

Air Quality Act: Implications for the Road
Construction Industry (With emphasis on the
Asphalt production industry)

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OVERVIEW OF PRESENTATION

- Background to AQA;
- Who in the Road Paving Industry is affected by the act?
- Which role players are currently listed?
- Emitters in road paving industry;
- Important section from Act;
- Conclusion.

INTRODUCTION

- Description of the Act;
- National Environmental Management: Air Quality Act No. 39 of 2004;
- AQA evolved from APPA (Air Pollution Prevention Act, 45 of 1945).

WHY THE ACT EXISTS

- *“To reform the law regulating air quality in order to protect the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social development;*
- *To provide for national norms and standards regulating air quality monitoring, management and control by all spheres of government;*
- *For specific air quality measures;*
- *And for matters incidental thereto”.*

Who in the Road Paving Industry is affected by the Act?

- All role players in the road paving industry producing emissions during product production and these production processes are listed in the Act.
- Environmental authorisation must first be obtained from the environmental authorities (Basic Assessment or EIA) depending on listed activity triggered.

Who are the “emitters” in the Road Paving Industry?

Any process producing:

Dust

- Mechanical road construction plant,
- Blasting,
- Stock piles,
- Crusher facilities

Emissions

- Batch plants (Cement),
- Asphalt production plants,
- Mechanical plant,
- Construction camps sites.

Odours

- Asphalt production plants (in particular – asphalt/synthetic rubber mix),
- Construction site camps (sewage and fires for food preparation and heating),
- Mechanical construction plant.

Which role players are currently listed?

- The asphalt production industry (Static and mobile plants);
- Bitumen production plants.

Example of a registered emission process i.e. Asphalt plant

- **Subcategory 5.8: Macadam preparation**
- **Description: The production mixtures of aggregate and tar or bitumen to produce road surfacing in permanent facilities and mobile plants.**
- **Application: All plants.**
- **Substance or mixture of substances: Plant status mg/Nm³ under normal conditions of 25°; 273 Kelvin and 101.3.kPa**
- **Particulate matter: New 50 /Existing 120**
- **Sulphur dioxide SO₂: New 1000/ Existing 1000**
- **Total volatile organic compounds from vapour recovery destruction units: Existing 150/ New 150**
- **Although cement production is a listed process, the operation of a cement batch plant is currently not listed and therefore no atmospheric emission license is needed. This is still a contentious issue though.**

Important Sections From the Air Quality Act Applicable to the Road Paving Industry



Section 14: Appointment of Air Quality Officers

- The Minister must designate an officer in the Department as the national air quality officer;
- The MEC must designate an officer in the provincial administration as the provincial air quality officer;
- Each municipality must designate an air quality officer from its administration

Section 21.2.2 Applicability of the Notice

- **Minimum emission standards as contained in this Notice shall apply to both permanently operated plants and for experimental (pilot) plants;**
- **Minimum emission standards are applicable under normal working conditions**
- **Normal start-up, maintenance, upset and shut-down conditions**

Section 21.2.3 Averaging Period

- **Unless where specified, minimum emission standards are expressed on a daily average basis, under normal conditions of 273 K, 101.3 kPa, specific oxygen percentage and dry gas.**

Section 21.2.4. Emission measurement

- Manner in which measurements of minimum emissions standards, as required by Section 21(3)(a)(ii) of the Act, shall be carried out;
- Methods other than those contained in Schedule A may be used with the written consent of the National Air Quality Officer;
- In seeking the written consent an applicant must provide the National Air Quality Officer with any information that supports the equivalence of the method other than that contained in Schedule A to a method contained in Schedule A.

Section 21.2.5. Compliance time frames

- New plant must comply with the new plant minimum emission standards as contained in Part 3 on the date of publication of this Notice;
- Existing plant must comply with minimum emission standards for existing plant as contained in Part 3 within 5 years of the date of publication of this Notice.
- Existing plant must comply with minimum emission standards for new plant as contained in Part 3 within 10 years of the date of publication of this Notice.

Section 21.2.6. Postponement of compliance time frames

- An application may be made to the National Air Quality Officer for the postponement of the compliance time frames in Section 5 for an existing plant.

