

AIR QUALITY LEGISLATION & RELATED INTERNATIONAL CONVENTIONS

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IMBEWU Enviro-Legal Specialists (Pty) Ltd.

- Environmental legal consultancy operating in conjunction with an Attorneys firm (Warburton Attorneys).
- Based in Johannesburg.
- Providers of wide range of environmental, sustainability, and climate change legal advice, electronic legal registers, environmental and climate change legal training.
- Particular specialty: advice on issues pertaining to implementation of climate change mitigation projects, e.g.,
 - relevance of the international context,
 - project initiation,
 - authorisations and consents,
 - contractual matters (management contracts, agreements for purchase and sale of emissions reductions).

Outline of Presentation

- IMBEWU Enviro-Legal Specialists (Pty) Ltd.
- Atmospheric Pollution Prevention Act No. 45 of 1965.
- National Environmental Management: Air Quality Act No. 39 of 2004.

SA air quality regime – then and now

- The Atmospheric Pollution Prevention Act 45 of 1965
 - Noxious or offensive gases
 - Smoke
 - Dust
 - Fumes emitted by vehicles
- The National Environmental Management: Air Quality Act 39 of 2004

The Atmospheric Pollution Prevention Act No. 45 of 1965

- No person shall within a controlled area, carry on a “scheduled process” in or on any premises unless he is the holder of a “current registration certificate”. (s 9(1)(a)(i)).
- Alter / erect / extend: new facilities for conduct of a Scheduled Process unless holder of / applied for a “provisional registration certificate” / provisional registration. (s 9(1)(b) & (c)).
- Scheduled Processes – Schedule II of APPA
- It is an offence not to have an APPA Permit when one is required to have one. (s9(2)).

APPA: noxious or offensive gasses

- Part II: Control of Noxious or Offensive Gases (ss 8 – 13):
 - Applicability: DEAT Minister may declare any area to be a “controlled area”. (ss1 & 8).
 - Reg. 1776 (19 July 1968): Part II of APPA applicable to the whole of the Republic.

Scheduled Process: example

- Process 29 – Power Generation Processes:
 - “That is to say, processes in which:
 - (a) fuel is burned for the generation of electricity for distribution to the public or for purposes of public transport”.

Registration Certificate (s9)

- Awarded *inter alia* because:
 - The Chief Officer is satisfied that the best practicable means are being adopted for preventing or reducing to a minimum the escape into the atmosphere of noxious or offensive gases produced or likely to be produced by the scheduled process in question. (s10(2)(a)(i)).
- Subject to conditions.
- "Best Practical Means":
 - includes the provision and maintenance of the necessary appliances for the prevention of the escape of noxious or offensive gases,
 - the effective care and operation of such appliances, and
 - the adoption of any other methods, which:
 - having regard to local conditions and circumstances,
 - the prevailing extent of technical knowledge and
 - the cost likely to be involved,may be reasonably practicable and necessary for the protection of any section of the public against the emission of poisonous or noxious gases. (s1).

- "Best Practical Means":
 - includes the provision and maintenance of the necessary appliances for the prevention of the dispersal or suspension of dust in the atmosphere;
 - the effective care and operation of such appliances; and,
 - the adoption of any other methods, which:
 - having regard to local conditions and circumstances,
 - the prevailing extent of technical knowledge and
 - the cost likely to be involved,may be reasonably practicable and necessary for the protection of any section of the public against the dispersal or suspension of dust in the atmosphere . (s1).
- Failure to control dust is an offence. (s28(3)).

APPA: Dust

- APPA Part IV: Dust Control (ss 27 – 35)
 - DEAT Minister may declare any area to be a Dust Control Area.
- If, in the opinion of the Chief Officer, nuisance is being caused by dust created by the carrying on of an industrial process or deposition on land, in a Dust Control area, the following steps maybe taken by the person engaging in the industrial activity or deposition, for controlling the dust nuisance:
 - Prescribed Steps (by Chief Officer), or
 - Best Practicable Means. (s28(1)(a) & (b)).
- The Chief Officer may also prescribe steps to be taken by the owner or occupier of land from which the dust nuisance originates, failing which the Best Practicable Means must be taken. (s29(1)).

