BERMUDA

CLEAN AIR AMENDMENT REGULATIONS 2026

BR 8 / 2026

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The Minister responsible for the environment, in exercise of the power conferred by section 11 of the Clean Air Act 1991, makes the following Regulations:

Citation

1 These Regulations, which amend the Clean Air Regulations 1993 (the "principal Regulations"), may be cited as the Clean Air Amendment Regulations 2026.

Amends regulation 2

2 Regulation 2 of the principal Regulations is amended in the definition of "controlled chemical" by deleting the words "the Schedule" and substituting "Schedule 1".

Amends regulation 5

3 Regulation 5 of the principal Regulations is amended by inserting after paragraph (a) the following—

"(aa) an offensive odour above the D/T limit from a particular controlled plant; or".

Revokes and replaces regulation 7

4 Regulation 7 of the principal Regulations is revoked and the following regulation is substituted—

"**Protection of the ambient air**

7 (1) A person shall not emit, or cause or permit to be emitted, from any source any specified air contaminant so as to cause the concentration of that air contaminant to exceed the relevant maximum limit per year prescribed in Schedule 2.

(2) For the purposes of paragraph (1), a person shall not exceed—

(a) the concentration of a specified air contaminant for the protection of human health listed in Part 1 of Schedule 2;

(b) the concentration of a specified air contaminant for the protection of vegetation and ecosystems listed in Part 2 of Schedule 2.

(3) In this regulation—

"concentration" means concentration in the ambient air;

"specified air contaminant" means any of the following air contaminants—

(a) sulphur dioxide;

(b) nitrogen dioxide;

(c) nitrogen oxides;

(d) inhalable particulate matter less than 10 micro-meters in size (PM_{10});

(e) inhalable particulate matter less than 2.5 micro-meters in size ($PM_{2.5}$);

(f) carbon monoxide;

(g) ozone;

(h) lead;

(i) hydrogen chloride gas;

(j) hydrogen sulphide;

(k) benzene;

(l) poly-aromatic hydrocarbon (PAH) as benzo[a]pyrene (B[a]P).".

Inserts regulation 7A and 7B

5 The principal Regulations are amended by inserting after regulation 7 the following new regulations—

"**Concentration of air contaminant criteria**

7A (1) The Minister shall assess the concentration of air contaminants across the whole or any part of Bermuda.

(2) Where the concentration of air contaminants exceed the maximum limits prescribed in Schedule 2, fixed measurements taken at monitoring stations approved by the Authority shall be used, but may be supplemented by modelling measurements in order to provide adequate information on the spatial distribution of the ambient air quality.

(3) In all areas where the level of those pollutants is unknown, but complaints that have been validated by an inspector may suggest a concentration exceeding a limit prescribed in Schedule 2 then modelling or estimation techniques or both may be used prior to considering the use of measurements.

(4) In all other areas a combination of fixed measurements, modelling or "indicative" measurements or both modelling and indicative measurements may be used.

(5) For the purposes of paragraphs (1) to (4), measurements shall be carried out in accordance with the criteria set out in Schedule 3.

(6) Save as provided for in paragraph (7), measurements shall be taken in accordance with the "reference" or "equivalent" measurement methods specified in Schedule 3.

(7) Where measurements are supplemented by modelling or "indicative" measurements then the Minister shall take account of the results of those supplementary methods in assessing ambient air quality.

Protection of the ambient air against nuisance odour

7B (1) A person granted an operating licence shall not emit, or cause or permit to be emitted a nuisance odour so as to cause the concentration of the odour to exceed the maximum requirements per year as provided in Schedule 4.

(2) For the purposes of paragraph (1), a person granted an operating licence under section 9 of the Clean Air Act 1991 shall—

(a) meet the D/T limits in Schedule 4;

(b) meet the operations and abatement equipment recommendations by the Authority as agreed by the licencee, for the purposes of preventing nuisance odours;

(c) take all the appropriate preventative measures against nuisance odours, in particular through application of the best available technologies.

(3) After consultation with the Authority, the Minister may, by order subject to the affirmative resolution procedure, amend the D/T limits in Schedule 4.".

Amends regulation 8

6 Regulation 8(1) of the principal Regulations is amended by revoking subparagraph (a) and substituting the following subparagraph—

"(a) of an opacity exceeding 15%, averaged over a period of six consecutive minutes in any one hour; or".

