DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM

No. 619 **6 June 2008**

NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY ACT, 2004 (ACT NO. 39 OF 2004)

PROPOSED REGULATIONS REGARDING THE FORM OF THE ATMOSPHERIC IMPACT REPORT, AS CONTEMPLATED IN SECTION 30 OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY ACT, 2004 (ACT NO. 39 OF 2004)

I, Marthinus Christoffel Johannes Van Schalkwyk, Minister of Environmental Affairs and Tourism, intends to make regulations in terms of section 53(o) of the Act to prescribe the form for the submission of an atmospheric impact report as contemplated in section 30 of the Act, as contained in the schedule hereto, which is hereby published for public comments.

Members of the public are invited to submit to the Minister, within 60 days of publication of the notice in the *Gazette*, written representations on or objections to the proposed regulations to the following addresses:

By post to: The Director-General: Environmental Affairs and Tourism
Attention: Mr. Sibusiso Shabalala
Private Bag X447
Pretoria, 0001

By fax to: (012) 320-1167, and by e-mail to sshabalala@deat.gov.za

Any inquiries in connection with the draft regulations can be directed to Mr. Mazwendoda Lushaba at (012) 310-3263 or Mr. Sibusiso Shabalala at (012) 310-3449.

Comments received after the closing date may not be considered.

Marthinus van Schalkwyk

MARTHINUS VAN SCHALKWYK,

MINISTER OF ENVIRONMENTAL AFFAIRS AND TOURISM

SCHEDULE

Any person required to submit an atmospheric impact report in terms of section 30 of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004), must do so in the form as set out below.

TABLE OF CONTENTS

1 INTRODUCTION

The Atmospheric Impact Report must contain an introductory section that provides accurate, complete, current and detailed information on the following:

1.1 Enterprise Details

Including:

- Company name;
- Trading name;
- Type of Entity, e.g. Company/Close Corporation/Trust/Joint Venture, etc.;
- Company/Close Corporation/Trust registration number (Registration numbers if Joint Venture);
- Registered address;
- Postal address;
- Telephone number (General);
- Fax number (General);
- Company website;
- Industry type/nature of trade;
- Name of the landowner/s or landlord/s;
- Name of mortgage bondholder/s (if any);
- Deeds office registration number of mortgage bond;
- Land use zoning as Town Planning Scheme;
- Land use rights if outside Town Planning Scheme;
- Responsible person name;
- Responsible person post;
- Telephone number;
- Cell phone number;
- Fax number;
- E-mail address;
- After hours contact details;
- Name of Safety, Health and Environmental Officer.

1.2 Location and Extent of the Plant

Including:

- Physical address of the licenced premises;
- Description of site (where no street address);
- Property registration number (Survey-General Code);
- Coordinates (latitudes, longitudes of approximate center of operations (Decimal Degrees);

- Coordinates (UTM) of approximate center of operations;
- Extent;
- Elevation above mean sea level (m);
- Province;
- District/Metropolitan municipality;
- Local municipality;
- Designated priority area (if applicable);
- Description of surrounding land use (within 5 km radius) (Attach map(s), satellite image(s) and/or aerial photograph(s) detailing location of premises in relation to surrounding community).

1.3 Nature of Process

Including:

- The detail description of the various processes undertaken at the site;
- The types of raw materials used;
- The types of products and by-products produced and/or stored.

1.4 Scope and Extent of Activity

Including:

- Name of Emission Control Officer;
- Full contact details of Emission Control Officer; and
- Qualifications of the Emission Control Officer;

as contemplated in section 48 of AQA or the company's equivalent.

1.5 Authorisation Details

A detail list of all current government authorisations, permits, licenses, etc. related to air quality management.

2 PROCESS DETAILS AND MASS BALANCE

The activities carried out at the site of works should, for clarity, be divided into individual industrial processes. Although these individual processes may be interlinked, each of these individual processes must be detailed as described in paragraph 2.2 below.

2.1 Summary

This paragraph must provide a summary of the detailed information contained in the following sections dealing with each individual process carried out at the site of works. The summary may take the form of a table.

The summary must provide the overall "balance sheet" of inputs, outputs and emissions at the site of works as detailed in the following sections.

2.2 Process A

The following processes (B, C, etc.), provide the details on the various processes carried out at the site of works and should provide accurate, complete, current and detailed information on the following:

2.2.1 Process name and description

2.2.2 Technology

Including:

- The types of technology employed;
- The product names and models;
- Current design and nominal capacities;
- Associated atmospheric emission control or mitigation technology;
- Initial commission date;
- Dates of significant modifications and/or upgrades;
- Reasons for any significant modifications and/or upgrades.

2.2.3 Flow chart

This paragraph should include an illustration of the process in the form of a flow diagram that clearly illustrates the process inputs, outputs and emissions including points of potential fugitive emissions and emergency releases and makes cross-reference to the technology described in paragraph 2.2.2 above.

2.2.4 Material Mass Balance

This paragraph must provide a "balance sheet" of inputs (raw material, feedstock, fuels, etc.), outputs and emissions for the process at maximum design capacity; average production for the last six months; estimated average production for the life of the plant; and the impacts on the mass balance that may result from the introduction of planned modifications within the next 5 years.

2.2.5 Best Practise Benchmarking

This paragraph should describe how the process measures up to:

(i) International best environmental management practise;

(ii) International best available technology;

(iii) International best available technology not entailing excessive cost;

(iv) International best practicable environmental option; and

(v) Other similar processes operated in South Africa[1].

