Gert Sibande District Municipality

Please address all correspondence to:

The Municipal Manager P O Box 1748 ERMELO 2350

Corner Joubert & Oosthuise Street ERMELO 2350



Office hours: Mondays to Thursdays 07:30 – 13:00 / 13:30 – 16:00 Fridays: 07:30 – 14:00

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OFFICE OF THE MUNICIPAL MANAGER

Enquiries: Mr. TD Hlanyane (017 801 7000)

Our Ref: 16/4/ Govan Mbeki/Sasol South Africa Ltd: Secunda Chemicals Operations-Nitro Fertilisers/0020/2020/F04

Date: 08 December 2020

Sasol South Africa Ltd: Secunda Chemicals Operations-Nitro Fertilisers
Private Bag X1000

Secunda

2302

Attention: Mr. Johannes Buys

Dear Sir

ATMOSPHERIC EMISSION LICENCE IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY ACT, 2004 (ACT NO. 39 OF 2004) AS AMENDED.

With reference to your application dated 21 February 2019, 10 July 2020, 31 October 2020, enclosed, herewith, Atmospheric Emission Licence No Govan Mbeki/Sasol South Africa Ltd: Secunda Chemicals/Operations-Nitro Fertilisers/0020/2020/F04 dated 08 December 2020 in respect of the Sasol South Africa Ltd: Secunda Chemicals Operations- Nitro Fertilisers.

Your attention is drawn to the following conditions for licence issue –

- a. Chapter 5, Section 42 of the Act, Issuing of Atmospheric Emission Licence And
- b. Chapter 5, Section 43 of the Act, Content of Provisional Atmospheric Emission Licence and Atmospheric Emission Licence.

1. SITUATION AND EXTENT OF PLANT

Situation

Portion of the farm Goedehoop 290 IS, district of Highveld Ridge, Govan Mbeki Local Municipality, Gert Sibande District, Mpumalanga.

Extent

24 km²

2. NATURE OF PROCESS AND LISTED ACTIVITIES

SECTION 21

| Listed Activity Number | Category of Listed Activity | Sub-category of the listed activity | Description of the Listed Activity |
|------------------------|-----------------------------------|-------------------------------------|---|
| 7.1 | Inorganic | Production and or Use in | Production and or Use in Manufacturing of Ammonia, |
| : | Chemicals | Manufacturing of | Fluorine, Fluorine Compounds, Chlorine, and |
| | Industry | Ammonia, Fluorine, | Hydrogen Cyanide and chlorine gas (excluding |
| | | Fluorine Compounds, | metallurgical processes-related activities regulated |
| | | Chlorine, and Hydrogen | under category 4) |
| | | Cyanide | |
| 7.2 | Inorganic | Production of Acids | The production, bulk handling and use in |
| | Chemicals | | manufacturing of hydrofluoric, hydrochloric, nitric and |
| | Industry | | sulphuric acid (including oleum) in concentration |
| | | | exceeding 10%. Processes in which oxides of sulphur |
| | | | are emitted through the manufacture and acid |
| | | | sulphides of alkalis or alkaline earths through the |
| | | | production of liquid sulphur or sulphurous cid |
| | | | Secondary production of hydrochloric acid through |
| | | | regeneration |
| 7.3 | Inorganic | Production of Chemicals | The production of superphosphates, ammonium |
| | Chemicals | Fertilizer | nitrate, ammonium phosphates and or ammonium |
| | Industry | | sulphate and their processing into fertiliser mixture |
| | | | (NPK) mixtures |

SECTION 23

| Activity Number | Activity | Description of the Listed Activity | Application | Sasol Nitro Processes |
|--------------------|---|---|--|--------------------------|
| 3 | Gaseous fuel-fired small boiler (using natural gas and liquified petroleum gas) | Small boilers fueled with gaseous fuels | All small boilers fueled with low particulate matter content gaseous fuels | Utilities |

Yours Faithfully

MR. CA HABILE MUNICIPAL MANAGER



GERT SIBANDE DISTRICT MUNICIPALITY

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

Atmospheric Emission License

Sasol South Africa Ltd Secunda Chemicals Operations-Nitro Fertilisers

Is authorized to continue the processes listed below, with the equipment and plant as detailed in licence conditions of licence no. Govan Mbeki/Sasol South Africa Ltd: Secunda Chemicals Operations- Nitro Fertilisers/0020/2020/F04 on the premises known as Portion of the farm Goedehoop 290 IS, district of Highveld Ridge, Govan Mbeki Local Municipality, Gert Sibande District Municipality, Mpumalanga.