Amends regulation 10

7 Regulation 10(1) of the principal Regulations is amended—

(a) by deleting the comma at the end of paragraph (c) and inserting "; or";

(b) by inserting after paragraph (c) the following paragraph—

"(d) an accidental release or discharge of a nuisance odour,".

Revokes and replaces Schedule

8 The Schedule to the principal Regulations is revoked and the following Schedule substituted—

"**SCHEDULE 1**

(regulation 2)

CONTROLLED CHEMICALS

Antimony and compounds

Arsenic and compounds

Asbestos (fibers)

Asphalt (petroleum) fume

Barium

Benzene and compounds

Benzo(a)pyrene (Note that this is a polycylic aromatic hydrocarbon listed below)

Beryllium and compounds

Bromine and compounds

Cadmium and compounds

Calcium sulphate

Chlorinated dibenzo-p-dioxins (dioxins)

Chlorine and compounds

Chloroform

Chromium and compounds

Cobalt and compounds

Copper and compounds

Cresols

Cyanide and compounds

Dichlorobenzene

Dichlorobenzidine

Glycol ethers

Hydrochloric acid

Hydrogen bromide

Hydrogen chloride

Hydrogen cyanide

Hydrogen peroxide

Hydrogen sulfide

Lead and compounds

Manganese compounds

Mercaptans

Mercury and compounds

Molybdenum

Nickel and compounds

Nitric acid

Ozone-depleting Chemicals & gases with high Global Warming Potential (GWP)

Phosphoric acid

Polybrominated biphenyls

Polychlorinated biphenyls

Pentachlorophenol

Polycylic aromatic hydrocarbons (PAHs, including coal-tar products used in surface treatments for tarmacadam)

Polyvinyl chloride

Radionuclides

Selenium and compounds

Styrene

Sulphuric acid

Tin and compounds

Vanadium and compounds

Vinyl chloride

Zinc and compounds

Ozone-depleting chemicals & gases with high Global Warming Potential (GWP):

TABLE 1. Annex A of Montreal Protocol 1987: Controlled Chemicals (Chlorofluorocarbons - CFCs and Halons)

Group	Sub-stance	Substance technical name	Ozone-Depleting Potential*	100-year Global Warming Potential***
Group I				
$CFCl_3$	(CFC-11)	Tri-chlorofluoromethane	1.0	4,750
CF_2Cl_2	(CFC-12)	Di-chlorofluoromethane	1.0	10,900
$C_2F_3Cl_3$	(CFC-113)	Tri-chlorotrifluoroethane	0.8	6,130
$C_2F_4Cl_2$	(CFC-114)	Di-chlorotetrafluoroethane	1.0	10,000
C_2F_5Cl	(CFC-115)	Chloro-pentafluoroethane	0.6	7,370
Group II				
CF_2BrCl	(halon-1211)	Bromo-chlorodifluoromethane	3.0	
CF_3Br	(halon-1301)	Bromo-trifluoromethane	10.0	
$C_2F_4Br_2$	(halon-2402)	Di-bromotetrafluoroethane	6.0	

TABLE 2. Annex B of Montreal Protocol 1987: Controlled Chemicals (Chlorofluorocarbons - CFCs)

Group	Substance	Substance technical name (Includes all Isomers)	Ozone-depleting Potential*
Group I			
CF_3Cl	(CFC-13)	Chloro-trifluoromethane	1.0
C_2FCl_5	(CFC-111)	Penta-chlorofluoroethane	1.0
$C_2F_2Cl_4$	(CFC-112)	Tetra-chlorodifluoroethane	1.0
C_3FCl_7	(CFC-211)	Hepta-chlorofluoropropane	1.0

TABLE 2. Annex B of Montreal Protocol 1987: Controlled Chemicals (Chlorofluorocarbons - CFCs)

