Fezile Dabi
District Municipality

Fezile Dabi District Municipality
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Aiming above the horizon

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Atmospheric Emissions Licence Holder: **SASOL South Africa Ltd., through its Sasolburg Operations' Gas Loop, Utilities and Chemicals**

Atmospheric Emissions licence Reference Number: **FDDM-MET-2013-23-P3-R1**

ATMOSPHERIC EMISSIONS LICENCE ISSUED IN TERMS OF SECTION 13 OF REGULATION No.893 of 22 NOVEMBER 2013 READ WITH 43 OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY AMENDMENT ACT, 2004, (ACT NO. 20 OF 2014)

This Atmospheric Emissions Licence issued to **SASOL South Africa Limited., through its Sasolburg Operations' Gas Loop, Utilities and Chemicals**, in terms of section 13 of the National Environmental Management: Air Quality Amendment Act, 2014 (Act No. 20 of 2014) : Listed of Activities which result in atmospheric emissions which have or may have significant detrimental effects on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage in respect of listed activities No's 1.1; 1.5; 2.1; 7.1; 7.2; 7.3 and 8.1.

The Atmospheric Emissions Licence has been issued on the basis of the National Air Quality Officer's decision on Sasolburg Operations' application for renewal submitted during February 2024.

The Atmospheric Emissions Licence is valid until 30 April 2029.

The reason for issuance of the current licence is to incorporate the decision of the National Air Quality Officer to grant postponement to comply with the time frames of the Minimum Emission Standards into Atmospheric Emission Licence: FDDM-MET-2013-23-P3-R1.

The Atmospheric Emissions Licence is issued subject to the conditions and requirements set out below which form part of the Atmospheric Emissions Licence and which are binding on the holder of the Atmospheric Emissions Licence, hereinafter referred to as the ("the licence holder").

1. ATMOSPHERIC EMISSIONS LICENCE ADMINISTRATION

Name of the Licensing Authority	Fezile Dabi District Municipality
Atmospheric Emissions Licence Number	FDDM-MET-2013-23-P3-R1
Atmospheric Emissions Licence Issue Date	Date of Signature by Air Quality Officer
Atmospheric Emissions Licence Type	Final
Review Date, not later than	30 April 2029

2. ATMOSPHERIC EMISSIONS LICENCE HOLDER DETAILS

Enterprise Name	Sasol South Africa Limited through its Sasolburg Operations' Gas Loop, Utilities and Chemicals plants
Trading as	N/A
Enterprise Registration Number (Registration Numbers if Joint Venture)	1968/013914/07
Registered Address	50 Katherine Street Sandton
Postal Address	PO Box 1 Sasolburg 1947
Telephone Number (General)	016 960 1111
Industry Sector	Petrochemical Industry
Name of Responsible Officer	[redacted]
Name of Emission Control Officer	[redacted]
Telephone Number	[redacted]
Cell Phone Number	[redacted]
Fax Number	[redacted]
Email Address	[redacted]
After Hours Contact Details	[redacted]
Land Use Zoning as per Town Planning Scheme	Industrial

3. SITUATION AND EXTENT OF PLANT

3.1 LOCATION AND EXTENT OF PLANT

Physical Address of the Premises	Sasol One Site Klasie Havenga Street Sasolburg 1947
Description of Site (Erf)	Subdivision 6 of 2 of Driefontein No- 2 and certain subdivisions of the farm Saltberry Plain, Roseberry Plain Flerewarde and Antrim and subdivision 5 of 4 of Montrose, District of Sasolburg, Free State.
Coordinates of Approximate Centre of Operations	Sasol 1 Latitude: S 26.82678 Longitude: E 27.84206
Extent	15.51 km^2
Elevation Above Mean Sea Level (m)	1 498 m
Province	Free State Province
District Municipality	Fezile Dabi District Municipality
Local Municipality	Metsimaholo Local Municipality
Designated Priority Area	Vaal Triangle Priority Area

