relating to paybacks for the stock concerned. In view of the information provided by Portugal and considering that paragraph 7 of ICCAT Supplemental Recommendation 16-06, concerning the North Atlantic albacore Multi-annual conservation and management programme ⁽¹¹⁾, establishes that any excess of a Contracting Party's annual quota/catch limit for the year 2019 shall be deducted from the respective quota/catch limit during or before the adjustment year 2021, an equal spreading over two years of the deduction, including relevant applicable multiplying factors, should be accepted. Deduction from the 2020 quota provided for by Implementing Regulation (EU) 2020/1247 should therefore be adjusted.
- (11) Further updates or corrections may still occur following the detection, for the current or previous exercise, of errors, omissions or misreporting in the catch figures declared by the Member States pursuant to Article 33 of Regulation (EC) No 1224/2009.
- (12) Implementing Regulation (EU) 2020/1247 should therefore be amended accordingly,

⁽⁹⁾ Commission Implementing Regulation (EU) 2020/1247 of 2 September 2020 operating deductions from fishing quotas available for certain stocks in 2020 on account of overfishing in the previous years (OJ L 288, 3.9.2020, p. 21).

⁽¹⁰⁾ Communication from the Commission – Guidelines for deduction of quotas under Article 105(1), (2) and (5) of Regulation (EC) No 1224/2009 (2012/C 72/07) (OJ C 72, 10.3.2012, p. 27).

⁽¹¹⁾ <https://www.iccat.int/Documents/Recs/compendiopdf-e/2016-06-e.pdf>

HAS ADOPTED THIS REGULATION:

Article 1

The fishing quotas fixed for the year 2020 in Regulations (EU) 2018/2025, (EU) 2019/1838, (EU) 2019/2236, and (EU) 2020/123, referred to in Annex I to this Regulation, shall be reduced by applying the deductions on the alternative stocks set out in that Annex.

Article 2

Implementing Regulation (EU) 2020/1247 is amended in accordance with Annex II to this Regulation.

Article 3

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

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

Done at Brussels, 8 December 2020.

For the Commission
The President
Ursula VON DER LEYEN

DEDUCTIONS FROM FISHING QUOTAS FOR THE YEAR 2020 TO BE APPLIED ON ALTERNATIVE STOCKS

OVERFISHED STOCKS						ALTERNATIVE STOCKS					
Member State	Species code	Area code	Species name	Area name	Quantity that cannot be deducted from the 2020 fishing quota for the overfished stock (in kilograms)	Member State	Species code	Area code	Species name	Area name	Quantity to be deducted from the 2020 fishing quota for the alternative stocks (in kilograms)
DK	POK	1N2AB.	Saithe	Norwegian waters of 1 and 2	33 968	DK	HER	1/2-	Herring	Union, Faroese, Norwegian and international waters of 1 and 2	33 968
ES	GHL	1N2AB.	Greenland halibut	Norwegian waters of 1 and 2	18 338	ES	REB	1N2AB.	Redfish	Norwegian waters of 1 and 2	18 338
ES	OTH	1N2AB.	Other species	Norwegian waters of 1 and 2	3 895	ES	REB	1N2AB.	Redfish	Norwegian waters of 1 and 2	3 895
ES	POK	1N2AB.	Saithe	Norwegian waters of 1 and 2	2 607	ES	REB	1N2AB.	Redfish	Norwegian waters of 1 and 2	2 607
FR	SWO	AS05N	Swordfish	Atlantic Ocean, south of 5° N	3 500	FR	ALB	AS05N	Southern albacore	Atlantic Ocean, south of 5° N	3 500

The Annex to Implementing Regulation (EU) 2020/1247 is replaced by the following:

'ANNEX

DEDUCTIONS FROM FISHING QUOTAS FOR THE YEAR 2020 FOR STOCKS WHICH HAVE BEEN OVERFISHED

Mem-ber State	Spe-cies code	Area code	Species name	Area name	Initial quota 2019 (in kilograms)	Permitted landings 2019 (Total adapted quantity in kilograms) ⁽¹⁾	Total catches 2019 (quantity in kilograms)	Quota con-sumption related to permitted landings	Overfishing related to permitted landing (quantity in kilograms)	Multi-plying factor ⁽²⁾	Add-itional Multi-plying factor ⁽³⁾ , ⁽⁴⁾	Out-standing deductions from previous Year(s) ⁽⁵⁾ (quantity in kilograms)	Deductions from fishing quotas for 2020 ⁽⁶⁾ and subsequent years (quantity in kilograms)	Deductions from 2020 fishing quotas for the overfished stocks ⁽⁷⁾ (quantity in kilograms)	Deductions from 2020 fishing quotas for alternative stocks (quantity in kilograms)	To be deducted from fishing quotas for 2021 and subsequent year(s) (quantity in kilograms)
DE	HER	4AB.	Herring	Union and Norwegian waters of 4 north of 53° 30' N	39 404 000	25 460 900	27 182 070	106,76 %	1 721 170	/	/	/	1 721 170	1 721 170	/	/
DE	MAC	2CX14-	Mackerel	3a and 4; Union waters of 2a, 3b, 3c and Subdivisions 22-32	441 000	14 859 024	15 542 581	104,60 %	683 557	/	/	/	683 557	683 557	/	/
DK	MAC	2CX14-	Mackerel	6, 7, 8a, 8b, 8d and 8e; Union and international waters of 5b; international waters of 2a, 12 and 14	/	2 688 463	2 693 920	100,20 %	5 457	/	/	/	5 457	5 457	/	/

DK	MAC	2A34.	Mackerel	3a and 4; Union waters of 2a, 3b, 3c and Subdivi- sions 22-32	14 480 000	13 330 744	14 022 305	105,19 %	691 561	/	/	/	691 561	691 561	/	/
DK	MAC	2A4A-N	Mackerel	Norwegian waters of 2a and 4a	10 242 000	10 252 106	11 197 228	109,22 %	945 122	/	/	/	945 122	945 122	/	/
DK	POK	1N2AB.	Saithe	Norwegian waters of 1 and 2	/	17 000	50 968	299,81 %	33 968	1,00	/	/	33 968	/	33 968	/
ES	BET	ATLANT	Bigeye tuna	Atlantic Ocean	9 415 300	8 941 151	9 090 055	101,67 %	148 904	/	C ⁽⁸⁾	/	148 904	148 904	/	/
ES	COD	1/2B.	Cod	1 and 2b	11 562 000	8 455 844	8 463 118	100,09 %	7 274	/	/	/	7 274	7 274	/	/
ES	GHL	1N2AB.	Greenland halibut	Norwegian waters of 1 and 2	/	2 000	14 225	711,25 %	12 225	1,00	A	/	18 338	/	18 338	/
ES	OTH	1N2AB.	Other spe- cies	Norwegian waters of 1 and 2	/	31 800	35 695	112,25 %	3 895	1,00	/	/	3 895	/	3 895	/
ES	POK	1N2AB.	Saithe	Norwegian waters of 1 and 2	/	196 000	198 607	101,33 %	2 607	/	/	/	2 607	/	2 607	/
ES	RED	N3LN.	Redfish	NAFO 3LN	/	515 100	517 806	100,53 %	2 706	/	/	/	2 706	2 706	/	/
ES	RJU	9-C.	Undulate ray	Union waters of 9	15 000	15 000	15 511	103,41 %	511 ⁽⁹⁾	N/A	N/A	2 067	2 067	0	/	2 067
FR	BET	ATLANT	Bigeye tuna	Atlantic Ocean	4 167 700	4 167 700	4 687 551	112,47 %	519 851	1,20	C	/	883 747	883 747	/	/

FR	RJE	7FG.	Small-eyed ray	Union waters of 7f and 7g	79 000	90 399	91 485	101,20 %	1 086	/	/	/	1 086	1 086	/	/
FR	RJU	7DE.	Undulate ray	Union waters of 7d and 7e	103 000	168 000	177 718	105,78 %	9 718	/	/	/	9 718	9 718	/	/
FR	SWO	AS05N	Swordfish	Atlantic Ocean, South of 5° N	/	/	3 500	N/A	3 500	/	/	/	3 500	/	3 500	/
GB	COD	N1GL14	Cod	Greenland waters of NAFO 1F and Greenland waters of 5, 12 and 14	364 000	353 500	353 500	100 %	0	/	/	4 167	4 167	4 167	/	/
GB	HER	4AB.	Herring	Union and Norwegian waters of 4 north of 53° 30' N	55 583 000	62 320 196	62 607 628	100,46 %	287 432	/	/	/	287 432	287 432	/	/
GB	MAC	2CX14-	Mackerel	6, 7, 8a, 8b, 8d and 8e; Union and international waters of 5b; international waters of 2a, 12 and 14	152 115 000	145 768 635	154 072 694	105,70 %	8 304 059	/	A ⁽⁸⁾	/	8 304 059	8 304 059	/	/
GB	RJU	7DE.	Undulate ray	Union waters of 7d and 7e	58 000	61 200	63 133	103,16 %	1 933	/	/	/	1 933	1 933	/	/
EL	BFT	AE45WM	Bluefin tuna	Atlantic Ocean, east of 45° W, and Mediterranean	285 110	304 110	312 690	102,82 %	8 580	/	C ⁽⁸⁾	/	8 580	8 580	/	/

IE	ALB	AN05N	Northern albacore	Atlantic Ocean, north of 5° N	2 854 300	3 115 420	3 213 170	103,14 %	97 750	/	C ⁽⁸⁾	/	97 750	97 750	/	/
NL	HER	4CXB7D	Herring	4c, 7d except Blackwater stock	18 162 000	19 497 305	19 512 481	100,08 %	15 176	/	/	/	15 176	15 176	/	/
NL	MAC	2A34.	Mackerel	3a and 4; Union waters of 2a, 3b, 3c and Subdivi- sions 22-32	1 342 000	1 494 000	2 012 324	134,69 %	518 324	1,40	/	/	725 654	725 654	/	/
PT	ALB	AN05N	Northern albacore	Atlantic Ocean, north of 5° N	1 994 200	1 794 200	2 463 161	137,28 %	668 961	1,40	C	/	1 271 026	635 513 ⁽¹⁰⁾	/	635 513 ⁽¹⁰⁾
PT	ALF	3X14-	Alfonsinos	Union and international waters of 3, 4, 5, 6, 7, 8, 9, 10, 12 and 14	164 000	149 034	156 756	105,18 %	7 722	/	A ⁽⁸⁾	/	7 722	7 722	/	/
PT	BUM	ATLANT	Blue marlin	Atlantic Ocean	50 440	7 076	18 016	254,61 %	10 940	1,00	A	/	16 410	16 410	/	/
PT	RJU	9-C.	Undulate ray	Union waters of 9	15 000	21 705	24 589	113,29 %	2 884	1,00	/	/	2 884	2 884	/	/
PT	SWO	AN05N	Swordfish	Atlantic Ocean, North of 5° N	1 010 390	2 410 390	2 414 333	100,16 %	3 943	/	/	/	3 943	3 943	/	/
SE	MAC	2A34.	Mackerel	3a and 4; Union waters of 2a, 3b, 3c and Subdivi- sions 22-32	4 034 000	2 945 203	3 075 839	104,44 %	130 636	/	/	/	130 636	130 636	/	/

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- (¹) Quotas available to a Member State pursuant to the relevant fishing opportunities Regulations after taking into account exchanges of fishing opportunities in accordance with Article 16(8) of Regulation (EU) No 1380/2013 of the European Parliament and of the Council (OJ L 354, 28.12.2013, p. 22), quota transfers from 2018 to 2019 in accordance with Article 4(2) of Council Regulation (EC) No 847/96 (OJ L 115, 9.5.1996, p. 3) and with Article 15(9) of Regulation (EU) No 1380/2013 or reallocation and deduction of fishing opportunities in accordance with Articles 37 and 105 of Regulation (EC) No 1224/2009.
- (²) As set out in Article 105(2) of Regulation (EC) No 1224/2009. Deduction equal to the overfishing * 1,00 shall apply in all cases of overfishing equal to, or less than, 100 tonnes.
- (³) As set out in Article 105(3) of Regulation (EC) No 1224/2009 and provided that the extent of overfishing exceeds 10 %.
- (⁴) Letter “A” indicates that an additional multiplying factor of 1,5 has been applied due to consecutive overfishing in the years 2017, 2018 and 2019. Letter “C” indicates that an additional multiplying factor of 1,5 has been applied as the stock is subject to a multiannual plan.
- (⁵) Remaining quantities from previous year(s).
- (⁶) Deductions to operate in 2020.
- (⁷) Deductions to operate in 2020 that could be actually applied considering the available quota on 10 September 2020.
- (⁸) Additional multiplying factor not applicable because the overfishing does not exceed 10 % of the permitted landings.
- (⁹) Quantities below 1 tonne are not considered.
- (¹⁰) At Portugal's request, the deduction of 1 271 026 kilos due in 2020 is equally spread over two years (2020 and 2021).'
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COMMISSION IMPLEMENTING REGULATION (EU) 2020/2007

of 8 December 2020

amending Implementing Regulation (EU) No 540/2011 as regards the extension of the approval periods of the active substances 1-decanol, 1,4-dimethylnaphthalene, 6-benzyladenine, acequinocyl, *Adoxophyes orana granulovirus*, aluminium sulfate, amisulbrom, *Aureobasidium pullulans* (strains DSM 14940 and DSM 14941), azadirachtin, *Bacillus pumilus* QST 2808, benalaxyl-M, bixafen, bupirimate, *Candida oleophila* strain O, chlorantraniliprole, disodium phosphonate, dithianon, dodine, emamectin, flubendiamide, fluometuron, fluxapyroxad, flutriafol, hexythiazox, imazamox, ipconazole, isoxaben, L-ascorbic acid, lime sulphur, orange oil, *Paecilomyces fumosoroseus* strain FE 9901, pendimethalin, penflufen, penthiopyrad, potassium phosphonates, prosulfuron, *Pseudomonas* sp. strain DSMZ 13134, pyridalyl, pyriofenone, pyroxsulam, quinmerac, S-abscisic acid, sedaxane, sintofen, sodium silver thiosulfate, spinetoram, spirotetramat, *Streptomyces lydicus* strain WYEC 108, tau-fluvalinate, tebufenozide, tembotrione, thiencazabone, valifenalate, zinc phosphide

THE EUROPEAN COMMISSION,

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

Having regard to Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC ⁽¹⁾, and in particular the first paragraph of Article 17 thereof,

Whereas:

- (1) Part A of the Annex to Commission Implementing Regulation (EU) No 540/2011 ⁽²⁾ sets out the active substances deemed to have been approved under Regulation (EC) No 1107/2009 whereas part B sets out the active substances approved under Regulation (EC) No 1107/2009 and part E sets out the active substances approved under Regulation (EC) No 1107/2009 as candidates for substitution.
- (2) The approvals of the active substances 1-decanol, 6-benzyladenine, acequinocyl, aluminium sulfate, amisulbrom, azadirachtin, bupirimate, *Candida oleophila* strain O, chlorantraniliprole, dithianon, dodine, emamectin, flubendiamide, fluometuron, flutriafol, hexythiazox, imazamox, ipconazole, isoxaben, L-ascorbic acid, lime sulphur, orange oil, *Paecilomyces fumosoroseus* strain FE 9901, pendimethalin, prosulfuron, quinmerac, S-abscisic acid, sintofen, sodium silver thiosulfate, spinetoram, spirotetramat, tau-fluvalinate, tebufenozide, tembotrione, thiencazabone, valifenalate and zinc phosphide will expire between 30 April 2024 and 31 October 2024. However, as Commission Implementing Regulation (EU) 2020/1740 ⁽³⁾ will apply to those active substances and will advance the date of submission of the dossier in support of the renewal of approval by 3 months, it is necessary to provide for a short extension of their respective approval periods to maintain the date of the dossier submission as required under Commission Implementing Regulation (EU) No 844/2012 ⁽⁴⁾ as applicants need time to prepare and submit the dossiers in the required format.
- (3) In addition, for emamectin, it appears from information provided by the applicant that delays in preparing the renewal dossier have been incurred due to the COVID-19 pandemic, despite the best efforts of the applicant to mitigate such delays. The designated rapporteur Member State for emamectin, the Netherlands, exceptionally agreed to accept the submission of the application for renewal of approval as required by Implementing Regulation (EU) 2020/1740 by 30 November 2021. Therefore, the approval period of emamectin should be extended also taking this additional period into account.
- (4) Furthermore, for chlorantraniliprole, it appears from information provided by the applicant that delays in preparing the application for renewal have been incurred due to the COVID-19 pandemic, despite the best efforts of the applicant to mitigate such delays. The designated rapporteur Member State for chlorantraniliprole, Ireland, exceptionally agreed to accept the submission of the application for renewal of approval as required by Implementing Regulation (EU) 2020/1740 by 31 December 2021. Therefore, the approval period of chlorantraniliprole should be extended also taking this additional period into account.

⁽¹⁾ OJ L 309, 24.11.2009, p. 1.

⁽²⁾ Commission Implementing Regulation (EU) No 540/2011 of 25 May 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards the list of approved active substances (OJ L 153, 11.6.2011, p. 1).

⁽³⁾ Commission Implementing Regulation (EU) 2020/1740 of 20 November 2020 setting out the provisions necessary for the implementation of the renewal procedure for active substances, as provided for in Regulation (EC) No 1107/2009 of the European Parliament and of the Council, and repealing Commission Implementing Regulation (EU) No 844/2012 (OJ L 392, 23.11.2020, p. 20).

⁽⁴⁾ Commission Implementing Regulation (EU) No 844/2012 of 18 September 2012 setting out the provisions necessary for the implementation of the renewal procedure for active substances, as provided for in Regulation (EC) No 1107/2009 of the European Parliament and of the Council concerning the placing of plant protection products on the market (OJ L 252, 19.9.2012, p. 26).

- (5) Commission Implementing Decision C/2018/3434 ⁽⁵⁾ established a work programme grouping together similar active substances and setting priorities on the basis of safety concerns for human and animal health or the environment.
- (6) In order to ensure a balanced distribution of responsibilities and work among Member States acting as rapporteurs and co-rapporteurs and taking into account the resources necessary for assessment and decision-making, it is appropriate to extend the approval periods of certain active substances as set out in Implementing Decision C/2018/3434. The approval periods of 1,4-dimethylnaphthalene, *Adoxophyes orana granulovirus*, *Aureobasidium pullulans* (strains DSM 14940 and DSM 14941), *Bacillus pumilus* QST 2808, benalaxyl-M, *Pseudomonas* sp. strain DSMZ 13134, pyridalyl, pyriofenone, pyroxsulam and *Streptomyces lydicus* strain WYEC 108 should be extended by one year. For the same reasons, it is appropriate to extend the approval periods of the active substances bixafen, *Candida oleophila* strain O, disodium phosphonate, fluxapyroxad, *Paecilomyces fumosoroseus* strain FE 9901, penflufen, penthiopyrad, potassium phosphonates and sedaxane by one to three years, respectively.
- (7) Regulation (EU) No 540/2011 should therefore be amended accordingly.
- (8) In view of the aim of the first paragraph of Article 17 of Regulation (EC) No 1107/2009, as regards cases where no application for renewal of approval in accordance with Article 5(1) of Implementing Regulation (EU) 2020/1740 is submitted within 3 years before the respective expiry date laid down in the Annex to this Regulation, the Commission will reinstate the expiry date as it was before the adoption of this Regulation, or set it at the earliest possible date thereafter.
- (9) In view of the aim of the first paragraph of Article 17 of Regulation (EC) No 1107/2009, where the Commission will adopt a Regulation providing that the approval of an active substance referred to in the Annex to this Regulation is not renewed because the approval criteria are not satisfied, the Commission will set the expiry date at the same date as it was before the adoption of the present Regulation or at the date of the adoption of the Regulation providing that the approval of the active substance is not renewed, whichever date is later. As regards cases where the Commission adopts a Regulation providing for the renewal of the approval of an active substance referred to in the Annex to this Regulation, the Commission will set, as appropriate under the circumstances, the earliest possible application date.
- (10) 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

The Annex to Regulation (EU) No 540/2011 is amended in accordance with the Annex to this Regulation.

Article 2

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

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

Done at Brussels, 8 December 2020.

For the Commission
The President
Ursula VON DER LEYEN

⁽⁵⁾ Commission Implementing Decision of 6 June 2018 on the establishment of a work programme for the assessment of applications for the renewal of approvals of active substances expiring in 2022, 2023 and 2024 in accordance with Regulation (EC) No 1107/2009 of the European Parliament and of the Council. C/2018/3434 final (OJ C 195, 7.6.2018, p. 20).

ANNEX

The Annex to Regulation (EU) No 540/2011 is amended as follows:

Part A is amended as follows:

- (1) In the sixth column, expiration of approval, of entry 311, quinmerac, the date 30 April 2024 is replaced by 31 July 2024.
- (2) In the sixth column, expiration of approval, of entry 314, zinc phosphide, the date 30 April 2024 is replaced by 31 July 2024.
- (3) In the sixth column, expiration of approval, of entry 317, 6-benzyladenine, the date 31 May 2024 is replaced by 31 August 2024.
- (4) In the sixth column, expiration of approval, of entry 323, dodine, the date 31 May 2024 is replaced by 31 August 2024.
- (5) In the sixth column, expiration of approval, of entry 328, tau-fluvalinate, the date 31 May 2024 is replaced by 31 August 2024.
- (6) In the sixth column, expiration of approval, of entry 330, bupirimate, the date 31 May 2024 is replaced by 31 August 2024.
- (7) In the sixth column, expiration of approval, of entry 333, 1-decanol, the date 31 May 2024 is replaced by 31 August 2024.
- (8) In the sixth column, expiration of approval, of entry 334, isoxaben, the date 31 May 2024 is replaced by 31 August 2024.
- (9) In the sixth column, expiration of approval, of entry 335, fluometuron, the date 31 May 2024 is replaced by 31 August 2024.
- (10) In the sixth column, expiration of approval, of entry 341, sintofen, the date 31 May 2024 is replaced by 31 August 2024.
- (11) In the sixth column, expiration of approval, of entry 343, azadirachtin, the date 31 May 2024 is replaced by 31 August 2024.
- (12) In the sixth column, expiration of approval, of entry 345, lime sulphur, the date 31 May 2024 is replaced by 31 August 2024.
- (13) In the sixth column, expiration of approval, of entry 346, aluminium sulfate, the date 31 May 2024 is replaced by 31 August 2024.
- (14) In the sixth column, expiration of approval, of entry 350, tebufenozide, the date 31 May 2024 is replaced by 31 August 2024.
- (15) In the sixth column, expiration of approval, of entry 351, dithianon, the date 31 May 2024 is replaced by 31 August 2024.
- (16) In the sixth column, expiration of approval, of entry 352, hexythiazox, the date 31 May 2024 is replaced by 31 August 2024.
- (17) In the sixth column, expiration of approval, of entry 353, flutriafol, the date 31 May 2024 is replaced by 31 August 2024.

Part B is amended as follows:

- (1) In the sixth column, expiration of approval, of entry 24, fluxapyroxad, the date 31 December 2022 is replaced by 31 May 2025.
- (2) In the sixth column, expiration of approval, of entry 26, *Adoxophyes orana* *granulovirus*, the date 31 January 2023 is replaced by 31 January 2024.
- (3) In the sixth column, expiration of approval, of entry 37, *Candida oleophila* strain O, the date 30 September 2023 is replaced by 31 December 2024.
- (4) In the sixth column, expiration of approval, of entry 39, *Paecilomyces fumosoroseus* strain FE 9901, the date 30 September 2023 is replaced by 31 December 2024.

- (5) In the sixth column, expiration of approval, of entry 40, potassium phosphonates, the date 30 September 2023 is replaced by 31 January 2026.
- (6) In the sixth column, expiration of approval, of entry 43, bixafen, the date 30 September 2023 is replaced by 31 May 2025.
- (7) In the sixth column, expiration of approval, of entry 48, sedaxane, the date 31 January 2024 is replaced by 31 May 2025.
- (8) In the sixth column, expiration of approval, of entry 49, emamectin, the date 30 April 2024 is replaced by 30 November 2024.
- (9) In the sixth column, expiration of approval, of entry 50, *Pseudomonas* sp. strain DSMZ 13134, the date 31 January 2024 is replaced by 31 January 2025.
- (10) In the sixth column, expiration of approval, of entry 52, *Aureobasidium pullulans* (strains DSM 14940 and DSM 14941), the date 31 January 2024 is replaced by 31 January 2025.
- (11) In the sixth column, expiration of approval, of entry 53, pyriofenone, the date 31 January 2024 is replaced by 31 January 2025.
- (12) In the sixth column, expiration of approval, of entry 54, disodium phosphonate, the date 31 January 2024 is replaced by 31 January 2026.
- (13) In the sixth column, expiration of approval, of entry 55, penflufen, the date 31 January 2024 is replaced by 31 May 2025.
- (14) In the sixth column, expiration of approval, of entry 56, orange oil, the date 30 April 2024 is replaced by 31 July 2024.
- (15) In the sixth column, expiration of approval, of entry 57, penthiopyrad, the date 30 April 2024 is replaced by 31 May 2025.
- (16) In the sixth column, expiration of approval, of entry 58, benalaxyl-M, the date 30 April 2024 is replaced by 30 April 2025.
- (17) In the sixth column, expiration of approval, of entry 59, tembotrione, the date 30 April 2024 is replaced by 31 July 2024.
- (18) In the sixth column, expiration of approval, of entry 60, spirotetramat, the date 30 April 2024 is replaced by 31 July 2024.
- (19) In the sixth column, expiration of approval, of entry 61, pyroxsulam, the date 30 April 2024 is replaced by 30 April 2025.
- (20) In the sixth column, expiration of approval, of entry 62, chlorantraniliprole, the date 30 April 2024 is replaced by 31 December 2024.
- (21) In the sixth column, expiration of approval, of entry 63, sodium silver thiosulfate, the date 30 April 2024 is replaced by 31 July 2024.
- (22) In the sixth column, expiration of approval, of entry 64, pyridalyl, the date 30 June 2024 is replaced by 30 June 2025.
- (23) In the sixth column, expiration of approval, of entry 68, 1,4-dimethylnaphthalene, the date 30 June 2024 is replaced by 30 June 2025.
- (24) In the sixth column, expiration of approval, of entry 69, amisulbrom, the date 30 June 2024 is replaced by 30 September 2024.
- (25) In the sixth column, expiration of approval, of entry 65, S-abscisic acid, the date 30 June 2024 is replaced by 30 September 2024.
- (26) In the sixth column, expiration of approval, of entry 66, L-ascorbic acid, the date 30 June 2024 is replaced by 30 September 2024.
- (27) In the sixth column, expiration of approval, of entry 67, spinetoram, the date 30 June 2024 is replaced by 30 September 2024.
- (28) In the sixth column, expiration of approval, of entry 70, valifenalate, the date 30 June 2024 is replaced by 30 September 2024.

- (29) In the sixth column, expiration of approval, of entry 71, thiencarbazon, the date 30 June 2024 is replaced by 30 September 2024.
- (30) In the sixth column, expiration of approval, of entry 72, acequinocyl, the date 31 August 2024 is replaced by 30 November 2024.
- (31) In the sixth column, expiration of approval, of entry 73, ipconazole, the date 31 August 2024 is replaced by 30 November 2024.
- (32) In the sixth column, expiration of approval, of entry 74, flubendiamide, the date 31 August 2024 is replaced by 30 November 2024.
- (33) In the sixth column, expiration of approval, of entry 75, *Bacillus pumilus* QST 2808, the date 31 August 2024 is replaced by 31 August 2025.
- (34) In the sixth column, expiration of approval, of entry 79, *Streptomyces lydicus* strain WYEC 108, the date 31 December 2024 is replaced by 31 December 2025.

Part E is amended as follows:

- (1) In the sixth column, expiration of approval, of entry 6, prosulfuron, the date 30 April 2024 is replaced by 31 July 2024.
 - (2) In the sixth column, expiration of approval, of entry 7, pendimethalin, the date 31 August 2024 is replaced by 30 November 2024.
 - (3) In the sixth column, expiration of approval, of entry 8, imazamox, the date 31 October 2024 is replaced by 31 January 2025.
-

COMMISSION REGULATION (EU) 2020/2008
of 8 December 2020
amending Regulations (EU) No 702/2014, (EU) No 717/2014 and (EU) No 1388/2014, as regards their
period of application and other relevant adjustments

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 108(4) thereof,

Having regard to Council Regulation (EU) 2015/1588 of 13 July 2015 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to certain categories of horizontal State aid ⁽¹⁾, and in particular Article 1(1) and Article 2(1) thereof,

After consulting the Advisory Committee on State aid,

Whereas:

- (1) Commission Regulation (EU) No 702/2014 ⁽²⁾ applies until 31 December 2020.
- (2) On 8 September 2018, the Commission launched a review of Regulation (EU) No 702/2014, with a view to replacing it with a new regulation for the period 2021 to 2027. However, the development of the common agricultural policy (CAP) should be taken into account when drafting that new regulation. Of particular relevance is the proposal for a Regulation of the European Parliament and of the Council establishing rules on support for strategic plans to be drawn up by Member States under the CAP ⁽³⁾, which provides for the implementation of the CAP strategic plans by Member States as from 1 January 2021.
- (3) However, the legislative procedure concerning the CAP reform is still ongoing and the legal framework, including the ensuing delegated and implementing acts, will not be adopted for yet some time.
- (4) To ensure that the Member States may continue having their State aid schemes exempted in accordance with Regulation (EU) No 702/2014 and to allow the review of that Regulation to be completed following the adoption of the CAP reform, it is appropriate to extend the period of application of Regulation (EU) No 702/2014 until 31 December 2022.

⁽¹⁾ OJ L 248, 24.9.2015, p. 1.

⁽²⁾ Commission Regulation (EU) No 702/2014 of 25 June 2014 declaring certain categories of aid in the agricultural and forestry sectors and in rural areas compatible with the internal market in application of Articles 107 and 108 of the Treaty on the Functioning of the European Union (OJ L 193, 1.7.2014, p. 1).