2.2.6 Planned Modifications within the next 5 years

This paragraph should describe any planned modifications of the process envisaged to be implemented within the next 5 years, including:

(i) the nature of the modification;

(ii) the potential impact of the modification on atmospheric emissions; and

(iii) the timetable for the installation and commissioning of the modified process.

2.3 Process B

2.4 Process C

2.5 Process D

3 ATMOSPHERIC EMISSIONS

This paragraph must, among others, provide a summary of the information provided in the "process" sections above, and must include the following sub-sections:

3.1 Air Pollutants

This paragraph must contain a list of the substances or mixture of substances emitted to the atmosphere from the site of works and must:

(i) Describe the potential impact on health, safety and the environment of the pollutant; and

(ii) The quantity of emissions at maximum design capacity, average production for the last six months, estimated average production for the life of the plant and following the introduction of planned modifications within the next 5 years.

3.2 Point source emissions

This paragraph must contain details on each identifiable source and fixed location of atmospheric emission, including stacks/chimneys, vents, release valves, exhausts, etc. Each point source should be cross-referenced to the relevant process detailed above (see paragraph 2), should be cross-

[1] Specific benchmarks that may be used as reference may include, among others, EU IPPC BAT reference documents and the US EPA RBLC clearing house.

referenced to the types of air pollutants emitted from the source (see paragraph 3.1) and should provide detail in respect of:

(i) Type;
(ii) Release height above natural ground level and source coordinates;
(iii) Dimensions (e.g. stack diameter);
(iv) Average flow rates;
(v) Exit temperature;
(vi) Exit velocity;
(vii) Emission monitoring equipment;
(viii) Authorised emission levels;
(ix) Internal emission targets;
(x) International best practice emission rates; and
(xi) Air pollution control or mitigation measures currently in place.

In reporting emissions, temporal variations in emissions should be described, with maximum hourly, maximum daily and average emission rates being specified. Technically sound methods must be used in quantifying emissions. The methods used, which may include continuous emissions monitoring, source sampling, emission factor application or use of chemical mass balances, must be documented and the margin of uncertainty indicated. The control efficiencies and availability of air pollution control or mitigation measures in place should be indicated.

3.3 Fugitive emissions

This section should describe and quantify all other atmospheric emissions at the site of works that are not described in 3.2 above, where "atmospheric emission" or "emission" means any emission or entrainment process emanating from a point, non-point or mobile source that results in air pollution, including, but not limited to:

(i) Dust from stockpiles, haul roads, conveyors, crushers, material handling;
(ii) Evaporation losses from storage tanks, transfer stations, effluent treatment works, dams, etc.; and
(iii) Current and planned measures to control or mitigate each source of fugitive emission.

Source locations and dimensions should be given and temporal variations in emissions described. Technically sound methods must be used in

quantifying emissions. The methods used to quantify emissions, which may include source modelling, source sampling, emission factor application or use of chemical mass balances, must be documented and the margin of uncertainty indicated. The control efficiencies and availability of air pollution control or mitigation measures in place and planned should be indicated.

3.4 Emergency incidents

This paragraph should provide a summary of emergency incidents over the last 2 years resulting in atmospheric emissions, including:

- Nature and cause of the incident;
- Actions taken immediately following the incident to minimize impact potentials; and
- Actions taken subsequently to reduce the likelihood of reoccurrence.

3.5 Upset conditions

This paragraph should provide a summary of the various typical upset operating conditions experienced over the last 2 years including frequency, emission type and quantity and the circumstances which constitute an upset (e.g. start-up, shut-down, failure of gas cleaning equipment, etc.).

4 IMPACT ASSESSMENT

This paragraph should include the following sub-sections:

4.1 Ambient air quality

This paragraph should describe the quality of ambient air in respect of all pollutants listed in paragraph 3 above in the area surrounding the plant, i.e. within a 5 kilometre radius of the site of works and, where applicable, compare these to current ambient air quality standards. The paragraph should also describe what ambient air quality monitoring is carried out, or has been carried out within the last 2 years, in the area surrounding the plant. The description should be based on all available measurements and simulated projections. The source and margin of certainty of the information provided should be documented[2].

[2] Unless otherwise required by the Air Quality Officer, for the purposes of this report, only information that is freely available or reasonably accessible is required.

4.2 Impact on local air quality

With reference to paragraph 4.1 above, this paragraph should describe the estimated contribution of the site of works to the ambient air pollution in the area. The methods used in estimating the works' contribution to ambient air pollution, which could include dispersion or receptor modelling, should be documented and the margin of uncertainty stipulated. Exceedences of air quality standards and health thresholds arising due to emissions from the works should be noted. Reference should be made to health thresholds from refereed health datasets[3]. In cases where the emissions of certain pollutants are projected to approach air quality limits or health thresholds the potential for cumulative air pollutant concentrations and resultant non-compliance or impacts should be considered.

4.3 Respiratory illness in the local area

This paragraph should provide details of recorded respiratory illness and complaints in the area and compare these statistics to the national average[4].

4.4 Complaints

This paragraph should provide details on any complaints the company has received in respect of air pollution for the last 2 years and include, where applicable, details of any circumstance that may have led to the complaint as well as the measures taken in response to complaints.

5 COMPLIANCE

This paragraph should provide details of any health, safety and/or environmental compliance promotion activities related to the site of works over the last 2 years including notices, court action, fines, etc.

6 CURRENT OR PLANNED AIR QUALITY INTERVENTIONS

This paragraph should provide an overview of how the company intends to improve its air quality management performance over the next 5 years with cross-references to the information provided in paragraph 2 above.

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[3] e.g. US-EPA IRIS, WHO

[4] Unless otherwise required by the Air Quality Officer, for the purposes of this report, only information that is freely available or reasonably accessible is required.