APPA: smoke

- APPA Part III: Atmospheric Pollution by Smoke.
 - Part III applies only in areas declared by the DEAT Minister. (s14(1)).
 - Such declaration can only be done with the concurrence of the local authority concerned (s14(2)).
- Fuel burning appliances (s15): No person shall install or cause or permit to be installed in or on any premises-
 - any fuel burning appliance, unless such appliance is so far as is reasonably practicable capable of being operated continuously without emitting dark smoke or smoke of a colour darker than may be prescribed by regulation.
 - Provided that due allowance shall be made for the unavoidable emission of dark smoke or smoke of a colour darker than may be so prescribed during the starting up of the said appliance or during the period of any breakdown or disturbance of such appliance.
 - any fuel burning appliance designed-
 - to burn pulverised solid fuel; or
 - to burn solid fuel in any form at a rate of one hundred kilograms or more per hour; or
 - to subject solid fuel to any process involving the application of heat, unless such appliance is provided with effective appliances to limit the emission of grit and dust to the satisfaction of the local authority or the chief officer, as the case may be.

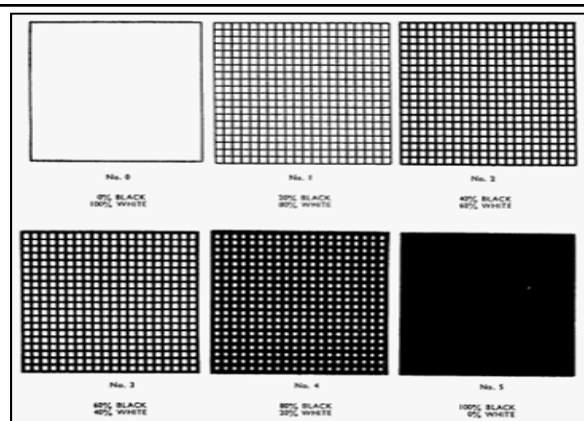
- The local authority may issue smoke abatement notices (s17(1)).
 - Failure to comply with such notice is an offence. (s17(4)).
- Local authorities may make Smoke Control Regulations and may prescribe penalties for the contravention thereof. (s18).
- A local authority may declare the area within its jurisdiction or any part of that area to be a Smoke Control Zone and prohibit the emanation or emission from any premises in that zone of smoke of a darker colour or greater density or content than is specified in the order. (s20).

APPA: some limitations

- Only point source control measures.
- Outdated perspective.
- Constitutional compliance.
- Failed to protect air quality (depending on your perspective).
- NEM: Air Quality Act No. 39 of 2004.

APPA: vehicular emissions

- APPA Part V: Air Pollution by fumes emitted by vehicles (ss36 – 40).
 - Part V applies only in areas declared by the DEAT Minister. (s36(1)).
 - Such declaration can only be done with the concurrence of the local authority concerned (s36(2)).
- The DEAT Minister is empowered to make Regulations (s39), and has done so:
 - R 1651 - **Regulations Concerning the Control of Noxious or Offensive Gases Emitted by Diesel - Driven Vehicles.**
 - Notices for contravention of the Regulations may be issued and failure to comply with the terms of such a notice constitute an offence (s37).



APPA, Schedule One

National Environmental Management: Air Quality Act No. 39 of 2004

AQA: Implications at a glance

- Includes *ambient air quality standards* as opposed to exclusively point-source control of emissions.
- More stringent standards including focus on particular emissions >> industrial focus.
- Possibility for declaration of *priority areas* within which particular *air quality management plans* will be implemented.
- A greater variety of considerations to be taken into account in the granting of *atmospheric emission licences*, including considerations of public participation and the requirements of the environmental impact assessment regime.
- Increased enforcement
- Monitoring responsibilities
- Complex *transitional arrangements* with respect to licensing.
- Provides for requirements to:
 - ◉ Appoint *air emission officers*,
 - ◉ Prepare *pollution prevention plans*,
 - ◉ Produce *atmospheric impact reports*.

NEM:AQA: A brief snapshot

- ❖ “NEM”: because promulgated in the context of the overarching framework for national environmental management established by the National Environmental Management Act (107 of 1998) (NEMA):
 - and particularly the National Environmental Management Principles (Section 2 of NEMA).
- ❖ Replaces the Atmospheric Pollution Prevention Act (1965).
- ❖ Commencement: 11 September 2005, with the exception of:
 - Sections 21, 22, 36 to 49;
 - Sections 51(1)(e), 51(1)(f), 51(3); and,
 - Sections 60 and 61.
- ❖ Framework legislation, i.e., requires number of other legislative procedures before it will be fully operational.

Preamble

“Whereas the quality of ambient air in many areas of the Republic is not conducive to a healthy environment for the people living in those areas let alone promoting their social and economic development;

And whereas the burden of health impacts associated with polluted ambient air falls most heavily on the poor;

And whereas air pollution carries a high social, economic and environmental cost that is seldom borne by the polluter;

And whereas atmospheric emissions of ozone-depleting substances, greenhouse gases and other substances have deleterious effects on the environment both locally and globally...”