⁽³⁾ Proposal for a Regulation of the European Parliament and of the Council establishing rules on support for strategic plans to be drawn up by Member States under the Common agricultural policy (CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulation (EU) No 1305/2013 of the European Parliament and of the Council and Regulation (EU) No 1307/2013 of the European Parliament and of the Council (COM(2018) 392 final).

- (5) Commission Regulations (EU) No 717/2014 ⁽⁴⁾ and (EU) No 1388/2014 ⁽⁵⁾ are also applicable until 31 December 2020.
- (6) On 29 April 2019 and on 2 May 2019, the Commission launched a review, respectively, of Regulations (EU) No 717/2014 and (EU) No 1388/2014, with the view to replacing them with new regulations for the period 2021 to 2027. Those regulations should remain coherent and consistent with other rules relevant for the assessment of State aid in the fishery and aquaculture sector, in particular with the Regulation on the European Maritime and Fisheries Fund (EMFF) ⁽⁶⁾. Of particular relevance is the proposal for a Regulation of the European Parliament and of the Council on the EMFF, which provides for the establishment of the EMFF as from 1 January 2021 ⁽⁷⁾. However, the legislative procedure concerning the EMFF reform is still ongoing. To ensure that the Member States may continue granting small amounts of aid in accordance with Regulation (EU) No 717/2014 and having their State aid schemes exempted in accordance with Regulation (EU) No 1388/2014, and to allow the review of those Regulations to be completed following the adoption of the EMFF reform, it is appropriate to extend the period of application of Regulations (EU) No 717/2014 and (EU) No 1388/2014 until 31 December 2022.
- (7) In the light of the extension of the periods of application of Regulations (EU) No 702/2014 and (EU) No 1388/2014, some Member States may wish to prolong measures on which summary information has been provided in accordance with those Regulations. In order to reduce the administrative burden, summary information regarding the prolongation of those measures, including a potential budget increase, should be deemed to have been communicated to the Commission and published, provided that no substantive amendment is made to the measures concerned.
- (8) Regulations (EU) No 702/2014 and (EU) No 1388/2014 should also be adapted to take into account the economic and financial consequences that the COVID-19 pandemic has had on undertakings and to ensure consistency with the general policy response adopted by the Commission, especially in the period 2020-2021. In particular, undertakings that were not in difficulty on 31 December 2019 but became undertakings in difficulty in the period from 1 January 2020 until 30 June 2021 should remain eligible for aid under those Regulations.
- (9) Article 1 and Articles 13 to 43 of Regulation (EU) No 1388/2014 include references to the EMFF Regulation (EU) No 508/2014 in order to define ineligible operations and the conditions for the granting of aid under those provisions. In order to ensure legal certainty during the period of prolongation of Regulation (EU) No 1388/2014, those references should be understood as referring to Regulation (EU) No 508/2014 in the version applicable on 31 December 2020, regardless of whether that Regulation is repealed.
- (10) Regulations (EU) No 702/2014, (EU) No 717/2014 and (EU) No 1388/2014 should therefore be amended accordingly.
- (11) In order to ensure continuity for existing aid under Regulations (EU) No 702/2014, (EU) No 717/2014 and (EU) No 1388/2014 and to enable undertakings that became undertakings in difficulty on or after 1 January 2020 due to the COVID-19 pandemic to be eligible for aid from 1 January 2020, this Regulation should enter into force as soon as possible after its publication in the *Official Journal of the European Union*,

⁽⁴⁾ Commission Regulation (EU) No 717/2014 of 27 June 2014 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to *de minimis* aid in the fishery and aquaculture sector (OJ L 190, 28.6.2014, p. 45).

⁽⁵⁾ Commission Regulation (EU) No 1388/2014 of 16 December 2014 declaring certain categories of aid to undertakings active in the production, processing and marketing of fishery and aquaculture products compatible with the internal market in application of Articles 107 and 108 of the Treaty on the Functioning of the European Union (OJ L 369, 24.12.2014, p. 37).

⁽⁶⁾ Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund and repealing Council Regulations (EC) No 2328/2003, (EC) No 861/2006, (EC) No 1198/2006 and (EC) No 791/2007 and Regulation (EU) No 1255/2011 of the European Parliament and of the Council (OJ L 149, 20.5.2014, p. 1).

⁽⁷⁾ Proposal for a Regulation of the European Parliament and of the Council on the European Maritime and Fisheries Fund and repealing Regulation (EU) No 508/2014 of the European Parliament and of the Council (COM(2018) 390 final).

HAS ADOPTED THIS REGULATION:

Article 1

Amendments to Regulation (EU) No 702/2014

Regulation (EU) No 702/2014 is amended as follows:

(1) in Article 1(6), the following point (c) is added:

‘(c) aid to undertakings which were not in difficulty on 31 December 2019 but became undertakings in difficulty in the period from 1 January 2020 to 30 June 2021.’;

(2) in Article 9, the following paragraph 8 is added:

‘8. By way of derogation from paragraphs 1, 2 and 6, where a Member State wishes to prolong measures in respect of which summary information was submitted to the Commission, summary information regarding the prolongation of those measures shall be deemed to have been communicated to the Commission and published, provided that no substantive amendment, other than a budget increase, is made to the measures concerned.’;

(3) in Article 52, the second paragraph is replaced by the following:

‘It shall apply until 31 December 2022.’.

Article 2

Amendments to Regulation (EU) No 717/2014

In Article 8 of Regulation (EU) No 717/2014, the second paragraph is replaced by the following:

‘It shall apply until 31 December 2022.’.

Article 3

Amendments to Regulation (EU) No 1388/2014

Regulation (EU) No 1388/2014 is amended as follows:

(1) in Article 1(3), point (d) is replaced by the following:

‘(d) aid granted to undertakings in difficulty, with the exception of aid to make good the damage caused by natural disasters and aid to undertakings which were not in difficulty on 31 December 2019 but became undertakings in difficulty in the period from 1 January 2020 to 30 June 2021.’;

(2) the following Article 11a is inserted:

‘Article 11a

Derogation from information and publication requirements

By way of derogation from Article 9(5) and Article 11, point (a), where a Member State wishes to prolong measures in respect of which summary information was submitted to the Commission, summary information regarding the prolongation of those measures shall be deemed to have been communicated to the Commission and published, provided that no substantive amendment, other than a budget increase, is made to the measures concerned.’;

(3) in Article 47, the second paragraph is replaced by the following:

‘It shall apply until 31 December 2022.’.

*Article 4***Application of references to Regulation (EU) No 508/2014 in Regulation (EU) No 1388/2014**

The references to provisions of Regulation (EU) No 508/2014 in Articles 1 and 13 to 43 of Regulation (EU) No 1388/2014 shall be understood as references to the version of those provisions applicable on 31 December 2020, regardless of whether that Regulation is repealed.

*Article 5***Entry into force**

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

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

Done at Brussels, 8 December 2020.

For the Commission
The President
Ursula VON DER LEYEN

DECISIONS

COMMISSION IMPLEMENTING DECISION (EU) 2020/2009

of 22 June 2020

establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions, for surface treatment using organic solvents including preservation of wood and wood products with chemicals

(notified under document C(2020) 4050)

(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 18 November 2019 with its opinion on the proposed content of the BAT reference document for surface treatment using organic solvents including preservation of wood and wood products with chemicals. 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 surface treatment using organic solvents including preservation of wood and wood products with chemicals, as set out in the Annex, are adopted.

⁽¹⁾ OJ L 334, 17.12.2010, p. 17.

⁽²⁾ Commission Decision of 16 May 2011 establishing a forum for the exchange of information pursuant to Article 13 of Directive 2010/75/EU on industrial emissions (OJ C 146, 17.5.2011, p. 3).

Article 2

This Decision is addressed to the Member States.

Done at Brussels, 22 June 2020.

For the Commission
Virginijus SINKEVIČIUS
Member of the Commission

ANNEX

Best available techniques (BAT) conclusions for surface treatment using organic solvents including preservation of wood and wood products with chemicals

SCOPE

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

- 6.7: Surface treatment of substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating, with an organic solvent consumption capacity of more than 150 kg per hour or more than 200 tonnes per year.
- 6.10: Preservation of wood and wood products with chemicals with a production capacity exceeding 75 m³ per day other than exclusively treating against sapstain.
- 6.11: Independently operated treatment of waste water not covered by Directive 91/271/EEC provided that the main pollutant load originates from activities specified in point 6.7 or 6.10 of Annex I to Directive 2010/75/EU.

These BAT conclusions also cover the combined treatment of waste water from different origins provided that the main pollutant load originates from the activities specified in point 6.7 or 6.10 of Annex I to Directive 2010/75/EU and that the waste water treatment is not covered by Council Directive 91/271/EEC ⁽¹⁾.

These BAT conclusions do not address the following:

For surface treatment of substances, objects or products using organic solvents:

- Waterproofing of textiles by means other than the use of a solvent-based continuous film. This may be covered by the BAT conclusions for the textiles industry (TXT).
- Printing, sizing and impregnation of textiles. This may be covered by the BAT conclusions for the textiles industry (TXT).
- Lamination of wood-based panels.
- Conversion of rubber.
- Manufacturing of coating mixtures, varnishes, paints, inks, semiconductors, adhesives or pharmaceutical products.
- On-site combustion plants unless the hot gases generated are used for direct contact heating, drying or any other treatment of objects or materials. These may be covered by the BAT conclusions for large combustion plants (LCP) or by Directive 2015/2193/EU of the European Parliament and of the Council ⁽²⁾.

For preservation of wood and wood products with chemicals:

- Chemical modification and hydrophobisation (e.g. using resins) of wood and wood products.
- Sapstain treatment of wood and wood products.
- Ammonia treatment of wood and wood products.
- On-site combustion plants. These may be covered by the BAT conclusions for large combustion plants (LCP) or by Directive 2015/2193/EU.

⁽¹⁾ Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment (OJ L 135, 30.5.1991, p. 40).

⁽²⁾ Directive (EU) 2015/2193 of the European Parliament and of the Council of 25 November 2015 on the limitation of emissions of certain pollutants into the air from medium combustion plants (OJ L 313, 28.11.2015, p. 1).

Other BAT conclusions and reference documents which may be of relevance for the activities covered by these BAT conclusions are the following:

- Economics and Cross-Media Effects (ECM).
- Emissions from Storage (EFS).
- Energy Efficiency (ENE).
- Waste Treatment (WT).
- Large Combustion Plants (LCP).
- Surface Treatment of Metals and Plastics (STM).
- Monitoring of Emissions to Air and Water from IED Installations (ROM).

DEFINITIONS

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

General terms	
Term used	Definition
Base coat	Paint which, when applied to a substrate, determines the colour and the effect (e.g. metallic, pearlescent).
Batch discharge	Discharge of a discrete, contained volume of water.
Clear coat	Coating material which, when applied to a substrate, forms a solid transparent film with protective, decorative or specific technical properties.
Combiline	Combination of hot-dip galvanising and coil coating in the same process line.
Continuous measurement	Measurement using an automated measuring system permanently installed on site for continuous monitoring of emissions, according to EN 14181.
Direct discharge	Discharge to a receiving water body without further downstream waste water treatment.
Emission factors	Coefficients that can be multiplied by known data such as plant/process data or throughput data to estimate emissions.
Existing plant	A plant that is not a new plant.
Fugitive emissions	Fugitive emissions as defined in Article 57(3) of Directive 2010/75/EU.
Grade B or C creosote	Types of creosote for which specifications are given in EN 13991.
Indirect discharge	Discharge which is not a direct discharge.
Major plant upgrade	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.
New plant	A plant first permitted on the site of the installation following the publication of these BAT conclusions or a complete replacement of a plant following the publication of these BAT conclusions.
Off-gas	The gas extracted from a process, piece of equipment or area which is either directed to treatment or discharged directly to air through a stack.
Organic compound	Organic compound as defined in Article 3(44) of Directive 2010/75/EU.
Organic solvent	Organic solvent as defined in Article 3(46) of Directive 2010/75/EU.

General terms	
Term used	Definition
Plant	All parts of an installation that carry out an activity listed in point 6.7 or 6.10 of Annex I to Directive 2010/75/EU and any other directly associated activities which have an effect on consumption and/or emissions. Plants may be new plants or existing plants.
Primer coat	Paint formulated for use as a layer on a prepared surface, to provide good adhesion, protection of any layers below and filling of surface irregularities.
Sector	Any of the surface treatment activities that are part of activities listed in point 6.7 of Annex I to Directive 2010/75/EU and are referred to in Section 1 of these BAT conclusions.
Sensitive receptor	Area which needs special protection, such as: — residential areas, — areas where human activities are carried out (e.g. neighbouring workplaces, schools, day-care centres, recreational areas, hospitals or nursing homes).
Solid mass input	The total mass of solids used as defined in Part 5, 3(a)(i) of Annex VII to Directive 2010/75/EU.
Solvent	'Solvent' refers to 'organic solvent'.
Solvent input	The total quantity of organic solvents used as defined in Part 7, 3(b) of Annex VII to Directive 2010/75/EU.
Solvent-based (SB)	Type of paint, ink or other coating material using solvent(s) as the carrier. For the preservation of wood and wood products, it refers to the type of treatment chemicals.
Solvent-based-mix (SB-mix)	Solvent-based coating where one of the coating layers is water-based (WB).
Solvent mass balance (SMB)	A mass balance exercise conducted at least once every year according to Part 7 of Annex VII to Directive 2010/75/EU.
Surface run-off water	Water from precipitation that flows over land or impervious surfaces, such as paved streets and storage areas, rooftops, etc. and does not soak into the ground.
Total emissions	The sum of fugitive emissions and emissions in waste gases as defined in Article 57(4) of Directive 2010/75/EU.
Treatment chemicals	Chemicals used in wood and wood products preservation such as biocides, chemicals used for waterproofing (e.g. oils, emulsions) and flame retardants. This also includes the carrier of active substances (e.g. water, solvent).
Valid hourly/half-hourly average	An hourly/half-hourly average is considered valid when there is no maintenance or malfunction of the automated measuring system.
Waste gases	Waste gases as defined in Article 57(2) of Directive 2010/75/EU.
Water-based (WB)	Type of paint, ink or other coating material in which water replaces all or part of the solvent content. For the preservation of wood and wood products, it refers to the type of treatment chemicals.
Wood preservation	Activities whose purpose is to protect wood and wood products from the damaging effects of fungi, bacteria, insects, water, weather or fire; to provide long-term conservation of structural integrity; and to improve the resistance of wood and wood products.

Pollutants and parameters	
Term used	Definition
AOX	Adsorbable organically bound halogens, expressed as Cl, include adsorbable organically bound chlorine, bromine and iodine.
CO	Carbon monoxide.
COD	Chemical oxygen demand. Amount of oxygen needed for the total chemical oxidation of the organic matter to carbon dioxide using dichromate. COD is an indicator for the mass concentration of organic compounds.
Chromium	Chromium, expressed as Cr, includes all inorganic and organic chromium compounds, dissolved or bound to particles.
DMF	N,N-Dimethylformamide.
Dust	Total particulate matter (in air).
F ⁻	Fluoride.
Hexavalent chromium	Hexavalent chromium, expressed as Cr(VI), includes all chromium compounds where the chromium is in the oxidation state +6 (dissolved or bound to particles).
HOI	Hydrocarbon oil index. The sum of compounds extractable with a hydrocarbon solvent (including long-chain or branched aliphatic, alicyclic, aromatic or alkyl-substituted aromatic hydrocarbons).
IPA	Isopropyl alcohol: propan-2-ol (also called isopropanol).
Nickel	Nickel, expressed as Ni, includes all inorganic and organic nickel compounds, dissolved or bound to particles.
NO _x	The sum of nitrogen monoxide (NO) and nitrogen dioxide (NO ₂), expressed as NO ₂ .
PAHs	Polycyclic aromatic hydrocarbons.
TOC	Total organic carbon, expressed as C (in water).
TVOC	Total volatile organic carbon, expressed as C (in air).
TSS	Total suspended solids. Mass concentration of all suspended solids (in water), measured via filtration through glass fibre filters and gravimetry.
VOC	Volatile organic compound as defined in Article 3(45) of Directive 2010/75/EU.
Zinc	Zinc, expressed as Zn, includes all inorganic and organic zinc compounds, dissolved or bound to particles.

ACRONYMS

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

Acronym	Definition
BPR	Biocidal Products Regulation (Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products, OJ L 167, 27.6.2012, p. 1).
DWI	Drawn and wall ironed (a type of can in the metal packaging industry).

Acronym	Definition
EMS	Environmental management system.
IED	Industrial Emissions Directive (2010/75/EU).
IR	Infrared.
LEL	Lower explosive limit – the lowest concentration (percentage) of a gas or vapour in air capable of producing a flash of fire in the presence of an ignition source. Concentrations lower than LEL are 'too lean' to burn. Also called lower flammable limit (LFL).
OTNOC	Other than normal operating conditions.
STS	Surface treatment using organic solvents.
UV	Ultraviolet.
WPC	Preservation of wood and wood products with chemicals.

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)

BAT-AELs for total and fugitive VOC emissions

For total VOC emissions, the emission levels associated with the best available techniques (BAT-AELs) are given in these BAT conclusions:

- as a specific emission load calculated as yearly averages by dividing the total emissions of VOCs (as calculated by the solvent mass balance) by a sector-dependent production input (or throughput) parameter; or
- as a percentage of the solvent input, calculated as yearly averages as per Part 7, 3(b)(i) of Annex VII to Directive 2010/75/EU.

For fugitive VOC emissions, the emission levels associated with the best available techniques (BAT-AELs) are given in these BAT conclusions as a percentage of the solvent input, calculated as yearly averages as per Part 7, 3(b)(i) of Annex VII to Directive 2010/75/EU.

BAT-AELs and indicative emission levels for emissions in waste gases

Emission levels associated with the best available techniques (BAT-AELs) and indicative emission levels for emissions in waste gases given in these BAT conclusions refer to concentrations, expressed as mass of emitted substance per volume of waste gas under the following standard conditions: dry gas, at a temperature of 273,15 K and a pressure of 101,3 kPa, without correction for oxygen content and expressed in mg/Nm³.

For averaging periods of BAT-AELs and indicative emission levels for emissions in waste gases, the following definitions apply.

Type of measurement	Averaging period	Definition
Continuous	Daily average	Average over a period of one day based on valid hourly or half-hourly averages.

Type of measurement	Averaging period	Definition
Periodic	Average over the sampling period	Average value of three consecutive measurements of at least 30 minutes each ⁽¹⁾ .

⁽¹⁾ For any parameter where, due to sampling or analytical limitations and/or due to operational conditions, a 30-minute sampling/measurement and/or an average of three consecutive measurements is inappropriate, a more representative sampling/measurement procedure may be employed.

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 substance per volume of water), expressed in mg/l.

Averaging periods associated with the BAT-AELs refer to either of the following two cases:

- in the case of continuous discharge, daily average values, i.e. 24-hour flow-proportional composite samples;
- in the case of batch discharge, average values over the release duration taken as flow-proportional composite samples.

Time-proportional composite samples can be used provided that sufficient flow stability is demonstrated. Alternatively, spot samples may be taken, provided that the effluent is appropriately mixed and homogeneous. Spot samples are taken if the sample is unstable with respect to the parameter to be measured. All BAT-AELs for emissions to water apply at the point where the emission leaves the plant.

Other environmental performance levels

Specific energy consumption (energy efficiency) levels associated with the best available techniques (BAT-AEPLs)

The environmental performance levels related to specific energy consumption refer to yearly averages calculated using the following equation:

$$\text{specific energy consumption} = \frac{\text{energy consumption}}{\text{activity rate}}$$

where:

- energy consumption: the total amount of heat (generated by primary energy sources) and electricity consumed by the plant, as defined in the energy efficiency plan (see BAT 19 (a)), expressed in MWh/year;
- activity rate: total amount of products processed by the plant or plant throughput, expressed in the appropriate unit depending on the sector (e.g. kg/year, m²/year, vehicles coated/year).

Specific water consumption levels associated with the best available techniques (BAT-AEPLs)

The environmental performance levels related to specific water consumption refer to yearly averages calculated using the following equation:

$$\text{specific water consumption} = \frac{\text{water consumption}}{\text{activity rate}}$$

where:

- water consumption: total amount of water consumed by the activities carried out in the plant excluding recycled and reused water, cooling water used in once-through cooling systems, as well as water for domestic-type usage, expressed in l/year or m³/year;

activity rate: total amount of products processed by the plant or plant throughput expressed in the appropriate unit depending on the sector (e.g. m² of coated coil/year, vehicles coated/year, thousand cans/year).

Indicative levels for specific waste quantity sent off site

The indicative levels related to the specific quantity of waste sent off site refer to yearly averages calculated using the following equation:

$$\text{specific waste quantity sent off site} = \frac{\text{waste quantity sent off site}}{\text{activity rate}}$$

where:

waste quantity sent off site:: total amount of waste sent off site by the plant, expressed in kg/year;

activity rate: total amount of products processed by the plant or plant throughput expressed in vehicles coated/year.

1. BAT CONCLUSIONS FOR SURFACE TREATMENT USING ORGANIC SOLVENTS

1.1. General BAT conclusions

1.1.1. 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 surface treatment using organic solvents, BAT is also to incorporate the following features in the EMS:

- (i) Interaction with quality control and assurance as well as health and safety considerations.
- (ii) Planning to reduce the environmental footprint of an installation. In particular, this involves the following:
 - (a) assessing the overall environmental performance of the plant (see BAT 2);
 - (b) taking into account cross-media considerations, especially the maintenance of a proper balance between solvent emissions reduction and consumption of energy (see BAT 19), water (see BAT 20) and raw materials (see BAT 6);
 - (c) reducing VOC emissions from cleaning processes (see BAT 9).
- (iii) The inclusion of:
 - (a) a plan for the prevention and control of leaks and spillages (see BAT 5 (a));
 - (b) a raw material evaluation system to use raw materials with low environmental impact and a plan to optimise the use of solvents in the process (see BAT 3);
 - (c) a solvent mass balance (see BAT 10);
 - (d) a maintenance programme to reduce the frequency and environmental consequences of OTNOC (see BAT 13);

- (e) an energy efficiency plan (see BAT 19 (a));
- (f) a water management plan (see BAT 20 (a));
- (g) a waste management plan (see BAT 22 (a));
- (h) an odour management plan (see BAT 23).

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.

1.1.2. Overall environmental performance

BAT 2. In order to improve the overall environmental performance of the plant, in particular concerning VOC emissions and energy consumption, BAT is to:

- identify the process areas/sections/steps that represent the greatest contribution to the VOC emissions and energy consumption and the greatest potential for improvement (see also BAT 1);
- identify and implement actions to minimise VOC emissions and energy consumption;
- regularly (at least once every year) update the situation and follow up the implementation of the identified actions.

1.1.3. Selection of raw materials

BAT 3. In order to prevent or reduce the environmental impact of the raw materials used, BAT is to use both of the techniques given below.

Technique		Description	Applicability
(a)	Use of raw materials with a low environmental impact	As part of the EMS (see BAT 1), systematic evaluation of the adverse environmental impacts of the materials used (in particular substances that are carcinogenic, mutagenic and toxic to reproduction as well as substances of very high concern) and substitution by others with no or lower environmental and health impacts where possible, taking into consideration the product quality requirements or specifications.	Generally applicable. The scope (e.g. level of detail) and nature of the evaluation will generally be related to the nature, scale and complexity of the plant and the range of environmental impacts it may have, as well as to the type and quantity of materials used.
(b)	Optimisation of the use of solvents in the process	Optimisation of the use of solvents in the process by a management plan (as part of the EMS (see BAT 1)) that aims to identify and implement necessary actions (e.g. colour batching, optimising spray pulverisation).	Generally applicable.

BAT 4. In order to reduce solvent consumption, VOC emissions and the overall environmental impact of the raw materials used, BAT is to use one or a combination of the techniques given below.

Technique		Description	Applicability
(a)	Use of high-solids solvent-based paints/coatings/varnishes/inks/adhesives	Use of paints, coatings, liquid inks, varnishes and adhesives containing a low amount of solvents and an increased solids content.	The selection of the surface treatment techniques may be restricted by the activity type, the substrate type and shape, product quality requirements as well as the need to ensure that the materials used, coating application techniques, drying/curing techniques and off-gas treatment systems are mutually compatible.
(b)	Use of water-based paints/coatings/inks/varnishes/adhesives	Use of paints, coatings, liquid inks, varnishes and adhesives where organic solvent is partially replaced by water.	
(c)	Use of radiation-cured inks/coatings/paints/varnishes/adhesives	Use of paints, coatings, liquid inks, varnishes and adhesives suitable to be cured by the activation of specific chemical groups by UV or IR radiation, or fast electrons, without heat and without emission of VOCs.	
(d)	Use of solvent-free two-component adhesives	Use of solvent-free two-component adhesive materials consisting of a resin and a hardener.	
(e)	Use of hot-melt adhesives	Use of coating with adhesives made from the hot extrusion of synthetic rubbers, hydrocarbon resins and various additives. No solvents are used.	
(f)	Use of powder coatings	Use of solvent-free coating which is applied as a finely divided powder and cured in thermal ovens.	
(g)	Use of laminate film for web or coil coatings	Use of polymer films applied onto a coil or web in order to give aesthetic or functional properties, which reduces the number of coating layers needed.	
(h)	Use of substances which are not VOCs or are VOCs of a lower volatility	Substitution of high-volatility VOC substances with others containing organic compounds that are non-VOCs or VOCs of a lower volatility (e.g. esters).	

1.1.4. *Storage and handling of raw materials*

BAT 5. In order to prevent or reduce fugitive VOC emissions during storage and handling of solvent-containing materials and/or hazardous materials, BAT is to apply the principles of good housekeeping by using all of the techniques given below.

Technique	Description	Applicability
Management techniques		
(a) Preparation and implementation of a plan for the prevention and control of leaks and spillages	A plan for the prevention and control of leaks and spillages is part of the EMS (see BAT 1) and includes, but is not limited to: — site incident plans for small and large spillages; — identification of the roles and responsibilities of persons involved; — ensuring staff are environmentally aware and trained to prevent/deal with spillage incidents; — identification of areas at risk of spillage and/or leaks of hazardous materials and ranking them according to the risk; — in identified areas, ensuring suitable containment systems are in place, e.g. impervious floors; — identification of suitable spillage containment and clean-up equipment and regularly ensuring it is available, in good working order and close to points where these incidents may occur; — waste management guidelines for dealing with waste arising from spillage control; — regular (at least once every year) inspections of storage and operational areas, testing and calibration of leak detection equipment and prompt repair of leaks from valves, glands, flanges, etc. (see BAT 13).	Generally applicable. The scope (e.g. level of detail) of the plan will generally be related to the nature, scale and complexity of the installation, as well as to the type and quantity of materials used.
Storage techniques		
(b) Sealing or covering of containers and bunded storage area	Storage of solvents, hazardous materials, waste solvents and waste cleaning materials in sealed or covered containers, suitable for the associated risk and designed to minimise emissions. The containers' storage area is bunded and of adequate capacity.	Generally applicable.
(c) Minimisation of storage of hazardous materials in production areas	Hazardous materials are present in production areas only in amounts that are necessary for production; larger quantities are stored separately.	

Technique		Description	Applicability
Techniques for pumping and handling liquids			
(d)	Techniques to prevent leaks and spillages during pumping	Leaks and spillages are prevented by using pumps and seals suitable for the material handled and which ensure proper tightness. This includes equipment such as canned motor pumps, magnetically coupled pumps, pumps with multiple mechanical seals and a quench or buffer system, pumps with multiple mechanical seals and seals dry to atmosphere, diaphragm pumps or bellows pumps.	Generally applicable.
(e)	Techniques to prevent overflows during pumping	This includes ensuring for example that: — the pumping operation is supervised; — for larger quantities, bulk storage tanks are fitted with acoustic and/or optical high-level alarms, with shut-off systems if necessary.	
(f)	Capture of VOC vapour during solvent-containing material delivery	When delivering solvent-containing materials in bulk (e.g. loading or unloading of tanks), the vapour displaced from receiving tanks is captured, usually by back-venting.	May not be applicable for solvents with low vapour pressure or due to cost considerations.
(g)	Containment for spills and/or rapid take-up when handling solvent-containing materials	When handling solvent-containing materials in containers, possible spills are avoided by providing containment, e.g. by using trolleys, pallets and/or stillages with built-in containment (e.g. 'catch pans') and/or rapid take-up by using absorbent materials.	Generally applicable.

1.1.5. Distribution of raw materials

BAT 6. In order to reduce raw material consumption and VOC emissions, BAT is to use one or a combination of the techniques given below.

Technique		Description	Applicability
(a)	Centralised supply of VOC-containing materials (e.g. inks, coatings, adhesives, cleaning agents)	Supply of VOC-containing materials (e.g. inks, coatings, adhesives, cleaning agents) to the application area by direct piping with ring lines, including system cleaning such as pig cleaning or air flushing.	May not be applicable in the case of frequent changes of inks/paints/coatings/adhesives or solvents.
(b)	Advanced mixing systems	Computer-controlled mixing equipment to achieve the desired paint/coating/ink/adhesive.	Generally applicable.
(c)	Supply of VOC-containing materials (e.g. inks, coatings, adhesives, cleaning agents) at the point of application using a closed system	In the case of frequent changes of inks/paints/coatings/adhesives and solvents or for small-scale usage, supply of inks/paints/coatings/adhesives and solvents from small transport containers placed near the application area using a closed system.	

Technique		Description	Applicability
(d)	Automation of colour change	Automated colour changing and ink/paint/coating line purging with solvent capture.	
(e)	Colour grouping	Modification of the sequence of products to achieve large sequences with the same colour.	
(f)	Soft purge in spraying	Refilling the spray gun with new paint without intermediate rinsing.	

1.1.6. Coating application

BAT 7. In order to reduce raw material consumption and the overall environmental impact of the coating application processes, BAT is to use one or a combination of the techniques given below.

