

GOVERNMENT NOTICES • GOEWERMENTSKENNISGEWINGS

DEPARTMENT OF ENVIRONMENTAL AFFAIRS

NO. 516

25 MAY 2018

**NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY ACT, 2004
(ACT NO. 39 OF 2004)****NOTICE OF INTENTION TO AMEND THE LIST OF ACTIVITIES WHICH RESULT IN ATMOSPHERIC EMISSION WHICH HAVE OR MAY HAVE A SIGNIFICANT DETRIMENTAL EFFECT ON THE ENVIRONMENT, INCLUDING HEALTH, SOCIAL CONDITIONS, ECONOMIC CONDITIONS, ECOLOGICAL CONDITIONS OR CULTURAL HERITAGE**

I, Bomo Edna Edith Molewa, Minister of Environmental Affairs, hereby, under section 21(4)(a) read with section 57(1) of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004), give notice of my intention to amend the list of activities which result in atmospheric emissions which have or may have a significant detrimental effect on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage, set out in the Schedule hereto.

Members of the public are invited to submit to the Minister, within 30 days from the date of the publication of this notice in the *Gazette*, written representations or objections on the proposed amendments to the following addresses:

By post to: The Director-General: Department of Environmental Affairs
Attention: Mr Olebogang Matshediso
Private Bag X447
Pretoria
0001

By hand at: 473 Steve Biko Road, Environment House, Arcadia, Pretoria

By e-mail: omatshediso@environment.gov.za

Any inquiries in connection with the notice can be directed to Ms Elizabeth Masakoameng at 012 399 9202 or Mr Olebogang Matshediso at 012 399 9215

Comments received after the closing date may not be considered.



BOMO EDNA EDITH MOLEWA
MINISTER OF ENVIRONMENTAL AFFAIRS

SCHEDULE

Definitions

1. In this Schedule, "the List" means the list of activities which result in atmospheric emissions which have or may have a significant detrimental effect on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage, published under Government Notice No. 893 of 22 November 2013, as amended by General Notice No. 551 of 12 June 2015.

Amendment of paragraph 11 of the List

2. Paragraph 11 of the **List is hereby amended—**

(a) by the substitution for paragraph 11 of the following paragraph:

"Postponement or Suspension of compliance time frames

(11) As contemplated in the National Framework for Air Quality Management in the Republic of South Africa, published in terms of section 7 of this Act, an application may be made to the National Air Quality Officer for the postponement or suspension of the compliance time frames [in paragraphs (9) and (10)] for an existing plant.; and

(b) by the insertion of the following paragraphs after paragraph 11:

"(11A) An existing facility's application contemplated in paragraph (11) may be made for a once-off postponement of the compliance timeframes with new plant standards.

(11B) A postponement of compliance timeframes may only be granted for a period not exceeding five years, and no postponement of compliance timeframes will be valid beyond 31 March 2025.

(11C) An existing facility to be decommissioned by 2030 may apply for a once-off suspension of compliance timeframes with new plant standards for a period not beyond 2030.

(11D) A once-off suspension application of compliance timeframes with new plant standard contemplated in paragraph (11C) must be accompanied by a clear decommissioning schedule.

(11E) A once-off suspension application of compliance timeframes with new plant standards contemplated in paragraph (11C) shall not be accepted after 31 March 2019.

(11F) An existing facility granted a once-off suspension of compliance timeframes with new plant standards shall comply with existing plant standards during the suspension period until the existing plant is decommissioned.

(11G) No postponement of compliance timeframes with existing plant standard or a suspension of compliance timeframe with existing plant standard shall be granted."

Substitution of Subcategory 2.4 of the List

3. The following Subcategory is hereby substituted for Subcategory 2.4 of the List:

"Subcategory 2.4: Storage and Handling of Petroleum Products

Description:	Petroleum products storage tanks and product transfer facilities.
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Application:	All permanent immobile liquid storage tanks larger than 1000 cubic meters cumulative tankage capacity at a site.
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- (a) The following transitional arrangement shall apply for the storage and handling of raw materials, intermediate and final products with a vapour pressure greater than 14kPa at operating temperature—

Leak detection and repair (LDAR) program approved by licensing authority to be instituted, by 01 January 2014.