Group	Substance	Substance technical name (Includes all Isomers)	Ozone-depleting Potential*
$C_3F_2Cl_6$	(CFC-212)	Hexa-chlorodifluoropropane	1.0
$C_3F_3Cl_5$	(CFC-213)	Penta-chlorotrifluoropropane	1.0
$C_3F_4Cl_4$	(CFC-214)	Tetra-chlorotetrafluoropropane	1.0
$C_3F_5Cl_3$	(CFC-215)	Tri-chloropentafluoropropane	1.0
$C_3F_6Cl_2$	(CFC-216)	Di-chlorohexafluoropropane	1.0
C_3F_7Cl	(CFC-217)	Chloro-heptafluoropropane	1.0
Group II			
CCl_4	carbon tetrachloride	Carbon Tetrachloride	1.1
Group III			
$C_2H_3Cl_3$†	methyl chloroform	1,1,1-trichloroethane †	0.1

† This formula does not refer to 1,1,2-trichloroethane

TABLE 3. Annex C of Montreal Protocol 1987: Controlled Chemicals (Hydrochlorofluorocarbons - HCFCs)

Group	Sub-stance	Substance Technical Name (Includes all Isomers)	Number of Isomers	Ozone Depleting Potential*	100-Year Global Warming Potential***
Group I					
$CHFCl_2$	(HCFC-21)**	Di-chlorofluoro-methane	1	0.04	151
CHF_2Cl	(HCFC-22)**	Chloro-difluoromethane	1	0.055	1810
CH_2FCl	(HCFC-31)	Chloro-fluoromethane	1	0.02	
C_2HFCl_4	(HCFC-121)	Tetra-chlorofluoroethane	2	0.01-0.04	

TABLE 3. Annex C of Montreal Protocol 1987: Controlled Chemicals (Hydrochlorofluorocarbons - HCFCs)

Group	Sub-stance	Substance Technical Name (Includes all Isomers)	Number of Isomers	Ozone Depleting Potential*	100-Year Global Warming Potential***
$C_2HF_2Cl_3$	(HCFC-122)	Trich-lorodifluoroethane	3	0.02-0.08	
$C_2HF_3Cl_2$	(HCFC-123)	Di-chlorotrifluoro-ethane	3	0.02-0.06	77
C_2HF_4Cl	(HCFC-124)	Chloro-tetrafluoroethane	2	0.02-0.04	609
$C_2H_2FCl_3$	(HCFC-131)	Tri-chlorofluoroethane	3	0.007-0.05	
$C_2H_2F_2Cl_2$	(HCFC-132)	Di-chlorodifluoroethane	4	0.008-0.05	
$C_2H_2F_3Cl$	(HCFC-133)	Chloro-Trifluoroethane	3	0.02-0.06	
$C_2H_3FCl_2$	(HCFC-141)	Di-chlorofluoroethane	3	0.005-0.07	
$C_2H_3F_2Cl$	(HCFC-142)	Chloro-difluoroethane	3	0.008-0.07	
C_2H_4FCl	(HCFC-151)	Chloro-fluoroethane	2	0.003-0.005	
C_3HFCl_6	(HCFC-221)	Hexa-chlorofluoro-propane	5	0.0015-0.07	
$C_3HF_2Cl_5$	(HCFC-222)	Penta-chlorodifluoro-propane	9	0.01-0.09	
$C_3HF_3Cl_4$	(HCFC-223)	Tetra-chlorotrifluoro-propane	12	0.01-0.08	
$C_3HF_4Cl_3$	(HCFC-224)	Tri-chlorotetrafluoro-propane	12	0.01-0.09	
$C_3HF_5Cl_2$	(HCFC-225)	Di-chloropenta-fluoro-propane	9	0.02-0.07	
C_3HF_6Cl	(HCFC-226)	Chloro-hexafluoro-propane	5	0.02–0.10	

TABLE 3. Annex C of Montreal Protocol 1987: Controlled Chemicals (Hydrochlorofluorocarbons - HCFCs)