Technique	Description	Applicability
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Techniques for non-spraying application

(a)	Roller coating	Application where rollers are used to transfer or meter the liquid coating onto a moving strip.	Only applicable to flat substrates ⁽¹⁾ .
(b)	Doctor blade over roller	The coating is applied to the substrate through a gap between a blade and a roller. As the coating and substrate pass, the excess is scraped off.	Generally applicable ⁽¹⁾ .
(c)	No-rinse (dry-in-place) application in the coating of coil	Application of conversion coatings which do not require a further water rinse using a roller coater (chemcoater) or squeegee rollers.	Generally applicable ⁽¹⁾ .
(d)	Curtain coating (casting)	Work-pieces are passed through a laminar film of coating discharged from a header tank.	Only applicable to flat substrates ⁽¹⁾ .
(e)	Electrocoating (e-coat)	Paint particles dispersed in a water-based solution are deposited on immersed substrates under the influence of an electric field (electrophoretic deposition).	Only applicable to metal substrates ⁽¹⁾ .
(f)	Flooding	The work-pieces are transported via conveyor systems into a closed channel, which is then flooded with the coating material via injection tubes. The excess material is collected and reused.	Generally applicable ⁽¹⁾ .
(g)	Co-extrusion	The printed substrate is coupled with a warm, liquefied plastic film and subsequently cooled down. This film replaces the necessary additional coating layer. It may be used between two different layers of different carriers acting as an adhesive.	Not applicable where high bond strength or resistance to sterilisation temperature is needed ⁽¹⁾ .

Technique		Description	Applicability
Spraying atomisation techniques			
(h)	Air-assisted airless spraying	An airflow (shaping air) is used to modify the spray cone of an airless spray gun.	Generally applicable ⁽¹⁾ .
(i)	Pneumatic atomisation with inert gases	Pneumatic paint application with pressurised inert gases (e.g. nitrogen, carbon dioxide).	May not be applicable to coating of wooden surfaces ⁽¹⁾ .
(j)	High-volume low-pressure (HVLP) atomisation	Atomisation of paint in a spray nozzle by mixing paint with high volumes of air with a low pressure (max. 1,7 bar). HVLP guns have a paint transfer efficiency of > 50 %.	Generally applicable ⁽¹⁾ .
(k)	Electrostatic atomisation (fully automated)	Atomisation by high-speed rotational discs and bells and shaping the spray jet with electrostatic fields and shaping air.	
(l)	Electrostatically assisted air or airless spraying	Shaping the spray jet of pneumatic or airless atomisation with an electrostatic field. Electrostatic paint guns have a transfer efficiency of > 60 %. Fixed electrostatic methods have a transfer efficiency of up to 75 %.	
(m)	Hot spraying	Pneumatic atomisation with hot air or heated paint.	May not be applicable for frequent colour changes ⁽¹⁾ .
(n)	'Spray, squeegee and rinse' application in the coating of coil	Sprays are used for application of cleaners, pre-treatments and for rinsing. After spraying, squeegees are used to minimise solution dragout, which is followed by rinsing.	Generally applicable ⁽¹⁾ .

Automation of spray application

(o)	Robot application	Robot application of coatings and sealants to internal and external surfaces.	Generally applicable ⁽¹⁾ .
(p)	Machine application	Use of paint machines for the handling of the sprayhead/spray gun/nozzle.	

⁽¹⁾ The selection of the application techniques may be restricted at plants with low throughput and/or high product variety as well as by the substrate type and shape, product quality requirements and the need to ensure that the materials used, coating application techniques, drying/curing techniques and off-gas treatment systems are mutually compatible.

1.1.7. *Drying/curing*

BAT 8. In order to reduce energy consumption and the overall environmental impact from drying/curing processes, BAT is to use one or a combination of the techniques given below.

Technique		Description	Applicability
(a)	Inert gas convection drying/curing	The inert gas (nitrogen) is heated in the oven, enabling solvent loading above the LEL. Solvent loads of > 1 200 g/m ³ nitrogen are possible.	Not applicable where dryers need to be opened regularly ⁽¹⁾ .
(b)	Induction drying/curing	Online thermal curing or drying by electromagnetic inductors that generate heat inside the metallic work-piece by an oscillating magnetic field.	Only applicable to metal substrates ⁽¹⁾ .
(c)	Microwave and high-frequency drying	Drying using microwave or high-frequency radiation.	Only applicable to water-based coatings and inks and non-metallic substrates ⁽¹⁾ .
(d)	Radiation curing	Radiation curing is applied based on resins and reactive diluents (monomers) which react on exposure to radiation (infrared (IR), ultraviolet (UV)), or high-energy electron beams (EB).	Only applicable to specific coatings and inks ⁽¹⁾ .
(e)	Combined convection/IR radiation drying	Drying of a wet surface with a combination of circulating hot air (convection) and an infrared radiator.	Generally applicable ⁽¹⁾ .
(f)	Convection drying/curing combined with heat recovery	Heat from off-gases is recovered (see BAT 19 (e)) and used to preheat the input air of the convection dryer/curing oven.	Generally applicable ⁽¹⁾ .

⁽¹⁾ The selection of the drying/curing techniques may be restricted by the substrate type and shape, product quality requirements and the need to ensure that the materials used, coating application techniques, drying/curing techniques and off-gas treatment systems are mutually compatible.

1.1.8. *Cleaning*

BAT 9. In order to reduce VOC emissions from cleaning processes, BAT is to minimise the use of solvent-based cleaning agents and to use a combination of the techniques given below.

Technique		Description	Applicability
(a)	Protection of spraying areas and equipment	Application areas and equipment (e.g. spray booth walls and robots) susceptible to overspray and drips, etc. are covered with fabric covers or disposable foils where foils are not subject to tearing or wear.	The selection of cleaning techniques may be restricted by the type of process, the substrate or equipment to be cleaned and the type of contamination.
(b)	Solids removal prior to complete cleaning	Solids are removed in a (dry) concentrated form, usually by hand, with or without the aid of small amounts of cleaning solvent. This reduces the amount of material to be removed by solvent and/or water in subsequent cleaning stages, and therefore the amount of solvent and/or water used.	
(c)	Manual cleaning with pre-impregnated wipes	Wipes pre-impregnated with cleaning agents are used for manual cleaning. Cleaning agents may be solvent-based, low-volatility solvents or solvent-free.	
(d)	Use of low-volatility cleaning agents	Application of low-volatility solvents as cleaning agents, for manual or automated cleaning, with high cleaning power.	
(e)	Water-based cleaning	Water-based detergents or water-miscible solvents such as alcohols or glycols are used for cleaning.	
(f)	Enclosed washing machines	Automatic batch cleaning/degreasing of press/machine parts in enclosed washing machines. This can be done using either: (a) organic solvents (with air extraction followed by VOC abatement and/or recovery of the used solvents) (see BAT 15); or (b) VOC-free solvents; or (c) alkaline cleaners (with external or internal waste water treatment).	
(g)	Purging with solvent recovery	Collection, storage and, if possible, reuse of the solvents used to purge the guns/applicators and lines between colour changes.	
(h)	Cleaning with high-pressure water spray	High-pressure water spray and sodium bicarbonate systems or similar are used for automatic batch cleaning of press/machine parts.	

Technique		Description	Applicability
(i)	Ultrasonic cleaning	Cleaning in a liquid using high-frequency vibrations to loosen the adhered contamination.	
(j)	Dry ice (CO ₂) cleaning	Cleaning of machinery parts and metallic or plastic substrates by blasting with CO ₂ chips or snow.	
(k)	Plastic shot-blast cleaning	Excess paint build-up is removed from panel jigs and body carriers by shot-blasting with plastic particles.	

1.1.9. Monitoring

1.1.9.1. Solvent mass balance

BAT 10. BAT is to monitor total and fugitive VOC emissions by compiling, at least once every year, a solvent mass balance of the solvent inputs and outputs of the plant, as defined in Part 7(2) of Annex VII to Directive 2010/75/EU and to minimise the uncertainty of the solvent mass balance data by using all of the techniques given below.

Technique		Description
(a)	Full identification and quantification of the relevant solvent inputs and outputs, including the associated uncertainty	This includes: — identification and documentation of solvent inputs and outputs (e.g. emissions in waste gases, emissions from each fugitive emission source, solvent output in waste); — substantiated quantification of each relevant solvent input and output and recording of the methodology used (e.g. measurement, calculation using emission factors, estimation based on operational parameters); — identification of the main sources of uncertainty of the aforementioned quantification, and implementation of corrective actions to reduce the uncertainty; — regular update of solvent input and output data.
(b)	Implementation of a solvent tracking system	A solvent tracking system aims to keep control of both the used and unused quantities of solvents (e.g. by weighing unused quantities returned to storage from the application area).
(c)	Monitoring of changes that may influence the uncertainty of the solvent mass balance data	Any change that could influence the uncertainty of the solvent mass balance data is recorded, such as: — malfunctions of the off-gas treatment system: the date and duration are recorded; — changes that may influence air/gas flow rates, e.g. replacement of fans, drive pulleys, motors; the date and type of change are recorded.

Applicability

The level of detail of the solvent mass balance will be proportionate to the nature, scale and complexity of the installation, and the range of environmental impacts it may have, as well as to the type and quantity of materials used.

1.1.9.2. Emissions in waste gases

BAT 11. BAT is to monitor emissions in waste gases 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.

Substance/ Parameter	Sectors/Sources		Standard(s)	Minimum monitoring frequency	Monitoring associated with
Dust	Coating of vehicles – Spray coating		EN 13284-1	Once every year ⁽¹⁾	BAT 18
	Coating of other metal and plastic sur- faces – Spray coating				
	Coating of aircraft – Preparation (e.g. sanding, blasting) and coating				
	Coating and printing of metal packaging – Spray application				
	Coating of wooden surfaces – Preparation and coating				
TVOC	All sectors	Any stack with a TVOC load < 10 kg C/h	EN 12619	Once every year ⁽¹⁾ ⁽²⁾ ⁽³⁾	BAT 14, BAT 15
		Any stack with a TVOC load ≥ 10 kg C/h	Generic EN stan- dards ⁽⁴⁾	Continuous	
DMF	Coating of textiles, foils and paper ⁽⁵⁾		No EN standard available ⁽⁶⁾	Once every three months ⁽¹⁾	BAT 15
NO _x	Thermal treatment of off-gases		EN 14792	Once every year ⁽⁷⁾	BAT 17
CO	Thermal treatment of off-gases		EN 15058	Once every year ⁽⁷⁾	BAT 17

⁽¹⁾ To the extent possible, the measurements are carried out at the highest expected emission state under normal operating conditions.

⁽²⁾ In the case of a TVOC load of less than 0,1 kg C/h, or in the case of an unabated and stable TVOC load of less than 0,3 kg C/h, the monitoring frequency may be reduced to once every 3 years or the measurement may be replaced by calculation provided that it ensures the provision of data of an equivalent scientific quality.

⁽³⁾ For the thermal treatment of off-gases, the temperature in the combustion chamber is continuously measured. This is combined with an alarm system for temperatures falling outside the optimised temperature window.

⁽⁴⁾ Generic EN standards for continuous measurements are EN15267-1, EN15267-2, EN15267-3 and EN 14181.

⁽⁵⁾ The monitoring only applies if DMF is used in the processes.

⁽⁶⁾ In the absence of an EN standard, the measurement includes the DMF contained in the condensed phase.

⁽⁷⁾ In the case of a stack with a TVOC load of less than 0,1 kg C/h, the monitoring frequency may be reduced to once every 3 years.

1.1.9.3. Emissions to water

BAT 12. BAT is to monitor emissions to water 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.

Substance/ Parameter	Sector	Standard(s)	Minimum monitoring frequency	Monitoring associated with
TSS ⁽¹⁾	Coating of vehicles	EN 872	Once every month ⁽²⁾ ⁽³⁾	BAT 21
	Coil coating			
	Coating and printing of metal packaging (only for DWI cans)			
COD ⁽¹⁾ ⁽⁴⁾	Coating of vehicles	No EN standard available		
	Coil coating			
	Coating and printing of metal packaging (only for DWI cans)			
TOC ⁽¹⁾ ⁽⁴⁾	Coating of vehicles	EN 1484		
	Coil coating			
	Coating and printing of metal packaging (only for DWI cans)			
Cr(VI) ⁽⁵⁾ ⁽⁶⁾	Coating of aircraft	EN ISO 10304-3 or EN ISO 23913		
	Coil coating			
Cr ⁽⁶⁾ ⁽⁷⁾	Coating of aircraft	Various EN stan- dards available (e.g. EN ISO 11885, EN ISO 17294-2, EN ISO 15586)		
	Coil coating			
Ni ⁽⁶⁾	Coating of vehicles			
	Coil coating			
Zn ⁽⁶⁾	Coating of vehicles			
	Coil coating			
AOX ⁽⁶⁾	Coating of vehicles	EN ISO 9562		
	Coil coating			
	Coating and printing of metal packaging (only for DWI cans)			
F ⁻ ⁽⁶⁾ ⁽⁸⁾	Coating of vehicles	EN ISO 10304-1		
	Coil coating			
	Coating and printing of metal packaging (only for DWI cans)			

- (¹) The monitoring only applies in the case of direct discharge to a receiving water body.
- (²) The monitoring frequency may be reduced to once every 3 months if the emission levels are proven to be sufficiently stable.
- (³) In the case of batch discharge that is less frequent than the minimum monitoring frequency, monitoring is carried out once per batch.
- (⁴) TOC monitoring and COD monitoring are alternatives. TOC monitoring is the preferred option because it does not rely on the use of very toxic compounds.
- (⁵) Monitoring of Cr(VI) only applies if chromium(VI) compounds are used in the processes.
- (⁶) In the case of indirect discharge to a receiving water body, the monitoring frequency may be reduced if the downstream waste water treatment plant is designed and equipped appropriately to abate the pollutants concerned.
- (⁷) Monitoring of Cr only applies if chromium compounds are used in the processes.
- (⁸) Monitoring of F- only applies if fluorine compounds are used in the processes.

1.1.10. Emissions during OTNOC

BAT 13. In order to reduce the frequency of the occurrence of OTNOC and to reduce emissions during OTNOC, BAT is to use both of the techniques given below.

Technique		Description
(a)	Identification of critical equipment	Equipment critical to the protection of the environment ('critical equipment') is identified on the basis of a risk assessment. In principle, this concerns all equipment and systems handling VOCs (e.g. off-gas treatment system, leak detection system).
(b)	Inspection, maintenance and monitoring	A structured programme to maximise critical equipment availability and performance which includes standard operating procedures, preventive maintenance, regular and unplanned maintenance. OTNOC periods, duration, causes and, if possible, emissions during their occurrence are monitored.

1.1.11. Emissions in waste gases

1.1.11.1. VOC emissions

BAT 14. In order to reduce VOC emissions from the production and storage areas, BAT is to use technique (a) and an appropriate combination of the other techniques given below.

Technique		Description	Applicability
(a)	System selection, design and optimisation	An off-gas system is selected, designed and optimised taking into account parameters such as: — amount of extracted air; — type and concentration of solvents in extracted air; — type of treatment system (dedicated/centralised); — health and safety; — energy efficiency. The following order of priority for the system selection may be considered: — segregation of off-gases with high and low VOC concentrations;	Generally applicable.

Technique		Description	Applicability
		— techniques to homogenise and increase the VOC concentration (see BAT 16 (b) and (c)); — techniques for the recovery of solvents in off-gases (see BAT 15); — VOC abatement techniques with heat recovery (see BAT 15); — VOC abatement techniques without heat recovery (see BAT 15).	
(b)	Air extraction as close as possible to the point of application of VOC-containing materials	Air extraction as close as possible to the point of application with full or partial enclosure of solvent application areas (e.g. coaters, application machines, spray booths). Extracted air may be treated by an off-gas treatment system.	May not be applicable where enclosure leads to difficult machinery access during operation. Applicability may be restricted by the shape and size of the area to be enclosed.
(c)	Air extraction as close as possible to the point of preparing paints/coatings/adhesives/inks	Air extraction as close as possible to the point of preparing paints/coatings/adhesives/inks (e.g. mixing area). Extracted air may be treated by an off-gas treatment system.	Only applicable where paints/coatings/adhesives/inks are prepared.
(d)	Extraction of air from the drying/curing processes	The curing ovens/dryers are equipped with an air extraction system. Extracted air may be treated by an off-gas treatment system.	Only applicable to drying/curing processes.
(e)	Minimisation of fugitive emissions and heat losses from the ovens/dryers either by sealing the entrance and the exit of the curing ovens/dryers or by applying sub-atmospheric pressure in drying	The entrance to and the exit from curing ovens/dryers are sealed to minimise fugitive VOC emissions and heat losses. The sealing may be ensured by air jets or air knives, doors, plastic or metallic curtains, doctor blades, etc. Alternatively, ovens/dryers are kept under sub-atmospheric pressure.	Only applicable when curing ovens/dryers are used.
(f)	Extraction of air from the cooling zone	When substrate cooling takes place after drying/curing, the air from the cooling zone is extracted and may be treated by an off-gas treatment system.	Only applicable when substrate cooling takes place after drying/curing.
(g)	Extraction of air from storage of raw materials, solvents and solvent-containing wastes	Air from raw material stores and/or individual containers for raw materials, solvents and solvent-containing wastes is extracted and may be treated by an off-gas treatment system.	May not be applicable for closed containers or for storage of raw materials, solvents and solvent-containing wastes with a low vapour pressure and low toxicity.

Technique		Description	Applicability
(h)	Extraction of air from cleaning areas	Air from the areas where machine parts and equipment are cleaned with organic solvents, either by hand or automatically, is extracted and may be treated by an off-gas treatment system.	Only applicable to areas where machine parts and equipment are cleaned with organic solvents.

BAT 15. In order to reduce VOC emissions in waste gases and increase resource efficiency, BAT is to use one or a combination of the techniques given below.

Technique	Description	Applicability
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I. Capture and recovery of solvents in off-gases

(a)	Condensation	A technique for removing organic compounds by reducing the temperature below their dew points so that the vapours liquefy. Depending on the operating temperature range required, different refrigerants are used, e.g. cooling water, chilled water (temperature typically around 5 °C), ammonia or propane.	Applicability may be restricted where the energy demand for recovery is excessive due to the low VOC content.
(b)	Adsorption using activated carbon or zeolites	VOCs are adsorbed on the surface of activated carbon, zeolites or carbon fibre paper. Adsorbate is subsequently desorbed, e.g. with steam (often on site), for reuse or disposal and the adsorbent is reused. For continuous operation, typically more than two adsorbers are operated in parallel, one of them in desorption mode. Adsorption is also commonly applied as a concentration step to increase the subsequent oxidation efficiency.	Applicability may be restricted where the energy demand for recovery is excessive due to the low VOC content.
(c)	Absorption using a suitable liquid	Use of a suitable liquid to remove pollutants from the off-gas by absorption, in particular soluble compounds and solids (dust). Solvent recovery is possible, for example, using distillation or thermal desorption. (For dust removal, see BAT 18.)	Generally applicable.

II. Thermal treatment of solvents in off-gases with energy recovery

(d)	Sending off-gases to a combustion plant	Part or all of the off-gases are sent as combustion air and supplementary fuel to a combustion plant (including CHP (combined heat and power) plants) used for steam and/or electricity production.	Not applicable for off-gases containing substances referred to in IED Article 59(5). Applicability may be restricted due to safety considerations.
(e)	Recuperative thermal oxidation	Thermal oxidation using the heat of the waste gases, e.g. to preheat the incoming off-gases.	Generally applicable.

Technique		Description	Applicability
(f)	Regenerative thermal oxidation with multiple beds or with a valveless rotating air distributor	An oxidiser with multiple beds (three or five) filled with ceramic packing. The beds are heat exchangers, alternately heated by flue-waste gases from oxidation, then the flow is reversed to heat the inlet air to the oxidiser. The flow is reversed on a regular basis. In the valveless rotating air distributor, the ceramic medium is held in a single rotating vessel divided into multiple wedges.	Generally applicable.
(g)	Catalytic oxidation	Oxidation of VOCs assisted by a catalyst to reduce the oxidation temperature and reduce the fuel consumption. Exhaust heat can be recovered with recuperative or regenerative types of heat exchangers. Higher oxidation temperatures (500–750 °C) are used for the treatment of off-gas from the manufacturing of winding wire.	Applicability may be restricted by the presence of catalyst poisons.

III. Treatment of solvents in off-gases without solvent or energy recovery

(h)	Biological off-gas treatment	Off-gas is dedusted and sent to a reactor with bio-filter substrate. The biofilter consists of a bed of organic material (such as peat, heather, compost, root, tree bark, softwood and different combinations) or some inert material (such as clay, activated carbon, and polyurethane), where the off-gas stream is biologically oxidised by naturally occurring microorganisms into carbon dioxide, water, inorganic salts and biomass. The biofilter is sensitive to dust, high temperatures or high variations in the off-gas, e.g. of the inlet temperature or the VOC concentration. Supplementary nutrient feeding may be needed.	Only applicable to the treatment of biodegradable solvents.
(i)	Thermal oxidation	Oxidation of VOCs by heating off-gases with air or oxygen to above their auto-ignition point in a combustion chamber and maintaining a high temperature long enough to complete the combustion of VOCs to carbon dioxide and water.	Generally applicable.

BAT-associated emission levels (BAT-AELs) are given in Tables 11, 15, 17, 19, 21, 24, 27, 30, 32 and 35 of these BAT conclusions.

BAT 16. In order to reduce the energy consumption of the VOC abatement system, BAT is to use one or a combination of the techniques given below.

Technique		Description	Applicability
(a)	Maintaining the VOC concentration sent to the off-gas treatment system by using variable-frequency drive fans	Use of a variable-frequency drive fan with centralised off-gas treatment systems to modulate the airflow to match the exhaust from the equipment that may be in operation.	Only applicable to central thermal off-gas treatment systems in batch processes such as printing.
(b)	Internal concentration of solvents in the off-gases	Off-gases are recirculated within the process (internally) in the curing ovens/dryers and/or in spray booths, so the VOC concentration in the off-gases increases and the abatement efficiency of the off-gas treatment system increases.	Applicability may be limited by health and safety factors such as the LEL, and product quality requirements or specifications.
(c)	External concentration of solvents in the off-gases through adsorption	The concentration of solvent in off-gases is increased by a continuous circular flow of the spray booth process air, possibly combined with curing oven/dryer off-gases, through adsorption equipment. This equipment can include: — fixed bed adsorber with activated carbon or zeolite; — fluidised bed adsorber with activated carbon; — rotor adsorber with activated carbon or zeolite; — molecular sieve.	Applicability may be restricted where the energy demand is excessive due to the low VOC content.
(d)	Plenum technique to reduce waste gas volume	Off-gases from curing ovens/dryers are sent to a large chamber (plenum), and partly recirculated as inlet air in the curing ovens/dryers. The surplus air from the plenum is sent to the off-gas treatment system. This cycle increases the VOC content of the curing ovens/dryers' air and decreases the waste gas volume.	Generally applicable.

1.1.11.2. NO_x and CO emissions

BAT 17. In order to reduce NO_x emissions in waste gases while limiting CO emissions from the thermal treatment of solvents in off-gases, BAT is to use technique (a) or both of the techniques given below.

Technique		Description	Applicability
(a)	Optimisation of thermal treatment conditions (design and operation)	Good design of the combustion chambers, burners and associated equipment/devices is combined with optimisation of combustion conditions (e.g. by controlling combustion parameters such as temperature and residence time) with or without the use of automatic systems and the regular planned maintenance of the combustion system according to suppliers' recommendations.	Design applicability may be restricted for existing plants.

Technique		Description	Applicability
(b)	Use of low-NO _x burners	The peak flame temperature in the combustion chamber is reduced, delaying but completing the combustion and increasing the heat transfer (increased emissivity of the flame). It is combined with increased residence time in order to achieve the desired VOC destruction.	Applicability may be restricted at existing plants by design and/or operational constraints.

Table 1

BAT-associated emission level (BAT-AEL) for NO_x emissions in waste gases and indicative emission level for CO emissions in waste gases from the thermal treatment of off-gases

Parameter	Unit	BAT-AEL ⁽¹⁾ (Daily average or average over the sampling period)	Indicative emission level ⁽¹⁾ (Daily average or average over the sampling period)
NO _x	mg/Nm ³	20–130 ⁽²⁾	No indicative level
CO		No BAT-AEL	20–150

⁽¹⁾ The BAT-AEL and indicative level do not apply where off-gases are sent to a combustion plant.

⁽²⁾ The BAT-AEL may not apply if nitrogen-containing compounds (e.g. DMF or NMP (N-methylpyrrolidone)) are present in the off-gas.

The associated monitoring is given in BAT 11.

1.1.11.3. Dust emissions

BAT 18. In order to reduce dust emissions in waste gases from substrate surface preparation, cutting, coating application and finishing processes for the sectors and processes listed in Table 2, BAT is to use one or a combination of the techniques given below.

Technique		Description
(a)	Wet separation spray booth (flushed impact panel)	A water curtain cascading vertically down the spray cabin rear panel captures paint particles from overspray. The water-paint mixture is captured in a reservoir and the water is recirculated.
(b)	Wet scrubbing	Paint particles and other dust in the off-gas are separated in scrubber systems by intensive mixing of the off-gas with water. (For VOC removal, see BAT 15 (c).)
(c)	Dry overspray separation with pre-coated material	A dry paint overspray separation process using membrane filters combined with limestone as pre-coating material to prevent fouling of the membranes.
(d)	Dry overspray separation using filters	Mechanical separation system, e.g. using cardboard, fabric or sinter.

Technique		Description
(e)	Electrostatic precipitator	In electrostatic precipitators, particles are charged and separated under the influence of an electrical field. In a dry electrostatic precipitator (ESP), the collected material is mechanically removed (e.g. by shaking, vibration, compressed air). In a wet ESP, it is flushed with a suitable liquid, usually a water-based separation agent.

Table 2

BAT-associated emission levels (BAT-AELs) for dust emissions in waste gases

Parameter	Sector	Process	Unit	BAT-AEL (Daily average or average over the sampling period)
Dust	Coating of vehicles	Spray coating	mg/Nm ³	< 1–3
	Coating of other metal and plastic surfaces	Spray coating		
	Coating of aircraft	Preparation (e.g. sanding, blasting), coating		
	Coating and printing of metal packaging	Spray application		
	Coating of wooden surfaces	Preparation, coating		

The associated monitoring is given in BAT 11.

1.1.1.2. *Energy efficiency*

BAT 19. In order to use energy efficiently, BAT is to use techniques (a) and (b) and an appropriate combination of the techniques (c) to (h) given below.

Technique	Description	Applicability
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Management techniques

(a)	Energy efficiency plan	An energy efficiency plan is part of the EMS (see BAT 1) and entails defining and calculating the specific energy consumption of the activity, setting key performance indicators on an annual basis (e.g. MWh/tonne of product) and planning the periodic improvement targets and related actions. The plan is adapted to the specificities of the plant in terms of process(es) carried out, materials, products, etc.	The level of detail and nature of the energy efficiency plan and of the energy balance record will generally be related to the nature, scale and complexity of the installation and the types of
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Technique		Description	Applicability
(b)	Energy balance record	The drawing up once every year of an energy balance record which provides a breakdown of the energy consumption and generation (including energy export) by the type of source (e.g. electricity, fossil fuels, renewable energy, imported heat and/or cooling). This includes: (i) defining the energy boundary of the STS activity; (ii) information on energy consumption in terms of delivered energy; (iii) information on energy exported from the plant; (iv) energy flow information (e.g. Sankey diagrams or energy balances) showing how the energy is used throughout the process. The energy balance record is adapted to the specificities of the plant in terms of process(es) carried out, materials, etc.	energy sources used. It may not be applicable if the STS activity is carried out within a larger installation, provided that the energy efficiency plan and the energy balance record of the larger installation sufficiently cover the STS activity.

Process-related techniques

(c)	Thermal insulation of tanks and vats containing cooled or heated liquids, and of combustion and steam systems	This may be achieved for example by: — using double-skinned tanks; — using pre-insulated tanks; — applying insulation to combustion equipment, steam pipes and pipes containing cooled or heated liquids.	Generally applicable.
(d)	Heat recovery by co-generation – CHP (combined heat and power) or CCHP (combined cooling, heat and power)	Recovery of heat (mainly from the steam system) for producing hot water/steam to be used in industrial processes/activities. CCHP (also called tri-generation) is a cogeneration system with an absorption chiller that uses low-grade heat to produce chilled water.	Applicability may be restricted by the plant layout, the characteristics of the hot gas streams (e.g. flow rate, temperature) or the lack of a suitable heat demand.
(e)	Heat recovery from hot gas streams	Energy recovery from hot gas streams (e.g. from dryers or cooling zones), e.g. by their recirculation as process air, through the use of heat exchangers, in processes, or externally.	
(f)	Flow adjustment of process air and off-gases	Adjustment of the flow of process air and off-gases according to the need. This includes reduction of air ventilation during idle operation or maintenance.	Generally applicable.
(g)	Spray booth off-gas recirculation	Capture and recirculation of the off-gas from the spray booth in combination with efficient paint overspray separation. Energy consumption is less than in the case of fresh air use.	Applicability may be restricted by health and safety considerations.
(h)	Optimised circulation of warm air in a large-volume curing booth using an air turbulator	Air is blown into a single part of the curing booth and distributed using an air turbulator which turns the laminar airflow into the desired turbulent flow.	Only applicable to spray coating sectors.

Table 3

BAT-associated environmental performance levels (BAT-AEPLs) for specific energy consumption

Sector	Product type	Unit	BAT-AEPL (Yearly average)
Coating of vehicles	Passenger cars	MWh/vehicle coated	0,5–1,3
	Vans		0,8–2
	Truck cabins		1–2
	Trucks		0,3–0,5
Coil coating	Steel and/or aluminium coil	kWh/m ² of coated coil	0,2–2,5 ⁽¹⁾
Coating of textiles, foils and paper	Coating of textiles with polyurethane and/or polyvinyl chloride	kWh/m ² of coated surface	1–5
Manufacturing of winding wires	Wires with an average diameter > 0,1 mm	kWh/kg of coated wire	< 5
Coating and printing of metal packaging	All product types	kWh/m ² of coated surface	0,3–1,5
Heatset web offset printing	All product types	Wh/m ² of printed area	4–14
Flexography and non-publication rotogravure printing	All product types	Wh/m ² of printed area	50–350
Publication rotogravure printing	All product types	Wh/m ² of printed area	10–30

⁽¹⁾ The BAT-AEPL may not apply where the coil coating line is part of a larger manufacturing installation (e.g. steelworks) or for combilines.