Category 7: Sub-category 7.1 Production and or Use in Manufacturing of Ammonia, Fluorine, Fluorine Compounds, Chlorine and Hydrogen Cyanide, Sub-category 7.2 Production of Acids, Sub-category 7.3 Production of Chemicals Fertilizer and Gaseous Fuel Fired Small Boiler

LICENSING AUTHORITY

Govan Mbeki/Sasol South Africa Ltd: Secunda Chemicals/Operations-Nitro Fertilisers/0020/2020/F04

Date: 08 December 2020

Gert Sibande District Municipality

Office hours:

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ATMOSPHERIC EMISSION LICENCE AS CONTEMPLATED IN SECTION 43 OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY ACT, 2004, (ACT NO. 39 OF 2004) (NEMAQA) AS AMENDED

I, Tsunke Daniel Hlanyane, in my capacity as License Officer (hereinafter referred to as "the Licensing Authority"), in terms of section 43 of the National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) as amended, hereinafter referred to as (the "Act"), and as provided for in section 36(1) of the Act, hereby grant an Atmospheric Emission Licence to Sasol South Africa Ltd: Secunda Chemicals Operations-Nitro Fertilisers ('the Applicant)."

This Atmospheric Emission Licence is issued to Sasol South Africa Ltd: Secunda Chemicals Operations-Nitro Fertilisers in terms of section 41(1) of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) as amended, in respect of Listed Activity Category 7: Sub-category 7.1 Production and or Use in Manufacturing of Ammonia, Fluorine, Fluorine Compounds, Chlorine and Hydrogen Cyanide, Subcategory 7.2 Production of Acids and Sub-category 7.3 Production of Chemicals Fertilizer; Gaseous Fuel Fired Small Boilers.

The Atmospheric Emission Licence has been issued based on the information provided in the company's application dated **21 February 2019**, **10 July 2020**, **31 October 2020** and information that became available during processing of the application.

The Atmospheric Emission Licence is valid upon signature for a period not exceeding five (05) years from the date of issue of the licence with licence number: Govan Mbeki/Sasol South Africa Ltd: Secunda Chemicals/Operations-Nitro Fertilisers and Explosives/0020/2019/F03. The reason for issuance of the licence is review. The Atmospheric Emission Licence is issued subject to the conditions and requirements set out below which form part of The Atmospheric Emission Licence and which are binding on the holder of the Atmospheric Emission Licence ("the holder").

1. ATMOSPHERIC EMISSION LICENCE ADMINISTRATION

| Name of the Licensing Authority | Gert Sibande District Municipality |
|---|---|
| Atmospheric Emission Licence Number | Govan Mbeki/Sasol South Africa Ltd: Secunda Chemicals/Operations-Nitro Fertilisers/0020/2020/F04 |
| Atmospheric Emission Licence Issue Date | 14 May 2019; 08 December 2020 |
| Atmospheric Emission Licence Type | Atmospheric Emission Licence |
| Review Date, not later than | 14 May 2024 |

ATMOSPHERIC EMISSION LICENCE HOLDER DETAILS

| Enterprise Name | Sasol South Africa Ltd |
|--|---|
| Trading as | Secunda Chemicals Operation- Nitro Fertilisers |
| Enterprise Registration Number (Registration Numbers if Joint Venture) | 1968/013914/06 |
| Registered Address | Sasol Place |
| | 50 Katherine Street |
| | Sandton |
| | Gauteng |
| Postal Address | Private Bag 1013 |
| | Secunda |
| | 2302 |
| Telephone Number (General) | 017 619 3512 |
| Industry Sector | Manufacture of fertilisers and nitrogen compounds |
| Name of Emission Control Officer | Johannes Buys |
| Telephone Number | 017 619 3512 |
| Cell Phone Number | 082 339 3906 |
| Fax Number | Not Available |
| Email Address | hannes.buys@sasol.com |
| After Hours Contact Details | 071 680 4315 |
| Land Use Zoning as per Town Planning Scheme | Industrial Special |
| | Stand number 8488 |
| | Secunda Extension 35 |

3. LOCATION AND EXTENT OF PLANT

3.1. Facility Address

| Physical Address of the Premises | Sasol Nitro | |
|--------------------------------------|---|--|
| | Secunda Fertiliser/Explosives Division | |
| | Nitrogen Rd | |
| | Secunda | |
| | 2302 | |
| Description of Site (Erf) | Portion of the farm Goedehoop 290 IS, district of Highveld Ridge, | |
| | Mpumalanga | |
| Coordinates of Approximate Centre of | | |
| Operations | | |
| Extent (km²) | 24 km² | |
| Elevation Above Mean Sea Level (m) | 1621.75 m | |
| Province | Mpumalanga | |
| Metropolitan/District Municipality | Gert Sibande District Municipality | |
| Local Municipality | Govan Mbeki Local Municipality | |
| Designated Priority Area | Highveld Priority Area | |

3.2. Description of surrounding land use (within 5 km radius)

The Sasol Secunda operations primary area (the plant), wastewater treatment plants, outside ash facility, coal supply to the factory and secondary area used for farming and game.