3.2 Description of Surrounding Land Use within 5 km radius

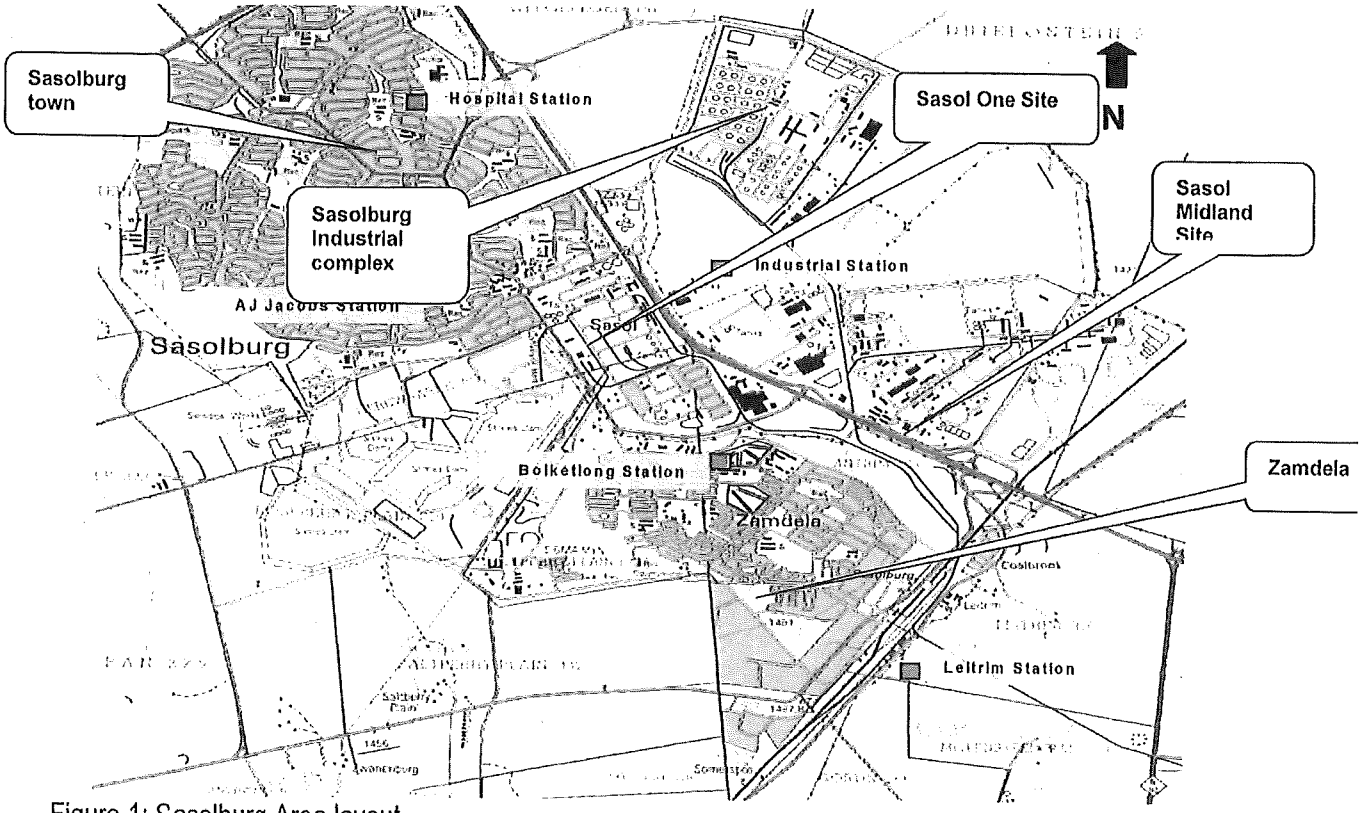


Figure 1: Sasolburg Area layout

Within a 5 km radius from the Sasol One facility is the town of Sasolburg, a residential area as well as a township called Zamdela. Other land use includes heavy as well as light industries. Sasol's water treatment facility and waste areas also falls within this 5 km radius.

4. GENERAL CONDITIONS

4.1. Process and ownership changes

The holder of the atmospheric emissions 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.

Building, plant or site works related to the listed activity or activities used by the licence holder shall be extended, altered or added subject to the applicable requirements for an environmental authorisation from the competent authority as per the provisions of the National Environmental Management Act 1998 (Act No. 107 of 1998) (NEMA), as amended read with the Environmental Impact Assessment Regulations thereunder. The investigation, assessment and communication of potential impact of such an activity must follow the required assessment procedure as prescribed in the Environmental Impact Assessment Regulations published in terms of section 24(5) of the National Environmental Management Act.