The associated monitoring is given in BAT 19 (b).

1.1.13. Water use and waste water generation

BAT 20. In order to reduce water consumption and waste water generation from aqueous processes (e.g. degreasing, cleaning, surface treatment, wet scrubbing), BAT is to use technique (a) and an appropriate combination of the other techniques given below.

Technique		Description	Applicability
(a)	Water management plan and water audits	A water management plan and water audits are part of the EMS (see BAT 1) and include: — flow diagrams and a water mass balance of the plant; — establishment of water efficiency objectives;	The level of detail and nature of the water management plan and water audits will generally be related to the nature, scale and complexity of the plant. It may not be ap-

Technique		Description	Applicability
		— implementation of water optimisation techniques (e.g. control of water usage, water recycling, detection and repair of leaks). Water audits are carried out at least once every year.	plicable if the STS activity is carried out within a larger installation, provided that the water management plan and the water audits of the larger installation sufficiently cover the STS activity.
(b)	Reverse cascade rinsing	Multiple stage rinsing in which the water flows in the opposite direction to the work-pieces/substrate. It allows a high degree of rinsing with a low water consumption.	Applicable where rinsing processes are used.
(c)	Reuse and/or recycling of water	Water streams (e.g. spent rinse water, wet scrubber effluent) are reused and/or recycled, if necessary after treatment, using techniques such as ion exchange or filtration (see BAT 21). The degree of water reuse and/or recycling is limited by the water balance of the plant, the content of impurities and/or the characteristics of the water streams.	Generally applicable.

Table 4

BAT-associated environmental performance levels (BAT-AEPLs) for specific water consumption

Sector	Product type	Unit	BAT-AEPL (Yearly average)
Coating of vehicles	Passenger cars	m ³ /vehicle coated	0,5–1,3
	Vans		1–2,5
	Truck cabins		0,7–3
	Trucks		1–5
Coil coating	Steel and/or aluminium coils	l/m ² of coated coil	0,2–1,3 ⁽¹⁾
Coating and printing of metal packaging	Two-piece DWI beverage cans	l/1 000 cans	90–110

⁽¹⁾ The BAT-AEPL may not apply where the coil coating line is part of a larger manufacturing installation (e.g. steelworks) or for combilines.

The associated monitoring is given in BAT 20 (a).

1.1.14. Emissions to water

BAT 21. In order to reduce emissions to water and/or to facilitate water reuse and recycling from aqueous processes (e.g. degreasing, cleaning, surface treatment, wet scrubbing), BAT is to use a combination of the techniques given below.

Techniques	Description	Typical pollutants targeted
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Preliminary, primary and general treatment

(a)	Equalisation	Balancing of flows and pollutant loads by using tanks or other management techniques.	All pollutants.
(b)	Neutralisation	The adjustment of the pH of waste water to a neutral value (approximately 7).	Acids, alkalis.
(c)	Physical separation, for example, by using screens, sieves, grit separators, primary settlement tanks and magnetic separation		Gross solids, suspended solids, metal particles.

Physico-chemical treatment

(d)	Adsorption	The removal of soluble substances (solutes) from the waste water by transferring them to the surface of solid, highly porous particles (typically activated carbon).	Adsorbable dissolved non-biodegradable or inhibitory pollutants, e.g. AOX.
(e)	Vacuum distillation	The removal of pollutants by thermal waste water treatment under reduced pressure.	Dissolved non-biodegradable or inhibitory pollutants that can be distilled, e.g. some solvents.
(f)	Precipitation	The conversion of dissolved pollutants into insoluble compounds by adding precipitants. The solid precipitates formed are subsequently separated by sedimentation, flotation or filtration.	Precipitable dissolved non-biodegradable or inhibitory pollutants, e.g. metals.
(g)	Chemical reduction	Chemical reduction is the conversion of pollutants by chemical reducing agents into similar but less harmful or hazardous compounds.	Reducible dissolved non-biodegradable or inhibitory pollutants, e.g. hexavalent chromium (Cr(VI)).
(h)	Ion exchange	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.	Ionic dissolved non-biodegradable or inhibitory pollutants, e.g. metals.
(i)	Stripping	The removal of purgeable pollutants from the aqueous phase by a gaseous phase (e.g. steam, nitrogen or air) that is passed through the liquid. The removal efficiency may be enhanced by increasing the temperature or reducing the pressure.	Purgeable pollutants, e.g. some adsorbable organically bound halogens (AOX).

Techniques		Description	Typical pollutants targeted
Biological treatment			
(j)	Biological treatment	Use of microorganisms for waste water treatment (e.g. anaerobic treatment, aerobic treatment).	Biodegradable organic compounds.
Final solids removal			
(k)	Coagulation and flocculation	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 with charges opposite to those of the suspended solids. Flocculation is a gentle mixing stage so that collisions of microfloc particles cause them to bond to produce larger flocs. It may be assisted by adding polymers.	Suspended solids and particulate-bound metals.
(l)	Sedimentation	The separation of suspended particles by gravitational settling.	
(m)	Filtration	The separation of solids from waste water by passing them through a porous medium, e.g. sand filtration, nano-, micro- and ultrafiltration	
(n)	Flotation	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.	

Table 5

BAT-associated emission levels (BAT-AELs) for direct discharges to a receiving water body

Substance/Parameter	Sector	BAT-AEL ⁽¹⁾
Total suspended solids (TSS)	Coating of vehicles Coil coating Coating and printing of metal packaging (only for DWI cans)	5–30 mg/l
Chemical oxygen demand (COD) ⁽²⁾		30–150 mg/l
Adsorbable organically bound halogens (AOX)		0,1–0,4 mg/l
Fluoride (F ⁻) ⁽³⁾		2–25 mg/l
Nickel (expressed as Ni)	Coating of vehicles Coil coating	0,05–0,4 mg/l
Zinc (expressed as Zn)		0,05–0,6 mg/l ⁽⁴⁾

Substance/Parameter	Sector	BAT-AEL ⁽¹⁾
Total chromium (expressed as Cr) ⁽²⁾	Coating of aircraft Coil coating	0,01–0,15 mg/l
Hexavalent chromium (expressed as Cr(VI)) ⁽⁶⁾		0,01–0,05 mg/l

⁽¹⁾ The averaging period is given in the general considerations.

⁽²⁾ The BAT-AEL for COD may be replaced by a BAT-AEL for TOC. The correlation between COD and TOC is determined on a case-by-case basis. The BAT-AEL for TOC is the preferred option because TOC monitoring does not rely on the use of very toxic compounds.

⁽³⁾ The BAT-AEL only applies if fluorine compounds are used in the processes.

⁽⁴⁾ The upper end of the BAT-AEL range may be 1 mg/l in the case of zinc-containing substrates or of substrates pretreated using zinc.

⁽⁵⁾ The BAT-AEL only applies if chromium compounds are used in the processes.

⁽⁶⁾ The BAT-AEL only applies if chromium(VI) compounds are used in the processes.

The associated monitoring is given in BAT 12.

Table 6

BAT-associated emission levels (BAT-AELs) for indirect discharges to a receiving water body

Substance/Parameter	Sector	BAT-AEL ⁽¹⁾ ⁽²⁾
Adsorbable organically bound halogens (AOX)	Coating of vehicles Coil coating Coating and printing of metal packaging (only for DWI cans)	0,1–0,4 mg/l
Fluoride (F) ⁽³⁾		2–25 mg/l
Nickel (expressed as Ni)	Coating of vehicles Coil coating	0,05–0,4 mg/l
Zinc (expressed as Zn)		0,05–0,6 mg/l ⁽⁴⁾
Total chromium (expressed as Cr) ⁽⁵⁾	Coating of aircraft Coil coating	0,01–0,15 mg/l
Hexavalent chromium (expressed as Cr(VI)) ⁽⁶⁾		0,01–0,05 mg/l

⁽¹⁾ 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.

⁽²⁾ The averaging period is given in the general considerations.

⁽³⁾ The BAT-AEL only applies if fluorine compounds are used in the processes.

⁽⁴⁾ The upper end of the BAT-AEL range may be 1 mg/l in the case of zinc-containing substrates or of substrates pretreated using zinc.

⁽⁵⁾ The BAT-AEL only applies if chromium compounds are used in the processes.

⁽⁶⁾ The BAT-AEL only applies if chromium(VI) compounds are used in the processes.

The associated monitoring is given in BAT 12.

1.1.15. *Waste management*

BAT 22. In order to reduce the quantity of waste sent for disposal, BAT is to use the techniques (a) and (b) and one or both of the techniques (c) and (d) given below.

Technique		Description
(a)	Waste management plan	A waste management plan is part of the EMS (see BAT 1) and is a set of measures aiming to: 1) minimise the generation of waste, 2) optimise the reuse, regeneration and/or recycling of waste and/or the recovery of energy from waste, and 3) ensure the proper disposal of waste.
(b)	Monitoring of waste quantities	Annual recording of waste quantities generated for each type of waste. The solvent content in the waste is determined periodically (at least once every year) by analysis or calculation.
(c)	Recovery/recycling of solvents	Techniques may include: — recovering/recycling solvents from liquid waste by filtration or distillation on site or off site; — recovering/recycling the solvent content of wipes by gravitational draining, wringing or centrifugation.
(d)	Waste-stream-specific techniques	Techniques may include: — reducing the water content of the waste, e.g. by using a filter press for the sludge treatment; — reducing the sludge and waste solvent generated, e.g. by reducing the number of cleaning cycles (see BAT 9); — using reusable containers, reusing the containers for other purposes, or recycling the container material; — sending the spent limestone generated from dry scrubbing to a lime or cement kiln.

1.1.16. *Odour emissions*

BAT 23. In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements:

- a protocol containing actions and timelines;
- a protocol for response to identified odour incidents, e.g. complaints;
- an odour prevention and reduction programme designed to identify the source(s), to characterise the contributions of the source(s), and to implement prevention and/or reduction measures.

Applicability

The applicability is restricted to cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated.

1.2. **BAT conclusions for the coating of vehicles**

The BAT conclusion in this section applies to the coating of vehicles (passenger cars, vans, trucks, truck cabins, and buses), and applies in addition to the general BAT conclusions given in Section 1.1.

1.2.1. VOC emissions and energy and raw material consumption

BAT 24. In order to reduce the consumption of solvents, other raw materials and energy, as well as to reduce VOC emissions, BAT is to use one or a combination of the coating systems given below.

Coating system		Description	Applicability
(a)	Mixed (SB-mix) coating	A coating system where one coating layer (primer or base coat) is water-based.	Only applicable to new plants or major plant upgrades.
(b)	Water-based (WB) coating	A coating system where the primer and base coat layers are water-based.	
(c)	Integrated coating process	A coating system which combines the functions of primer and base coat and is applied by spray coating in two steps.	
(d)	Three-wet process	Coating system where the primer, base coat and clear coat layers are applied without intermediate drying. The primer and base coat may be solvent-based or water-based.	

Table 7

BAT-associated emission levels (BAT-AELs) for total emissions of VOCs from the coating of vehicles

Parameter	Vehicle type	Unit	BAT-AEL ⁽¹⁾ (Yearly average)	
			New plant	Existing plant
Total VOC emissions as calculated by the solvent mass balance	Passenger cars	g VOCs per m ² of surface area ⁽²⁾	8–15	8–30
	Vans		10–20	10–40
	Truck cabins		8–20	8–40
	Trucks		10–40	10–50
	Buses		< 100	90–150

⁽¹⁾ The BAT-AELs refer to emissions from all process stages, carried out at the same installation from the electrophoretic coating or any other kind of coating process up to and including the final wax and polish of the topcoat, as well as solvents used in cleaning of production equipment, both during and outside the production period.

⁽²⁾ The surface area is defined as set out in Part 3 of Annex VII to Directive 2010/75/EU.

The associated monitoring is given in BAT 10.

1.2.2. *Waste quantity sent off site*

Table 8

Indicative levels for specific waste quantity sent off site from the coating of vehicles

Parameter	Vehicle type	Relevant waste streams	Unit	Indicative level (Yearly average)
Waste quantity sent off site	Passenger cars	— Waste paint — Waste plastisols, sealers and adhesives	kg/vehicle coated	3–9 ⁽¹⁾
	Vans			4–17 ⁽¹⁾
	Truck cabins	— Used solvents — Paint sludge — Other paint-shop-related waste (e.g. absorbent and cleaning materials, filters, packaging materials, spent activated carbon)		2–11 ⁽¹⁾

⁽¹⁾ The upper end of the range is higher if dry scrubbing with limestone is used.

The associated monitoring is given in BAT 22 (b).

1.3. **BAT conclusions for the coating of other metal and plastic surfaces**

The emission levels given below for coating of other metal and plastic surfaces are associated with the general BAT conclusions described in Section 1.1. The emission levels given below may not apply where metal and/or plastic automotive components are coated in a vehicle coating plant and these emissions are included in the calculation of the total VOC emissions for the coating of vehicles (see Section 1.2).

Table 9

BAT-associated emission levels (BAT-AELs) for total emissions of VOCs from the coating of other metal and plastic surfaces

Parameter	Process	Unit	BAT-AEL (Yearly average)
Total VOC emissions as calculated by the solvent mass balance	Coating of metal surfaces	kg VOCs per kg of solid mass input	< 0,05–0,2
	Coating of plastic surfaces		< 0,05–0,3

The associated monitoring is given in BAT 10.

As an alternative to the BAT-AELs in Table 9, the BAT-AELs in both Table 10 and Table 11 may be used.

Table 10

BAT-associated emission level (BAT-AEL) for fugitive emissions of VOCs from the coating of other metal and plastic surfaces

Parameter	Unit	BAT-AEL (Yearly average)
Fugitive VOC emissions as calculated by the solvent mass balance	Percentage (%) of the solvent input	< 1–10

The associated monitoring is given in BAT 10.

Table 11

BAT-associated emission level (BAT-AEL) for VOC emissions in waste gases from the coating of other metal and plastic surfaces

Parameter	Unit	BAT-AEL (Daily average or average over the sampling period)
TVOC	mg C/Nm ³	1–20 ⁽¹⁾ ⁽²⁾

⁽¹⁾ The upper end of the BAT-AEL range is 35 mg C/Nm³ if techniques are used which allow the reuse/recycling of the recovered solvent.

⁽²⁾ For plants using BAT 16 (c) in combination with an off-gas treatment technique, an additional BAT-AEL of less than 50 mg C/Nm³ applies to the waste gas of the concentrator.

The associated monitoring is given in BAT 11.

1.4. BAT conclusions for the coating of ships and yachts

The BAT conclusion in this section applies to the coating of ships and yachts, and applies in addition to the general BAT conclusions given in Section 1.1.

BAT 25. In order to reduce total emissions of VOCs and dust emissions to air, to reduce emissions to water and to improve the overall environmental performance, BAT is to use techniques (a) and (b) and a combination of techniques (c) to (i) given below.

Technique	Description	Applicability
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Waste and waste water management

(a)	Segregation of waste and waste water streams	Docks and slipways are constructed with: — a system to collect and handle dry waste effectively and keep it separate from wet waste; — a system to separate waste water from storm water and run-off water.	Only applicable to new plants or major plant upgrades.
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Techniques relating to preparation and coating processes

(b)	Restrictions for adverse weather conditions	Where the treatment areas are not fully enclosed, blasting and/or airless spray coating are not carried out if adverse weather conditions are observed or forecast.	Generally applicable.
(c)	Partial enclosure of treatment areas	Fine nets and/or water spray curtains are used around areas where blasting and/or airless spray coating are carried out to prevent dust emissions. They may be permanent or temporary.	Applicability may be restricted by the shape and size of the area to be enclosed. Water spray curtains may not be applicable in cold climatic conditions.
(d)	Full enclosure of treatment areas	Blasting and/or airless spray coating are carried out in halls, closed workshops, areas tented with textiles or areas fully enclosed with nets to prevent dust emissions. Air from the treatment areas is extracted and may be sent to off-gas treatment; see also BAT 14 (b).	Applicability may be restricted by the shape and size of the area to be enclosed.

Technique		Description	Applicability
(e)	Dry blasting in a closed system	Dry blasting using steel grit or shot is carried out in closed blasting systems equipped with a suction head and centrifugal blasting wheels.	Generally applicable.
(f)	Wet blasting	Blasting is carried out with water containing a fine abrasive material, such as a fine cinder (e.g. copper slag cinder) or silica.	May not be applicable in cold climatic conditions and/or in enclosed areas (cargo tanks, double bottom tanks) due to the heavy mist formation.
(g)	(Ultra-)High-Pressure ((U)HP) water jetting or blasting	(U)HP blasting is a dustless surface treatment method using extremely high-pressure water. There are options with or without an abrasive.	May not be applicable in cold climatic conditions, or due to surface specifications (e.g. new surfaces, spot blasting).
(h)	Stripping of coatings by induction heating	An inductor head is moved over the surface, causing localised fast heating of the steel to lift old coatings.	May not be applicable for surfaces with a thickness of less than 5 mm and/or for surfaces with components sensitive to induction heating (e.g. insulation, flammable).
(i)	Underwater hull and propeller cleaning system	Underwater cleaning system using water pressure and rotating polypropylene brushes.	Not applicable for ships in full dry dock.

Table 12

BAT-associated emission level (BAT-AEL) for total emissions of VOCs from the coating of ships and yachts

Parameter	Unit	BAT-AEL (Yearly average)
Total VOC emissions as calculated by the solvent mass balance	kg VOCs per kg of solid mass input	< 0,375

The associated monitoring is given in BAT 10.

1.5. BAT conclusions for the coating of aircraft

The BAT conclusion in this section applies to the coating of aircraft, and applies in addition to the general BAT conclusions given in Section 1.1.

BAT 26: In order to reduce total emissions of VOCs and to improve the overall environmental performance of coating of aircraft, BAT is to use technique (a) or both of the techniques given below.

Technique		Description	Applicability
(a)	Enclosure	Component parts are coated in enclosed spray booths (see BAT 14 (b)).	Generally applicable.
(b)	Direct printing	Use of a printing device to directly print complex layouts on the aircraft parts.	Applicability may be restricted by technical considerations (e.g. accessibility of the applicator gantry, customised colours).

Table 13

BAT-associated emission level (BAT-AEL) for total emissions of VOCs from the coating of aircraft

Parameter	Unit	BAT-AEL (Yearly average)
Total VOC emissions as calculated by the solvent mass balance	kg VOCs per kg of solid mass input	0,2–0,58

The associated monitoring is given in BAT 10.

1.6. BAT conclusions for coil coating

The emission levels for coil coating given below are associated with the general BAT conclusions given in Section 1.1.

Table 14

BAT-associated emission level (BAT-AEL) for fugitive emissions of VOCs from coil coating

Parameter	Unit	BAT-AEL (Yearly average)
Fugitive VOC emissions as calculated by the solvent mass balance	Percentage (%) of the solvent input	< 1–3

The associated monitoring is given in BAT 10.

Table 15

BAT-associated emission level (BAT-AEL) for VOC emissions in waste gases from coil coating

Parameter	Unit	BAT-AEL (Daily average or average over the sampling period)
TVOC	mg C/Nm ³	1–20 ⁽¹⁾ ⁽²⁾

⁽¹⁾ The upper end of the BAT-AEL range is 50 mg C/Nm³ if techniques are used which allow the reuse/recycling of the recovered solvent.

⁽²⁾ For plants using BAT 16 (c) in combination with an off-gas treatment technique, an additional BAT-AEL of less than 50 mg C/Nm³ applies to the waste gas of the concentrator.

The associated monitoring is given in BAT 11.

1.7. **BAT conclusions for the manufacturing of adhesive tapes**

The emission levels for the manufacturing of adhesive tapes given below are associated with the general BAT conclusions given in Section 1.1.

Table 16

BAT-associated emission level (BAT-AEL) for total emissions of VOCs from the manufacturing of adhesive tapes

Parameter	Unit	BAT-AEL (Yearly average)
Total VOC emissions as calculated by the solvent mass balance	Percentage (%) of the solvent input	< 1–3 ⁽¹⁾

⁽¹⁾ This BAT-AEL may not apply to the manufacturing of plastic films used in temporary surface protection.

The associated monitoring is given in BAT 10.

Table 17

BAT-associated emission level (BAT-AEL) for VOC emissions in waste gases from the manufacturing of adhesive tapes

Parameter	Unit	BAT-AEL (Daily average or average over the sampling period)
TVOC	mg C/Nm ³	2–20 ⁽¹⁾ ⁽²⁾

⁽¹⁾ The upper end of the BAT-AEL range is 50 mg C/Nm³ if techniques are used which allow the reuse/recycling of the recovered solvent.

⁽²⁾ For plants using BAT 16 (c) in combination with an off-gas treatment technique, an additional BAT-AEL of less than 50 mg C/Nm³ applies to the waste gas of the concentrator.

The associated monitoring is given in BAT 11.

1.8. **BAT conclusions for the coating of textiles, foils and paper**

The emission levels for the coating of textiles, foils and paper given below are associated with the general BAT conclusions given in Section 1.1.

Table 18

BAT-associated emission level (BAT-AEL) for fugitive emissions of VOCs from the coating of textiles, foils and paper

Parameter	Unit	BAT-AEL (Yearly average)
Fugitive VOC emissions as calculated by the solvent mass balance	Percentage (%) of the solvent input	< 1–5

The associated monitoring is given in BAT 10.

Table 19

BAT-associated emission level (BAT-AEL) for VOC emissions in waste gases from the coating of textiles, foils and paper

Parameter	Unit	BAT-AEL (Daily average or average over the sampling period)
TVOC	mg C/Nm ³	5–20 ⁽¹⁾ ⁽²⁾

⁽¹⁾ The upper end of the BAT-AEL range is 50 mg C/Nm³ if techniques are used which allow the reuse/recycling of the recovered solvent.

⁽²⁾ For plants using BAT 16 (c) in combination with an off-gas treatment technique, an additional BAT-AEL of less than 50 mg C/Nm³ applies to the waste gas of the concentrator.

The associated monitoring is given in BAT 11.

1.9. BAT conclusions for the manufacturing of winding wire

The BAT conclusion in this section applies to the manufacturing of winding wire, and applies in addition to the general BAT conclusions given in Section 1.1.

BAT 27. In order to reduce total emissions of VOCs and energy consumption, BAT is to use technique (a) and one or a combination of the techniques (b) to (d) given below.

Technique	Description	Applicability
(a) Process-integrated VOC oxidation	The air/solvent mix resulting from solvent evaporation during the repeated enamel curing process is treated in a catalytic oxidiser (see BAT 15 (g)) integrated in the curing oven/dryer. The waste heat from the catalytic oxidiser is used in the drying process to heat up the circulating airflow and/or as process heat for other purposes within the plant.	Generally applicable.
(b) Solvent-free lubricants	Solvent-free lubricants are applied as follows: — the wire is drawn through a lubricant-wetted felt; or — a lubricant-impregnated filament is run with the wire and the paraffin wax melts due to the residual heat of the wire and the frictional heat.	Applicability may be limited due to product quality requirements or specifications, e.g. diameter.
(c) Self-lubricating coatings	A solvent-containing lubrication step is avoided by using a coating system that also contains lubricant (a special wax).	Applicability may be limited due to product quality requirements or specifications.
(d) High-solids enamel coating	Use of enamel coating with a solids content of up to 45 %. In the case of fine wires (with a diameter less than or equal to 0.1 mm), the solids content is up to 30 %.	

Table 20

BAT-associated emission level (BAT-AEL) for total emissions of VOCs from the manufacture of winding wire

Parameter	Product type	Unit	BAT-AEL (Yearly average)
Total VOC emissions as calculated by the solvent mass balance	Coating of winding wire with an average diameter greater than 0,1 mm	g VOCs per kg of coated wire	1–3,3

The associated monitoring is given in BAT 10.

Table 21

BAT-associated emission level (BAT-AEL) for VOC emissions in waste gases from the manufacture of winding wire

Parameter	Unit	BAT-AEL (Daily average or average over the sampling period)
TVOC	mg C/Nm ³	5–40

The associated monitoring is given in BAT 11.

1.10. BAT conclusions for the coating and printing of metal packaging

The emission levels for the coating and printing of metal packaging given below are associated with the general BAT conclusions given in Section 1.1.

Table 22

BAT-associated emission level (BAT-AEL) for total emissions of VOCs from the coating and printing of metal packaging

Parameter	Unit	BAT-AEL (Yearly average)
Total VOC emissions as calculated by the solvent mass balance	g VOCs per m ² of coated/printed surface	< 1–3,5

The associated monitoring is given in BAT 10.

As an alternative to the BAT-AEL in Table 22, the BAT-AELs in both Table 23 and Table 24 may be used.

Table 23

BAT-associated emission level (BAT-AEL) for fugitive emissions of VOCs from the coating and printing of metal packaging

Parameter	Unit	BAT-AEL (Yearly average)
Fugitive VOC emissions as calculated by the solvent mass balance	Percentage (%) of the solvent input	< 1–12

The associated monitoring is given in BAT 10.

Table 24

BAT-associated emission level (BAT-AEL) for VOC emissions in waste gases from the coating and printing of metal packaging

Parameter	Unit	BAT-AEL (Daily average or average over the sampling period)
TVOC	mg C/Nm ³	1–20 ⁽¹⁾

⁽¹⁾ For plants using BAT 16 (c) in combination with an off-gas treatment technique, an additional BAT-AEL of less than 50 mg C/Nm³ applies to the waste gas of the concentrator.

The associated monitoring is given in BAT 11.

1.11. BAT conclusions for heatset web offset printing

The BAT conclusion in this section applies to heatset web offset printing, and applies in addition to the general BAT conclusions given in Section 1.1.

BAT 28. In order to reduce total VOC emissions, BAT is to use a combination of the techniques given below.

Technique	Description	Applicability
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Material-based and printing techniques

(a)	Use of low-IPA or IPA-free additives in dampening solutions	Reduction or avoidance of isopropanol (IPA) as a wetting agent in dampening solutions, through substitution by mixtures of other organic compounds which are not volatile or have a low volatility.	Applicability may be limited by technical and product quality requirements or specifications.
(b)	Waterless offset	Modification of the press and the pre-press processes to enable the use of specially coated offset plates, eliminating the need for dampening.	May not be applicable for long print runs due to the need for more frequent changes of plates.

Cleaning techniques

(c)	Use of VOC-free solvents or solvents with low volatility for automatic blanket cleaning	Use of organic compounds which are not volatile or have a low volatility as cleaning agents for automatic blanket cleaning.	Generally applicable.
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Off-gas treatment techniques

(d)	Web offset dryer integrated with off-gas treatment	A web offset dryer with an integrated off-gas treatment unit, enabling incoming dryer air to be mixed with a part of the waste gases returned from the off-gas thermal treatment system.	Applicable to new plants or major plant upgrades.
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Technique		Description	Applicability
(e)	Extraction and treatment of air from the press room or the press encapsulation	Routing of extracted air from the press room or the press encapsulation to the dryer. As a result, a part of the solvents evaporated in the press room or press encapsulation is abated by the thermal treatment (see BAT 15) downstream of the dryer.	Generally applicable.

Table 25

BAT-associated emission level (BAT-AEL) for total emissions of VOCs from heatset web offset printing

Parameter	Unit	BAT-AEL (Yearly average)
Total VOC emissions as calculated by the solvent mass balance	kg VOCs per kg of ink input	< 0,01–0,04 ⁽¹⁾

⁽¹⁾ The upper end of the BAT-AEL range is related to the production of high-quality products.

The associated monitoring is given in BAT 10.

As an alternative to the BAT-AELs in Table 25, the BAT-AELs in both Table 26 and Table 27 may be used.

Table 26

BAT-associated emission level (BAT-AEL) for fugitive emissions of VOCs from heatset web offset printing

Parameter	Unit	BAT-AEL (Yearly average)
Fugitive VOC emissions as calculated by the solvent mass balance	Percentage (%) of the solvent input	< 1–10 ⁽¹⁾

⁽¹⁾ The upper end of the BAT-AEL range is related to the production of high-quality products.

The associated monitoring is given in BAT 10.

Table 27

BAT-associated emission level (BAT-AEL) for VOC emissions in waste gases from heatset web offset printing

Parameter	Unit	BAT-AEL (Daily average or average over the sampling period)
TVOC	mg C/Nm ³	1–15

The associated monitoring is given in BAT 11.

1.12. BAT conclusions for flexography and non-publication rotogravure printing

The emission levels for flexography and non-publication rotogravure printing given below are associated with the general BAT conclusions given in Section 1.1.

Table 28

BAT-associated emission level (BAT-AEL) for total emissions of VOCs from flexography and non-publication rotogravure printing

Parameter	Unit	BAT-AEL (Yearly average)
Total VOC emissions as calculated by the solvent mass balance	kg VOCs per kg of solid mass input	< 0,1–0,3

The associated monitoring is given in BAT 10.

As an alternative to the BAT-AEL in Table 28, the BAT-AELs in both Table 29 and Table 30 may be used.

Table 29

BAT-associated emission level (BAT-AEL) for fugitive emissions of VOCs from flexography and non-publication rotogravure printing

Parameter	Unit	BAT-AEL (Yearly average)
Fugitive VOC emissions as calculated by the solvent mass balance	Percentage (%) of the solvent input	< 1–12

The associated monitoring is given in BAT 10.

Table 30

BAT-associated emission level (BAT-AEL) for VOC emissions in waste gases from flexography and non-publication rotogravure printing

Parameter	Unit	BAT-AEL (Daily average or average over the sampling period)
TVOC	mg C/Nm ³	1–20 ⁽¹⁾ ⁽²⁾

⁽¹⁾ The upper end of the BAT-AEL range is 50 mg C/Nm³ if techniques are used which allow the reuse/recycling of the recovered solvent.

⁽²⁾ For plants using BAT 16 (c) in combination with an off-gas treatment technique, an additional BAT-AEL of less than 50 mg C/Nm³ applies to the waste gas of the concentrator.

The associated monitoring is given in BAT 11.

1.13. BAT conclusions for publication rotogravure printing

The BAT conclusion in this section applies to publication rotogravure printing, and applies in addition to the general BAT conclusions given in Section 1.1.

BAT 29. In order to reduce VOC emissions from publication rotogravure printing, BAT is to use a toluene recovery system based on adsorption and one or both of the techniques given below.