Figure 1: Google Earth Image of area surrounding the site (5km) of Sasol Nitro

4. GENERAL CONDITIONS

4.1. Process and ownership changes

- (a) The holder of the Atmospheric Emission Licence must ensure that all unit processes and apparatus used for the purpose of undertaking the listed activity in question, and all appliances and mitigation measures for preventing or reducing atmospheric emissions, are at all times properly maintained and operated.
- (b) No building, plant or site of works related to the listed activity or activities used by the licence holder shall be extended, altered or added to the listed activity without an environmental authorisation from the competent authority. The investigation, assessment and communication of potential impact of such an activity must follow the assessment procedure as prescribed in the Environmental Impact Assessment Regulations published in terms of Section 24(5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.
- (c) Any changes in processes or production increases, by the licence holder, will require prior written approval by the licensing authority.
- (d) Any changes to the type and quantities of input materials and products, or to production equipment and treatment facilities will require prior written approval by the licensing authority.
- (e) The licence holder must, in writing, inform the licensing authority of any change of ownership of the enterprise. The licensing authority must be informed within thirty (30) working days after the change of ownership.
- (f) The licence holder must immediately on cessation or decommissioning of the listed activity inform, in writing the licensing authority.
- (g) The licence holder must notify the Licensing Authority in writing and submit the closure and rehabilitation plan three (3) months prior to the decommissioning of the facility.

(h) The licence holder must notify the Licensing Authority within 07 days after the completion of demolishing process for Ammonium Sulphate Plant.

4.2. General duty of care

- (a) The holder of the Licence must, when undertaking the listed activity, adhere to the duty of care obligations as set out in section 28 of the NEMA as amended including Part III Section 3 of Gert Sibande District Municipal Air Quality by-laws.
- (b) The Licence holder must undertake the necessary measures to minimize or contain the atmospheric emissions. The measures are set out in section 28(3) of the NEMA as amended.
- (c) Failure to comply with the above condition is a breach of the duty of care, and the Licence holder will be subject to the sanctions set out in section 28 of the NEMA as amended including Part III Section 3 of Gert Sibande District Municipal Air Quality by-laws.

4.3. Sampling and/or analysis requirements

- (a) Measurement, calculation and /or sampling and analysis shall be carried out in accordance with any nationally or internationally acceptable standard in line with (Annexure A) of NEMAQA as amended.
- (b) Methods other than those contained in Annexure A of NEMAQA as amended may be used with the written consent of the National Air Quality Officer.
- (c) In seeking the written consent referred to in paragraph (b), an applicant must provide the National Air Quality Officer with any information that supports the equivalence of the method other than that contained in Annexure A to a method contained in Annexure A.
- (d) The licence holder is responsible for quality assurance of methods and performance. Where the holder of the licence uses internal or external laboratories for sampling or analysis, only accredited laboratories by the national accreditation body shall be used. The certified copy of accreditation of the internal or external laboratory must be submitted to the license authority annually including its external audits certification.
- (e) The licence holder must provide the licensing authority on request with raw data obtained during sampling and or analysis including proof of agreed methodology used to reach the final results submitted for compliance.

4.4. General requirements for licence holder

- (a) The licence holder is responsible for ensuring compliance with the conditions of this licence by any person acting on his, her or its behalf including but not limited to an employee, agent, sub-contractor or person rendering a service to the holder of the licence.
- (b) The licence does not relieve the licence holder to comply with any other statutory requirements that may be applicable to the carrying on of the listed activity.
- (c) A valid licence must be kept at the premises where the listed activity is undertaken. The original licence must be made available to the Environmental Management Inspector / Air Quality Officer or an authorised officer representing the licensing authority who requests to see it.

- (d) The Atmospheric Emission Licence Certificate must be displayed at the premises where the listed activity is undertaken.
- (e) The licence holder must inform, in writing, the licensing authority of any change to its details but not limited to the name of the Emission Control Officer, postal address and/or telephonic details within five (05) working days after such change has been effected.
- (f) The Emission Control Officer or facility representative must attend the Highveld Priority Area Implementation Task Team or Air Quality Stakeholder Forum Meetings quarterly.
- (g) The licence holder must report and submit annual emission report on the National Atmospheric Emission Inventory System (NAEIS) for the preceding year in terms of GNR 283 in Government Gazette 38633 of 02 April 2015.
- (h) The licence holder must hold an environmental consultation meeting with affected and interested parties annually to give feedback on the impact of the facility on related matters and must provide written prove of such consultation to the licensing authority annually.