Any changes in processes or production increases which may have an impact on atmospheric emissions, by the licence holder, will require prior approval by the licensing authority.

Any changes to the type and quantities of input materials and products, or to production equipment and treatment facilities which may have an impact on atmospheric emissions will require prior written approval by the licensing authority.

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 30 (thirty) days after the change of ownership.

The licence holder must immediately on cessation or decommissioning of the listed activity, in writing, inform the licensing authority.

4.2. General duty of care

The holder of the license must, when undertaking the listed activity, adhere to the duty of care obligations as set out in section 28 of the NEMA.

The license 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.

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.

4.3. Sampling and/or analysis requirements

Measurement, calculation and/or sampling and analysis shall be carried out in accordance with any nationally or internationally acceptable standard. A different method may be acceptable to the licensing authority as long as it has been consulted and agreed to the satisfactory documentation necessary in confirming the equivalent test reliability, quality and equivalence of analyses.

The licence holder is responsible for quality assurance of methods and performance. Where the holder of the licence uses external laboratories for sampling or analysis, accredited laboratories shall be used.

4.4. General requirements for licence holder

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.

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.

A copy of the licence must be kept at the premises where the listed activity is undertaken. The licence must be made available to the environmental management inspector representing the licensing authority who requests to see it.

The licence holder must inform, in writing, the licensing authority of any change to its details including the name of the emissions control officer, postal address and/or telephonic details.

The offset implementation plan to reduce PM and SO_2 pollution in the ambient / receiving environment must continue until at least 1 April 2025.

Quarterly progress reports must be submitted to the National Air Quality Officer and the Licensing Authority indicating progress on the implementation of the compliance roadmap and commitments made in support of Sasol's Postponement Application. The report must also include progress made on the Offset projects. The last report must be submitted for the quarter ending 31 March 2025.

4.5. Statutory obligations

The licence holder must comply with the obligations as set out in Chapter 5 of the Act.

4.6. Annual payment of atmospheric emissions licence processing fee

The licence holder must, for the period of validity of the licence, pay the processing fee annually to the licensing authority. Alternatively the licence holder can pay the emissions licence processing fee once off.

4.7 Variation of Atmospheric Emissions Licence

The Air Quality Officer reserves the right to by notice, in writing, set and adjust the emissions limit value or operating condition after consultation with the licence holder.

4.8 Non- Compliance with Conditions

If the licence holder fails to comply with the conditions or requirements of this Atmospheric Emissions Licence, the Air Quality Officer may by notice in writing call upon such a holder to comply with such conditions or requirement within a reasonable period specified in the notice, and in the event of failure on the part of such holder to comply with the said conditions or requirement within the period so specified, the Air Quality Officer may cancel the Atmospheric Emissions License or suspend the operation thereof for such period as he or she may deem fit.

5. NATURE OF PROCESS

5.1. PROCESS DESCRIPTION

Gas Loop, Utilities and Chemicals: Steam Stations (1 & 2)

Sasolburg Operations operates two steam/power stations in Sasolburg. Pulverised coal is fired in boilers which are used for steam and power generation. Both the steam and power generated at these stations are used for Sasol's purposes, although Sasol can export electricity to the National Grid to assist with national electricity supply. Emissions include combustion gasses (SO_2, NO, NO_2, Particulates, CO_2 and CO).

Gas Loop, Utilities and Chemicals: Auto Thermal Reformers and Rectisol

Sasol Sasolburg Operations operates two Auto Thermal Reformers (ATRs) on the Sasol One facility. Natural gas is reformed in the ATRs to form the building blocks of the Fischer Tropsch process. The heat required in the ATRs is obtained from the Fired Heaters which is fired with process tail gas, except during start-up when they are fired with natural gas. Emissions from the two Fired Heaters are combustion gas products, such as NO, NO_2, CO and CO_2. Little to no sulphur compounds are present.

Sasol Sasolburg Operations also operates the Rectisol plant on the Sasol One Site. The purpose of the Rectisol plant is "dew point correction" and "CO_2" removal. Due to the high concentration of methane and other hydrocarbons, the gas from the first two stages are sent to the flare and those from the last three stages are sent to atmosphere through the Steam Station 1 Stacks. Emissions include hydrocarbons specifically benzene with high concentrations of CO_2 emitted from the Steam Station 1 stacks.