Technique		Description
(a)	Use of retention inks	Retention inks slow the formation of the dried film surface, which allows toluene to evaporate over a longer time and therefore more toluene to be released in the dryer and recovered by the toluene recovery system.
(b)	Automatic cleaning systems connected to the toluene recovery system	Automated cylinder cleaning with air extraction to the toluene recovery system.

Table 31

BAT-associated emission level (BAT-AEL) for fugitive emissions of VOCs from publication rotogravure printing

Parameter	Unit	BAT-AEL (Yearly average)
Fugitive VOC emissions as calculated by the solvent mass balance	Percentage (%) of the solvent input	< 2,5

The associated monitoring is given in BAT 10.

Table 32

BAT-associated emission level (BAT-AEL) for VOC emissions in waste gases from publication rotogravure printing

Parameter	Unit	BAT-AEL (Daily average or average over the sampling period)
TVOC	mg C/Nm ³	10–20

The associated monitoring is given in BAT 11.

1.14. BAT conclusions for the coating of wooden surfaces

The emission levels for the coating of wooden surfaces given below are associated with the general BAT conclusions given in Section 1.1.

Table 33

BAT-associated emission level (BAT-AEL) for total emissions of VOCs from the coating of wooden surfaces

Parameter	Coated substrates	Unit	BAT-AEL (Yearly average)
Total VOC emissions as calculated by the solvent mass balance	Flat substrates	kg VOCs per kg of solid mass input	< 0.1
	Other than flat substrates		< 0.25

The associated monitoring is given in BAT 10.

As an alternative to the BAT-AELs in Table 33, the BAT-AELs in both Table 34 and Table 35 may be used.

Table 34

BAT-associated emission level (BAT-AEL) for fugitive emissions of VOCs from the coating of wooden surfaces

Parameter	Unit	BAT-AEL (Yearly average)
Fugitive VOC emissions as calculated by the solvent mass balance	Percentage (%) of the solvent input	< 10

The associated monitoring is given in BAT 10.

Table 35

BAT-associated emission level (BAT-AEL) for VOC emissions in waste gases from the coating of wooden surfaces

Parameter	Unit	BAT-AEL (Daily average or average over the sampling period)
TVOC	mg C/Nm ³	5-20 ⁽¹⁾

⁽¹⁾ For plants using BAT 16 (c) in combination with an off-gas treatment technique, an additional BAT-AEL of less than 50 mg C/Nm³ applies to the waste gas of the concentrator.

The associated monitoring is given in BAT 11.

2. BAT CONCLUSIONS FOR PRESERVATION OF WOOD AND WOOD PRODUCTS WITH CHEMICALS

2.1. Environmental management systems

BAT 30. In order to improve the overall environmental performance, BAT is to elaborate and implement an Environmental Management System (EMS) that incorporates all of the features (i) to (xx) of BAT 1 as well as the following specific features:

- (i) Keeping up to date with the developments in biocidal products and in associated legislation (e.g. authorisation of products under the BPR) with a view to using the most environmentally friendly processes.
- (ii) Inclusion of a solvent mass balance for solvent-based and creosote treatment (see BAT 33 (c)).
- (iii). Identification and listing of all environmentally critical process and abatement equipment (whose failure could have an impact on the environment) (see BAT 46 (c)). The list of critical equipment is kept up to date.
- (iv) Inclusion of plans for the prevention and control of leaks and spillages, including waste management guidelines for dealing with waste arising from spillage control (see BAT 46).
- (v) Recording of accidental leakages and spillages, and improvement plans (countermeasures).

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.

2.2. **Substitution of harmful/hazardous substances**

BAT 31. In order to prevent or reduce emissions of PAHs and/or solvents, BAT is to use water-based preservatives.

Description

Solvent-based preservatives or creosote are replaced by water-based preservatives. Water acts as the carrier for the biocides.

Applicability

The applicability may be restricted due to product quality requirements or specifications.

BAT 32. In order to reduce the environmental risk posed by the use of treatment chemicals, BAT is to substitute treatment chemicals currently in use with less hazardous ones based on a regular (e.g. once every year) check aiming at identifying potentially new available and safer alternatives.

Applicability

Substitution may be restricted due to product quality requirements or specifications.

2.3. **Resource efficiency**

BAT 33. In order to increase resource efficiency and to reduce the environmental impact and risk associated with the use of treatment chemicals, BAT is to reduce their consumption by using all of the techniques given below.

Technique		Description	Applicability
(a)	Use of an efficient preservative application system	Application systems where the wood is immersed in the preservative solution are more efficient than, for example, spraying. The application efficiency of vacuum processes (closed system) is close to 100 %. The selection of the application system takes into account the use class and the penetration level needed.	Only applicable to new plants or major plant upgrades.
(b)	Control and optimisation of the consumption of the treatment chemicals for the specific end use	Control and optimisation of the consumption of the treatment chemicals by: (a) weighing the wood/wood products before and after impregnation; or (b) determining the amount of preservative solution during and after impregnation. The consumption of the treatment chemicals follows suppliers' recommendations and does not lead to exceedances of the retention requirements (e.g. set in product quality standards).	Generally applicable.

Technique		Description	Applicability
(c)	Solvent mass balance	The compilation, at least once every year, of organic solvent inputs and outputs of a plant as defined in Part 7(2) of Annex VII to Directive 2010/75/EU.	Only applicable to plants using solvent-based treatment chemicals or creosote.
(d)	Measurement and adjustment of wood moisture before treatment	Wood moisture is measured prior to treatment (e.g. by measuring the electric resistance or by weighing) and adjusted if needed (e.g. by further seasoning of the wood) in order to optimise the impregnation process and ensure the required product quality.	Only applicable if wood with a specific moisture content is needed.

2.4. Delivery, storage and handling of treatment chemicals

BAT 34. In order to reduce emissions from delivery, storage and handling of treatment chemicals, BAT is to use technique (a) or (b) and all of the techniques (c) to (f) given below.

Technique		Description
(a)	Back-venting	Also referred to as vapour balancing. Vapours of solvents or creosote which are displaced from the receiving tank during filling are collected and returned to the tank or truck from which the liquid is delivered.
(b)	Capture of displaced air	Vapours of solvents or creosote which are displaced from the receiving tank during filling are collected and led to a treatment unit, e.g. an activated carbon filter or a thermal oxidation unit.
(c)	Techniques to reduce evaporation losses due to heating up of stored chemicals	When exposure to sunlight may lead to evaporation of solvents and creosote stored in above-ground storage tanks, tanks are covered by a roof or coated with light-coloured paint to reduce the heating up of stored solvents and creosote.
(d)	Securing delivery connections	Delivery connections to storage tanks located within the bunded/contained area are secured and shut off when not in use.
(e)	Techniques to prevent overflows during pumping	This includes ensuring that: — the pumping operation is supervised; — for larger quantities, bulk storage tanks are fitted with acoustic and/or optical high-level alarms, with shut-off systems if necessary.
(f)	Closed storage containers	Use of closed storage containers for treatment chemicals.

2.5. Preparation/conditioning of wood

BAT 35. In order to reduce the consumption of treatment chemicals and the consumption of energy and to reduce emissions of treatment chemicals, BAT is to optimise the wood charge of the vessel and to avoid trapping of treatment chemicals by using a combination of the techniques given below.

Technique		Description	Applicability
(a)	Separation of wood in packs by spacers	Spacers are placed at regular intervals in the packs to facilitate the flow of treatment chemicals through the pack and the draining after treatment.	Generally applicable.
(b)	Sloping of wood packs in traditional horizontal treatment vessels	Wood packs are inclined in the treatment vessel to facilitate the flow of treatment chemicals and the draining after treatment.	Generally applicable.
(c)	Use of tilting pressure treatment vessels	The whole treatment vessel is inclined after treatment so that excess treatment chemicals drain easily and can be recovered from the bottom of the vessel.	Only applicable to new plants or major plant upgrades.
(d)	Optimised positioning of shaped wood pieces	Shaped wood pieces are positioned so as to prevent trapping of treatment chemicals.	Generally applicable.
(e)	Securing wood packs	The wood packs are secured inside the treatment vessel in order to limit the movement of wood pieces which could change the structure of the pack and reduce the impregnation efficiency.	Generally applicable.
(f)	Maximisation of the wood load	The wood load in the treatment vessel is maximised to ensure the best ratio between the wood to be treated and the treatment chemicals.	Generally applicable.

2.6. Preservative application process

BAT 36. In order to prevent accidental leakage and emissions of treatment chemicals from non-pressure processes, BAT is to use one of the techniques given below.

Technique	
(a)	Double-walled treatment vessels with automatic leak detection devices
(b)	Single-walled treatment vessels with sufficiently large and wood-preservative-resistant containment, fender and automatic leak detection device

BAT 37. In order to reduce emissions of aerosols from wood and wood products preservation using water-based treatment chemicals, BAT is to enclose spraying processes, collect overspray and reuse it in the preparation of wood preservation solution.

BAT 38. In order to prevent or reduce emissions of treatment chemicals from pressure processes (autoclaves), BAT is to use all of the techniques given below.

Technique		Description
(a)	Process controls to prevent operation unless the treatment vessel door is locked and sealed	The treatment vessel door is locked and sealed once the treatment vessel is loaded and before treatment takes place. Process controls are in place that prevent the operation of the treatment vessel unless the door is locked and sealed.
(b)	Process controls to prevent the treatment vessel from opening while it is pressurised and/or filled with preservative solution	Process controls display the pressure and whether liquid is present in the treatment vessel. They prevent the opening of the treatment vessel while it is still pressurised and/or filled.
(c)	Catch-lock for the treatment vessel door	The door of the treatment vessel is equipped with a catch-lock to prevent the release of liquids in the event that the treatment vessel door needs to be opened in an emergency situation (e.g. door seal is broken). The catch-lock permits the door to be partially opened to release the pressure while retaining liquids.
(d)	Use and maintenance of safety relief valves	Treatment vessels are fitted with safety relief valves to protect the vessels from excessive pressure. Discharges from valves are directed to a tank of sufficient capacity. Safety relief valves are regularly inspected (e.g. once every 6 months) for signs of corrosion, contamination or incorrect fitting and are cleaned and/or repaired as required.
(e)	Control of emissions to air from the vacuum pump exhaust	Air extracted from pressure treatment vessels (i.e. the vacuum pump outlet) is treated (e.g. in a vapour-liquid separator).
(f)	Reduction of emissions to air when opening the treatment vessel	Sufficient time for dripping and condensation is allowed between the depressurisation period and the opening of the treatment vessel.
(g)	Application of a final vacuum to remove excess treatment chemicals from the surface of treated wood	To avoid dripping, a final vacuum is applied in the treatment vessel before opening it to remove excess treatment chemicals from the surface of treated wood. Application of a final vacuum may not be necessary if the removal of excess treatment chemicals from the surface of treated wood is ensured by the application of an appropriate initial vacuum (e.g. less than 50 mbar).

BAT 39. In order to reduce energy consumption in pressure processes (autoclaves), BAT is to use variable pump control.

Description

After reaching the required working pressure, the treatment system is switched to a pump with reduced power and energy consumption.

Applicability

Applicability may be limited in the case of oscillating pressure processes.

2.7. Post-treatment conditioning and interim storage

BAT 40. In order to prevent or reduce the contamination of soil or groundwater from the interim storage of freshly treated wood, BAT is to allow sufficient dripping time after treatment and to remove the treated wood from the contained/bunded area only once it is deemed dry.

Description

To allow the surplus treatment chemicals to drip back into the treatment vessel, treated wood/wood packs are held in the contained/bunded area (e.g. above the treatment vessel or over a dripping pad) for a sufficient time after the treatment and before transfer to the post-treatment drying area. Then, before leaving the post-treatment drying area, treated wood/wood packs are, for example, lifted by mechanical means and suspended for a minimum of 5 minutes. If no dripping of treatment solution occurs, the wood is deemed to be dry.

2.8. Waste management

BAT 41. In order to reduce the quantity of waste sent for disposal, especially of hazardous waste, BAT is to use the techniques (a) and (b) and one or both of the techniques (c) and (d) given below.

Technique		Description
(a)	Removal of debris prior to treatment	Debris (e.g. sawdust, woodchips) is removed from the surface of the wood/wood products before treatment.
(b)	Recovery and reuse of waxes and oils	When waxes or oils are used for impregnation, surplus waxes or oils from the impregnation process are recovered and reused.
(c)	Bulk delivery of treatment chemicals	Delivery of treatment chemicals in tanks to reduce the amount of packaging.
(d)	Use of reusable containers	Reusable containers used for treatment chemicals (e.g. intermediate bulk containers) are returned to the supplier for reuse.

BAT 42. In order to reduce the environmental risk related to waste management, BAT is to store waste in suitable containers or on sealed surfaces and to keep hazardous waste separately in a designated weather-protected and contained/bunded area.

2.9. Monitoring

2.9.1. Emissions to water

BAT 43. BAT is to monitor pollutants in waste water and potentially contaminated surface run-off water prior to each batch discharge 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.

Substance/Parameter	Standard(s)
Biocides ⁽¹⁾	EN standards might be available depending on the composition of the biocidal products
Cu ⁽²⁾	Various EN standards available (e.g. EN ISO 11885, EN ISO 17294-2, EN ISO 15586)

Substance/Parameter	Standard(s)
Solvents ⁽³⁾	EN standards available for some solvents (e.g. EN ISO 15680)
PAHs ⁽⁴⁾	EN ISO 17993
Benzo[a]pyrene ⁽⁴⁾	EN ISO 17993
HOI	EN ISO 9377-2

⁽¹⁾ Specific substances are monitored, depending on the composition of the biocidal products in use in the process.

⁽²⁾ The monitoring only applies if copper compounds are used in the process.

⁽³⁾ The monitoring only applies to plants using solvent-based treatment chemicals. Specific substances are monitored, depending on the solvents in use in the process.

⁽⁴⁾ The monitoring only applies to plants using creosote treatment.

2.9.2. Groundwater quality

BAT 44. BAT is to monitor pollutants in groundwater with a frequency of at least once every 6 months 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.

The monitoring frequency may be reduced to once every 2 years based on a risk assessment or if pollutant levels are proven to be sufficiently stable (e.g. after a period of 4 years).

Substance/Parameter ⁽¹⁾	Standard(s)
Biocides ⁽²⁾	EN standards might be available depending on the composition of the biocidal products
As	Various EN standards available (e.g. EN ISO 11885, EN ISO 17294-2, EN ISO 15586)
Cu	
Cr	
Solvents ⁽³⁾	EN standards available for some solvents (e.g. EN ISO 15680)
PAHs	EN ISO 17993
Benzo[a]pyrene	EN ISO 17993
HOI	EN ISO 9377-2

⁽¹⁾ The monitoring may not apply if the substance concerned is not used in the process and if the groundwater is proven not to be contaminated with this substance.

⁽²⁾ Specific substances are monitored, depending on the composition of biocidal products which are used or were previously used in the process.

⁽³⁾ The monitoring only applies to plants using solvent-based treatment chemicals. Specific substances are monitored, depending on the solvents in use in the process.

2.9.3. Emissions in waste gases

BAT 45. BAT is to monitor emissions in waste gases with a frequency of at least once every year 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.

Parameter	Process	Standard(s)	Monitoring associated with
TVOC ⁽¹⁾	Wood and wood products preservation using creosote and solvent-based treatment chemicals	EN 12619	BAT 49, BAT 51
PAHs ⁽¹⁾ ⁽²⁾	Wood and wood products preservation using creosote	No EN standard available	BAT 51
NO _x ⁽³⁾	Wood and wood products preservation using creosote and solvent-based treatment chemicals	EN 14792	BAT 52
CO ⁽³⁾		EN 15058	

⁽¹⁾ To the extent possible, the measurements are carried out at the highest expected emission state under normal operating conditions.

⁽²⁾ This includes: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene and pyrene.

⁽³⁾ The monitoring only applies to emissions from the thermal treatment of off-gases.

2.10. Emissions to soil and groundwater

BAT 46. In order to prevent or reduce emissions to soil and groundwater, BAT is to use all of the techniques given below.

Technique	Description
(a) Plant and equipment containment or bund	The parts of the plant in which treatment chemicals are stored or handled, i.e. treatment chemicals storage area, treatment, post-treatment conditioning and interim storage areas (comprising treatment vessel, working vessel, unloading/pull-out facilities, dripping/drying area, cooling zone), pipes and ductwork for treatment chemicals, and creosote (re) conditioning facilities, are contained or banded. Containments and bands have impermeable surfaces, are resistant to treatment chemicals and have sufficient capacity to capture and hold the volumes handled or stored in the plant/equipment. Drip trays (made of treatment-chemical-resistant material) may also be used as local containments for the collection and recovery of drips and spills of treatment chemicals from critical equipment or processes (i.e. valves, inlets/outlets of storage tanks, treatment vessels, working tanks, unloading/pull-out zones, handling of freshly treated wood, cooling/drying zone). The liquids in the containments/bands and drip trays are collected to recover the treatment chemicals for their reuse in the treatment chemicals system. Sludge generated in the collection system is disposed of as hazardous waste.

Technique		Description
(b)	Impermeable floors	Floors of areas which are not contained or bunded, and where drips, spills, accidental releases or leaching of treatment chemicals may occur are impermeable to the substances concerned (e.g. storage of treated wood on impermeable floors in the event that it is required in the BPR authorisation for the wood preservative used for the treatment). The liquids on the floors are collected to recover the treatment chemicals for their reuse in the treatment chemicals system. Sludge generated in the collection system is disposed of as hazardous waste.
(c)	Warning systems for equipment identified as 'critical'	'Critical' equipment (see BAT 30) is equipped with warning systems to indicate malfunctions.
(d)	Prevention and detection of leaks from underground storage and ductwork for harmful/hazardous substances and record-keeping	The use of underground components is minimised. When underground components are used for the storage of harmful/hazardous substances, secondary containment (e.g. double-walled containment) is put in place. Underground components are equipped with leak detection devices. Risk-based and regular monitoring of underground storage and ductwork is carried out to identify potential leakages; when necessary, leaking equipment is repaired. A record is kept of incidents that may cause soil and/or groundwater pollution.
(e)	Regular inspection and maintenance of plant and equipment	The plant and the equipment are regularly inspected and serviced to ensure proper functioning; this includes in particular checking the integrity and/or leak-free status of valves, pumps, pipes, tanks, pressure vessels, drip trays, and containments/bunds and the proper functioning of warning systems.
(f)	Techniques to prevent cross-contamination	Cross-contamination (i.e. the contamination of plant areas that usually do not come into contact with treatment chemicals) is prevented by using appropriate techniques such as: — design of drip trays in such a way that forklifts are not in contact with potentially contaminated surfaces of the drip trays; — design of charging equipment (used to remove treated wood from the treatment vessel) in such a way that the carry-over of treatment chemicals is prevented; — use of a crane system for handling treated wood; — use of dedicated transport vehicles for potentially contaminated areas; — restricted access to potentially contaminated areas; — use of grit walkways.

2.11. Emissions to water and waste water management

BAT 47. In order to prevent or, where that is not practicable, to reduce emissions to water and to reduce water consumption, BAT is to use all of the techniques given below.

Technique	Description	Applicability
(a) Techniques to prevent contamination of rain and surface run-off water	Rain and surface run-off water are kept separated from areas where treatment chemicals are stored or handled, from areas where freshly treated wood is stored and from contaminated water. This is achieved by using at least the following techniques: — drainage channels and/or an outer kerb bund around the plant; — roofing with roof guttering of areas where treatment chemicals are stored or handled (i.e. treatment chemicals' storage area; treatment, post-treatment conditioning and interim storage areas; pipes and ductwork for treatment chemicals; creosote (re)conditioning facilities); — weather protection (e.g. roofing, tarpaulins) for the storage of treated wood in the event that it is required in the BPR authorisation for the wood preservative used for the treatment.	For existing plants, the applicability of drainage channels and an outer kerb bund may be restricted by the size of the plant area.
(b) Collection of potentially contaminated surface run-off water	Surface run-off water from areas that are potentially contaminated with treatment chemicals is collected separately. Collected waste water is discharged only after appropriate measures are taken e.g. monitor (see BAT 43), treat (see BAT 47 (e)), re-use (see BAT 47 (c)).	Generally applicable.
(c) Use of potentially contaminated surface run-off water	After its collection, potentially contaminated surface run-off water is used for the preparation of water-based wood preservative solutions.	Only applicable to plants using water-based treatment chemicals. Applicability may be restricted by the quality requirements for its intended use.
(d) Reuse of cleaning water	Water used to wash equipment and containers is recovered and reused in the preparation of water-based wood preservative solutions.	Only applicable to plants using water-based treatment chemicals.
(e) Treatment of waste water	Where contamination in the collected surface run-off water and/or cleaning water is detected or can be expected, and where the use of the water is not feasible, the waste water is treated in an adequate waste water treatment plant (on or off site).	Generally applicable.

Technique		Description	Applicability
(f)	Disposal as hazardous waste	Where contamination in the collected surface run-off water and/or cleaning water is detected or can be expected, and where the treatment or use of the water is not feasible, the collected surface run-off water and/or cleaning water is disposed of as hazardous waste.	Generally applicable.

BAT 48. In order to reduce emissions to water from wood and wood products preservation using creosote, BAT is to collect the condensates from the depressurisation and vacuum operation of the treatment vessel and from creosote (re)conditioning and either treat them on site using an activated carbon or sand filter or dispose of them as hazardous waste.

Description:

Condensate volumes are collected, allowed to settle and treated in an activated carbon or sand filter. The treated water is either reused (closed circuit) or discharged to the public sewer system. Alternatively, the collected condensates may be disposed of as hazardous waste.

2.12. Emissions to air

BAT 49. In order to reduce emissions of VOCs to air from wood and wood products preservation using solvent-based treatment chemicals, BAT is to enclose the emitting equipment or processes, extract the off-gases and send them to a treatment system (see techniques in BAT 51).

BAT 50. In order to reduce emissions of organic compounds and odour to air from wood and wood products preservation using creosote, BAT is to use low-volatility impregnating oils, i.e. Grade C creosote instead of Grade B.

Applicability

Grade C creosote may not be applicable in the case of cold climatic conditions.

BAT 51. In order to reduce emissions of organic compounds to air from wood and wood products preservation using creosote, BAT is to enclose emitting equipment or processes (e.g. storage and impregnation tanks, depressurisation, creosote reconditioning), extract the off-gases and use one or a combination of the treatment techniques given below.

Technique		Description	Applicability
(a)	Thermal oxidation	See BAT 15 (i). Exhaust heat can be recovered by means of heat exchangers.	Generally applicable.
(b)	Sending off-gases to a combustion plant	Part or all of the off-gases are sent as combustion air and supplementary fuel to a combustion plant (including CHP (combined heat and power) plants) used for steam and/or electricity production.	Not applicable for off-gases containing substances referred to in IED Article 59(5). Applicability may be restricted due to safety considerations.

Technique		Description	Applicability
(c)	Adsorption using activated carbon	Organic compounds are adsorbed on the surface of activated carbon. Adsorbed compounds may be subsequently desorbed, e.g. with steam (often on site) for reuse or disposal and the adsorbent is re-used.	Generally applicable.
(d)	Absorption using a suitable liquid	Use of a suitable liquid to remove pollutants from the off-gases by absorption, in particular soluble compounds.	Generally applicable.
(e)	Condensation	A technique for removing organic compounds by reducing the temperature below their dew points so that the vapours liquefy. Depending on the operating temperature range required, different refrigerants are used, e.g. cooling water, chilled water (temperature typically around 5 °C), ammonia or propane. Condensation is used in combination with another abatement technique.	Applicability may be restricted where the energy demand for recovery is excessive due to the low VOC content.

Table 36

BAT-associated emission levels (BAT-AELs) for TVOC and PAH emissions in waste gases from wood and wood products preservation using creosote and/or solvent-based treatment chemicals

Parameter	Unit	Process	BAT-AEL (Average over the sampling period)
TVOC	mg C/Nm ³	Creosote and solvent-based treatment	< 4–20
PAHs	mg/Nm ³	Creosote treatment	< 1 ⁽¹⁾

⁽¹⁾ The BAT-AEL refers to the sum of the following PAH compounds: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene and pyrene.

The associated monitoring is given in BAT 45.

BAT 52. In order to reduce NO_x emissions in waste gases while limiting CO emissions from the thermal treatment of off-gases in wood and wood products preservation using creosote and/or solvent-based treatment chemicals, BAT is to use technique (a) or both of the techniques given below.

Technique		Description	Applicability
(a)	Optimisation of thermal treatment conditions (design and operation)	See BAT 17 (a).	Design applicability may be restricted for existing plants.

Technique		Description	Applicability
(b)	Use of low-NO _x burners	See BAT 17 (b).	Applicability may be restricted at existing plants by design and/or operational constraints.

Table 37

BAT-associated emission level (BAT-AEL) for NO_x emissions in waste gases and indicative emission level for CO emissions in waste gases to air from the thermal treatment of off-gases in wood and wood products preservation using creosote and/or solvent-based treatment chemicals

Parameter	Unit	BAT-AEL ⁽¹⁾ (Average over the sampling period)	Indicative emission level ⁽¹⁾ (Average over the sampling period)
NO _x	mg/Nm ³	20–130	No indicative level
CO		No BAT-AEL	20–150

⁽¹⁾ The BAT-AEL and indicative level do not apply where off-gases are sent to a combustion plant.

The associated monitoring is given in BAT 45.

2.13. Noise

BAT 53. 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.

Technique	
Storage and handling of raw materials	
(a)	Installation of noise walls and utilisation/optimisation of the noise-absorbing effect of buildings
(b)	Enclosure or partial enclosure of noisy operations
(c)	Use of low-noise vehicles/transport systems
(d)	Noise management measures (e.g. improved inspection and maintenance of equipment, closing of doors and windows)
Kiln drying	
(e)	Noise reduction measures for fans

Applicability

The applicability is restricted to cases where a noise nuisance at sensitive receptors is expected and/or has been substantiated.

COMMISSION IMPLEMENTING DECISION (EU) 2020/2010**of 8 December 2020****amending the Annex to Implementing Decision (EU) 2020/1809 concerning certain protective measures in relation to outbreaks of highly pathogenic avian influenza in certain Member States***(notified under document C(2020) 8910)***(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 2005/94/EC of 20 December 2005 on Community measures for the control of avian influenza and repealing Directive 92/40/EEC ⁽³⁾, and in particular Article 63(4) thereof,

Whereas:

- (1) Commission Implementing Decision (EU) 2020/1809 ⁽⁴⁾ was adopted following outbreaks of highly pathogenic avian influenza (HPAI) in holdings where poultry or other captive birds were kept in certain Member States and the establishment of protection and surveillance zones by those Member States in accordance with Council Directive 2005/94/EC.
- (2) Implementing Decision (EU) 2020/1809 provides that the protection and surveillance zones established by the Member States listed in the Annex to that Implementing Decision, in accordance with Directive 2005/94/EC, are to comprise at least the areas listed as protection and surveillance zones in that Annex.
- (3) Since the date of adoption of Implementing Decision (EU) 2020/1809, Germany has notified the Commission of new outbreaks of HPAI of subtype H5N8 in holdings where poultry or other captive birds are kept in the Dithmarschen and Mecklenburgische Seenplatte districts.
- (4) In addition, Belgium has notified the Commission of an outbreak of HPAI of subtype H5N5 in a holding where poultry or other captive birds are kept in the Province of West Flanders.
- (5) Moreover, Poland has also notified the Commission of an outbreak of HPAI of subtype H5N8 in a holding where poultry or other captive birds are kept in the Siedlecki district.
- (6) Furthermore, the Netherlands has notified the Commission of a new outbreak of HPAI in a holding where poultry or other captive birds are kept in the Province of Utrecht.

⁽¹⁾ OJ L 395, 30.12.1989, p. 13.

⁽²⁾ OJ L 224, 18.8.1990, p. 29.

⁽³⁾ OJ L 10, 14.1.2006, p. 16.

⁽⁴⁾ Commission Implementing Decision (EU) 2020/1809 of 30 November 2020 concerning certain protective measures in relation to outbreaks of highly pathogenic avian influenza in certain Member States (OJ L 402, 1.12.2020, p. 144).

- (7) Those outbreaks in Belgium, Germany, the Netherlands and Poland are outside the areas currently listed in the Annex to Implementing Decision (EU) 2020/1809, and the competent authorities of those Member States have taken the necessary measures required in accordance with Directive 2005/94/EC, including the establishment of protection and surveillance zones around these outbreaks.
- (8) Furthermore, the outbreak in Belgium is located in close proximity to the border with France. Accordingly, the competent authorities of those two Member States have duly collaborated with regard to the establishment of the necessary surveillance zone, in accordance with Directive 2005/94/EC, as the surveillance zone of this outbreak also extends into the territory of France.
- (9) The Commission has examined the measures taken by Belgium, France, Germany, the Netherlands and Poland, and it is satisfied that the borders of the protection and surveillance zones, established by the competent authorities of those Member States, are at a sufficient distance to the holdings where the recent outbreaks of HPAI have been confirmed.
- (10) In order to prevent any unnecessary disturbance to trade within the Union and to avoid unjustified barriers to trade being imposed by third countries, it is necessary to rapidly describe at Union level, in collaboration with Belgium, France, Germany, the Netherlands and Poland the new protection and surveillance zones established by those Member States in accordance with Directive 2005/94/EC.
- (11) Therefore, the surveillance zones listed for France and the protection and surveillance zones listed for Germany, the Netherlands and Poland in the Annex to Implementing Decision (EU) 2020/1809 should be amended.
- (12) In addition, protection and surveillance zones for Belgium should be listed in the Annex to Implementing Decision (EU) 2020/1809.
- (13) Accordingly, the Annex to Implementing Decision (EU) 2020/1809 should be amended to update regionalisation at Union level to take account of the new protection and surveillance zones duly established by the competent authorities of Belgium, France, Germany, the Netherlands and Poland in accordance with Directive 2005/94/EC and the duration of the restrictions applicable therein.
- (14) Implementing Decision (EU) 2020/1809 should therefore be amended accordingly.
- (15) Given the urgency of the epidemiological situation in the Union as regards the spread of HPAI, it is important that the amendments to be made to the Annex to Implementing Decision (EU) 2020/1809 by this Decision take effect as soon as possible.
- (16) 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

The Annex to Implementing Decision (EU) 2020/1809 is replaced by the text set out in the Annex to this Decision.