4.5. Statutory obligations

The licence holder must comply with the obligations as set out in Chapter 5 of NEMAQA (Act No. 39 of 2004) as amended, National Environmental Management Act, (Act No. 108 of 1998 as amended, National Water Act, (Act No. 36 of 1998), and National Waste Management Act, (Act No. 59 of 2008) including Gert Sibande District bylaws.

- 5. NATURE OF PROCESS
- 5.1. Process Description
- 5.1.1. Nitric Acid Process (U100)

5.1.2. Ammonium Nitrate Process (U200)

5.1.3. Utilities (U300)

| 5.1.4. | Sulphuric Acid Storage and Truck Loading (U400) |
|--------|---|
| | |
| | |
| 5.1.5. | LAN Plant Outside Battery Limits (OBL's) (U500) |
| | |
| | |
| | |
| | |
| 5.1.6. | Limestone Ammonium Nitrate Process (U600) |
| | |
| | |
| | |
| | |
| 5.1.7. | Bagging Plant (U700) |
| V.1.7. | |
| | |
| | |

5.2. Listed activity or activities

5.2.1 Section 21

| Sasol Nitro Processes | Nitro Fertilizer Nitric Acid Process (Unit 100) | Nitro Fertilizer Nitric Acid Process (Unit 100) | Nitro Fertiliser, Ammonium Nitrate Process (Unit 200), Limestone Ammonium Nitrate Process (Unit 600), |
|---|--|--|---|
| Application | All installations producing and or using more than 100 tons per annum of any of the listed compounds | All installations producing, handling and or using more than 100 tons per annum of any of the listed compounds (excluding metallurgical processes-related activities regulated under Category 4). | All installations producing and or processing more than 10 tons per month. |
| Description of the Listed Activity | Production and or Use in Manufacturing of Ammonia, Fluorine, Fluorine Compounds, Chlorine, and Hydrogen Cyanide and chlorine gas (excluding metallurgical processes-related activities regulated under category 4) | The production, bulk handling and use in manufacturing of hydrofluoric, hydrochloric, nitric and sulphuric acid (including oleum) in concentration exceeding 10% Processes in which oxides of sulphur are emitted through the manufacture and acid sulphides of alkalis or alkaline earths through the production of liquid sulphur or sulphurous acid Secondary production of hydrochloric acid through regeneration | The production of superphosphates, ammonium nitrate, ammonium phosphates and or ammonium sulphate and their processing into fertiliser mixture (NPK) mixtures |
| Sub-category of the listed activity | Production and or Use in Manufacturing of Ammonia, Fluorine, Fluorine Compounds, Chlorine, and Hydrogen Cyanide | Production of Acids | Production of Chemicals Fertilizer |
| Listed Category of Activity Listed Activity | 7.1 Inorganic Chemicals Industry | 7.2 Inorganic Chemicals Industry | 7.3 Inorganic Chemicals Industry |

Section 23 5.2.2

| Activity Number | Activity | Description of the Listed Activity | Application | Sasol Nitro Processes |
|--------------------|--|------------------------------------|--|-----------------------|
| 3 | Gaseous fuel-fired small boiler (using | Small boilers fueled with gaseous | All small boilers fueled with low particulate matter Utilities | Utilities |
| | natural gas and liquified petroleum gas) | fuels | content gaseous fuels | |

Unit process or processes 5.3

| Emission Unit Name | Associated Stack | Unit process | Description | Function of unit process | Batch or continuous process | Operating hours per day | No. days operation per year |
|-----------------------|---|---|---|---|-----------------------------------|----------------------------|-----------------------------------|
| Absorption tower | SV1_Nitric Acid stack | Unit 200 - Ammonia Nitrate Process | In the Absorption tower, NO2 reacts with H2O to form nitric acid | Production of Ammonium Nitrate Solution | Continuous | 24 | 365 |
| Pipe reactor | SV2_Ammonium nitrate stack | Unit 300 – Utilities | Ammonia reacts with nitric acid to form ammonium nitrate. | Generation of steam | Continuous | 24 | 365 |
| Concentrators | SV03_Limestone ammonium nitrate Stack | Unit 400 – Sulphuric Acid Storage | Ammonium nitrate is concentrated by evaporating water contained in the product in a three stage process. NH3 is dosed for pH control. | Storage of Sulphuric Acid | Continuous | 24 | 365 |
| Screening | SV03_Limestone ammonium nitrate Stack | Unit 500 – LAN Plant Outside Battery Limits | To achieve ideal particle size grade. | Storage of raw material and final product for Unit 600 (Limestone Ammonium Nitrate Plant) | Continuous | 24 | 365 |
| Granulator | SV03_Limestone ammonium nitrate Stack | Unit 600 LAN- Fertilizer Process | Unit 600 LAN- Granulates limestone ammonium nitrate Fertilizer Process | Production of Granular Fertilisers | Continuous | 24 | 365 |
| Fluidised bed dryer | SV03_Limestone ammonium | Unit 700 – Bagging Plant | To dry granulated limestone ammonium nitrate | Storage of LAN product from unit 500 | Continuous | 24 | 365 |