- (b) The following special arrangements shall apply for control of Total Volatile Organic Compounds (TVOCs) from storage of raw materials, intermediate and final products, except during loading and offloading. (Alternative control measures that can achieve the same or better results may be used)—

- (i) Storage vessels for liquids shall be of the following type:

True vapour pressure of contents at product storage temperature	Type of tank or vessel
Type 1: Up to 14 kPa	Fixed-roof tank vented to atmosphere, or as per Type 2 and 3
Type 2: Above 14 kPa and up to 91 kPa with a throughput of less than 50'000 m ³ per annum	Fixed-roof tank with Pressure Vacuum Vents fitted as a minimum, to prevent "breathing" losses, or as per Type 3
Type 3: Above 14 kPa and up to 91 kPa with a throughput greater than 50'000 m ³ per annum	<ul style="list-style-type: none"> a) External floating-roof tank with primary rim seal and secondary rim seal for tank with a diameter greater than 20m, or b) fixed-roof tank with internal floating deck / roof fitted with primary seal, or c) fixed-roof tank with vapour recovery system.
Type 4: Above 91 kPa	Pressure vessel

- (ii) The roof legs, slotted pipes and/or dipping well on floating roof tanks (except for domed floating roof tanks or internal floating roof tanks) shall have sleeves fitted to minimise emissions.

- (iii) Relief valves on pressurised storage should undergo periodic checks for internal leaks. This can be carried out using portable acoustic monitors or if venting to atmosphere with an accessible open end, tested with a hydrocarbon analyser as part of an LDAR programme.

- (c) The following special arrangements shall apply for control of TVOCs from the loading and unloading (excluding ships) of raw materials, intermediate and final products with a vapour pressure of greater than 14kPa at handling temperature. Alternative control measures that can achieve the same or better results may be used:

- (i) All installations with a throughput of greater than 50'000 m³ per annum of products with a vapour pressure greater than 14 kPa, must be fitted with vapour recovery / destruction units. Emission limits are set out in the table below—

Description:	Vapour Recovery Units		
Application:	All loading/ offloading facilities with a throughput greater than 50 000 m ³ per annum		
Substance or mixture of substances		Plant status	mg/Nm ³ under normal conditions of 273 Kelvin and 101.3 kPa.
Common name	Chemical symbol		
Total volatile organic compounds from vapour recovery/ destruction units using thermal treatment.	N/A	New	150
		Existing	150
Total volatile organic compounds from vapour recovery/ destruction units using non-thermal treatment.	N/A	New	40 000
		Existing	40 000

- (ii) For road tanker and rail car loading / offloading facilities where the throughput is less than 50'000 m³ per annum, and where ambient air quality is, or is likely to be impacted, all liquid products shall be loaded using bottom loading, or equivalent, with the venting pipe connected to a vapour balancing system. Where vapour balancing and / or bottom loading is not possible, a recovery system utilizing adsorption, absorption, condensation or incineration of the remaining VOC's, with a collection efficiency of at least 95%, shall be fitted."

Amendment of Category 5 of the List

4. Category 5 of the List is hereby amended—

- (a) by the substitution in Subcategory 5.4 for paragraph (a) of the following paragraph:

"(b) The following **special arrangement shall apply**—

(i) Emissions from cooling, grinding and fugitive dust capture processes are not subject to the oxygen content reference condition.

(ii) Where pyritic limestone is used, a sulphur dioxide limit of 400 mg/Nm³ shall apply.";

- (b) by the addition in paragraph (a) of Subcategory 5.5 of the following subparagraph:

"(xviii) Where pyritic limestone is used, a sulphur dioxide limit of 400 mg/Nm³ shall apply."

- (c) by the addition in Subcategory 5.9 of the following paragraph:

"(a) The following special arrangement shall apply:

(i) Where co-feeding with waste materials with calorific value allowed in terms of the Waste Disposal Standards published in terms of the National Environmental Management: Waste Act, 2008 (Act No.59 of 2008) as amended, occurs, additional requirements under Subcategory 1.6 shall apply.

(ii) The applicable emission limit for Total Fluorides shall be as set out in Subcategory 5.9.

(iii) Additional requirements under Subcategory 1.6 shall continue to apply even after the waste ceases to be waste in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), as amended."