Group	Sub-stance	Substance Technical Name (Includes all Isomers)	Number of Isomers	Ozone Depleting Potential*	100-Year Global Warming Potential***
$C_3H_2FCl_5$	(HCFC-231)	Penta-chlorofluoro-propane	9	0.05–0.09	
$C_3H_2F_2Cl_4$	(HCFC-232)	Tetra-chlorodifluoro-propane	16	0.008–0.10	
$C_3H_2F_3Cl_3$	(HCFC-233)	Tri-chlorotrifluoro-propane	18	0.007–0.23	
$C_3H_2F_4Cl_2$	(HCFC-234)	Di-chlorotetrafluoro-propane	16	0.01–0.28	
$C_3H_2F_5Cl$	(HCFC-235)	Chloro-pentafluoropropane	9	0.03–0.52	
$C_3H_3FCl_4$	(HCFC-241)	Tetra-chlorofluoro-propane	12	0.004–0.09	
$C_3H_3F_2Cl_3$	(HCFC-242)	Tri-chlorodifluoro-propane	18	0.005–0.13	
$C_3H_3F_3Cl_2$	(HCFC-243)	Di-chlorotrifluoro-propane	18	0.007–0.12	
$C_3H_3F_4Cl$	(HCFC-244)	Chloro-tetrafluoro-propane	12	0.009–0.14	
$C_3H_4FCl_3$	(HCFC-251)	Tri-chlorofluoropropane	12	0.001–0.01	
$C_3H_4F_2Cl_2$	(HCFC-252)	Di-chlorodifluoro-propane	16	0.005–0.04	
$C_3H_4F_3Cl$	(HCFC-253)	Chlorotrifluoro-propane	12	0.003–0.03	
$C_3H_5FCl_2$	(HCFC-261)	Di-chlorofluoropropane	9	0.002–0.02	
$C_3H_5F_2Cl$	(HCFC-262)	Chloro-difluoropropane	9	0.002–0.02	
C_3H_6FCl	(HCFC-271)	Chloro-fluoropropane	5	0.001–0.03	

TABLE 3. Annex C of Montreal Protocol 1987: Controlled Chemicals (Hydrochlorofluorocarbons - HCFCs)

Group	Sub-stance	Substance Technical Name (Includes all Isomers)	Number of Isomers	Ozone Depleting Potential*	100-Year Global Warming Potential***
Group II					
$CHFBr_2$		Di-bromofluoro-methane	1	1	
CHF_2Br	(HBFC-22B1)	Bromodifluoro-methane	1	0.74	
CH_2FBr		Bromo-fluoro-methane	1	0.73	
C_2HFBr_4		Tetra-bromofluoro-ethane	2	0.3–0.8	
$C_2HF_2Br_3$		Tri-bromodifluoro-ethane	3	0.5–1.8	
$C_2HF_3Br_2$		Dibromotrifluoro-ethane	3	0.4–1.6	
C_2HF_4Br		Bromo-tetrafluoro-ethane	2	0.7–1.2	
$C_2H_2FBr_3$		Tri-bromofluoro-ethane	3	0.1–1.1	
$C_2H_2F_2Br_2$		Di-bromodifluoro-ethane	4	0.2–1.5	
$C_2H_2F_3Br$		Bromotrifluoro-ethane	3	0.7–1.6	
$C_2H_3FBr_2$		Di-bromofluoro-ethane	3	0.1–1.7	
$C_2H_3F_2Br$		Bromodifluoro-ethane	3	0.2–1.1	
C_2H_4FBr		Bromofluoro-ethane	2	0.07–0.1	
C_3HFBr_6		Hexabromofluoro-propane	5	0.3–1.5	
$C_3HF_2Br_5$		Penta-bromodifluoro-propane	9	0.2–1.9	
$C_3HF_3Br_4$		Tetra-bromotrifluoro-propane	12	0.3–1.8	

TABLE 3. Annex C of Montreal Protocol 1987: Controlled Chemicals (Hydrochlorofluorocarbons - HCFCs)