LICENSING OFFICER
Licence No. Govan Mbeki/Sasol South Africa Ltd: Secunda Chemicals/Operations-Nitro Fertilisers/0020/2020/F04
14 May 2019, 08 December 2020
Page 8 of 20

| ber | | |
|-----------------------------------|---------------|--|
| No. days operation per year | | |
| Operating hours per day | | |
| Batch or continuous process | | >, |
| ınit | | |
| Function of unit process | | |
| | | purpose of for Nitro |
| | | uce steam for the purpose of rt-up and as utility for Nitro plants. |
| Description | | To produce steam for the purpose on NAP start-up and as utility for Nitro Fertiliser plants. |
| Unit process | | |
| Associated Stack | nitrate Stack | SV8 Small Boilers stack |
| Emission Unit Name | | Small boilers |





Figure 2: Nitric Acid Process (Unit 100) flow diagram



Figure 3: Ammonium Nitrate Process (Unit 200) flow diagram



Figure 5: Utilities Process (Unit 300) flow diagram

6. RAW MATERIAL AND PRODUCTS

6.1. Raw materials used

| Raw material type | Design consumption rate | Units (quantity/period) | Actual consumption rate | Units (quantity/period) |
|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Limestone | | Tons per annum | | Tons per annum |
| Average Airflow | | Tons per annum | | Tons per annum |
| Ammonia | | Tons per annum | | Tons per annum |
| Nitric Acid | | Tons per annum | | Tons per annum |
| Process Water | | Tons per annum | | Tons per annum |
| Ammonium Nitrate 88% | | Tons per annum | | Tons per annum |
| Ammonium Sulphate | | Tons per annum | | Tons per annum |
| Anticaking Agent | | Tons per annum | | Tons per annum |

6.2. Production rates

| Production Name | Design consumption rate | Units (quantity/period) | Actual consumption rate | Units (quantity/period) |
|---------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Nitric Acid (60% concentration) | | Tons per annum | | Tons per annum |
| Ammonia Nitrate | | Tons per annum | | Tons per annum |
| LAN | | Tons per annum | | Tons per annum |

6.3 By product

| Production Name | Production capacity consumption rate | Units (quantity/period) | Design consumption rate | Units (quantity/period) |
|-----------------|--------------------------------------|-------------------------|-------------------------|-------------------------|
| Non-Fert | 4 000 | Tons per annum | 4 000 | Tons per annum |

6.4 Material used in energy sources

| Energy source | Maximum permitted consumption rate | Units (quantity/period) | Design consumption rate | Units (quantity/period) |
|----------------------|------------------------------------|-------------------------|-------------------------|----------------------------|
| Nitric Acid Process | (Unit 100) | | | |
| Natural Gas Start-up | | Giga joules per | | Giga joules per |
| boilers | | annum | | annum |
| | | Megawatt hours per | | Megawatt hours per |
| Electricity | | annum | | annum |

^{*}Nitro Fertiliser combined figure for: Nitric Acid Process Electricity at 125 100 MWh/a + Ammonium Nitrate Process at 29 190 MWh/a + Limestone Ammonium Nitrate Process at 58 459 MWh/a.

Sources of atmospheric emission 6.5. 6.5.1.

Point source parameters

| Type of emission | Continuous | Continuous | Continuous | Continuous |
|---|--|--|---|--------------------|
| Emission hours | 24 | 7 2 | 24 | 54 |
| Actual Gas Exit Vetocity (m/s) | 18.36 | 11.28 | 12.38 | 8.2 |
| Actual Gas Volumetr ic Flow (m/s) | 33.333 | 5.670 | 116.667 | 14.53 |
| Actual Gas Exit Temperature (°C) | 004 | 76.5 | 40 | 287 |
| Diameter at. Stack Tip / Vent Exit (m) | 1.52 | 080 | | 1.5 |
| Height Above Nearby Building | 20.5 | 38,8 | 24 | |
| Height of Release Above Ground (m) | 61 | 45.3 | 70 | 35 |
| Longitude (decimal degrees) | A THAIR STANDARD STAN | | | |
| Latitude (decimal degrees) | | | | |
| Unique Sourcename B | Nitric Acid Stack | Ammonium Nitrate Production Plant Stack | Limestone Ammonium Nitrate Stack (LAN) | SV0008 Stack Stack |
| Unique IB | SV0001 | SV0002 | SV0003 | 800008 |