AQA: Objects

- Objects of the AQB:
 - to protect the environment by providing reasonable measures for-
 - the protection and enhancement of the quality of air in the Republic;
 - the prevention of air pollution and ecological degradation; and
 - securing ecologically sustainable development while promoting justifiable economic and social development; and
 - generally to give effect to section 24(b) of the Constitution in order to enhance the quality of ambient air for the sake of securing an environment that is not harmful to the health and well-being of people.

Key provisions: National Framework

- DEAT Minister: obliged, two years from the enactment of AQA, to establish a national framework for achieving the objects of AQA, including national *norms and standards* for:
 - the control of emissions from point and non-point sources;
 - air quality monitoring;
 - air quality management planning;
 - air quality information management; and ,
 - national standards for municipalities and provinces to monitor ambient air quality and point, non-point and mobile source emissions
- The Minister must also establish a national framework which includes mechanisms, systems and procedures to attain compliance with ambient air quality standards.

Constitution Act (108/1996): Section 24

"Everyone has the right:

- (a) to an environment that is not harmful to their health or well-being; and
- (b) to have the environment protected, for the benefit of present and future generations through reasonable legislative and other measures that –
 - (i) prevent pollution and ecological degradation;
 - (ii) promote conservation; and
 - (iii) secure ecologically sustainable development and the use of natural resources while promoting justifiable economic and social development."

Ambient air quality & emissions standards

- Minister:
 - must identify substances or mixtures of substances in ambient air which pose a threat to health, well-being or the environment; and
 - must establish national standards for ambient air quality in respect of such substances; and,
 - may establish national standards for emissions of such substances from point, non-point and mobile sources.
- Provincial MECs and Municipalities may take similar steps to those permitted the Minister:
 - BUT provincial and municipal standards may not be less stringent than the national standards >> **they may be more stringent.**

NEM:AQA foresees the possibility of different ambient air quality standards in different parts of the Republic

>> possibility of "location shopping".

Planning & Responsibilities

- ❖ A National Air Quality Officer will be responsible for national air quality management.
- ❖ Provincial Air Quality Officers will co-ordinate these matters at a provincial level.
- ❖ Each municipality must also designate an air quality officer.
- ❖ An *air quality management plan* must be included in:
 - environmental implementation or environmental management plans (EIPs & EMPs) prepared under NEMA by national and provincial departments; and,
 - integrated development plans (IDPs) prepared by municipalities.

Management Tools

- ❖ Priority areas:
 - Areas may be declared *priority areas* if ambient air quality standards are being exceeded or any other situation exists which is or may cause a significant negative impact on air quality, and the area requires specific air quality management action to rectify the situation.
 - A *priority area air quality management plan* must then be prepared, aimed at:
 - ❖ co-ordinating air quality management in the area;
 - ❖ addressing issues related to air quality in the area; and
 - ❖ providing for the implementation of the plan by a committee of relevant stakeholders.

Possible areas?

Management Tools

- ❖ AQA makes provision for four main “tools” that government will use to ensure progressive compliance with ambient air quality standards:
 - Priority areas
 - Listing of activities
 - Controlled emitters
 - Controlled fuels.
- ❖ There are also certain “other measures” in the AQA to achieve its objects.

Vaal Triangle Air-Shed Priority Area

- ❖ Notice of “intention to declare” published nationally.
- ❖ DEAT Minister: “is satisfied that the ambient air quality within the proposed Vaal Triangle Air-Shed Priority Area is exceeding or may exceed ambient air quality standards and that a situation exists...which is causing, or may cause, a significant negative impact on air quality within the area, and that the area requires specific air quality management action to rectify the situation”.
- ❖ Once declared:
 - National Air Quality Officer require to submit the required Air Quality Management Plan to the Minister within 12 months of the declaration.
 - In preparing the Plan the affected national, provincial and local air quality management officers will encourage and consider all inputs from interested and affected parties in the area.

Management Tools

☉ Listing of Activities:

- The Minister must, or an MEC may, publish a list of activities which result in atmospheric emissions and which have or may have a significant detrimental effect on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage.
- The notice must establish minimum emission standards in respect of substances resulting from a listed activity, including:
 - ☉ the permissible amount, volume, emission rate or concentration of the substances that may be emitted; and
 - ☉ the manner in which measurements of such emissions must be carried out.
- The notice may contain transitional and other special arrangements in respect of activities which are carried out at the time of listing.