Gas Loop, Utilities and Chemicals: Thermal Oxidation

Sasol Sasolburg Operations operates a thermal oxidation unit where waste streams from various production units are thermally oxidised. As part of the oxidation process, heat is recovered by means of steam generation in the B6930 incinerator, which supplements the steam supply to the plants from the Steam Stations. Three incinerators, B6990 (chemical incinerator), B6930 (high sulphur pitch incinerator) and B6993 (spent caustic incinerator) are operated on a continuous basis. The B6930 high sulphur pitch incinerator has a bag house for particulate emission control, whilst the caustic incinerator has a wet scrubber to have both SO_2 and particulate matter emission control.

Gas Loop, Utilities and Chemicals: Ammonia

Sasol Sasolburg Operations operates an Ammonia plant on the Sasol One Site. The Benfield unit is part of the Ammonia plant and consists of a CO_2 absorber column were CO_2 is removed from the process gas stream using the Benfield solution. The Benfield solution is regenerated in the desorber column were the CO_2 is desorbed to the atmosphere and also partially worked up to high grade CO_2 for the food industry.

Gas Loop, Utilities and Chemicals: Nitric acid plant (NAP)

A nitric acid plant is operational at the Sasol Bunsen Street site. Ammonia is piped from the cold storage area to the nitric acid plant where it is reacted with oxygen to produce NOx, as an intermediate product, which is fed to a catalyst to selectively convert NO to NO_2. The NO_2 is fed to a series of absorption columns where nitric acid is formed. The exhaust vent from the second tower, which contains NO_2, and N_2O is sent to the de-NOx reactor, where the gas is reduced over a catalyst to nitrogen and oxygen, which is released to atmosphere.

Gas Loop, Utilities and Chemicals: Ammonium Nitrate

Sasol Sasolburg Operations operates the ammonium nitrate solution plant. This plant is integrated into the NAP plant. The nitric acid from the NAP plant is reacted with ammonia in a reactor to form the ammonium nitrate solution.

Gas Loop, Utilities and Chemicals: Prillan

Sasol Sasolburg Operations operates a Prillan unit on the Sasol One Site. Aqueous ammonium nitrate is concentrated by means of parallel evaporators. The concentrated liquor is then fed to the top of the prill tower where after it is sprayed using nozzles to obtain a desired diameter. The spheres fall through counter current air flow which cools the droplet and forms the prill. The upward air flow is passed through three scrubbers at the top of the Prillan plant before it is vented to atmosphere. The prills are fed to drying, cooling and screening units where off specification prills are recycled to the dissolving tank whilst the on specification prills are packaged as final product. The air used for drying is passed through a scrubber before being vented to atmosphere. Emissions are particulates coming from the scrubbers on top of the Prill tower as well as from the drying scrubbers.

Gas Loop, Utilities and Chemicals: Phenolics (N-Base, Cresol, ATAR, TNPE and Phenosolvan) and Paraffins

The phenolics value chain is comprised of a few plants which extract and purify a range of phenolic products from tar acid containing feed streams sourced from Secunda Synfuels Operations. Various process chemicals are used to extract the tar acids and to remove impurities where-after phenol, cresols and xylenols are recovered via distillation. Solid waste generated by the process is incinerated while liquid effluent is first cleaned to recover phenolic component before the water is treated at the Sasol Bio-works. All relieve valves and vents are connected to the plant's flare system and normal combustion products are emitted (CO2, CO, NO, NO2 and H2O). The fuel gas furnace emits combustion gas products and SO2 and SO3 are emitted from the SOx scrubber.

The Paraffin plant takes feed from the Wax plants and distils a range of paraffin products. A number of fuel gas fired furnaces are operational on the plant providing sufficient heat for the purification steps. These emit combustions products.

Gas Loop, Utilities and Chemicals: SGEPP (Sasol Gas Engine Power Plant)

The combined cycle Power Plant consisting of several Gas Engines utilizes approximately 290 000 000 kilograms (approximately 12 Petajoules) per annum of natural gas to generate approximately 180 MWh of electricity per hour as well as medium pressure steam.