APPLIANCES AND MEASURES TO PREVENT AIR POLLUTION

Appliances and control measures

| | | | | . 11 | | | | | | | · | | | | |
|--|-----------|-------------|--------------|---------------------|-----------------------|-----------|-----------------------|--------|---------------|-----------------------|---------------|----------|---------------|----------|----------|
| | Minimum | Utilisatio | u (%) | | 100 | | | | 100 | | 100 | | 100 | | |
| | Minimum | Control | Efficiency | (%) | 99.6%-NH ₃ | 96%-NH₄ | , S N O N | (>2hm) | 99%-NH₄ | NO ₃ (>5µm | %66 | | 99%e | | |
| | Design | Capacit | > | | 000 09 | m³h | | | 000 09 | m³ħ | 225 000 | m³h | 208 000 | m³h | i. |
| | Technol | ogy | Type | | Not | available | | | Not | available | Air Mix | Scrubber | Two | Venturi | scrubber |
| | Date of | Significant | Modification | / Upgrade | Not available | | | | Not available | | Not available | | Not available | | |
| Technology | Commissio | n Date | | | 2004 | | | | 2004 | | 2011 | | 2011 | 10001144 | |
| Abatement Equipment Control Technology | Abatement | Equipment | Technology | Manufacture Date | 2003 | | | | 2003 | | 2010 | | 2010 | | |
| Abatement Equ | Abatement | Equipment | Technology | Name and Model | Kimre | Scrubber | | | HE Monsanto | Mist Eliminator | Venturi | Scrubber | Venturi | Scrubber | |
| | Appliance | Type/ | Descriptio | | Scrubber | Wet | | | Scrubber | Wet | Scrubber | Wet | Scrubber | Wet | |
| | Applianc | e Serial | Number | | 200SB- | 237 | | | 200FT- | 236 | -8S009 | 2001 | 600SB- | 2002 | 1 |
| Appliances | Appliance | / Process | Equipment | Number | 200SB-237 | | | | 200FT-236 | | -BS009 | 2001 | 600SB- | 2002 | |
| | | Associated | Source Code | | SV1 | | | | SV2 | | SV3 | | SV3 | | |

Point Source - maximum emission rates (under normal working conditions) 7.2.

| Solint Sources Code Delintont Name | 2 | F as H | HCI (from primary | production of hydroc | acid) |
|------------------------------------|--|--------------------------------|-------------------|--------------------------------|-------|
| | | <u></u> 生 | nary | nydrochloric | |
| | mg/Nm*) unde of 273 Kelvin a | | | | |
| num Kelease Kate | m*) under normal cond Kelvin and 101,3 kPa | C) | | 15 | |
| 17 | onditions Pa | | | | |
| : | m³ under normal conditions Compliance I imeframe Kelvin and 101.3 kPa | 01 April 202 | | 01 April 202 | |
| , | Imetrame | 01 April 2020 to 31 March 2025 | - | 01 April 2020 to 31 March 2025 | |
| | ₹ | 1 2025 | | י 2025 ו | |
| Laboratory | Average region burghon of Emissions | Daily | | Daily | |
| D. castian at | Duration of | රි | | 3 | |
| Tentanian. | CINISSIONS | Continuous | | Continuous | |

| | HCI (from secondary production of hydrochloric acid) | 30 | 01 April 2020 to 31 March 2025 | Daily | Continuous |
|---------------------|--|-------|--------------------------------|-------|------------|
| | SO ₂ | 350 | 01 April 2020 to 31 March 2025 | Daily | Continuous |
| | SO3 | 25 | 01 April 2020 to 31 March 2025 | Daily | Continuous |
| | NOx | 350 | 01 April 2020 to 31 March 2025 | Daily | Continuous |
| | Particulate matter (PM) | 05** | 01 April 2020 to 31 March 2025 | Daily | Continuous |
| Ammonium Nitrate | F as HF | 5 | 01 April 2020 to 31 March 2025 | Daily | Continuous |
| | NH ₃ | **180 | 01 April 2020 to 31 March 2025 | Daily | Continuous |
| | Particulate matter (PM) | 50 | 01 April 2020 to 31 March 2025 | Daily | Continuous |
| *Limestone Ammonium | F as HF | 5 | 01 April 2020 to 31 March 2025 | Daily | Continuous |
| | NH ₃ | 50 | 01 April 2020 to 31 March 2025 | Daily | Continuous |

* If the facility does not emit any of the above pollutant, the standard report will be zero for those pollutant.