Amendment of Category 9 of the List

5. Category 9 of the List is hereby amended—

(a) by the substitution for subcategory 9.2 of the following subcategory:

Subcategory 9.2: Chemical Recovery Furnaces

Description:		The recovery of chemicals from the thermal treatment of spent liquor using furnaces.	
Application:		All installations producing more than 1 ton per month.	
Substance or mixture of substances		Plant status	mg/Nm ³ under normal conditions of 5% O ₂ , 273 Kelvin and 101.3 kPa.
Common name	Chemical symbol		
Particulate matter	N/A	New	50
		Existing	100
Hydrogen sulphide	H ₂ S	New	15
		Existing	15
Sulphur dioxide	SO ₂	New (Kraft Process)	30
		Existing (Kraft Process)	300
		New (Bisulphite Process)	300
		Existing (Bisulphite Process)	450
Oxides of nitrogen	NO _x expressed as NO ₂	New (Kraft Process)	300
		Existing (Kraft Process)	300
		New (Bisulphite Process)	300
		Existing (Bisulphite Process)	400

(b) by the substitution for subcategory 9.5, of the following subcategory:

Subcategory 9.5: Wood Drying and the Production of Manufactured Wood Products

Description:	The drying of wood using direct-fired kilns; and the manufacture of laminated and compressed wood products.		
Application:	All installations producing more than 10 tons per month.		
Substance or mixture of substances		Plant status	mg/Nm ³ under normal conditions of 273 Kelvin, 10% O ₂ , and 101.3 kPa.
Common name	Chemical symbol		
Particulate matter	N/A	New	150
		Existing	200
Oxides of nitrogen	NO _x expressed as NO ₂	New	500
		Existing	700

Substitution of Annexure A to the List

6. The following Annexure is hereby substituted for Annexure A to the List:

"ANNEXURE A - METHODS FOR SAMPLING AND ANALYSIS

The following referenced documents are indispensable for the application of the Notice. For undated references, the latest edition of the referenced document (including any amendments) applies. Information on currently valid national and international standards can be obtained from South African Bureau of Standards.

Substance group	Parameter	Methods for Sampling and Analysis of Pollutants	
		Standard Reference Method	Title
Measurement Planning	Measurement planning and measurement sites selection	BS EN 15259	Requirements for the measurement sections and sites and for the measurement objective, plan and report.
Quality Assurance	Competence of testing and calibration laboratories	ISO 17025	General requirements for the competence of testing and calibration laboratories.
		DD CEN/TS 15675:2007	Air quality. Measurement of stationary source emissions. Application of EN ISO/IEC 17025:2005 to periodic measurements.
	Continuous Emission Monitoring Systems (Includes portable analysers)	BS EN 14181	Stationary Source Emissions – Quality assurance of automated measurement systems.
		BS EN 15267-2	Air quality. Certification of automated measuring systems. Initial assessment of the AMS manufacturer's quality management system and post certification surveillance for the manufacturing process.
		BS EN 15267-3	Air quality. Certification of automated measuring systems. Performance criteria and test procedures for automated measuring systems for monitoring emissions from stationary sources.

	Portable analysers	BS EN 50379-2	Specification for portable electrical apparatus designed to measure combustion flue gas parameters of heating appliances. Performance requirements for apparatus used in statutory inspections and assessment.
		DD CEN/TS 15674:2007	Air quality. Measurement of stationary source emissions. Guidelines for the elaboration of standardised methods.
Secondary Parameters	Determination of gas velocity and flow rate	ISO 10780	Stationary Source Emissions - Measurement of velocity and volume flow rate of gas streams in ducts
		ISO 14164	Stationary Source Emissions - Determination of the volume flow rate of gas streams in ducts - Automated method
		BS EN ISO 16911-1	Stationary source emissions. Manual and automatic determination of velocity and volume flow rate in ducts. Manual reference method
		BS EN ISO 16911-2	Stationary source emissions. Manual and automatic determination of velocity and volume flow rate in ducts. Automated measuring systems.
		USEPA Method 1	Sample and Velocity Traverses for Stationary Sources
		USEPA Method 2	Determination of stack gas velocity and volumetric flow rate (Type S Pitot Tube)
		USEPA Method 2A	Direct measurement of gas volume through pipes and small ducts
		USEPA Method 2B	Determination of exhaust gas volume flow rate from gasoline vapor incinerators
		USEPA Method 2C	Determination of gas velocity and volumetric flow rate in small stacks or ducts (standard pitot tube)