Article 2

This Decision is addressed to the Member States.

Done at Brussels, 8 December 2020.

For the Commission
Stella KYRIAKIDES
Member of the Commission

ANNEX

‘ANNEX

PART A

Protection zone as referred to in Article 1:

Member State: Belgium

Area comprising:	Date until applicable in accordance with Article 29(1) of Directive 2005/94/EC
Those parts of the municipality of Menen, Moorslede, Wervik and Wevelgem contained within a circle of a radius of three kilometers, centered on WGS84 dec. coordinates long 3,126743 – lat 50,820040	17.12.2020

Member State: Croatia

Area comprising:	Date until applicable in accordance with Article 29(1) of Directive 2005/94/EC
Općina Koprivnički Bregi, naselja Koprivnički Bregi i Jeduševac, općina Novigrad Podravski, naselja Plavšćinac, Delovi, Vlaislav i Novigrad Podravski, općina Hlebine, naselje Hlebine u Koprivničko- križevačkoj županiji koji se nalaze na području u obliku kruga radijusa tri kilometra sa središtem na GPS koordinatama N46.122115; E16.9561216666667.	31.12.2020

Member State: Denmark

Area comprising:	Date until applicable in accordance with Article 29(1) of Directive 2005/94/EC
The parts of Randers municipality (ADNS code 01730), Favrskov municipality (ADNS 01710) and Syddjurs municipality (ADNS code 01706) that are contained within circle of radius 3 kilometer, centred on GPS coordinates N56.3980; E10.1936.	10.12.2020

Member State: France

Area comprising:	Date until applicable in accordance with Article 29(1) of Directive 2005/94/EC
<i>Les communes suivantes dans le département de HAUTE-CORSE (2B)</i>	
— ALTIANI — AVAPESSA — BIGORNO — BISINCHI — CAMPILE — CAMPITELLO	10.12.2020

— CANAVAGGIA — CASTELLO-DI-ROSTINO — CATERI — CROCICCHIA — ERBAJOLO — FELICETO — FOCICCHIA — LENTO — MONTEGROSSO — MURO — NESSA — ORTIPORIO — PENTA-ACQUATELLA — PIEDICORTE-DI-GAGGIO — SCOLCA — SPELONCATO — SANT'ANDREA-DI-BOZIO — SANT'ANTONINO — VALLE-DI-ROSTINO — VOLPAJOLA	
<i>Les communes suivantes dans le département de YVELINES (78)</i>	
— SAINT-CYR-L'ECOLE	10.12.2020
<i>Les communes suivantes dans le département de Corse du Sud (2A)</i>	
— AFA — AJACCIO — ALATA — BASTELICACCIA — GROSSETO-PRUGNA — SARROLA-CARCOPINO	9.12.2020

Member State: Germany

Area comprising:	Date until applicable in accordance with Article 29(1) of Directive 2005/94/EC
SCHLESWIG-HOLSTEIN	
Landkreis Nordfriesland — Hallig Oland	1.12.2020
Landkreis Segeberg — Gemeinde Latendorf — Gemeinde Heidmühlen – exklusive des Bereiches zwischen Stellbrooker Weg und Osterau nördlich des Stellbrooker Moors — Gemeinde Boostedt – Gebiet südlich der Ortschaft Boostedt (entlang Waldweg, Heidenbarg, Münsterberg, Heisterbarg, Zum Quellental, Tegelbar, Mühlenweg, Latendorfer Str.) sowie östlich und südlich des Bundeswehrgeländes — Gemeinde Rickling – Gebiet südlich der Rothenmühlenau und westlich der Straßen Alter Schönmoorer Weg und Kirschenweg bis zur Einmündung in die Schönmoorer Str., weiter südlich der Schönmoorer Str. bis zum Glinngraben und westlich des Glinngrabens — Gemeinde Großenaspe – Gebiet westlich der Straßen Halloh und Eekholt sowie östlich des Wildparks Eekholt — Forstgutsbezirk Buchholz	5.12.2020

Landkreis Nordfriesland — Gemeinde Rodenäs — Gemeinde Neukirchen — Gemeinde Klanxbüll — Gemeinde Humptrup — Gemeinde Braderup — Gemeinde Tinningstedt — Gemeinde Klixbüll — Gemeinde Risum-Lindholm — Gemeinde Niebüll — Gemeinde Bosbüll — Gemeinde Uphusum — Gemeinde Klanxbüll — Gemeinde Emmelsbüll-Horsbüll — Gemeinde Holm	15.12.2020
Landkreis Nordfriesland — Gemeinde Pellworm	10.12.2020
MECKLENBURG-VORPOMMERN	
Landkreis Vorpommern-Rügen — Ostseeheilbad Zingst	9.12.2020
Landkreis Vorpommern-Rügen — Gemeinde Ramin – Ortsteile Drammendorf, Götemitz, Kasseltitz, Kasseltitzer Katen, Rothenkirchen, Sellentin, Ramin, Giesendorf — Gemeinde Samtens – Ortsteile Frankenthal, Muhltitz, Luttow, Natzevitz, Samtens — Gemeinde Gustow – Ortsteile Saalkow, Warksow — Gemeinde Poseritz – Ortsteile Datzow, Poseritz-Ausbau — Gemeinde Altfähr – Ortsteil Kransdorf	9.12.2020
Landkreis Rostock — Gemeinde Neubukow Stadt – Ortsteile Buschmühlen, Malpendorf, Neubukow, Spriehusen, Steinbrink — Gemeinde Biendorf – Ortsteile Jörnstorff Dorf, Jörnstorff Hof, Lehnenhof — Gemeinde Rerik Stadt – Ortsteile Russow, Russow Ausbau	8.12.2020
Landkreis Rostock — Stadt Gnoien – Ortsteile Eschenhörn, Warbelow sowie die Stadt Gnoien südöstlich der Teterower Straße und südöstlich der Straße „Bleiche“ — Gemeinde Behren-Lübchin – Ortsteile Bobbin, Neu Wasdow — Gemeinde Finkenthal – Ortsteil Schlutow	14.12.2020
Landkreis Dithmarschen — Gemeinde Neufelderkoog — Gemeinde Kaiser-Wilhelm-Koog – Gemeindegebiet südlich der Süderstraße — Gemeinde Kronprinzenkoog – Gemeindegebiet südlich der Straße Süderquerweg — Gemeinde Neufeld – Gemeindegebiet südlich der Straße Ölmühlenweg, westlich der Straße Westerdieker Strot — Gemeinde Diekhusen-Fahrstedt – das Gemeindegebiet südlich der Straße Ölmühlenweg, westlich der Straße Fahrstedterwesterdeich — Gemeinde Schmedeswurth – das Gemeindegebiet westlich der Straße Schmedeswurthwesterdeich	22.12.2020
Landkreis Mecklenburgische Seenplatte — Gemeinde Lärz – Ortsteile Krümmel, Lärz-Ausbau — Gemeinde Mirow – Ortsteil Birkenhof	29.12.2020

Member State: The Netherlands

Area comprising:	Date until applicable in accordance with Article 29(1) of Directive 2005/94/EC
<i>Province: Gelderland</i>	
1. From the crossing with N322 and Zandstraat, follow Zandstraat in eastern direction until tram line. 2. Follow tramline in south-eastern direction until Molenstraat. 3. Follow Molenstraat in north-eastern direction until Meidoornstraat. 4. Follow Meidoornstraat in eastern direction until Korenbloemstraat. 5. Follow Korenbloemstraat in eastern direction until Florastraat. 6. Follow Florastraat in southern direction until Vogelzang. 7. Follow Vogelzang in eastern direction until Kamstraat. 8. Follow Kamstraat in southern direction until Van Heemstraweg. 9. Follow Van Heemstraweg in north-eastern direction until North-South (N329). 10. Follow North-South (N329) in southern direction until Neersteindsestraat. 11. Follow Neersteindsestraat in south-eastern direction until Altforstestraat. 12. Follow Altforstestraat in south-west direction until Middenweg. 13. Follow Middenweg in south-eastern direction until Mekkersteeg. 14. Follow Mekkersteeg in southern direction until Zuidweg. 15. Follow Zuidweg in western direction until Noord-Zuid. 16. Follow Noord-Zuid in southern direction until de Maas(water). 17. Follow Maas in western direction until Veerweg. 18. Follow Veerweg in northern direction until Raadhuisdijk. 19. Follow Raadhuisdijk in western direction turning into Berghuizen until Nieuweweg. 20. Follow Nieuweweg in western direction until Wamelseweg. 21. Follow Wamelseweg in northern direction turning into Zijvond until Liesbroekstraat. 22. Follow Liesbroekstraat in eastern direction until Nieuweweg. 23. Follow Nieuweweg in northern direction until Liesterstraat. 24. Follow Liesterstraat in eastern direction until Maas en Waalweg (N322). 25. Follow Maas en Waalweg in northern direction until crossing with Zandstraat.	20.11.2020
1. From Waalbandijk follow "de Waal" in eastern direction until Waalbandijk at nr 155. 2. Follow Waalbandijk at nr 155 in southern direction, turning into Heersweg until Kerkstraat. 3. Follow Kerkstraat in southern direction until Van Heemstraweg. 4. Follow Van Heemstraweg in eastern direction until Scharenburg. 5. Follow Scharenburg in southern direction until Molenweg. 6. Follow Molenweg in southern direction until Broerstraat. 7. Follow Broerstraat in western direction until Neersteindsestraat. 8. Follow Neersteindsestraat in eastern direction, turning into Bikkeldam until Singel. 9. Follow Singel in southern direction until Middenweg. 10. Follow Middenweg in eastern direction until Mekkersteeg. 11. Follow Mekkersteeg in southern direction until Zuidweg. 12. Follow Zuidweg in western direction until Noord Zuid N329. 13. Follow Noord Zuid N329 in southern direction until "de Maas" (river). 14. Follow "de Maas" in western direction until Veerweg. 15. Follow Veerweg in northern direction until Raadhuisdijk. 16. Follow Raadhuisdijk in western direction until Kapelstraat. 17. Follow Kapelstraat in northern direction, turning into Den Hoedweg until Dijkgraaf De Leeuweg. 18. Follow Dijkgraaf De Leeuweg in western direction until Wolderweg. 19. Follow Wolderweg in northern direction until Nieuweweg. 20. Follow Nieuweweg in eastern direction until Liesterstraat. 21. Follow Liesterstraat in eastern direction until Zijveld. 22. Follow Zijveld in northern direction until Zandstraat. 23. Follow Zandstraat in eastern direction until Dijkstraat. 24. Follow Dijkstraat in northern direction until Waalbandijk.	28.11.2020

1. Vanaf kruising A50/Halve Wetering (water), Halve wetering volgen in noordoostelijke richting tot aan Geerstraat. 2. Geerstraat volgen in oostelijke richting overgaand in Geersepad overgaand in Dorpsplein tot aan Middendijk. 3. Middendijk volgen in noordelijke richting tot aan Kerkepad. 4. Kerkepad volgen in oostelijke richting tot aan Zeedijk. 5. Zeedijk volgen in zuidelijke richting tot aan Vaassenseweg (N792). 6. Vaassenseweg volgen in oostelijke richting overgaand in Dorpsstraat tot aan Twelloseweg. 7. Twelloseweg volgen in zuidelijke richting, overgaand in Terwoldseweg tot aan Rijksstraatweg. 8. Rijksstraatweg volgen in westelijke richting overgaand in Oude Rijksstraatweg tot aan Molenstraat. 9. Molenstraat volgen in zuidelijke richting overgaand in Hietweideweg tot aan Jupiter. 10. Jupiter volgen in westelijke richting overgaand in Leigraaf tot aan Zonnenbergstraat. 11. Zonnenbergstraat volgen in westelijke richting tot aan Leemsteeg. 12. Leemsteeg volgen in noordelijke richting tot aan Bottenhoekseweg. 13. Bottenhoekseweg volgen in westelijke richting overgaand in Stationsweg tot aan Rijksstraatweg (N344). 14. Rijksstraatweg (N344)/Deventerstraat volgen in westelijke richting tot aan Drostendijk. 15. Drostendijk volgen in noordelijke richting tot aan A50. 16. A50 volgen in noordelijke richting tot aan Halve Wetering (water).	4.12.2020
Province: Groningen	
1. Vanaf kruising N355-Kloosterweg, Kloosterweg volgen in noordelijke richting overgaand in herestraat tot aan Van Eysingaweg. 2. Van Eysingaweg volgen in noordelijke richting overgaand in Eeuwe Ennesweg tot aan Leegsterweg. 3. Leegsterweg volgen in oostelijke richting overgaand in Laauwersweg overgaand in brugstraat tot aan Schoolstraat. 4. Schoolstraat volgen in noordelijke richting overgaand in Wester-waardijk tot aan Zuiderried. 5. Zuiderried volgen oostelijke richting tot aan Kievitsweg. 6. Kievitsweg volgen in zuidelijke richting tot aan Friesestraatweg volgen oostelijke richting tot aan Bindervoetpolder (N388). 7. Bindervoetpolder (N388) volgen in zuidelijke richting tot aan Provincialeweg. 8. Provincialeweg volgen in westelijke richting tot aan Hoofdstraat. 9. Hoofdstraat volgen in westelijke richting tot aan Lutjegasterweg. 10. Lutjegasterweg volgen in noordelijke richting tot aan Bombay. 11. Bombay volgen in westelijke richting tot aan Zandweg tegenover Easterweg 1. 12. Zandweg volgen in westelijke richting tot aan De Lauwers. 13. De Lauwers volgen in noordelijke richting tot aan Miedweg. 14. Miedweg volgen in noordelijke richting tot aan Prinses Margrietkanaal. 15. Prinses Margrietkanaal volgen in westelijke richting tot aan Stroboser Trekfeart. 16. Stroboser Trekfeart volgen in noordelijke richting tot aan Rijksweg N355. 17. Rijksweg N355 volgen in oostelijke richting tot aan Kloosterweg.	2.12.2020
Province: Friesland	
1. Vanaf Kruising Waltingleane/Mulierlaan, Mulierlaan volgen in oostelijke richting tot aan Taekelaan. 2. Taekelaan volgen in oostelijke richting tot aan Witmarsumerfvaart (water). 3. Witmarsumerfvaart volgen in noordelijke richting tot aan Harlingervvaart (water). 4. Harlingervvaart volgen in oostelijke richting tot aan Westergoaweg. 5. Westergoaweg volgen in zuidelijke richting tot aan A7. 6. A7 volgen in westelijke richting tot aan Bolswarderweg. 7. Bolswarderweg volgen in westelijke richting tot aan Dorpsstraat.	13.12.2020

8. Dorpsstraat volgen in zuidelijke richting overgaand in Bruinder tot aan Van Panhuysenkanaal.
9. Van Panhuysenkanaal volgen in westelijke richting tot aan Hemmensweg.
10. Hemmensweg volgen in westelijke richting tot aan Weersterweg.
11. Weersterweg volgen in noordelijke richting tot aan Haitsmaleane.
12. Haitsmaleane volgen in westelijke richting tot aan Melkvaart (water).
13. Melkvaart volgen in noordelijke richting tot aan Kornwerdervaart (water).
14. Kornwerdervaart volgen in westelijke richting tot aan Miedlaan.
15. Miedlaan volgen in noordelijke richting tot aan Hayumerlaane.
16. Hayumerlaane volgen in noordelijke richting tot aan Gooyumervaart (water).
17. Gooyumervaart volgen in noordelijke richting tot aan Gooyumerlaan.
18. Gooyumerlaan. Volgen in oostelijke richting tot aan Buitendijk.
19. Buitendijk volgen in noordelijke richting tot aan Stuitlaan.
20. Stuitlaan volgen in westelijke richting overgaand in Pingjumer Gulden Halsband tot aan Waltingaleane.
21. Waltingaleane volgen in oostelijke richting tot aan Mulierlaan.

Province: Utrecht

1. Vanaf de kruising van de N228 en de Goverwellesingel, de Goverwellesingel volgend in noordelijke richting overgaand in de Goverwelletunnel tot aan de Achterwillenseweg.
2. De Achterwillenseweg volgend in oostelijke richting tot aan de Vlietdijk.
3. De Vlietdijk volgend in noordelijke richting overgaand in de Platteweg tot aan de Korssendijk.
4. De Korssendijk volgend in noordelijke richting overgaand in de Ree in oostelijke richting tot aan de Nieuwenbroeksedijk.
5. De Nieuwenbroeksedijk volgend in oostelijke richting tot aan de Kippenkade.
6. De Kippenkade volgend in noordelijke richting tot aan de Wierickepad.
7. De Wierickepad volgend in noordelijke richting overgaand in oostelijke richting overgaand in de Kerkweg overgaand in de Groendijck tot aan de Westeinde.
8. De Westeinde volgend in noordelijke richting overgaand in de Oosteinde tot aan de Tuurluur.
9. De Tuurluur volgend in zuidelijke richting overgaand in de Papekoperdijk.
10. De Papekopperdijk volgend in zuidelijke richting overgaand in de Johan J Vierbergenweg overgaand in de Zwier Regelinkstraat tot aan de N228.
11. De N228 volgend in zuidelijke richting tot aan de Damweg.
12. De Damweg volgend in zuidelijke richting tot aan de Zuidzijdsseweg.
13. De Zuidzijdsseweg volgend in westelijke richting overgaand in de Slangenweg tot aan de West-Vlisterdijk.
14. De West-Vlisterdijk volgend in noordelijke richting overgaand in westelijke richting overgaand in de Bredeweg volgend in noordelijke richting overgaand in Grote Haven tot aan de N228.
15. De N228 volgend in westelijke richting tot aan de Goverwellesingel.

15.12.2020

1. Vanaf de kruising van de N521 en de Nesserlaan volgend in oostelijke richting tot aan de Amstel.
2. De Amstel volgend in zuidelijke richting tot aan de Oude Waver.
3. De Oude Waver volgend in oostelijke richting tot aan de Hoofdweg.
4. De Hoofdweg volgend in zuidelijke richting overgaand in N212 tot aan de Mijdrechtse Dwarsweg.
5. De Mijdrechtse Dwarsweg volgend in westelijke richting overgaand in de Industrieweg tot aan de Rondweg.
6. De Rondweg volgend in zuidelijke richting overgaand in westelijke richting tot aan de Bozenhoven.
7. De Bozenhoven volgend in oostzuidelijke richting overgaand in de Molenland in westzuidelijke richting tot aan de Oosterlandweg.
8. De Oosterlandweg volgend in westnoordelijke richting tot aan de kruising van de Doctor J. van der Haarlaan en het water.
9. Het Water volgend in zuidelijke richting tot aan de Machinetocht.

19.12.2020

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| 10. De Machinetoht volgend in westnoordelijke richting tot aan de Schattekerkerweg.
11. De Schattekerkerweg volgend in westzuidelijke richting tot aan de Westerlandweg.
12. De Westerlandweg volgend in westnoordelijke richting overgaand in noordelijke richting tot aan de Oude Spoorbaan.
13. De Oude Spoorbaan volgend in westelijke richting overgaand in westzuidelijke richting tot aan de N231.
14. De N231 volgend in noordelijke richting tot aan de Drechtijk.
15. De Drechtijk volgend in noordelijke richting overgaand in de Kerklaan tot aan de Boterdijk.
16. De Boterdijk volgend in oostnoordelijke richting tot aan de Traverse.
17. De Traverse volgend in noordelijke richting tot aan de Vuurlijn.
18. De Vuurlijn volgend in westelijke richting tot aan de Noorddammerweg.
19. De Noorddammerweg volgend in noordelijke richting tot aan de N196.
20. De N196 volgend in oostelijke richting tot aan de Faunalaan.
21. De Faunalaan volgend in noordelijke richting tot aan de Aan de Zoom.
22. De Aan de Zoom volgend in oostelijke richting tot aan de Zonnedaauw.
23. De Zonnedaauw volgend in noordelijke richting tot aan de In Het Midden.
24. De In Het Midden volgend in oostelijke richting tot aan de In Het Rond.
25. De In Het Rond volgend in noordelijke richting overgaand in oostelijke richting tot aan de Op De Klucht.
26. De Op De Klucht volgend in noordelijke richting tot aan de Knautia.
27. De Knautia volgend in oostelijke richting tot aan de Klaproos.
28. De Klaproos volgend in noordelijke richting tot aan het water.
29. Het water volgend in oostelijke richting tot aan de N251.
30. De N251 volgend in noordelijke richting tot aan de Nesserlaan. | |
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Member State: Poland

Area comprising:	Date until applicable in accordance with Article 29(1) of Directive 2005/94/EC
<i>W województwie wielkopolskim, w powiecie wolsztyńskim:</i>	
Obszary gmin Wolsztyn i Przemęt położone w promieniu 3 km wokół ogniska o współrzędnych GPS: N 52.0492 E 16.1558	23.12.2020
<i>W województwie mazowieckim, w powiecie siedleckim i sokołowskim:</i>	
Części gmin Paprotnia i Suchożebry w powiecie siedleckim oraz część gminy Bielany w powiecie sokołowskim położone w promieniu 3 km wokół ogniska o współrzędnych GPS: N 52.2787 E 22.3408	27.12.2020

Member State: Sweden

Area comprising:	Date until applicable in accordance with Article 29(1) of Directive 2005/94/EC
Those parts of the municipality of Ystad (ADNS code 01200) contained within a circle of a radius of three kilometres, centred on WGS84 dec. coordinates N55.24.13 and E14.5.27	10.12.2020

PART B

Surveillance zone as referred to in Article 1:

Member State: Belgium

Area comprising:	Date until applicable in accordance with Article 31 of Directive 2005/94/EC
The municipalities Ledegem, Menen, Wervik and Wevelgem and those parts of the municipality of Izegem, Zonnebeke, Komen, Kortrijk, Kuurne, Lendeledede, Moeskroen, Moorslede and Roeselare contained within a circle of a radius of 10 kilometres, centered on WGS84 dec. coordinates long 3.126743 lat 50.820040 and beyond the area described in the protection zone	26.12.2020
Those parts of the municipality of Menen, Moorslede, Wervik and Wevelgem contained within a circle of a radius of three kilometers, centered on WGS84 dec. coordinates long 3.126743 – lat 50.820040	From 18.12.2020 until 26.12.2020

Member State: Croatia

Area comprising:	Date until applicable in accordance with Article 31 of Directive 2005/94/EC
Općina Koprivnički Bregi, naselja Koprivnički Bregi i Jeduševac, općina Novigrad Podravski, naselja Plavšinci, Delovi, Vlislav i Novigrad Podravski, općina Hlebine, naselje Hlebine u Koprivničko- križevačkoj županiji koji se nalaze na području u obliku kruga radijusa tri kilometra sa središtem na GPS koordinatama N46.122115; E16.9561216666667.	From 1.1.2021 until 10.1.2021
Općina Koprivnica naselja Bakovčica, Koprivnica, Draganovec, Herešin, Jagnjedovec, Starigrad i Štaglinec, općina Hlebine, naselje Gabajeva Greda, općina Drnje, naselje Drnje, općina Molve, naselja Molve, Molve Grede, Čingi – Lingi i Repaš, općina Koprivnički Bregi, naselje Glogovac, općina Gola, naselja Ždala, Gola, Gotalovo, Novačka i Otočka, općina Virje, naselja Donje Zdjelice, Miholjanec, Hampovica i Virje, općina Petrinec naselja Sigetec, Komatnica i Peteranec, općina Đurđevac, naselje Đurđevac, općina Novigrad Podravski, naselja Borovljani, Javorovac i Srdinac, općina Sokolovac, naselje Gornja Velika, općina Novo Virje, naselje Novo Virje u Koprivničko- križevačkoj županiji i općina Kapela, naselja Gornji Mosti, Donji Mosti i Srednji Mosti u Bjelovarsko-bilogorskoj županiji koji se nalaze na području u obliku kruga radijusa sedam kilometra sa središtem na GPS koordinatama N46.122115; E16.9561216666667.	10.1.2021

Member State: Denmark

Area comprising:	Date until applicable in accordance with Article 31 of Directive 2005/94/EC
The parts of Randers municipality (ADNS code 01730) beyond the area described in the protection zone and within the circle of radius 10 kilometres, centred on GPS coordinates N56.3980; E10.1936.	19.12.2020
The parts of Randers municipality (ADNS code 01730), Favrskov municipality (ADNS 01710) and Syddjurs municipality (ADNS code 01706) that are contained within circle of radius 3 kilometer, centred on GPS coordinates N56.3980; E10.1936.	From 11.12.2020 until 19.12.2020

The parts of Tønder municipality (ADNS code 01550), beyond the area described in the protection zone and beyond the area of the surveillance zone lying in Germany but within the circles of radius 10 kilometres, centred on GPS coordinates N 54,844346;E 8,688644, GPS coordinates N54,841968;E8,868140 and GPS coordinates N54,863731;E8,718642.

24.12.2020

Member State: France

Area comprising:

Date until applicable in accordance with
Article 31 of Directive 2005/94/EC*Les communes suivantes dans le département de HAUTE-CORSE (2B)*

All except the following:

- ALTIANI
- AVAPESSA
- BIGORNO
- BISINCHI
- CAMPILE
- CAMPITELLO
- CANAVAGGIA
- CASTELLO-DI-ROSTINO
- CATERI
- CROCICCHIA
- ERBAJOLO
- FELICETO
- FOCICCHIA
- LENTO
- MONTEGROSSO
- MURO
- NESSA
- ORTIPORIO
- PENTA-ACQUATELLA
- PIEDICORTE-DI-GAGGIO
- SCOLCA
- SPELONCATO
- SANT'ANDREA-DI-BOZIO
- SANT'ANTONINO
- VALLE-DI-ROSTINO
- VOLPAJOLA

19.12.2020

- ALTIANI
- AVAPESSA
- BIGORNO
- BISINCHI
- CAMPILE
- CAMPITELLO
- CANAVAGGIA
- CASTELLO-DI-ROSTINO
- CATERI
- CROCICCHIA
- ERBAJOLO
- FELICETO
- FOCICCHIA
- LENTO
- MONTEGROSSO
- MURO
- NESSA
- ORTIPORIO
- PENTA-ACQUATELLA

From 11.12.2020 until 19.12.2020

— PIEDICORTE-DI-GAGGIO — SCOLCA — SPELONCATO — SANT'ANDREA-DI-BOZIO — SANT'ANTONINO — VALLE-DI-ROSTINO — VOLPAJOLA	
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Les communes suivantes dans le département de YVELINES (78)

— BAILLY — BOIS-D'ARCY — BOUGIVAL — BUC — LA CELLE-SAINT-CLOUD — CHAMBOURCY — CHATEAUFORT — CHAVENAY — LE CHESNAY — LES CLAYES-SOUS-BOIS — CROISSY-SUR-SEINE — ELANCOURT — L'ETANG-LA-VILLE — FONTENAY-LE-FLEURY — FOURQUEUX — GUYANCOURT — JOUY-EN-JOSAS — LES LOGES-EN-JOSAS — LOUVECIENNES — MAGNY-LES-HAMEAUX — MAREIL-MARLY — MARLY-LE-ROI — MAUREPAS — MONTIGNY-LE-BRETONNEUX — NOISY-LE-ROI — LE PECQ — PLAISIR — LE PORT-MARLY — RENNEMOULIN — ROCQUENCOURT — SAINT-NOM-LA-BRETECHE — TOUSSUS-LE-NOBLE — TRAPPES — VELIZY-VILLACOUBLAY — VERSAILLES — LE VESINET — VILLEPREUX — VIROFLAY — VOISINS-LE-BRETONNEUX	20.12.2020
— SAINT-CYR-L'ECOLE	From 11.12.2020 until 20.12.2020

Les communes suivantes dans le département de Corse du Sud (2A)

— ALBITRECCIA — APPIETTO — CALCATOGGIO — CANNELLE — CASAGLIONE — CAURO — COGNOCOLI-MONTICCHI	18.12.2020
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— CUTTOLI-CORTICCHIATO — ECCICA-SUARELLA — OCANA — PERI — PIETROSELLA — SARI-D'ORCINO — SANT'ANDRÉA-D'ORCINO — TAVACO — VALLE-DI-MEZZANA — VILLANOVA	
— AFA — AJACCIO — ALATA — BASTELICACCIA — GROSSETO-PRUGNA — SARROLA-CARCOPINO	From 10.12.2020 until 18.12.2020
<i>Les communes suivantes dans le département Nord (59)</i>	
— BOUSBECQUE — COMINES — HALLUIN — LINSELLES — NEUVILLE-EN-FERRAIN — RONCQ — WERVICQ-SUD	26.12.2020

Member State: Germany

Area comprising:	Date until applicable in accordance with Article 31 of Directive 2005/94/EC
SCHLESWIG-HOLSTEIN	
Landkreis Nordfriesland — Gemeinde Galmsbüll — Gemeinde Dagebüll — Gemeinde Ockholm — Hallig Gröde — Hallig Langeneß — Gemeinde Wyk auf Föhr — Gemeinde Wrixum — Gemeinde Oevenum	10.12.2020
Landkreis Nordfriesland — Hallig Oland	From 2.12.2020 until 10.12.2020
Landkreis Segeberg — Gemeinde Daldorf – südlich des Hohenberger Wegs und der Ricklinger Str. sowie westlich der BAB 21 — Gemeinde Rickling – exklusive des Gebiets in Part A — Gemeinde Boostedt – exklusive des Gebiets in Part A — Gemeinde Groß Kummerfeld — Gemeinde Negernbötel – Gebiet westlich der BAB 21 — Stadt Wahlstedt — Gemeinde Wittenborn – Gebiet westlich der Kieler Str. und nördlich der B 206 — Gemeinde Bark — Gemeinde Todesfelde – Gebiet westlich der Verlängerung der Straße Hörn und nördlich des Bogens Poggensaal sowie nördlich der Todesfelder Straße (L 187) — Gemeinde Hartenholm	14.12.2020