Group	Sub-stance	Substance Technical Name (Includes all Isomers)	Number of Isomers	Ozone Depleting Potential*	100-Year Global Warming Potential***
$C_3H_4Br_3$		Tribromotetrafluoro-propane	12	0.5–2.2	
$C_3HF_5Br_2$		Di-bromopentafluoro-propane	9	0.9–2.0	
C_3HF_6Br		Bromohexa-fluoro-propane	5	0.7–3.3	
$C_3H_2FBr_5$		Penta-bromofluoro-propane	9	0.1–1.9	
$C_3H_2F_2Br_4$		Tetrabromodi-fluoro-propane	16	0.2–2.1	
$C_3H_2F_3Br_3$		Tribromotrifluo-propane	18	0.2–5.6	
$C_3H_2F_4Br_2$		Di-bromotetra-fluoro-propane	16	0.3–7.5	
$C_3H_2F_5Br$		Bromo-pentafluoro-propane	8	0.9–1.4	
$C_3H_3FBr_4$		Tetrabromofluoro-propane	12	0.08–1.9	
$C_3H_3F_2Br_3$		Tri-bromodifluoro-propane	18	0.1–3.1	
$C_3H_3F_3Br_2$		Di-bromotrifluo-propane	18	0.1–2.5	
$C_3H_3F_4Br$		Bromo-tetrafluoro-propane	12	0.3–4.4	
$C_3H_4FBr_3$		Tri-bromofluoro-propane	12	0.03–0.3	
$C_3H_4F_2Br_2$		Di-bromodifluoro-propane	16	0.1–1.0	
$C_3H_4F_3Br$		Bromotrifluo-propane	12	0.07–0.8	
$C_3H_5FBr_2$		Dibromofluoro-propane	9	0.04–0.4	
$C_3H_5F_2Br$		Bromodifluoro-propane	9	0.07–0.8	

TABLE 3. Annex C of Montreal Protocol 1987: Controlled Chemicals (Hydrochlorofluorocarbons - HCFCs)

Group	Sub-stance	Substance Technical Name (Includes all Isomers)	Number of Isomers	Ozone Depleting Potential*	100-Year Global Warming Potential***
C_3H_6FBr		Bromofluoro-propane	5	0.02-0.7	
Group III					
CH_2BrCl	bromo-chloro-methane	bromochloro-methane	1	0.12	

Any refrigerant with a high global warming potential shall be considered as a controlled chemical under these Regulations.

TABLE 4. Annex E of Montreal Protocol 1987: Controlled Chemicals

Group	Substance	Ozone-Depleting Potential*
Group I		
CH_3Br	methyl bromide	0.6

TABLE 5. Annex F of Montreal Protocol 1987: Controlled Chemicals (Hydrofluorocarbons - HFCs)

Group	*Substance (Formula/ Common name)*	Substance Technical name	*100-Year Global Warming Potential****
Group I			
CHF_2CHF_2	HFC-134	1,1,2,2-Tetrafluoroethane	1,100
CH_2FCF_3	HFC-134a	1,1,1,2-Tetrafluoroethane	1,430
CH_2FCHF_2	HFC-143	1,1,2-Trifluoroethane	353
$CHF_2CH_2CF_3$	HFC-245fa	1,1,1,3,3-Pentafluoropropane	1,030
$CF_3CH_2CF_2CH_3$	HFC-365mfc	1,1,1,3,3-Pentafluorobutane	794
CF_3CHFCF_3	HFC-227ea	1,1,1,2,3,3,3-Heptafluoropropane	3,220
$CH_2FCF_2CF_3$	HFC-236cb	1,1,1,2,2,3-Hexafluoropropane	1,340

TABLE 5. Annex F of Montreal Protocol 1987: Controlled Chemicals (Hydrofluorocarbons - HFCs)

Group	***Substance (Formula/ Common name)***	**Substance Technical name**	***100-Year Global Warming Potential****
CHF_2CHFCF_3	HFC-236ea	1,1,1,2,3,3-Hexafluoropropane	1,370
$CF_3CH_2CF_3$	HFC-236fa	1,1,1,3,3,3-Hexafluoropropane	9,810
$CH_2FCF_2CHF_2$	HFC-245ca	1,1,2,2,3-Pentafluoropropane	693
$CF_3CHFCHFCF_2CF_3$	HFC-43-10mee	1,1,1,2,3,4,4,5,5,5-Decafluoropentane	1,640
CH_2F_2	HFC-32	Difluoromethane	675
CHF_2CF_3	HFC-125	Pentafluoroethane	3,500
CH_3CF_3	HFC-143a	1,1,1-Trifluoroethane	4,470
CH_3F	HFC-41	Fluoromethane	92
CH_2FCH_2F	HFC-152	1,2-Difluoroethane	53
CH_3CHF_2	HFC-152a	1,1-Difluoroethane	124
Group II			
CHF_3	HFC-23	Trifluoromethane (Fluoroform)	14,800

*Where a range of ozone depleting products (ODPs) is indicated, the highest value in that range shall be used for the purposes of the Protocol. The ODPs listed as a single value have been determined from calculations based on laboratory measurements. Those listed as a range are based on estimates and are less certain. The range pertains to an isomeric group. The upper value is the estimate of the ODP of the isomer with the highest ODP, and the lower value is the estimate of the ODP of the isomer with the lowest ODP.