Gas Loop, Utilities and Chemicals: Monomers

Sasol, Sasolburg Chemical Operations operates a Monomer production and separation unit where ethylene is produced to be used within the polyethylene and polyvinylchloride manufacturing plants. A Mixture of ethane and ethylene is piped to Sasolburg from Secunda where it enters the Ethylene Purification Unit (S4500) where the ethylene is separated from the ethane by means of distillation. The ethylene is then routed to the customers.

The ethane product from the S4500 is then routed to the Cracking Unit (S4600) where it is cracked to ethylene. Once cracked, the ethylene/ethane gas mixture goes through a quenching, scrubbing and drying phase where after the gas is selectively hydrogenated to convert acetylene to ethylene. After this the C_2 mixture is purified by means of distillation processes where light and heavy components as well as unreacted ethane are removed. The ethylene is then stored in the ethylene tank to be distributed to the polythene and vinyl chloride monomer plants. Hydrocarbon off-gasses are sent to the plant's main flare where it is converted to CO_2, CO and H_2O. The cracking unit emits traces of H_2S from the caustic scrubber.

5.2. LISTED ACTIVITIES

Listed Activities, as published in terms of Section 21 of the AQA, authorised to be conducted at the premises by the licence holder:

Listed Activity Number	Category of Listed Activity	Sub-category of the Listed Activity	Listed Activity Name	Description of the Listed Activity
Steam/Power Generation (Steam Stations 1, 2)				
1	1	1.1	Solid Fuel Combustion installations	Solid fuels combustion installations used primarily for steam raising or electricity generation
SGEPP				
2	1	1.5	Reciprocating engines	Liquid and gas fuel stationary engines used for electricity generation
Auto Thermal Reformers (ATR)				
3	2	2.1	Petroleum Industry	Combustion installations not used primarily for steam raising or electricity generation (furnaces and heaters)
N-Base, Cresol, Paraffins, ATAR, TNPE, Rectisol and Phenol				
4	6	6.1	Organic chemical industry	The production, or use in production of organic chemicals not specified elsewhere including acetylene, acetic, maleic or phthalic anhydride or thei acids, carbon disulphide, pyridine, formaldehyde, acetaldehyde, acrolein and its derivatives, acrylonitrile, amines and synthetic rubber. The production of organometallic compounds, organic dyes and pigments, surface-active agents. The polymerisation or co-polymerisation of any unsaturated hydrocarbons, substituted hydrocarbon (including Vinyl chloride). The manufacture, recovery or purification of acrylic acid or any ester of acrylic acid. The use of toluene di-isocyanate or other di-isocyanate of comparable volatility; or recovery of pyridine. All permanent immobile liquid storage facilities at a single site with a

Listed Activity Number	Category of Listed Activity	Sub-category of the Listed Activity	Listed Activity Name	Description of the Listed Activity
				combined storage capacity of greater than 1 000 m^3
Thermal Oxidation				
5	8	8.1	Thermal treatment of hazardous and general waste	Facilities where general and hazardous waste are treated by the application of heat (Applicable : Capacity of Incinerator > 10kg/hour)
Nitric acid plant				
6	7	7.1	Inorganic Chemical Industry	Production and or use in manufacturing of ammonia, fluorine, fluorine compounds, hydrogen cyanide and chlorine gas
7	7	7.2	Inorganic Chemical Industry	Production, bulk handling and or 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 production of acid sulphites of alkalis or alkaine earths or through the production of liquid sulphur or sulphurous acid Secondary production of hydrochloric acid through regeneration
Ammonia, Ammonium nitrate and Prillan				
8	7	7.1	Inorganic Chemical Industry	Production and or use in manufacturing of ammonia, fluorine, fluorine compounds, hydrogen cyanide and chlorine gas
9	7	7.3	Inorganic Chemical Industry	The production of superphosphates, ammonium nitrate, ammonium phosphates and or ammonium sulphate and their processing into fertiliser mixtures (NPK Mixtures)
Monomers				
10	2	2.1	Petroleum Industry	The production, or use in production of organic chemicals not specified elsewhere including acetylene, acetic, maleic or phthalic anhydride or thei acids, carbon disulphide, pyridine, formaldehyde, acetaldehyde, acrolein and its derivatives, acrylonitrile, amines and synthetic rubber. The production of