**No person may conduct a listed activity without a:
provisional atmospheric emission licence; or,
an atmospheric emission licence**

(Analogous to APPA Section 9 and Provisional Section 9 certificates)

Management Tools

☉ Controlled fuels:

- The Minister or MEC may declare a substance or a mixture of substances which, when used as a fuel in a combustion process, result in atmospheric emissions that present a threat to health or the environment, as a *controlled fuel*.
- A notice may *inter alia*:
 - ☉ establish standards for the use of the controlled fuel in combustion processes;
 - ☉ establish standards for the manufacture or sale of the controlled fuel;
 - ☉ establish specifications (including maximum or minimum levels or concentrations of the constituents of substances) for the composition of controlled fuels;
 - ☉ prohibit the manufacture, sale or use of the controlled fuel; and
 - ☉ provide for the phasing in of its provisions.

No person may manufacture, sell or use a controlled fuel unless that manufacture, sale or use complies with the standards.

Management Tools

☉ Controlled Emitters:

- The Minister or MEC may declare any appliance or activity, or any appliance or activity falling within a specified category, as controlled emitters if such it results in atmospheric emissions which present a threat to health or the environment.
- A notice must establish emission standards, which must include standards setting the permissible amount, volume, emission rate or concentration of any specified substances that may be emitted from the controlled emitter.

No person may manufacture, sell or use any appliance or conduct an activity declared as a controlled emitter unless the appliance or activity complies with the relevant standards.

Controlled Emitters: Motor vehicles?

Other Measures

☉ Pollution prevention plans:

- The Minister or MEC may declare a substance as a **priority air pollutant** and require a person, (e.g. a person conducting a listed activity that involves the emission of a priority air pollutant), to prepare and implement a **pollution prevention plan** in respect of such substance >> SO₂, CO₂, others: Dust?

☉ Atmospheric Impact Reports:

- An air quality officer may require any person to submit an **atmospheric impact report** if:
 - ☉ he / she reasonably suspects that the person has on one or more occasions contravened or failed to comply with the AQA or any conditions of a licence and that such contravention or failure has had, or may have, a detrimental effect on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage, or has contributed to the degradation of ambient air quality; or
 - ☉ a review of a provisional atmospheric emission licence or an atmospheric emission licence is undertaken.

Other Measures

- Dust:
 - Minister or the MEC may prescribe measures for the control of dust in specified places or areas (either in general or by specified machinery or in specified instances) or steps that must be taken to prevent nuisance by dust, or other measures aimed at the control of dust.
- Rehabilitation when mining operations cease:
 - If it is determined that a mine, having regard to its known ore reserves, is likely to cease mining operations within a period of five years, the owner of that mine must promptly notify the Minister in writing:
 - of the likely cessation of those mining operations; and
 - of any plans that are in place or in contemplation for:
 - the rehabilitation of the area where the mining operations were conducted after mining operations have stopped; and
 - the prevention of pollution of the atmosphere by dust after those operations have stopped.

Licensing

- Metropolitan and District Municipalities are charged with implementing the atmospheric emission licensing system in respect of "listed activities"
 - This authority may be delegated upwards to a provincial organ of state where a municipality is unable to perform this function.
- Licence Application:
 - Licensing authority may require a range of information, including investigations into the likely effect of the proposed licence on air quality;
 - Processing fee will be charged.
 - The "EIA" provisions of s24 of NEMA and s22 of the ECA "apply to all applications for atmospheric emission licences, and both an applicant and the licensing authority must comply with those sections and any applicable notice issued or regulation made in relation to those sections".
 - Public participation is required.

Management – Other Measures

- Noise:
 - Minister may prescribe essential national standards for:
 - the control of noise (either in general or by specified machinery or activities or in specified places or areas), or
 - for determining
 - a definition of noise and
 - the maximum levels of noise.
 - When controlling noise the provincial and local spheres of government will be bound by any prescribed national standards.
 - An atmospheric emission licence for conducting a listed activity may prescribe conditions in respect of noise.
- Odours – also dealt with in the AQA
 - "offensive odour" means any smell which is considered to be malodorous or a nuisance to a reasonable person

Licensing

- Factors to be taken into account by the licensing authority include:
 - any applicable minimum standards for ambient and point source emissions.
 - the pollution to be caused and the effect on the environment (including health, social conditions, economic conditions, cultural heritage and ambient air quality);
 - the *best practicable environmental option* (NEMA) available that could be taken:
 - to prevent, control, abate and mitigate that pollution; and
 - protect the environment;
 - the "EIA" provisions of NEMA and the ECA;
 - whether the applicant is a fit and proper person;
 - any relevant submissions; and
 - any departmental guidelines.