** Identifies the most commercially viable substances with ODP values listed against them to be used for the purposes of the Protocol.

*** For substances for which no GWP is indicated, the default value 0 applies until a GWP value is included by means of the procedure foreseen in paragraph 9(a)(ii) of Article 2. ".

Inserts Schedules 2, 3 and 4

9 The principal Regulations are amended by inserting after Schedule 1 the following Schedules—

"**SCHEDULE 2**

(regulation 7)

PROTECTION OF THE AMBIENT AIR MAXIMUM LIMITS

Part 1 - protection of human health

Air contaminant	Period of monitoring for each standard	Maximum number of exceedances of concentration limits per year
Sulphur dioxide (SO_2)	15-minute	266 µg/m^3 not to be exceeded more than 35 times in a calendar year
	1-hour	350 µg/m^3 not to be exceeded more than 24 times in a calendar year
	24-hour	125 µg/m^3 not to be exceeded more than 3 times in a calendar year
Nitrogen dioxide (NO_2)	1-hour	200 µg/m^3 not to be exceeded more than 18 times in a calendar year
	1-year	40 µg/m^3 not to be exceeded within a calendar year
Inhalable particulate matter less than 10 micro-meters in size (PM_{10})	24-hour	50 µg/m^3
	1-year	30 µg/m^3 annual mean
Inhalable particulate matter less than 2.5 micro-meters in size ($PM_{2.5}$)	24-hour	35 µg/m^3 in the 98th percentile, averaged over 3 years
	1-year	9 µg/m^3 annual mean
Carbon monoxide (CO)	1-hour	15,000 µg/m^3
	8-hour	6,000 µg/m^3 running an 8-hour mean
Ozone (O_3)	1-hour	160 µg/m^3
	8-hour	100 µg/m^3 not to be exceeded more than 10 times in a calendar year
	1-year	60 µg/m^3

Part 1 - protection of human health

Air contaminant	Period of monitoring for each standard	Maximum number of exceedances of concentration limits per year
Lead (Pb)	24-hour	50 µg/m^3
	30-day	1.5 µg/m^3
	1-year	0.25 µg/m^3 annual mean
Hydrogen chloride gas (HCl)	1-hour	100 µg/m^3
	24-hour	40 µg/m^3
Hydrogen sulphide (H_2S)	1-hour	14 µg/m^3
	24-hour	4 µg/m^3
Benzene	1-year	3.25 µg/m^3 annual mean
Poly-aromatic hydrocarbon (PAH) as Benzo[a]Pyrene (B[a]P)	1-year	0.00025 µg/m^3 running annual mean

Part 2 - protection of vegetation and ecosystems

Air contaminant	Period of monitoring for each standard	Maximum concentration limits per year
Nitrogen oxides	1-year	30 µg/m^3 annual mean
Sulphur dioxide	1-year	20 µg/m^3 annual mean

SCHEDULE 3

(regulation 7A)

METHODOLOGIES AND PROCESSES FOR MEASURING AIR CONTAMINANTS IN AMBIENT AIR

The following "reference" and "equivalent" standards are approved, that is to say, the air pollution measurement standards in respect of licences set from time to time—

(a) United States U.S. Environmental Protection Agency: approved using the Federal Reference Methods (FRM) and Federal Equivalent Methods (FEM) under Title 40, Part 53 of the Code of Federal Regulations (40CFR53);

(b) European Union EU: approved using the Standard Methods for Type Approval of the monitoring of air pollutants under Directive 2008/50/EC on "*ambient air quality and cleaner air*

for Europe" as amended by Commission Directive (EU) 2014/1480 on the "*laying down rules concerning reference methods, data validation and location of sampling points for the assessment of ambient air quality*";

(c) United Kingdom: approved using the MCERTS Performance Standards scheme.

The following "indicative" monitoring methods are approved, in respect of licences set from time to time—

(a) United States Environmental Protection Agency (US EPA) air sensor toolbox (https://www.epa.gov/air-sensor-toolbox);

(b) United Kingdom DEFRA Air Quality Expert Group (AQEG) "low-cost" pollution sensors (https://uk-air.defra.gov.uk/research/aqeg/pollution-sensors.php).