		USEPA Method 2D	Measurement of gas volume flow rates in small pipes and ducts
		USEPA Method 2F	Determination of Stack Gas Velocity And Volumetric Flow Rate With Three Dimensional Probes
		USEPA Method 2G	Determination of stack gas velocity and volumetric flow rate with two dimensional probes.
		USEPA Method 2H	Determination of stack gas velocity taking into account velocity decay near the stack wall
	Water vapour	BS EN 14790	Stationary Source Emissions - Determination of the water vapour in ducts
		USEPA Method 4	Determination of moisture content in stack gases
	Oxygen; Carbon monoxide; and Carbon dioxide	BS EN 14789	Stationary source emissions - Determination of volume concentration of oxygen (O ₂) - Reference method - Paramagnetism.
		USEPA Method 3	Gas analysis for the determination of dry molecular weight
		USEPA Method 3A	Determination of oxygen and carbon dioxide concentrations in emissions from stationary sources - (Instrumental Analyzer Procedure).
		USEPA Method 3B	Gas analysis for the determination of emission rate correction factor or excess air
		USEPA Method 3C	Determination of carbon dioxide, methane, nitrogen, and oxygen from stationary sources
		ISO 12039	Stationary Source Emissions - Determination of carbon monoxide, carbon dioxide and oxygen. Performance characteristics and calibration of automated measuring systems

		ISO 10396	Stationary source emissions — Sampling for the automated determination of gas emission concentrations for permanently-installed monitoring systems.
		BS EN 15058	Stationary Source Emissions - Determination of the mass concentration of carbon monoxide (CO). Reference Method: Non-Dispersive Infrared Spectrometry
		BS EN 50379-2	Specification for portable electrical apparatus designed to measure combustion flue gas parameters of heating appliances. Performance requirements for apparatus used in statutory inspections and assessment
		BS EN 50379-3	Specification for portable electrical apparatus designed to measure combustion flue gas parameters of heating appliances. Performance requirements for apparatus used in non-statutory servicing of gas fired heating appliances
		ASTM D6348	Standard test method for determination of gaseous compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy
Dust	Particulate Matter	BS EN 13284-1	Stationary Source Emissions - Determination of low range mass concentration of dust: manual gravimetric method
		ISO 9096	Stationary Source Emissions - Manual determination of mass concentration of particulate matter
		ISO 12141	Stationary Source Emissions - Determination of mass concentration of particulate matter (dust) at low concentrations - Manual gravimetric method
		ISO 10155	Stationary Source Emissions - Automated monitoring of mass concentrations of particles. Performance characteristics, test methods and specifications.

		USEPA Method 5	Determination of particulate matter emissions from stationary sources.
		USEPA Method 17	Determination of particulate matter emissions from stationary sources
		ISO 23210	Stationary source emissions -- Determination of PM ₁₀ /PM _{2,5} mass concentration in flue gas -- Measurement at low concentrations by use of impactors
		ISO 25597	Stationary source emissions -- Test method for determining PM _{2,5} and PM ₁₀ mass in stack gases using cyclone samplers and sample dilution
	Dust fallout	ASTM D1739	Standard Test Method for Collection and Measurement of Dustfall (Settleable Particulate Matter).
Metals	Arsenic Antimony Chromium Cobalt Copper Manganese Nickel Cadmium Thalium Vanadium Lead	BS EN 14385	Stationary Source Emissions - Determination of the total emission of As, Cd, Cr, Co, Cu, Mn, Ni, Pb, Sb, Tl and V
		USEPA Method 29	Determination of metals emissions from stationary sources
	Mercury	BS EN 14884	Stationary Source Emissions - Determination of total mercury: automated measuring systems

		BS EN 13211	Stationary Source Emissions - Manual method of determination of the concentration of total mercury
	Chromium	USEPA Method 304	Determination of chromium emissions from decorative and hard chromium electroplating and chromium anodising operations-isokinetic method.
Organic Compounds	Polychlorinated Dioxins/Furans	BS EN 1948	Stationery Source Emissions – Determination of the mass concentration of PCBBS/PCDFS and Dioxin-like PCBS
		USEPA Method 23	Determination of Polychlorinated Dibenzo-P-Dioxins and Polychlorinated Dibenzofurans from stationary sources
	Acrylonitrile	USEPA Method 0031	Sampling method for volatile organic compounds
	Methylamines	BS EN 13649	Stationary Source Emissions - Determination of the mass concentration of individual gaseous organic compounds. Activated carbon and solvent desorption method
	Polycyclic Aromatic Hydrocarbons	ISO 11338-1	Stationary Source Emissions - Determination of gas and particle-phase polycyclic aromatic hydrocarbons. Part 1: Sampling
		ISO 11338-2	Stationary Source Emissions - Determination of gas and particle-phase polycyclic aromatic hydrocarbons. Part 2: Sample preparation, clean-up and determination.
	Total Volatile Organic Compounds	BS EN 12619	Stationary Source Emissions - Determination of the mass concentration of total gaseous organic carbon. Continuous Flame Ionisation Detector Method
		BS EN 13526	Stationary Source Emissions - Determination of the mass concentration of total gaseous organic carbon in flue gases from solvent using processes. Continuous Flame Ionisation Detector Method