Licensing

- ❖ If successful:
 - a *provisional atmospheric emission licence* will be issued to enable the commissioning of the listed activity.
 - when the commissioned facility has been in full compliance with the conditions and requirements of the *provisional atmospheric emission licence* for at least six months, the holder is entitled to an *atmospheric emission licence*.
 - an atmospheric emission licence is subject to such **conditions** as may be specified or prescribed for listed activities of the kind in question.
 - periodic **review** of atmospheric emission licences and for **variation** of the licence.

It is an offence to contravene or to fail to comply with a condition of an atmospheric emission licence.

A person performing a listed activity is guilty of an offence if air pollutants are emitted at concentrations above the emission limits specified in the licence.

Licensing

- ❖ One of the factors taken into account in considering an application for an atmospheric emission licence is whether the applicant is a "fit and proper person".
- ❖ Determination of a "fit and proper person" includes whether:
 - that person has contravened or failed to comply with the AQA, APPA, or any other legislation applicable to air quality;
 - that person has held a provisional atmospheric emission licence, an atmospheric emission licence or other authority that has been suspended or revoked;
 - that person has been a director or senior manager who is or was a director or manager of a company or firm to which the above applies;
 - the management of the listed activity is or will not be in the hands of a technically competent person.

Licensing

- ❖ An air quality officer may require the holder of a provisional atmospheric emission licence or an atmospheric emission licence, to designate an **emission control officer**.
- ❖ The emission control officer must have requisite air quality management competence in respect of the listed activity in question, and must:
 - work towards the development and introduction of cleaner production technologies and practices;
 - take all reasonable steps to ensure compliance by the holder of the licence with the licence conditions and requirements; and
 - promptly report any non-compliance with any licence conditions or requirements to the licensing authority through the most effective means reasonably available.

Transitional Arrangements

- ❖ APPA repealed.
- ❖ "Grandfather clauses": section 60 – retains anything done in terms of legislation repealed by the Act that could be done in terms of the Act.
- ❖ APPA certificates:
 - Provisional registration certificate – remains valid for two years.
 - Registration certificate – remains valid for four years but the AQA will apply.
 - ❖ Within the first three years of the four year period the holder must lodge a renewal application in terms of the AQA (if he fails to do so the registration certificate expires at the end of the three year period).
- ❖ An application for a registration certificate made under APPA which is not decided when AQA takes effect "*must be proceeded with in terms of this Act as if such application was an application for an atmospheric emission licence ...*".

Transitional Arrangements

- Pending the listing of activities, the APPA scheduled processes, must for the purposes of the AQA, be regarded as "listed activities", the undertaking of which requires a licence.
- Until ambient air quality standards have been established the ambient air quality standards are as set out in Schedule 2 of the Act, including standards for:
 - ozone (O₃)
 - oxides of nitrogen (NO_x)
 - nitrogen dioxide (NO₂)
 - sulphur dioxide (SO₂)
 - lead (Pb)
 - particulates (PM₁₀)
 - total suspended solids

Comparison between old and new regimes

Pollutant	Time	APPA	AQA	SANS	WHO	USEPA
PM ₁₀	24-hour		180 µg/m ⁻³	75 µg/m ⁻³		150 µg/m ⁻³
	Annual		60 µg/m ⁻³	40 µg/m ⁻³		50 µg/m ⁻³

SANS 1929 – Ambient Air Quality – Limits for common pollutants

- AQA described as a "paradigm shift" from point-source approach to an ambient air quality approach.
- AQA already contains "transitional" standards for ambient air quality - based, largely, on the conversion of guidelines in this regard originally provided for under APPA.
- New standards are required that achieve the goals of protecting health and well-being.
- DEAT consequently requested the South African Bureau of Standards (SABS) to undertake their formal standard-setting process for criteria pollutants.
- SABS initiated a detailed participatory standard-setting process that resulted in the publication of - *South African National Standard (SANS) 2005. Ambient air quality-Limits for common pollutants. SANS 1929:2005* ISBN 0-626-16514-8.
- SANS 1929 provides the basis for the proposed new standards.

Next steps: developing air quality regime

- The State of the Air Report – October 2006
- The Inaugural Annual Air Quality Governance Lekgotla – October 2006
- New Priority Areas
- The National Framework for Air Quality Management – 11 September 2007
- Standards for other prioritised pollutants
- The National Air Quality Information System (NAQIS)



Thank you

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