SCHEDULE 4

(regulation 7B)

DETERMINING IF AN OFFENSIVE ODOUR IS A "NUISANCE ODOUR"

1 Many types of controlled plants will generate odours that are particular to the licenced process and facility. Odours are only considered to be a "nuisance odour" once above a particular concentration, however, determining odour concentration is complex and the human nose often provides the best assessment method. Most methods rely upon diluting the offending odour with odourless-air to the point where the odour is no longer detectable by trained inspectors. This dilution method with odourless-air is referred to as Dilution-to-Threshold (D/T) whereby a particular odour source will have a specific D/T limit assigned to it at the location of the nearest off-site neighbour(s).

2 The D/T method can be used to determine whether odour is considered a "nuisance odour" at the neighbouring property from controlled plants such as—

(a) aerated sewage treatment plants;

(b) spray paint facilities;

(c) fuel storage facilities;

(d) electrical generators;

(e) incinerators;

(f) waste management sites, etc.

3 If the odour is detectable by trained inspectors after the D/T limit has been reached, then that odour is considered to represent a "nuisance odour". It is noted that odours will be apparent to neighbours at "non-nuisance" levels but

should, according to best practice D/T limits, be less offensive to neighbours when compared to odours detected above the D/T limits, which represent "nuisance odour" levels. It is noted that certain odours are more 'offensive' than others, which can result in different D/T limits being set for different types of odours in some jurisdictions.

4 There are a range of measures available that can be used to help mitigate the impact of "nuisance" odours to neighbours. These include, but are not limited to, physical abatement measures applied to exhaust stacks in addition to changes to the processes, equipment, enclosures and to the operating hours. Such mitigation processes are to be considered by the Minister and licencee where 'nuisance' odours are impacting the public using best available technologies for the controlled plant in question.

5 Dilution-to-Threshold (D/T) is defined as the amount of dilution with odourless-air where one of two trained inspectors will perceive a nuisance odour.

6 The D/T limit that is typically considered to represent the threshold between "non-nuisance" and 'nuisance' odour is 5:1 (i.e. 5-parts odourless-air to 1-part odour complaint air). A 5:1 D/T nuisance threshold is considered to represent a typical odour limit when compared to a US standard using equipment tested and adapted for Bermuda's size (and isolated location) and verified against UK/EU testing methodologies. At this time all controlled plants shall be required to ensure that they do not create a "nuisance odour" to their neighbours. Refinement of the 5:1 D/T in the future may be required for certain controlled plants as this odour assessment technique becomes more established in Bermuda and greater understanding of what constitutes an "offensive" odour becomes known.

7 If at least one of the trained inspectors can detect the nuisance odour beyond a dilution of 5:1 then that odour is considered to represent a "nuisance odour."

8 Inspectors shall be trained and assessed at odour detection at recognised odour training centres.

9 Before an odour is considered a "nuisance" any one of two (2) trained inspectors shall have assessed the odour and considered it a nuisance (i.e. detectable at greater than a dilution of 5:1).

10 Odour assessment using the D/T method is determined at the location of the neighbours being impacted by the odour from the controlled plant, as defined under the Clean Air Act 1991.

11 Exceedance of the 5:1 D/T limit, as determined by any one of two (2) trained inspectors, thereby constituting a "nuisance odour", shall not be

exceeded more than twice per year. Upon exceedance of the "nuisance odour" limit, the inspector may serve an Emission Control Order on the person owning or operating the controlled plant that is considered to be the source of the "nuisance odour". (i.e. section 12(1)(iv) and section 12(1)(c) of the Clean Air Act 1991). ".

Transitional provisions

10 (1) A person operating a controlled plant immediately before the commencement day of these Regulations shall not be in breach of regulation 7 until the expiry of six months beginning on that day.

(2) The Minister may, by order published in the Gazette, extend the transitional period in paragraph (1) as the Minister may determine.

(3) The order made by the Minister under paragraph (2) is subject to the affirmative resolution procedure.

Commencement

11 These Regulations come into operation on such day as the Minister appoints by notice published in the Gazette.

Made this 30th day of January 2026

Minister of Public Works and Environment

[Operative Date: 31 January 2026]