Listed Activity Number	Category of Listed Activity	Sub-category of the Listed Activity	Listed Activity Name	Description of the Listed Activity
				organometallic compounds, organic dyes and pigments, surface-active agents. The polymerisation or co-polymerisation of any unsaturated hydrocarbons, substituted hydrocarbon (including Vinyl chloride). The manufacture, recovery or purification of acrylic acid or any ester of acrylic acid. The use of toluene di-isocyanate or other di-isocyanate of comparable volatility; or recovery of pyridine. All permanent immobile liquid storage facilities at a single site with a combined storage capacity of greater than 1 000 m^3

5.3. UNIT PROCESS OR PROCESSES

List of all unit processes associated with the listed activities to be undertaken at the site of work.

Unit Process	Function of Unit Process	Batch or Continuous Process
ATR		
Auto Thermal reformers	Convert natural gas to reformed gas	Continuous
Membrane separators	Purification of reformed gas	Continuous
Flares	Destruction of gas	Batch
Rectisol		
Rectisol	CO_2 removal and dew point correction	Continuous
Thermal Oxidation		
B6993 Spent Caustic Incinerator	The incineration of spent caustic solution and off specification solvent products including MIBK by-products in a down fired incinerator.	Continuous
Spent Caustic Storage F6903	Intermediate storage	
Hydrocarbon Solvents F6963 A/B F6927 B	Intermediate storage	

Sodium Carbonate F6954	Intermediate storage	
Caustic F6959 / F6975	Intermediate storage	
B6930 High Sulphur Pitch Incinerator	The incineration of High Sulphur Pitch, Organic solvents and High Organic waters in a limestone fluidized bed unit.	Continuous
HSP Storage tanks F6926 / F6990	Intermediate storage	
HOW tank F6938	Intermediate storage	
BFW tank F6939	Intermediate storage	
B6990 Chemical Incinerator	The incineration of heavy oils, off-specification waxes, Sasol spent catalyst, funda filter cake, slop solvents and high organic waste.	Continuous
Product tank	Intermediate storage	
SS1 and SSII		
Fuel oil tanks	Holding fuel	Continuous
Coal bunkers/silos	Holding coal	Continuous
Boiler	Steam production	Continuous
Feed water tanks	Holding water	Continuous
Resins (HCl, caustic)	Holding chemicals	Continuous
NH_3 tank	Holding ammonia	Continuous
Nitric acid plant		
NO reactor	Reaction of NH_3 and air to form NO & NO_2 (NOx)	Continuous
Absorber columns	Absorption of NOx to HNO_3	Continuous
De-NOx reactor	Reduction of NOx to O_2 and N_2	Continuous
Ammonium Nitrate		
AN reactor	Reaction to form ammonium nitrate	Continuous
Neutralizer	pH correction	Continuous
AN solution tank	Storage of AN solution	Continuous
Prillan		
Wet section	Concentration of ammonium nitrate solution	Continuous
Dry section	Drying of prilled ammonium nitrate	Continuous
Storage	Storage of prilled ammonium nitrate	Continuous

Ammonia		
CO_2 capture	Remove moisture from the CO_2 stream	Continuous
CO-shift	Reacts CO + steam to form H_2	Continuous
Benfield	Removal of CO_2 from the process stream	Continuous
PSA	Production of LPH_2	Continuous
Deoxo	N_2 purification	Continuous
Ammonia synthesis	Production of NH_3	Continuous
BFW	Demineriilzed water	Continuous
Flare	Flare system to remove hydrogen and inerts from the process	Continuous
N-Base, Cresol, ATAR, TNPE and Phenol		
Phenol producing column	Process NBF DTA material for phenol production	Continuous
Feedstock storage	Hold feed material	Batch
Rundown tanks	Hold product phenol	Batch
Final product tanks	Hold final product phenol	Batch
Product Stabiliser tanks	Hold chemicals	Batch
Tempered water system	Hold and provide condensate to phenol unit	Continuous
Relief system	Relief system in high pressure cases	Batch
HP steam	Provide heat to phenol unit reboilers/heater	Continuous
HOW Storage tanks	Holding high organic effluent materials	Batch
Sand Filtration	Filter solids from HOW water	Continuous
Extraction	Extract phenolics from the high organic wastewater	Continuous
C stream distillation	Recover butyl acetate (solvent)	Continuous
Stripping section	Strip out butyl acetate from final effluent	Continuous
Crude tar acids storage	Hold tar acids extracted from high organic effluent	Batch
Separators	Remove tar and oil from high organic stream	Continuous
Storage tanks	Holding raw materials – Formalin, Caustic Soda, O-cresol, Water	Batch
Feed storage tanks	Holding raw materials as buffer between Secunda and Sasolburg	Batch
Drying and N-base removal	Removing excess water from the feed followed by a process step to remove unwanted nitrogen base compounds from the feed	Continuous
Phenol production	Phenol produced from cleaned-up cresol feed	Continuous
Phenol removal	Remaining phenol in bottom product from above unit has to be removed	Continuous
Product Splitter	Separates cresol products from feed based on boiling points differences	Continuous