— Gemeinde Hasenmoor — Gemeinde Bimöhlen — Gemeinde Großenaspe – exklusive des Gebiets in Part A — Gemeinde Wiemersdorf – Gebiet östlich der Bahnstrecke Bad Bramstedt-Neumünster bis zur Bahnhofstraße sowie östlich der Straße Am Teich, des Verbindungsfeldweges zwischen Am Teich und Ziegeleiweg, östlich des Ziegeleiweges bis zur Wiemersdorfer Au, nördlich der Wiemersdorfer Au und östlich der Straße Harzhorn — Gemeinde Gönnebek	
Landkreis Segeberg — Gemeinde Latendorf — Gemeinde Heidmühlen – exklusive des Bereiches zwischen Stellbrooker Weg und Osterau nördlich des Stellbrooker Moors — Gemeinde Boostedt – Gebiet südlich der Ortschaft Boostedt (entlang Waldweg, Heidenbarg, Münsterberg, Heisterbarg, Zum Quellental, Tegelbar, Mühlenweg, Latendorfer Str.) sowie östlich und südlich des Bundeswehrgeländes — Gemeinde Rickling – Gebiet südlich der Rothenmühlenau und westlich der Straßen Alter Schönmoorer Weg und Kirschenweg bis zur Einmündung in die Schönmoorer Str., weiter südlich der Schönmoorer Str. bis zum Glinngraben und westlich des Glinngrabens — Gemeinde Großenaspe – Gebiet westlich der Straßen Halloh und Eekholt sowie östlich des Wildparks Eekholt — Forstgutsbezirk Buchholz	From 6.12.2020 until 14.12.2020
Kreisfreie Stadt Neumünster — von der Kreisgrenze zum Kreis Segeberg stadteinwärts auf der Altonaer Straße bis zum Holsatenring, ostwärts entlang Holsatenring und Sachsenring bis zur Kreuzung Haart, an der Kreuzung Haart/Sachsenring südostwärts Richtung Segeberg bis zur Straße „Am Geilenbek“, von dort die Straße „Am Geilenbek“ entlang bis zur Kreisgrenze des Kreises Plön, dann entlang der Stadtgrenze bis zur Kreisgrenze des Kreises Segeberg Höhe Kummerfelder Straße	14.12.2020
Landkreis Plön — Gemeinde Bönebüttel – von der Stadtgrenze Neumünster südlich der Bundesstraße B430 bis zur Straße Sickfurt, dann südlich der Straße Börringbauer Weg bis zum Wiesenweg — Gemeinde Rendswühren – südlich der Straße Wiesenweg und Neuenrader Weg bis zur B430, dann südlich der B430 bis zur Straße Gönnebeker Weg, dann südwestlich der Straße Gönnebeker Weg und der Straße Böhren bis zur Kreisgrenze des Kreises Segeberg	14.12.2020
Landkreis Nordfriesland — Gemeinde Friedrich-Wilhelm-Lübke-Koog — Gemeinde Aventoft — Gemeinde Ellhöft — Gemeinde Süderlügum — Gemeinde Westre — Gemeinde Ladelund — Gemeinde Achtrup — Gemeinde Karlum — Gemeinde Lexgaard — Gemeinde Galmsbüll — Gemeinde Leck — Gemeinde Sprakebüll — Gemeinde Stadum — Gemeinde Enge-Sande — Gemeinde Bargum — Gemeinde Stedesand — Gemeinde Langenhorn — Gemeinde Dagebüll	24.12.2020

Landkreis Nordfriesland — Gemeinde Rodenäs — Gemeinde Neukirchen — Gemeinde Klanxbüll — Gemeinde Humptrup — Gemeinde Braderup — Gemeinde Tinningstedt — Gemeinde Klixbüll — Gemeinde Risum-Lindholm — Gemeinde Niebüll — Gemeinde Bosbüll — Gemeinde Uphusum — Gemeinde Klanxbüll — Gemeinde Emmelsbüll-Horsbüll — Gemeinde Holm	From 16.12.2020 until 24.12.2020
Landkreis Nordfriesland — Hallig Hooge — Hallig Süderoog — Hallig Südfall	19.12.2020
Landkreis Nordfriesland — Gemeinde Pellworm	From 11.12.2020 until 19.12.2020
MECKLENBURG-VORPOMMERN	
Landkreis Vorpommern-Rügen — Gemeinde Ostseebad Prerow — Gemeinde Wieck a. Darß — Gemeinde Pruchten — Stadt Barth einschließlich der Ortsteile Tannenheim, Planitz, Glöwitz, Fahrenkamp — Gemeinde Fuhlendorf – Ortsteile Bodstedt, Fuhlendorf — Gemeinde Kenz-Küstrow, Ortsteile: Dabitz und Küstrow	18.12.2020
Landkreis Vorpommern-Rügen — Ostseeheilbad Zingst	From 10.12.2020 until 18.12.2020
Landkreis Vorpommern-Rügen — Gemeinde Dreschvitz — Gemeinde Ummanz – Ortsteile Lüßvitz, Moordorf, Unrow, Lieschow, Groß Kubitz, Dubkevitz — Gemeinde Sehlen – Ortsteile Sehlen, Groß Kubbelkow, Teschenhagen — Gemeinde Garz – Ortsteile Buhse, Bietegast, Garz, Dumseviz, Gützlaßshagen, Heidenfelde, Karnitz, Klein Stubben, Kniepow, Koldevitz, Kowall, Poltenbusch, Rosengarten, Tangnitz, Swine, Wendorf — Gemeinde Poseritz – Ortsteile Poseritz, Glutzow-Siedlung, Glutzow-Hof, Groß Stubben, Klein Grabow, Luppah, Mellnitz, Mellnitz Hof, Mellnitz Siedlung, Neparmitz, Neparmitz Ausbau, Puddemin, Renz, Swantow, Üselitz, Venzvitz, Wulfsberg, Zeiten — Gemeinde Gustow – Ortsteile Benz, Gustow, Drigge, Nesebanz, Prosnitz, Sissow — Gemeinde Altefähr – Ortsteile Altefähr, Barnkevitz, Grahlhof, Jarkvitz, Klein Bandelvitz, Scharpitz, Poppelvitz, Groß Bandelvitz, Papenhagen — Gemeinde Rambin – Ortsteile Bessin, Breesen, Grabitz, Kasselvitz-Ausbau, Gurvitz, Neuendorfer Katen — Gemeinde Samtens – Ortsteile Berglase, Dumrade, Tolkmitz, Stönkvitz, Zirkow-Hof, Negast, Sehrow — Gemeinde Putbus – Ortsteile Dumgenevitz, Krimvitz, Strachtitz — Gemeinde Gingst – Ortsteile Haidhof, Steinsdorf, Klucksevitz — Gemeinde Parchtitz – Ortsteile Neuendorf, Volkshagen, Platvitz — Hansestadt Stralsund — Gemeinde Sundhagen – Ortsteile Niederhof, Neuhof	18.12.2020

Landkreis Vorpommern-Rügen — Gemeinde Ramin – Ortsteile Drammendorf, Götemitz, Kasselvitz, Kasselvitzer Katen, Rothenkirchen, Sellentin, Ramin, Giesendorf — Gemeinde Samtens – Ortsteile Frankenthal, Muhltz, Luttow, Natzevitz, Samtens — Gemeinde Gustow – Ortsteile Saalkow, Warksow — Gemeinde Poseritz – Ortsteile Datzow, Poseritz-Ausbau — Gemeinde Altfähr – Ortsteil Kransdorf	From 10.12.2020 until 18.12.2020
Landkreis Vorpommern-Rügen — Gemeinde Lindholz – Ortsteile Breesen, Tangrim, Carlsthal — Gemeinde Deyelsdorf – Ortsteile Deyelsdorf, Stubbendorf, Fäsekow, Bassendorf — Gemeinde Grammdorf – Ortsteile Keffenbrink, Dorow, Nehringen, Rodde, Camper	23.12.2020
Landkreis Rostock — Gemeinde Neubukow Stadt – Ortsteil Panzow — Gemeinde Biendorf – Ortsteile Biendorf, Büttelkow, Gersdorf, Körchow, Parchow, Sandhagen, Uhlenbrook, Westenbrügge, Wischuer — Gemeinde Rerik Stadt – Ortsteile Blengow, Gaarzer Hof, Garvsmühlen, Meschendorf, Rerik, Roggow — Gemeinde Alt Bukow – Ortsteile Alt Bukow, Questin, Teschow, Bantow — Gemeinde Am Salzhaff – Ortsteile Klein Strömkendorf, Pepelow, Rakow, Teßmannsdorf — Gemeinde Bastorf – Ortsteile Bastorf, Hohen Niendorf, Mechelsdorf, Wendelstorf, Westhof, Zweedorf — Gemeinde Carinerland – Ortsteile Alt Karin, Bolland, Clausdorf, Danneborth, Garvensdorf, Kamin, Karin, Kirch Mulsow, Klein Mulsow, Krempin, Moitin, Neu Karin, Ravensberg, Zarfzow — Kröpelin Stadt – Ortsteile Altenhagen, Boldenshagen, Brusow, Detershagen, Diedrichshagen, Hanshagen, Horst, Hundehagen, Jennewitz, Klein Nienhagen, Kröpelin, Parchow Ausbau, Schmadebeck, Wichmannsdorf	17.12.2020
Landkreis Rostock — Gemeinde Neubukow Stadt – Ortsteile Buschmühlen, Malpendorf, Neubukow, Spriehusen, Steinbrink — Gemeinde Biendorf – Ortsteile Jörnstorff Dorf, Jörnstorff Hof, Lehnenhof — Gemeinde Rerik Stadt – Ortsteile Russow, Russow Ausbau	From 9.12.2020 until 17.12.2020
Landkreis Rostock — Stadt Gnoien – Ortsteile Dölitz, Kranichshof sowie die Stadt Gnoien nordwestlich der Teterower Straße und nordwestlich der Straße „Bleiche“ — Gemeinde Behren-Lübchin – Ortsteile Alt Quitzenow, Bäbelitz, Behren-Lübchin, Friedrichshof, Groß Nieköhr, Klein Nieköhr, Neu Nieköhr, Neu Quitzenow, Samow, Viecheln und Wasdow — Gemeinde Finkenthal – Ortsteile Finkenthal und Fürstenhof — Gemeinde Walkendorf – Ortsteile Boddin, Gottesgabe, Groß Lunow, Klein Lunow, Neu Boddin — Gemeinde Altkalen – Ortsteile Altkalen, Alt Pannekow, Damm, Granzow, Granzow Ausbau, Kämmerich, Kleverhof, Lüchow und Neu Pannekow — Gemeinde Schwasdorf – Ortsteile Neu Remlin und Remlin	23.12.2020
Landkreis Rostock — Stadt Gnoien – Ortsteile Eschenhörn, Warbelow sowie die Stadt Gnoien südöstlich der Teterower Straße und südöstlich der Straße „Bleiche“ — Gemeinde Behren-Lübchin – Ortsteile Bobbin, Neu Wasdow — Gemeinde Finkenthal – Ortsteil Schlutow	From 15.12.2020 Until 23.12.2020
Landkreis Nordwestmecklenburg — Gemeinde Boiensdorf — Gemeinde Neuburg- die Ortsteile Lischow, Vogelsang, Nantrow, Neu Nantrow, Ilow, Madsow — Gemeinde Passeer- die Ortsteile Neu Poorstorf, Höltingsdorf	17.12.2020

Landkreis Mecklenburgische Seenplatte — Gemeinde Dargun – Ortschaften Altbauhof, Barlin, Brudersdorf, Darbein, Neu Darbein, Dargun, Dörgelin, Glasow, Groß Methling, Klein Methling (in Teilen), Lehnenhof, Neubauhof, Stubbendorf (in Teilen) — Gemeinde Nossendorf – Ortschaft Nossendorf	23.12.2020
Landkreis Dithmarschen — Gemeinde Kaiser-Wilhelmkoog – Gemeindegebiet nördlich der Süderstraße — Gemeinde Friedrichskoog – Gemeindegebiet südlich des Feldweges in Höhe des Krabbenlochs, westlich der Hauptstraße, südlich der Straßen Jürgensweg, Maaßenweg und Koogstraße — Gemeinde Kronprinzenkoog – Gemeindegebiet nördlich der Straße Süderquerweg und südlich der Friedrichsköger Straße, östlich der Schleusenstraße und südlich der Straße Mühlenweg (L144) — Gemeinde Trennewurth – Gemeindegebiet südlich der Straße Trennewurth Altendeich inkl. der nördlichen Bebauung an den Straßen Op de Meent und Dorfstraße — Gemeinde Helse — Stadt Marne — Gemeinde Marnerdeich — Gemeinde Diekhusen-Fahrstedt – Gemeindegebiet nördlich der Straße Ölmühlenweg, östlich der Straße Fahrstedterwesterdeich — Gemeinde Schmedeswurth – Gemeindegebiet östlich der Straße Schmedeswurthwesterdeich — Gemeinde Volsenhusen – Gemeindegebiet inkl. der östlichen Bebauung der Straße L 173 (Kannemoor) und inkl. des Ortsteils Norderwisch, südlich und westlich der Straße Rösthusener Querweg, westlich der Straße Rösthusen — Gemeinde Ramhusen — Gemeinde Neufeld – Gemeindegebiet nördlich der Straße Ölmühlenweg, östlich der Straße Westerdieker Strot — Gemeinde Barlt – Gemeindegebiet südlich der L 144, westlich der Dorfstraße — Gemeinde Dingen – das Gemeindegebiet westlich der Marschstraße — Gemeinde Eddelak – das Gemeindegebiet westlich der Bebauung an der L 138 — Stadt Brunsbüttel – Gemeindegebiet westlich der Fritz-Staiger-Straße, nordwestlich der Ostermoorer Straße und der Schillerstraße bis zum Schleusenzentrum NOK	31.12.2020
Landkreis Dithmarschen — Gemeinde Neufelderkoog — Gemeinde Kaiser-Wilhelm-Koog – Gemeindegebiet südlich der Süderstraße — Gemeinde Kronprinzenkoog – Gemeindegebiet südlich der Straße Süderquerweg — Gemeinde Neufeld – Gemeindegebiet südlich der Straße Ölmühlenweg, westlich der Straße Westerdieker Strot — Gemeinde Diekhusen-Fahrstedt – das Gemeindegebiet südlich der Straße Ölmühlenweg, westlich der Straße Fahrstedterwesterdeich — Gemeinde Schmedeswurth – das Gemeindegebiet westlich der Straße Schmedeswurthwesterdeich	From 23.12.2020 until 31.12.2020
Landkreis Mecklenburgische Seenplatte — Gemeinde Rechlin – Ortschaften Rechlin, Retzow, Kotzow, Vietzen — Gemeinde Mirow – Ortschaften Mirow, Granzow, Peetsch, Fleeth, Fleether Mühle, Starsow, Diemitz — Gemeinde Schwarz – Ortschaften Schwarz, Buschhof — Gemeinde Lärz – Ortschaften Troja, Neu Gaarz, Lärz, Ichlim, Gaarzer Mühle — Gemeinde Buchholz – Ortschaft Buchholz — Gemeinde Priborn – Ortschaften Kolkhof, Priborn — Gemeinde Südmüritz – Ortschaften Vipperow, Vipperow-Ausbau, Solzow — Gemeinde Melz – Ortschaften Melz, Friedrichshof, Heide — Gemeinde Kieve – Ortschaft Kieve	7.1.2021

Landkreis Mecklenburgische Seenplatte — Gemeinde Lärz – Ortsteile Krümmel, Lärz-Ausbau — Gemeinde Mirow – Ortsteil Birkenhof	From 30.12.2020 until 7.1.2021
<i>BRANDENBURG</i>	
Landkreis Ostprignitz-Ruppin — Gemeinde Wittstock/Dosse – Gemarkungen Berlinchen, Sewekow, Dranse, Schweinrich, Zempow — Gemeinde Rheinsberg – Gemarkung Flecken Zechlin	7.1.2021
<i>NIEDERSACHSEN</i>	
Landkreis Cuxhaven — innerhalb der Samtgemeinde Land Hadeln: Von der Elbe her kommend ca. 600m westlich der Medemmündung auf Norder-teiler Deich, Otterndorf, der Straße folgend über den Deich auf die Deichstraße, der Straße folgend in Richtung Schleuse am Hafen Otterndorf; ab der Schleuse dem Verlauf des Flusses Medem folgend flussaufwärts bis zur Eisenbahnbrücke auf Höhe der Bahnhofstraße, Otterndorf und weiter auf der Bahnlinie Cuxha-ven-HH in Richtung HH. Ab dem ehemaligen Bahnhof Neuhaus weiter auf der L144 „Am Bahnhof“ Richtung Intzenbüttel über die Bahnhofstraße Richtung Neuhaus. Ab dem Übergang zur B73 der Bundesstraße folgend Richtung Stade bis Dingwörden; weiter auf der L111 (zunächst Dingwörden wechselt name-ntlich auf Itzwörden) bis zur Landkreisgrenze Stade	31.12.2020
Landkreis Stade — Gemeinde Balje: „Itzwördener Straße“ ab der Landkreisgrenze Stade/Cuxhaven über die Straße „Hörne-Ost“ bis zur Straße „Süderdeich-West“ Höhe Hausnummer 34 (Land-esstraße 111), von dort eine gedachte Linie zum Wohngebäude „Elbdeich-West 25“ und weiter über die private Erschließungsstraße zur öffentlichen Straße „Elbdeich-West“, außendeichs entlang der Straßen „Elbdeich-West“ und „Deichstraße“ bis zur Deichüberfahrt in Höhe der Kreuzung „Deichstraße/ Bahnhofstraße/Baljer Weg“ und von dort über den Weg in Richtung der Bundeswasserstraße „Elbe“ bis zum dortigen Hochwasserschutzdeich und wei-ter bis an das südliche Elbufer (Landkreisgrenze)	31.12.2020

Member State: The Netherlands

Area comprising:	Date until applicable in accordance with Article 31 of Directive 2005/94/EC
<i>Province: Gelderland</i>	
1. From the crossing Beldertseweg with Amsterdam-Rijnkanaal, follow Beldertseweg (N835) in eastern direction until Ommerenwal. 2. Follow Ommerenwal in eastern direction turning into Voorburgtseweg turning into Ooievaar turning into Dokter Guepinlaan turning into Voorstraat turning into Dokter van Noorstraat until Oudsmidsestraat. 3. Follow Oudsmidsestraat in eastern direction until Dorpsstraat. 4. Follow Dorpsstraat in northern direction until Papestraat. 5. Follow Papestraat in eastern direction turning into Remstraat turning into Hogeweg until Cuneraweg. 6. Follow Cuneraweg in northern direction until Nederrijn (river). 7. Follow Nederrijn in south-eastern direction until Veerweg. 8. Follow Veerweg in southern direction until aan Rijnbandijk. 9. Follow Rijnbandijk in eastern direction until Dorpsstraat. 10. Follow Dorpsstraat in southern direction until Burg Lodderstaat. 11. Follow Burg Lodderstaat in eastern direction until Dalwagenseweg. 12. Follow Dalwagenseweg in southern direction turning into Dodewaardsestraat until Matensestraat.	29.11.2020

13. Follow Matensestraat in eastern direction until Dalwagen.
14. Follow Dalwagen in southern direction until Pluimenburgsestraat.
15. Follow Pluimenburgsestraat in eastern direction, turning into Waalbandijk, crossing river “de Waal” until Waalbandijk.
16. Follow Waalbandijk in eastern direction allong “pad langs ganzenkuil” until Deest.
17. Follow Deest in southern direction until Van Heemstraweg.
18. Follow Van Heemstraweg in eastern direction until Geerstraat.
19. Follow Geerstraat in southern direction until Koningstraat.
20. Follow Koningstraat in eastern direction until Betenlaan.
21. Follow Betenlaan in southern direction until Broeksche Leigraaf Winsen (water).
22. Follow Broeksche Leigraaf Winsen in eastern direction until A50.
23. Follow A50 in southern direction until Graafsebaan.
24. Follow Graafsebaan in Northern direction until Julianasingel.
25. Follow Julianasingel in western direction until Dr Saal v. Zwanenbergsingel.
26. Follow Dr Saal v. Zwanenbergsingel in northern direction until railway-track Nijmegen's-Hertogenbosch.
27. Follow railway-track Nijmegen's-Hertogenbosch in western direction until Klompstraat.
28. Follow Klompstraat in northern direction turning into Kepkensdonk turning into Weisestraat until Gewandeweg.
29. Follow Gewandeweg in western direction until Kesselsegraaf.
30. Follow Kesselsegraaf in northern direction until De Lithse Ham.
31. From De Lithse Ham crossing the rivers “Maas” and “Waal” at Heerewarden until Waalbandijk.
32. Follow Waalbandijk in northern direction turning into Molenstraat until Dreef.
33. Follow Dreef volgen in northern direction until Pippertsestraat.
34. Follow Pippertsestraat in northern direction turning into Zijvelingsestraat until Vuadapad.
35. Follow Vuadapad in eastern direction until Groenestraat.
36. Follow Groenestraat in northern direction until “de Linge” (river).
37. Follow De Linge in north-eastern direction until Beldertseweg (N835).
38. Follow Beldertseweg in northern direction until crossing with the “Amsterdam-Rijnkanaal”.

1. From the crossing with N322 and Zandstraat, follow Zandstraat in eastern direction until tram line.
2. Follow tramline in south-eastern direction until Molenstraat.
3. Follow Molenstraat in north-eastern direction until Meidoornstraat.
4. Follow Meidoornstraat in eastern direction until Korenbloemstraat.
5. Follow Korenbloemstraat in eastern direction until Florastraat.
6. Follow Florastraat in southern direction until Vogelzang.
7. Follow Vogelzang in eastern direction until Kamstraat.
8. Follow Kamstraat in southern direction until Van Heemstraweg.
9. Follow Van Heemstraweg in north-eastern direction until North-South (N329).
10. Follow North-South (N329) in southern direction until Neersteindsestraat.
11. Follow Neersteindsestraat in south-eastern direction until Altforstestraat.
12. Follow Altforstestraat in south-west direction until Middenweg.
13. Follow Middenweg in south-eastern direction until Mekkersteeg.
14. Follow Mekkersteeg in southern direction until Zuidweg.
15. Follow Zuidweg in western direction until Noord-Zuid.
16. Follow Noord-Zuid in southern direction until de Maas(water).
17. Follow Maas in western direction until Veerweg.
18. Follow Veerweg in northern direction until Raadhuisdijk.
19. Follow Raadhuisdijk in western direction turning into Berghuizen until Nieuweweg.
20. Follow Nieuweweg in western direction until Wamelseweg.
21. Follow Wamelseweg in northern direction turning into Zijvond until Liesbroekstraat.
22. Follow Liesbroekstraat in eastern direction until Nieuweweg.
23. Follow Nieuweweg in northern direction until Liesterstraat.

From 21.11.2020 until 29.11.2020

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| <p>24. Follow Liesterstraat in eastern direction until Maas en Waalweg (N322).</p> <p>25. Follow Maas en Waalweg in northern direction until crossing with Zandstraat.</p> | |
| <ol style="list-style-type: none"> 1. From Marsdijk at the Bicycle ferry cross the “Nederrijn” towards Veerweg. 2. Follow Veerweg in northern direction until Herenstraat. 3. Follow Herenstraat in eastern direction turning into Grebbeweg until Grebbedijk. 4. Follow Grebbedijk in eastern direction turning into ‘Nederrijn’ until Wolfswaard. 5. Follow Wolfswaard in southern direction until Randwijkse Rijndijk. 6. Follow Randwijkse Rijndijk in eastern direction until Lakemondsestraat. 7. Follow Lakemondsestraat in southern direction until De Hel. 8. Follow De Hel in southern direction turning into Tolsestraat until zandweg at nr 6. 9. Follow Zandweg in southern direction until Gesperdensestraat. 10. Follow Gesperdensestraat in eastern direction until Wuustweg. 11. Follow Wuustweg in southern direction until Boelenhamsestraat. 12. Follow Boelenhamsestraat in western direction until railway track. 13. Follow the railway track in eastern direction until Leigraafseweg. 14. Follow Leigraafseweg in southern direction until A15. 15. Follow A15 in eastern direction until Andeltsche Leigraaf. 16. Follow Andeltsche Leigraaf in southern direction until Engelandstraat. 17. Follow Engelandstraat in western direction until De Steeg. 18. Follow De Steeg in southern direction turning into Molenhofstaat until Groenestraat. 19. Follow Groenestraat in eastern direction until Horstweg. 20. Follow Horstweg in southern direction until Waalbandijk. 21. Follow Waalbandijk in eastern direction, crossing “de Waal” until Uiterwaard. 22. Cross Uiterwaard until Dijk. 23. Follow Dijk in southern direction until Molenstraat. 24. Follow Molenstraat in western direction until Leegstraat. 25. Follow Leegstraat in southern direction until Van Heemstraweg. 26. Follow Van Heemstraweg in eastern direction until Plakstraat. 27. Follow Plakstraat in southern direction until Koningstraat. 28. Follow Koningstraat in eastern direction until A50. 29. Follow A50 in southern direction until Ficarystraat. 30. Follow Ficarystraat in eastern direction until Wezelsedijk. 31. Follow Wezelsedijk in southern direction until Hoogvonderweg. 32. Follow Hoogvonderweg in western direction, tuning into Wezelseveldweg until Broekstraat. 33. Follow Broekstraat in eastern direction until Puitsestraat. 34. Follow Puitsestraat in southern direction, turning into Van Balverenlaan. 35. Follow Van Balverenlaan in southern direction turning into Ruffelsdijk until N845. 36. Follow N845 in southern direction until A326. 37. Follow A326 in western direction until A50. 38. Follow A50 in southern direction until Berghemseweg. 39. Follow Berghemseweg in western direction until railway track. 40. Follow the railway track in western direction until Hertogin Johannasingel. 41. Follow Hertogin Johannasingel in northern direction until Gewandeweg. 42. Follow Gewandeweg in western direction until Huizenbeemdweg. 43. Follow Huizenbeemdweg in northern direction until Lutterstraat. 44. Follow Lutterstraat in northern direction until Tiendweg. 45. Follow Tiendweg in western direction until Weisestraat. 46. Follow Weisestraat in northern direction until Valkseweg. 47. Follow Valkseweg in western direction until Lithseweg. 48. Follow Lithseweg crossing “de Maas” until Maasdijk. 49. Follow Maasdijk in northern direction crossing “de Waal” until Waalbandijk. 50. Follow Waalbandijk in northern direction until Jonkheer P.A. Reuchlinlaan. 51. Follow Jonkheer P.A. Reuchlinlaan in northern direction until Provincialeweg. 52. Follow Provincialeweg in northern direction until Rivierenlandlaan. 53. Follow Rivierenlandlaan in northern direction until Industrieweg. | 7.12.2020 |

54. Follow Industrierweg in northern direction, turning into Beldertseweg until Ommerenweg. 55. Follow Ommerenweg in eastern direction until Voorburgseweg. 56. Follow Voorburgseweg in eastern direction, turning into Dokter Guepinlaan until Kerststraat. 57. Follow Kerststraat in northern direction until Groenestraat. 58. Follow Groenestraat in eastern direction until Hogebrinksestraat. 59. Follow Hogebrinksestraat in southern direction until Beemsestraat. 60. Follow Beemsestraat in northern direction, turning into Rijndijk until Waaijweg. 61. Follow Waaijweg in eastern direction until Drosseweg. 62. Follow Drosseweg in northern direction until Marsdijk. 63. Follow Marsdijk in eastern direction until the Bicycle ferry.	
1. From Waalbandijk follow “de Waal” in eastern direction until Waalbandijk at nr 155. 2. Follow Waalbandijk at nr 155 in southern direction, turning into Heersweg until Kerkstraat. 3. Follow Kerkstraat in southern direction until Van Heemstraweg. 4. Follow Van Heemstraweg in eastern direction until Scharenburg. 5. Follow Scharenburg in southern direction until Molenweg. 6. Follow Molenweg in southern direction until Broerstraat. 7. Follow Broerstraat in western direction until Neersteindsestraat. 8. Follow Neersteindsestraat in eastern direction, turning into Bikkeldam until Singel. 9. Follow Singel in southern direction until Middenweg. 10. Follow Middenweg in eastern direction until Mekkersteeg. 11. Follow Mekkersteeg in southern direction until Zuidweg. 12. Follow Zuidweg in western direction until Noord Zuid N329. 13. Follow Noord Zuid N329 in southern direction until “de Maas” (river). 14. Follow “de Maas” in western direction until Veerweg. 15. Follow Veerweg in northern direction until Raadhuisdijk. 16. Follow Raadhuisdijk in western direction until Kapelstraat. 17. Follow Kapelstraat in northern direction, turning into Den Hoedweg until Dijkgraaf De Leeuweg. 18. Follow Dijkgraaf De Leeuweg in western direction until Wolderweg. 19. Follow Wolderweg in northern direction until Nieuweweg. 20. Follow Nieuweweg in eastern direction until Liesterstraat. 21. Follow Liesterstraat in eastern direction until Zijveld. 22. Follow Zijveld in northern direction until Zandstraat. 23. Follow Zandstraat in eastern direction until Dijkstraat. 24. Follow Dijkstraat in northern direction until Waalbandijk.	From 29.11.2020 until 7.12.2020
1. Vanaf Kruising Zuukerenweg/De Meent. De Meent volgen in noordelijke richting tot aan Oenerweg. 2. Oenerweg volgen in oostelijke richting overgaand in Eperweg tot aan Ooster Oenerweg. 3. Ooster Oenerweg volgen in noordelijke richting tot aan Molenstraat. 4. Molenstraat volgen in oostelijke richting tot aan Houtweg. 5. Houtweg volgen in oostelijke richting tot aan IJsseldijk. 6. IJsseldijk volgen in zuidelijke richting tot aan IJsseldijk 10. 7. Bij IJsseldijk 10 de IJssel overstekend tot aan Rijkstraatweg (N337). 8. Rijkstraatweg (N337) volgen in zuidelijke richting tot aan Beltenweg. 9. Beltenweg volgen in oostelijke richting tot aan Holstweg. 10. Holstweg volgen in zuidoostelijke richting tot aan Zandwetering (water). 11. Zandwetering volgen in zuidelijke richting tot aan Kleistraat. 12. Kleistraat volgen in oostelijke richting tot aan Dingshofweg. 13. Dingshofweg volgen in oostelijke richting tot aan Soestwetering (water). 14. Soestwetering volgen in zuidelijke richting tot aan Raalterweg (N348). 15. Raalterweg (N348) volgen in zuidelijke richting tot aan Lindemanweg. 16. Lindemanweg volgen in zuidelijke richting tot aan Nering Bögelweg. 17. Nering Bögelweg volgen in westelijke richting tot aan haakse bocht, overstekend in Dotherweg.	13.12.2020

18. Dotherweg volgen in zuidelijke richting tot aan Olthoflaan.
19. Olthoflaan volgen in zuidelijke richting tot aan Hassinklaan.
20. Hassinklaan volgen in zuidelijke richting tot aan Deventerweg (N348).
21. Deventerweg (N348) volgen in zuidelijke richting tot aan Ravensweerdsweg.
22. Ravensweerdsweg volgen in westelijke richting tot aan IJssel (water).
23. IJssel overstekend tot aan Rammelwaardsdijk.
24. Rammelwaardsdijk volgen in westelijke richting tot aan Voorsterbeek (water).
25. Voorsterbeek (water) volgen in westelijke richting tot aan Lange Klarenbeekseweg.
26. Lange Klarenbeekseweg volgen in noordelijke richting tot aan Oudhuizerstraat.
27. Oudhuizerstraat volgen in westelijke richting tot aan Polveensweg.
28. Polveensweg volgen in westelijke richting overgaand in Hessenallee tot aan Klarenbeekseweg.
29. Klarenbeekseweg volgen in westelijke richting tot aan Woudweg.
30. Woudweg volgen in westelijke richting tot aan Apeldoornsch kanaal (water).
31. Apeldoornsch kanaal volgen in noordelijke richting tot aan Wolfskuilen.
32. Wolfskuilen volgen in westelijke richting tot aan A1.
33. A1 volgen in westelijke richting tot aan Arnhemseweg.
34. Arnhemseweg volgen in noordelijke richting tot aan Laan van Westenenk (Ring).
35. Laan van Westenenk (Ring) in westelijke richting, overgaand in Laan van Spitsbergen tot aan J.C. Wilsaan.
36. J.C. Wilsaan volgen in noordelijke richting tot aan Amersfoortseweg (N344).
37. Amersfoortseweg (N344) volgen in westelijke richting tot aan Elspetergrindweg.
38. Elspetergrindweg volgen in noordelijke richting tot aan Elspeterweg.
39. Elspeterweg volgen in oostelijke richting tot aan Enkhoutweg.
40. Enkhoutweg volgen in noordelijke richting tot aan Elburgerweg.
41. Elburgerweg volgen in noordelijke richting tot aan Oranjeweg.
42. Oranjeweg volgen in noordoostelijke richting tot aan Woesterweg.
43. Woesterweg volgen in noordelijke richting tot aan Langeweg.
44. Langeweg volgen in oostelijke richting tot aan Hoofdstraat.
45. Hoofdstraat volgen in noordelijke richting tot aan Vegtelarijweg.
46. Vegtelarijweg volgen in oostelijke richting tot aan Willem Dreeslaan.
47. Willem Dreeslaan volgen in oostelijke richting tot aan Europalaan.
48. Europalaan volgen in noordelijke richting tot aan Zuukerenweg.
49. Zuukerenweg volgen in oostelijke richting tot aan De Meent.