		BS EN 13649	Stationary Source Emissions - Determination of the mass concentration of individual gaseous organic compounds. Activated Carbon and Solvent Desorption Method
		USEPA Method 18	Measurement of gaseous organic compound emissions by gas chromatography
		USEPA Method 25A	Determination of total gaseous organic concentration using a flame ionization analyzer
		USEPA Method 25B	Determination of total gaseous organic concentration using a nondispersive infrared analyzer
		USEPA Method 21	Determination of volatile organic compound leaks
Inorganic Compounds	Hydrogen Sulphide	BS EN 13649	Stationary Source Emissions - Determination of the mass concentration of individual gaseous organic compounds. Activated Carbon and Solvent Desorption Method (Use NIOSH 1600 for analysis)
		USEPA Method 11	Determination of hydrogen sulfide content of fuel gas streams in petroleum refineries
		USEPA Method 15	Determination of hydrogen sulfide, carbonyl sulfide, and carbon disulfide emissions from stationary sources
		USEPA Method 16A	Determination of Total Reduced Sulfur Emissions from Stationary Sources (Impinger Technique)
		USEPA Method 16B	Determination of Total Reduced Sulfur Emissions from Stationary Sources (Gas Chromatograph Analysis)
		USEPA Method 16C	Determination of Total Reduced Sulfur Emissions from Stationary Sources (Real Time Data)

	Chlorine /Hydrogen Chloride	BS EN 1911	Stationary source emissions. Determination of mass concentration of gaseous chlorides expressed as HCl. Standard reference method
		USEPA Method 26	Determination of hydrogen halide and halogen emissions from stationary sources non-isokinetic method
	Hydrogen Cyanide	USEPA OT Method 29	Sampling and analysis for hydrogen cyanide emissions from stationary sources
		Method 426	Determination of cyanide emissions from stationary sources
		NIOSH 7904	CYANIDES, aerosol and gas.
	Total Flourides/ Hydrogen Flouride	USEPA Method 26A	Determination of hydrogen halide and halogen emissions from stationary sources non-isokinetic method
		ISO 15713	Stationary Source Emissions - Sampling and determination of gaseous fluoride content
	Oxides of Sulphur	ISO 7935	Stationary Source Emissions - Determination of the mass concentration of sulphur dioxide. Performance characteristics of automated measuring methods
		ISO 10396	Stationary source emissions — Sampling for the automated determination of gas emission concentrations for permanently-installed monitoring systems.
		BS EN 14791	Stationary Source Emissions - Determination of mass concentration of sulphur dioxide. Reference method
		USEPA Method 8	Determination of sulfuric acid and sulfur dioxide emissions from stationary sources
	Oxides of Nitrogen	ISO 10849	Stationary Source Emissions - Determination of the mass concentration of nitrogen oxides. Performance characteristics of automated measuring systems

		ISO 10396	Stationary source emissions — Sampling for the automated determination of gas emission concentrations for permanently-installed monitoring systems.
		BS EN 14792	Stationary Source Emissions - Determination of mass concentration of nitrogen oxides (NO _x). Reference Method: Chemiluminescence
		ASTM D6348	Standard test method for determination of gaseous compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy
		USEPA Method 7D	Determination of Nitrogen Oxide Emissions from Stationary Sources (Alkaline-Permanganate/Ion Chromatographic Method)
	Ammonia	EPA CTM 027	Ammonia Analysis
		ASTM D6348	Standard test method for determination of gaseous compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy

Short title and commencement

7. This Notice is called the 2018 Amendments to the list of activities which result in atmospheric emissions which have or may have a significant detrimental effect on the environment, and takes effect on the date of publication in the **Government Gazette**.