** The minimum emission standards are to be based on a wet basis for the period of 01 April 2020 to 31 March 2025.

Section 23- Gaseous Fuel Fired Small Boilers

| | | Maximum Release Rate | | | |
|-------------------|--------------------|--|----------------------|----------------|--------------------------------------|
| Point Source Code | Pollutant Name | (mg/Nm³) under normal conditions Compliance Timeframe of 273 Kelvin, 3% O ₂ and 101,3 kPa | Compliance Timeframe | Average Period | Average Period Duration of Emissions |
| Small Roilers | Particulate Matter | 20 | From May 2023 | Hourly | Batch |
| | Sulphur Dioxide | 100 | From May 2023 | Hourly | Batch |

Point source – maximum emission rates (under start-up. maintenance and shut-down conditions) 7.3.

| | Maximum Permitted Duration of Emissions | | | Within 48 hours after commissioning of | plant or equipment |
|--|--|---------------------------|---------------------|--|--------------------|
| | Emission Hours | | N/A | | |
| conditions | Maximum Gas Emission Exit Velocity Hours | (s/m) | N/A | | |
| to the source maximum emission rates (under starting), maintenance and sind-down conditions) | Maximum Gas Volumetric Flow | (m³/hr) | N/A | | |
| el stalt-up, maille | Averaging Period | | | N/A | 9 |
| SIOII I ates (ulluc | Maximum Release Rate | Date to be Achieved By | N/A | | |
| INVIII CIIIIS | Maximum | (mg/Nm³) | N/A | | |
| T SOM SO | Pollutant Name | | All Point | Source | Pollutant |
| | Point Source | Code | All Point All Point | Source Code Source | |

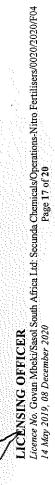
Should normal start-up, maintenance, upset and shut-down conditions exceed a period of 48 hours, Section 30 of the National Environmental Management, 1998 (Act No. 107 of 1998), shall apply unless otherwise specified by the Licensing Authority.

Point source - emission monitoring and reporting requirements 7.4.

| | | | - L - C - L - C | | | | |
|-------------------------|--|------------------------|--|------------------------------|------------------------------|---|--|
| Point Source code | Emission Sampling Sampling //Monitoring Method Frequency | Sampling Frequency | Sampling Duration | Parameters to be Measured | Parameters to be Reported | Reporting Frequency | Conditions under which Monitoring could be Stopped |
| SV0001 | SV0001 In line with | In line with No. 37054 | In line with No. 37054 In line with No. 37054 In line with | In line with | In line with No. 37054 | In line with No. 37054 In line with No. 37054 Only on written | Only on written |
| | Annexure A of | Government Gazette | Government Gazette | Government Gazette | Government Gazette | Government Gazette | authorisation by the |
| | NEMAQA | 22 November 2013. | 22 November 2013. | No. 37054 of 22 | 22 November 2013. | 22 November 2013. | Licensing Authority |
| | | | | November 2013. | | | |

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| Conditions under which Monitoring could be Stopped | Only on written | authorisation by the | Licensing Authority | Only on written | authorisation by the | Licensing Authority | Only on written | authorisation by the | Licensing Authority |
|--|---|----------------------|---------------------|---|----------------------|-------------------------------------|--|----------------------|---------------------|
| Reporting Frequency | In line with No. 37054 In line with No. 37054 Only on written | Government Gazette | 22 November 2013. | In line with No. 37054 | Government Gazette | 22 November 2013. | To commence in May | 2023 | |
| Parameters to be Reported | In line with No. 37054 | Government Gazette | 22 November 2013, | In line with No. 37054 In line with No. 37054 Only on written | Government Gazette | 22 November 2013. | To commence in May To commence in May To commence in May | 2023 | |
| Parameters to be Measured | with No. 37054 In line with No. 37054 | Government Gazette | 22 November 2013. | In line with No. 37054 In line with No. 37054 | Government Gazette | 22 November 2013. | To commence in May | 2023 | |
| Sampling Duration | In line with No. 37054 | Government Gazette | 22 November 2013. | In line with No. 37054 | Government Gazette | . 22 November 2013. | To commence in May | 2023 | |
| Sampling Frequency | In line with No. 37054 In line | Government Gazette | 22 November 2013. | In line with No. 37054 | Government Gazette | 22 November 2013. 22 November 2013. | To commence in May To commence in May | 2023 | |
| Emission Sampling Sampling //Monitoring Method Frequency | In line with | Annexure A of | NEMAQA | SV0003 In line with | Annexure A of | NEMAQA | SV0008 To commence in | May 2023 | |
| Point Source code | SV0002 | | | \$7,0003 | | | 8000/8 | | |



7.6. Routine reporting and record-keeping

7.6.1 Complaints register

The licence holder must maintain a complaints register at its premises, and such register must be made available for inspections. The complaints register must include the following information on the complainant, namely, the name, physical address, telephone number, date and the time when the complaint was registered. The register should also provide space for noise, dust and offensive odours complaints.