1. Vanaf kruising A50/Halve Wetering (water), Halve Wetering volgen in noordoostelijke richting tot aan Geerstraat.
2. Geerstraat volgen in oostelijke richting overgaand in Geersepad overgaand in Dorpsplein tot aan Middendijk.
3. Middendijk volgen in noordelijke richting tot aan Kerkepad.
4. Kerkepad volgen in oostelijke richting tot aan Zeedijk.
5. Zeedijk volgen in zuidelijke richting tot aan Vaassenseweg (N792).
6. Vaassenseweg volgen in oostelijke richting overgaand in Dorpsstraat tot aan Twelloseweg.
7. Twelloseweg volgen in zuidelijke richting, overgaand in Terwoldseweg tot aan Rijksstraatweg.
8. Rijksstraatweg volgen in westelijke richting overgaand in Oude Rijksstraatweg tot aan Molenstraat.
9. Molenstraat volgen in zuidelijke richting overgaand in Hietweideweg tot aan Jupiter.
10. Jupiter volgen in westelijke richting overgaand in Leigraaf tot aan Zonnenbergstraat.
11. Zonnenbergstraat volgen in westelijke richting tot aan Leemsteeg.
12. Leemsteeg volgen in noordelijke richting tot aan Bottenhoekseweg.
13. Bottenhoekseweg volgen in westelijke richting overgaand in Stationsweg tot aan Rijksstraatweg (N344).
14. Rijksstraatweg (N344)/Deventerstraat volgen in westelijke richting tot aan Drostendijk.
15. Drostendijk volgen in noordelijke richting tot aan A50.
16. A50 volgen in noordelijke richting tot aan Halve Wetering (water).

From 5.12.2020 until 13.12.2020

Province: Groningen

1. Vanaf Brug Sylsterwei Dokkumer Djip, Dokkumer Djip volgen in oostelijke richting tot aan Lauwersmeer.
2. Lauwersmeer volgen in oostelijke richting tot aan Zoutkamperril.
3. Zoutkamperril volgen in oostelijke richting tot aan Hunsingokanaal.
4. Hunsingokanaal volgen in oostelijke richting tot aan Hunsingoweg (N388).
5. Hunsingoweg volgen in zuidelijke richting tot aan S.H. Woldringhstraat.
6. S.H. Woldringhstraat, overgaand in Julianastraat volgen in oostelijke richting tot aan Churchillweg.
7. Churchillweg volgen in oostelijke richting overgaand in Zoutkamperweg, overgaand in Hoofdstraat overgaand in Ewer, overgaand in Hoofdweg, volgend in zuidelijke richting tot aan Reitdiep.
8. Reitdiep volgen in oostelijke richting tot aan Boerderij Nwe Kampen.
9. Vanaf De Nwe Kampen, De Kampen volgen in zuidelijke richting, overgaand in Englumweg tot aan Englumstraat.
10. Englumstraat volgen in oostelijke richting overgaand in Boventilsterweg (N982) tot aan Barnwerderweg (N983).
11. Barnwerderweg volgen in zuidelijke richting tot aan Oude Dijk.
12. Oude Dijk, overgaand in, Jensemaweg volgen in zuidelijke richting tot aan Spanjaardsdijk Noord.
13. Spanjaardsdijk Noord volgen in zuidelijke richting tot aan Van Starckenborghkanaal Noordzijde.
14. Van Starckenborghkanaal Noordzijde volgen in westelijke richting tot aan Rijksstraatweg (N355) volgen in zuidelijke richting tot aan rotonde met Fanerweg (N980), de Fanerweg volgend tot aan Spoorlijn Groningen-Leeuwarden.
15. Spoorlijn Groningen-Leeuwarden volgen in zuidelijke richting tot aan Hoge Weg.
16. Hoge Weg volgen in zuidelijke richting tot aan Dorpsstraat.
17. Dorpsstraat overgaand in Westerdijk volgen in westelijke richting tot aan Lettelberterdiep.
18. Lettelberterdiep volgen in zuidelijke richting tot aan A7.
19. A7 volgen westelijke richting tot aan Zethuisterweg.
20. Zethuisterweg volgen in noordelijke richting tot aan Kolonieweg.
21. Kolonieweg volgen in westelijke richting tot aan Julianabuurt.
22. Julianabuurt volgen in noordelijke richting tot aan Drachsterweg.
23. Drachsterweg volgen in noordelijke richting tot aan Poelbuurt.
24. Poelbuurt volgen in westelijke richting tot aan Scheiding.
25. Scheiding volgen in zuidelijke richting tot aan Heidelaan.
26. Heidelaan volgen in westelijke richting tot aan Warreboslaan.
27. Warreboslaan volgen in noordelijke richting tot aan Burmaniastraat.
28. Burmaniastraat volgen in westelijke richting overgaand in Badlaan tot aan Gedemptevaart.
29. Gedemptevaart volgen in noordelijke richting tot aan Vierhuisterweg.
30. Vierhuisterweg volgen in noordelijke richting overgaand in Turfloane tot aan Warmotsstrjitte.
31. Warmotsstrjitte volgen in westelijke richting tot Pauloane.
32. Pauloane volgen in noordelijke richting tot aan Wopkeloane.
33. Wopkeloane volgen in noordelijke/westelijke richting overgaand in De Singel.
34. De Singel volgen in noordelijke richting tot aan Krúswei.
35. Krúswei volgen in westelijke richting tot aan It Kleasterbreed.
36. It Kleasterbreed volgen in noordelijke richting tot aan De Sannen.
37. De Sannen volgen in westelijke richting overgaand in De Buorren overgaand in Tillewei tot aan Prinses Margrietkanaal.
38. Prinses Margrietkanaal volgen in noordelijke richting tot aan Twizelerfeart.
39. Twizelerfeart volgen in westelijke richting tot aan N355.
40. N355 volgen in noordelijke richting tot aan De Wedze.
41. De Wedze volgen in noordelijke richting overgaand in Ganzewei tot aan Sparrewei.
42. Sparrewei volgen in oostelijke richting overgaand in Hanenburgch overgaand in Cecilialoane tot aan Nonnewei.
43. Nonnewei volgen in noordelijke richting tot aan Müntsewei.

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44. Müntsewei volgen in noordelijke richting overgaand in Hüsternoard tot aan Foarwei. 45. Foarwei volgen in oostelijke richting tot aan Jan Binneswei. 46. Jan Binneswei volgen in noordelijke richting overgaand in De Wygeast tot aan Allemawei. 47. Allemawei volgen in oostelijke richting tot aan Lauwersmeerweg (N358). 48. Lauwersmeerweg volgen in noordelijke richting tot aan Alddijp. 49. Alddijp volgen in oostelijke richting tot aan Butendykswei. 50. Butendykswei volgen in noordelijke richting tot aan Streamkanaal Willem Loeslús. 51. Streamkanaal Willem Loeslús volgen in oostelijke richting tot aan Brug Sylsterwei Dokkumer Djip.	
1. Vanaf kruising N355-Kloosterweg, Kloosterweg volgen in noordelijke richting overgaand in Herestraat tot aan Van Eysingaweg. 2. Van Eysingaweg volgen in noordelijke richting overgaand in Eeuwe Ennesweg tot aan Leegsterweg. 3. Leegsterweg volgen in oostelijke richting overgaand in Laauwersweg overgaand in brugstraat tot aan Schoolstraat. 4. Schoolstraat volgen in noordelijke richting overgaand in Wester-waardijk tot aan Zuiderried. 5. Zuiderried volgen oostelijke richting tot aan Kievitsweg. 6. Kievitsweg volgen in zuidelijke richting tot aan Friesestraatweg volgen oostelijke richting tot aan Bindervoetpolder (N388). 7. Bindervoetpolder (N388) volgen in zuidelijke richting tot aan Provincialeweg. 8. Provincialeweg volgen in westelijke richting tot aan Hoofdstraat. 9. Hoofdstraat volgen in westelijke richting tot aan Lutjegasterweg. 10. Lutjegasterweg volgen in noordelijke richting tot aan Bombay. 11. Bombay volgen in westelijke richting tot aan Zandweg tegenover Easterweg 1. 12. Zandweg vogen in westelijke richting volgen tot aan De Lauwers. 13. De Lauwers volgen in noordelijke richting tot aan Miedweg. 14. Miedweg volgen in noordelijke richting tot aan Prinses Margrietkanaal. 15. Prinses Margrietkanaal volgen in westelijke richting tot aan Stroboser Trekfeart. 16. Stroboser Trekfeart volgen in noordelijke richting tot aan Rijksweg N355. 17. Rijksweg N355 volgen in oostelijke richting tot aan Kloosterweg.	From 3.12.2020 until 11.12.2020
<i>Province: Friesland</i>	
1. Vanaf Tjerk Hiddessluizen van Harinxmakanaal volgen in oostelijke richting tot aan Waadseewei. 2. Waadseewei volgen in noordelijke richting tot aan Rijksweg. 3. Rijksweg volgen in oostelijke richting tot aan Kiesterzijl. 4. Kiesterzijl volgen in zuidelijke richting tot aan Van Harinxmakanaal. 5. Van Harinxmakanaal volgen in oostelijke richting tot aan Burgermeester J. Dijkstraweg. 6. Burgermeester J. Dijkstraweg volgen in zuidelijke richting tot aan Tsjommer Faert (water). 7. Tsjommer Faert volgen in zuidelijke richting tot aan Witzumerweg. 8. Witzumerweg volgen in zuidelijke richting tot aan Lollumerweg. 9. Lollumerweg volgen in oostelijke richting tot aan Holprijp. 10. Holprijp volgen in oostelijke richting tot aan Aldmaer (water). 11. Aldmaer volgen in oostelijke richting tot aan Platendijk. 12. Platendijk volgen in zuidelijke richting tot aan Felsumerleane. 13. Felsumerleane volgen in zuidelijke richting tot aan Bonkwertterreed. 14. Bonkwertterreed volgen in zuidelijke richting tot aan Provincialeweg. 15. Provincialeweg volgen in noordelijke richting tot aan Lange Daam (water). 16. Lange Daam volgen in zuidelijke richting tot aan Boolserterfeart (water). 17. Boolserterfeart volgen in westelijke richting tot aan De Sebeare (water). 18. De Sebeare (water) volgen in zuidelijke richting tot aan Seaberefeart (water). 19. Seaberefeart (water) volgen in zuidelijke richting tot aan Eastereinderfeart (water).	22.12.2020

20. Eastereinderfeart (water) volgen in oostelijke richting tot aan Frjensjerterfeart (water).
21. Frjensjerterfeart (water) volgen in zuidelijke richting tot aan Terpstjitte.
22. Terpstjitte volgen in westelijke richting overgaand in Ringdijk tot aan Ingenawei.
23. Ingenawei volgen in oostelijke richting tot aan Folsgearsterleane.
24. Folsgearsterleane volgen zuidelijke richting overgaand in monumentwei tot aan Skeender.
25. Skeender volgen in zuidelijke richting overgaand in Easthimmerwei tot aan Rige.
26. Rige volgen in zuidelijke richting tot aan De Wimerts (water).
27. De Wimerts volgen in westelijke richting tot aan Abbegaerster Opfeart (water).
28. Abbegaerster Opfeart volgen in zuidelijke richting tot aan Morrawei.
29. Morrawei volgen in zuidelijke richting tot aan Hissedyk.
30. Hissedyk volgen in westelijke richting overgaand in De Kat tot aan Westerkating.
31. Westerkating volgen in zuidelijke richting tot aan spoorlijn Leeuwarden – Stavoren.
32. Spoorlijn Leeuwarden – Stavoren volgen in westelijke richting tot aan Nijhuzumerdyk.
33. Nijhuzumerdyk volgen in westelijke richting tot aan Trekwei.
34. Trekwei volgen in zuidelijke richting overgaand in Prystershoek tot aan Brouwersdyk.
35. Brouwersdyk volgen in westelijke richting tot aan Droege Dolte (water).
36. Droege Dolte volgen in zuidelijke richting tot aan De Tillefonne.
37. De Tillefonne volgen in westelijke richting tot aan Slinkewei.
38. Slinkewei volgen in westelijke richting tot aan oever van het IJsselmeer (water).
39. IJsselmeer volgen in noordelijke richting via sluizen Kornwerderzand tot aan Tjerk Hiddessluizen.

1. Vanaf Kruising Waltingleane/Mulierlaan, Mulierlaan volgen in oostelijke richting tot aan Taekelaan.
2. Taekelaan volgen in oostelijke richting tot aan Witmarsumerfvaart (water).
3. Witmarsumerfvaart volgen in noordelijke richting tot aan Harlingervvaart (water).
4. Harlingervvaart volgen in oostelijke richting tot aan Westergoaweg.
5. Westergoaweg volgen in zuidelijke richting tot aan A7.
6. A7 volgen in westelijke richting tot aan Bolswarderweg.
7. Bolswarderweg volgen in westelijke richting tot aan Dorpsstraat.
8. Dorpsstraat volgen in zuidelijke richting overgaand in Bruinder tot aan Van Panhuysenkanaal.
9. Van Panhuysenkanaal volgen in westelijke richting tot aan Hemmensweg.
10. Hemmensweg volgen in westelijke richting tot aan Weersterweg.
11. Weersterweg volgen in noordelijke richting tot aan Haitsmaleane.
12. Haitsmaleane volgen in westelijke richting tot aan Melkvaart (water).
13. Melkvaart volgen in noordelijke richting tot aan Kornwerdervvaart (water).
14. Kornwerdervvaart volgen in westelijke richting tot aan Miedlaan.
15. Miedlaan volgen in noordelijke richting tot aan Hayumerlaene.
16. Hayumerleane volgen in noordelijke richting tot aan Gooyumervvaart (water).
17. Gooyumervvaart volgen in noordelijke richting tot aan Gooyumerlaan.
18. Gooyumerlaan. Volgen in oostelijke richting tot aan Buitendijk.
19. Buitendijk volgen in noordelijke richting tot aan Stuitlaan.
20. Stuitlaan volgen in westelijke richting overgaand in Pingjumer Gulden Halsband tot aan Waltingaleane.
21. Waltingaleane volgen in oostelijke richting tot aan Mulierlaan.

From 14.12.2020 until 22.12.2020

Province: Utrecht

1. Vanaf de kruising van de N207 en de N11, de N11 volgend in oostzuidelijke richting tot aan de Spoorlaan.
2. De Spoorlaan volgend in oostelijke richting tot aan de Rijksstraatweg.
3. De Rijksstraatweg volgend in zuidelijke richting tot aan de Kerklaan.

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4. De Kerklaan volgend in oostelijke richting overgaand in de Verloostraat tot aan Buitendijk.
5. De Buitendijk volgen in zuidelijke richting tot aan de Kerkweg.
6. De Kerkweg volgend in oostelijke richting overgaand in Meije tot aan de Hazekade.
7. De Hazekade volgend in zuidelijke richting tot aan Hoofdweg.
8. Hoofdweg volgen in zuidelijke richting tot aan de 's Gravensloot.
9. De 's Gravensloot volgend in oostelijke richting tot aan de Oudelandseweg.
10. De Oudelandseweg volgend in noordelijke richting tot aan de Geestdorp.
11. De Geestdorp volgend in oostelijke richting tot aan de N198.
12. De N198 volgend in oostelijke richting overgaand in zuidelijke richting overgaand in oostelijke richting overgaand in zuidelijke richting tot aan de Strijkviertel.
13. De Strijkviertel volgend in zuidelijke richting tot aan de A12.
14. De A12 volgend in oostelijke richting tot aan de A2.
15. De A2 volgend in zuidelijke richting tot aan de N210.
16. De N210 volgend in zuidelijke richting overgaand in westelijke richting overgaand in zuidelijke richting tot aan de S.L. van Alterenstraat.
17. De S.L. van Alterenstraat volgend in zuidelijke richting tot aan de rivier de Lek.
18. De rivier de Lek volgend in westelijke richting tot aan de Bonevlietweg.
19. De Bonevlietweg volgend in zuidelijke richting tot aan de Melkweg.
20. De Melkweg volgend in zuidelijke richting overgaand in de Peppelweg tot aan de Essenweg.
21. De Essenweg volgend in noordelijke richting overgaand in de Graafland tot aan de Irenestraat.
22. De Irenestraat volgend in westelijke richting tot aan de Beatrixstraat.
23. De Beatrixstraat volgend in noordelijke richting tot aan de Voorstraat.
24. De Voorstraat volgend in westelijke richting overgaand in Sluis, overgaand in de Opperstok overgaand, in de Bergstoep tot aan de veerpont Bergambacht-Groot Ammers.
25. De veerpont volgend in noordelijke richting tot aan de Veerweg.
26. De Veerweg volgend in noordelijke richting tot aan de N210.
27. De N210 volgend in westelijke richting tot aan de Zuidbroekse Opweg.
28. De Zuidbroekse Opweg volgend in noordelijke richting tot aan de Oosteinde.
29. De Oosteinde volgend in westelijke richting tot aan de Kerkweg.
30. De Kerkweg volgend in westelijke richting tot aan de Graafkade.
31. De Graafkade volgend in oostelijke richting tot aan de Wellepoort.
32. De Wellepoort volgend in noordwestelijke richting overgaand in de Schaapjeshaven tot aan de Kattendijk.
33. De Kattendijk volgend in oostelijke richting tot aan de veerpont over de Hollandsche IJssel.
34. De veerpont volgend in noordelijke richting tot aan het Veerpad.
35. Het Veerpad volgend in noordelijke richting overgaand in de Kerklaan overgaand in de Middelweg tot aan de N456.
36. De N456 volgend in noordelijke richting tot aan de N207.
37. De N207 volgend in noordelijke richting tot aan de N11.

1. Vanaf de kruising van de N228 en de Goverwellesingel, de Goverwellesingel volgend in noordelijke richting overgaand in de Goverwelletunnel tot aan de Achterwillenseweg.
2. De Achterwillenseweg volgend in oostelijke richting tot aan de Vlietdijk.
3. De Vlietdijk volgend in noordelijke richting overgaand in de Platteweg tot aan de Korssendijk.
4. De Korssendijk volgend in noordelijke richting overgaand in de Ree in oostelijke richting tot aan de Nieuwenbroeksedijk.
5. De Nieuwenbroeksedijk volgend in oostelijke richting tot aan de Kippenkade.
6. De Kippenkade volgend in noordelijke richting tot aan de Wierickepad.
7. De Wierickepad volgend in noordelijke richting overgaand in oostelijke richting overgaand in de Kerkweg overgaand in de Groendijk tot aan de Westeinde.
8. De Westeinde volgend in noordelijke richting overgaand in de Oosteinde tot aan de Tuurluur.
9. De Tuurluur volgend in zuidelijke richting overgaand in de Papekoperdijk.

From 16.12.2020 until 24.12.2020

10. De Papekopperdijk volgend in zuidelijke richting overgaand in de Johan J Vierbergenweg overgaand in de Zwier Regelinkstraat tot aan de N228. 11. De N228 volgend in zuidelijke richting tot aan de Damweg. 12. De Damweg volgend in zuidelijke richting tot aan de Zuidzijdseweg. 13. De Zuidzijdseweg volgend in westelijke richting overgaand in de Slangenweg tot aan de West-Vlisterdijk. 14. De West-Vlisterdijk volgend in noordelijke richting overgaand in westelijke richting overgaand in de Bredeweg volgend in noordelijke richting overgaand in Grote Haven tot aan de N228. 15. De N228 volgend in westelijke richting tot aan de Goverwellesingel.	
1. Vanaf de kruising van de N207 en de A4, de A4 volgend in noordelijke richting tot aan de N201. 2. De N201 volgend in oostelijke richting, overgaand in noordelijke richting, overgaand in oostelijke richting tot aan de N232. 3. De N232 volgend in noordelijke richting tot aan de A9. 4. De A9 volgend in westelijke richting tot aan de A4. 5. De A4 volgend in noordoostelijke richting, overgaand in oostelijke richting in de A10 tot aan de spoorlijn bij de ArenA. 6. Vanaf de spoorlijn bij de ArenA de spoorlijn volgend in zuidelijke richting tot aan de Amerlandseweg. 7. De Amerlandseweg volgend in westelijke richting overgaand in de N401 volgend in zuidelijke richting overgaand in westzuidelijke richting tot aan de N212. 8. De N212 volgend in zuidelijke richting tot aan de N463. 9. De N463 volgend in westelijke richting tot aan de Milandweg. 10. De Milandweg volgend in zuidelijke richting tot aan de Oude Meije. 11. De Oude Meije volgend in westnoordelijke richting tot aan de Meije. 12. De Meije volgend in westzuidelijke richting tot aan het water de Meije. 13. De water de Meije volgend in westelijke richting tot aan de Zierendeweg. 14. De Zierendeweg volgend in noordelijke richting, overgaand in de Achttienkavels tot aan de Zevenhovenseweg. 15. De Zevenhovenseweg volgend in westelijke richting, overgaand in de Kerkweg tot aan Westkanaalweg. 16. Westkanaalweg volgen in noordelijke richting tot aan Hertog Beijerenstraat. 17. Hertog Beijerenstraat volgen in westelijke richting tot aan Paradijsweg. 18. Paradijsweg volgen in noordoostelijke richting tot aan Kerkpad. 19. Kerkpad volgen in westelijke richting tot aan Langeraaarseweg. 20. Langeraaarseweg volgen in westelijke richting tot aan G van Dijkstraat. 21. G van Dijkstraat volgen in noordelijke richting tot aan J.M.Halkestraat. 22. J.M.Halkestraat volgen in oostelijke richting tot aan Van Wassenaerstraat. 23. Van Wassenaerstraat volgen in noordelijke richting, overgaand in Achtmorgenpad, overgaand in water tot aan water gemeentegrens tussen Gemeente Kaag en Brassem en Gemeente Nieuwkoop. 24. Water gemeentegrens tussen Gemeente Kaag en Brassem en Gemeente Nieuwkoop volgen in oostelijke richting tot aan Vriezenweg. 25. Vriezenweg volgen in westelijke richting tot aan N207 26. De N207 volgend in noordelijke richting tot aan de A4.	28.12.2020
1. Vanaf de kruising van de N521 en de Nesserlaan volgend in oostelijke richting tot aan de Amstel. 2. De Amstel volgend in zuidelijke richting tot aan de Oude Waver. 3. De Oude Waver volgend in oostelijke richting tot aan de Hoofdweg. 4. De Hoofdweg volgend in zuidelijke richting overgaand in N212 tot aan de Mijdrechtse Dwarsweg. 5. De Mijdrechtse Dwarsweg volgend in westelijke richting overgaand in de Industrieweg tot aan de Rondweg. 6. De Rondweg volgend in zuidelijke richting overgaand in westelijke richting tot aan de Bozenhoven. 7. De Bozenhoven volgend in oostzuidelijke richting overgaand in de Molenland in westzuidelijke richting tot aan de Oosterlandweg. 8. De Oosterlandweg volgend in westnoordelijke richting tot aan de kruising van de Doctor J. van der Haarlaan en het water.	From 20.12.2020 until 28.12.2020

9. Het Water volgend in zuidelijke richting tot aan de Machinetocht.
10. De Machinetocht volgend in westnoordelijke richting tot aan de Schattekerkerweg.
11. De Schattekerkerweg volgend in westzuidelijke richting tot aan de Westerlandweg.
12. De Westerlandweg volgend in westnoordelijke richting overgaand in noordelijke richting tot aan de Oude Spoorbaan.
13. De Oude Spoorbaan volgend in westelijke richting overgaand in westzuidelijke richting tot aan de N231.
14. De N231 volgend in noordelijke richting tot aan de Drechtijk.
15. De Drechtijk volgend in noordelijke richting overgaand in de Kerklaan tot aan de Boterdijk.
16. De Boterdijk volgend in oostnoordelijke richting tot aan de Traverse.
17. De Traverse volgend in noordelijke richting tot aan de Vuurlijn.
18. De Vuurlijn volgend in westelijke richting tot aan de Noordammerweg.
19. De Noordammerweg volgend in noordelijke richting tot aan de N196.
20. De N196 volgend in oostelijke richting tot aan de Faunalaan.
21. De Faunalaan volgend in noordelijke richting tot aan de Aan de Zoom.
22. De Aan de Zoom volgend in oostelijke richting tot aan de Zonnedaauw.
23. De Zonnedaauw volgend in noordelijke richting tot aan de In Het Midden.
24. De In Het Midden volgend in oostelijke richting tot aan de In Het Rond.
25. De In Het Rond volgend in noordelijke richting overgaand in oostelijke richting tot aan de Op De Klucht.
26. De Op De Klucht volgend in noordelijke richting tot aan de Knautia.
27. De Knautia volgend in oostelijke richting tot aan de Klaproos.
28. De Klaproos volgend in noordelijke richting tot aan het water.
29. Het water volgend in oostelijke richting tot aan de N251.
30. De N251 volgend in noordelijke richting tot aan de Nesserlaan.

Member State: Poland

Area comprising:	Date until applicable in accordance with Article 31 of Directive 2005/94/EC
<i>W województwie wielkopolskim w powiecie wolsztyńskim i grodziskim i w województwie lubuskim w powiecie wschowskim</i>	
Obszary gmin Wolsztyn oraz Przemęt w powiecie wolsztyńskim, Rakoniewice w powiecie grodziskim oraz Sława w powiecie wschowskim położone poza obszarem zapowietrzonym w promieniu 10 km wokół ogniska o współrzędnych GPS: N 52.0492 E 16.1558	1.1.2021
Obszary gmin Wolsztyn i Przemęt w powiecie wolsztyńskim położone w promieniu 3 km wokół ogniska o współrzędnych GPS: N 52.0492 E 16.1558	From 24.12.2020 until 1.1.2021
<i>W województwie mazowieckim, w powiecie siedleckim i sokołowskim:</i>	
Części gmin Mokobody, Mordy, Paprotnia, Siedlce i Suchożebry w powiecie siedleckim oraz części gmin Bielany, Repki i Sokołów Podlaski w powiecie sokołowskim położone poza obszarem zapowietrzonym w promieniu 10 km wokół ogniska o współrzędnych GPS: N 52.2787 E 22.3408	5.1.2021
Części gmin Paprotnia i Suchożebry w powiecie siedleckim oraz część gminy Bielany w powiecie sokołowskim położone w promieniu 3 km wokół ogniska o współrzędnych GPS: N 52.2787 E 22.3408	From 28.12.2020 until 5.1.2021

Member State: Sweden

Area comprising:	Date until applicable in accordance with Article 31 of Directive 2005/94/EC
The area of the parts of the municipality of Ystad (ADNS code 01200) extending beyond the area described in the protection zone and within the circle of a radius of 10 kilometres, centred on WGS84 dec. coordinates N55.24.13 and E14.5.27	19.12.2020

Those parts of the municipality of Ystad (ADNS code 01200) contained within a circle of a radius of three kilometres, centred on WGS84 dec. coordinates N55.24.13 and E14.5.27

From 11.12.2020 until 19.12.2020'

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