Section 21.2.6. Postponement of compliance time frames (continue)

The application contemplated in 6(1) must include -

- An Atmospheric Impact Report in terms of Section 30 of the Act, compiled by a person registered as a professional engineer or as a professional natural scientist in the appropriate category;
- A detailed justification and reasons for the application; and
- A certified copy of the announcement of the intention to seek postponement in, at least, one newspaper distributed in the area affected by the specific plant.
- The National Air Quality Officer, with the concurrence of the Licensing Authority may grant a postponement of the compliance time frames for an existing plant for a period, not exceeding 5 years.
- Review

Section 21.2.7. Compliance monitoring

- Where continuous emission monitoring is required for a listed activity;
- The averaging period for the purposes of compliance monitoring shall be one calendar month or as prescribed in the Atmospheric Emission License;
- Emission monitoring system must be maintained to yield a minimum of 80% valid hourly average values
- No more than five half-hourly average values in any day, and no more than ten daily average values per year, may be discarded due to malfunction or maintenance of the continuous measurement system.
- Continuous emission monitoring systems must be audited by an SANAS accredited laboratory at least once every two (2) years.

Section 21.2.7. Compliance monitoring

- Where periodic emission monitoring is required for a listed activity in terms of the minimum emission standards as contained in Part 3-
 - Measurements shall take place on, at least, an annual basis unless otherwise prescribed in the Atmospheric Emission License as contemplated in Section 22 of the Act.
 - All tests will be conducted by SANAS accredited laboratories or laboratories accredited by similar foreign authorities.

Section 21.2.8. Reporting Requirements

- Notwithstanding the compliance time frames established in terms of Section 5, the Atmospheric Emission License holder shall submit an emission report in the form specified by the National Air Quality Officer to the Licensing Authority -
 - within one (1) year of the date of publication of this Notice; and
 - annually thereafter unless otherwise prescribed in the Atmospheric Emission License as contemplated in Section 22 of the Act.

Section 21.2.8. Reporting Requirements (continue)

- The report contemplated in 8(1) shall include-
 - The name, description and license reference number of the plant as reflected in the Atmospheric Emission License.
 - Conditions wrt periodic emission monitoring is required for a listed activity in terms of the minimum emission standards as contained in Part 3

Section 21.2.8. Reporting Requirements (continue)

- Where continuous emission monitoring is required for a listed activity in terms of the minimum emission standards as contained in Part 3;
- The most recent correlation tests.

Section 21.2.8. Reporting Requirements (continue)

- Within three (3) years of the date of publication of this Notice, the National Air Quality Officer will establish an internet-based National Atmospheric Emission Inventory as a component of the South African Air Quality Information System (SAAQIS). Once established, the reports contemplated in 8(1) must be made in the format required for the internet-based National Atmospheric Emission Inventory.

Section 51. Offences

- **NB** :Being unable to provide a certificate or license;
- If licensed but does not comply with emission standards.

Section 52. Penalties

- Fine calculated according to the severity of the offence but not -
 - Exceeding maximum fine for criminal offences as per legislation
 - Imprisonment (Max – 10 years)

Section 61. Transitional Licensing Arrangements

- From APPA to AQA
- Provisional APPA certificate valid for 2 years from 1 April 2010 (as if a provisional licence – AQA);
- Should a provisional licence be issued (AQA) within that 2 years the provisional certificate (APPA) expires on that date;
- Permanent APPA certification stays valid for a period of 4 (four) years after 1 April 2010;
- Application for an atmospheric emission licence must be made within the first three years of the four years. If not, the APPA certificate lapses at the end of the three years and you become an illegal activity.

Schedule 2. Ambient air quality standards

- Ambient concentrations of particulate matter with a particle size of less than 10 microns (μ) in size (PM10) may not exceed -
- (a) a 24-hour average of 180 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and the 24-hour limit may not be exceeded more than three times in one year; or
- an annual average of 60 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

CONCLUSION

- It is evident that the NEMAQA is a departure from a purely "point source" approach to regulation of air emissions as envisaged in the APPA to include a more progressive regulation of ambient air quality in general.
- Whilst the NEMAQA is a welcome evolution in respect of air quality control, it is expected that the applicability and interpretation thereof and the listed activities will not, as with the commencement of any new legislation constituting "uncharted territory", so to speak, be without its challenges.

END

- Questions?