Furthermore, the licence holder is to investigate and quarterly, report to the licensing authority in a summarised format on the total number of complaints logged. The complaints must be reported in the following format with each component indicated as may be necessary:

- a) Source code / name;
- b) Root cause analysis;
- c) Calculation of impacts / emissions associated with incidents and dispersion modelling of pollutants, where applicable;
- d) Measures implemented or to be implemented to prevent recurrence; and
- e) Date by which measure will be implemented.

The licensing authority must also be provided with a copy of the complaints register. The record of a complaint must be kept for at least 5 (five) years after the complaint was made.

7.6.2 Emergency Incidents

The licence holder must keep record of all plant failure or emergency incidents including section 30 and submit to the licence authority quarterly a report detailing the following:

- a) Type of plant and summary description of the equipment
- b) Reasons for failure or cause
- c) Previous occurrence on the same plant and number of times similar incident occurred
- d) Mitigation instituted to prevent similar occurrence
- e) Any breach of internal standard operating procedure
- f) Number of times similar incident occurred

7.6.3 Annual reporting

The licence holder must complete and submit to the licensing authority an annual report after the facility annual financial year, the report must include information for the year under review (i.e. annual year end of the company). The report must be submitted to the licensing authority not later than sixty (60) days after the end of each reporting period. The annual report must include, amongst others the following:

- (a) NEM: AQA Section 21 pollutant emissions trend for listed activity;
- (b) External compliance audit report (s);
- (c) Major upgrades projects (i.e. abatement equipment or process equipment);
- (d) Greenhouse gas emissions annual report in line with the National Greenhouse Gas Emission Reporting Regulations No. 40762 Government Gazette 03 April 2017;
- (e) Action taken to address complains received;
- (f) Compliance status to statutory obligation (4.5) including any other issued authorisations.

The holder of the licence must keep a copy of the annual report for a period of at least 5 (five) years.

7.6.4. Investigation

| Investigation | | Purpose | Completion Date |
|------------------------------------|-----|---|-----------------|
| Monitoring, management, mitigation | and | To do investigation and confirm the most suitable method for emission | July 2021 |
| | | sampling of the Ammonium Nitrate Plant Stack. | |
| Monitoring, management, mitigation | and | To complete sample port design for purposes of installation at the next | May 2023 |
| | | full shutdown at Nitro Fertiliser which will be in May 2023 | |

8. DISPOSAL OF WASTE AND EFFLUENT ARISING FROM ABATEMENT EQUIPMENT CONTROL TECHNOLOGY

| Source Code Waste / Effluent Type | Hazardous Components Present | Method of Disposal |
|--|------------------------------|------------------------------|
| SV3 Effluent treatment from venturi scrubber | None | In Line with NEMA and SEMA's |

9. PENALTIES FOR NON-COMPLIANCE WITH LICENCE AND STATUTORY CONDITIONS AND OR REQUIREMENTS

Failure to comply with the any of the above condition and requirements in terms of Chapter 7 Section 51 including Chapter 8Section 53 - 55 of NEMAQA (Act no. 39 of 2004 is a breach of the Licence conditions, and the Licence holder will be subject to the sanctions set out in Chapter 7 Section 52 of NEMAQA (Act no. 39 of 2004), Chapter 10, Section 89 of the National Health Act 61 of 2003, Chapter 7 Section 28,32,33 and 34 of the National Environmental Management Act 108 of 1998, Chapter 16, section 151 of the National Water Act, and Chapter 7 section 68 of the National Waste Management Act, including any penalties contained in the By-laws.

10. APPEAL OF LICENCE

- 10.1 The Licence Holder must notify every registered interested and affected party, in writing and within ten (10) days, of receiving the District's decision.
- 10.2 The notification referred to in 10.1 must -
 - 10.2.1 Inform the registered interested and affected parties of the appeal procedure provided for in Chapter 7 Part 3 Section 62 of Municipal Systems Act (Act 32 of 2000), as amended;
 - 10.2.2 Advise the interested and affected parties that a copy of the Atmospheric Emission Licence and reasons for the decision will be furnished on request;
 - 10.2.3 An appeal against the decision must be lodged in terms of Chapter 7 Part 3 Section 62 of Municipal Systems Act (Act 32 of 2000), from the date of issue of this Atmospheric Emission Licence, with:

Municipal Manager,

PO Box 1748,

Ermelo

2350

Fax No. 017-811 1207;

And

10.3. Specify the date on which the Atmospheric Emission Licence was issued.

11. REVIEW OF ATMOSPHERIC EMISSION LICENCE

In terms of Chapter 5 (44) (45) (46) (47) NEMAQA (Act No. 39 of 2004) as amended, the Atmospheric Emission Licence is valid for 5 years from date of issue of the licence with licence number: Govan Mbeki/Sasol South Africa Ltd: Secunda Chemicals/Operations-Nitro Fertilisers and Explosives/0020/2019/F03.