Intermediate feed product storage	Between units products are temporarily stored to minimize the whole production train to be affected if one unit experiences problems	Batch / Continuous
Final product tanks	Bulk storage before shipment to customer	Batch / Continuous
Loading facility	Road tanker loading of intermediate or final products	Batch
Loading facility	Road tanker loading of pitch type material for transport to incineration plant	Batch
Paraffin plant		
Reactors	Production of hydrocarbons	Continuous
Distillation column	Separation of hydrocarbons	Continuous
Furnaces	Provide heat to the distillation columns	Continuous
Flare system	Flaring of excess hydrocarbons as well as over-pressure protection	Continuous
SGEPP		
Gas Engines	Utilisation of Natural gas to generate electricity	Continuous
Monomers		
Ethylene unit S4600 & S4500	Cracking of ethane and propane Separation of ethylene & ethane from C2 rich gas	Continuous
Ethylene storage tank	Storage of final product	Continuous
Ethane storage sphere	Storage of furnace feed material	Continuous
Propylene storage sphere and bullets	Storage of refrigerant product	Continuous
Cracker system	Cracking of ethane or propane to ethylene (This unit operation include boiler feed water, dilution steam, crack gas quench, MEA, Caustic and fuelgas)	Continuous
Cooling water system	Used as cooling medium	Continuous
Loading bay facility	Loading of ethylene road tanker	Batch
Feed gas preparation	Ethane saturator	Continuous
Compression	Crack gas compression as well as ethylene and propylene compression	Continuous
Flare system	Flaring of off-spec product during upset conditions as well as over-pressure protection	Continuous
Cold separation	This unit operation include de-ethaniser, C3-recovery, secondary feed gas drying, cold separation, de-methaniser, ethylene cycle, C2-splitter and ethane system	Continuous
Liquefaction	This unit operation include propylene refrigeration, ethylene distribution and storage	Batch

Pre-cooling and drying	Propylene system, pre-cooling, acetylene removal, primary feed gas drying	Continuous

5.4. HOURS OF OPERATIONS

Unit Process / Plant	Operating Hours (e.g. 07h00 – 17h00)	No. Days Operation per Year
ATR		
Reformers	24 hours	365
Membrane separators	24 hours	365
Flares	Ad hoc	When required
Thermal Oxidation		
B6993 Spent Caustic Incinerator	24 Hours	365
B6930 High Sulphur Pitch Incinerator	24 Hours	365
B6990 Chemical Incinerator	24 Hours	365
Steam Stations 1&2		
Fuel oil tanks	24 hours	365
Coal bunkers/silos	24 hours	365
15 Boilers	24 hours	365
Feed water tanks	24 hours	365
Resins (HCL, caustic)	24 hours	365
Coarse ash	24 hours	365
Ash water	24 hours	365
NH_3 tank	24 hours	365
Blowdowns tank	24 hours	365
Nitric acid plant		
NO reactor	24 hours	365
Absober columns	24 hours	365
De-NOx reactor	24 hours	365
Ammonium Nitrate		
AN reactor	24 hours	365
Neutralizer	24 hours	365
AN solution tank	24 hours	365
Prillan		
Wet section	24 hours	365
Dry section	24 hours	365
Storage	24 hours	365

Unit Process / Plant	Operating Hours (e.g. 07h00 – 17h00)	No. Days Operation per Year
Ammonia		
CO_2 capture	24 hours	365
CO-shift	24 hours	365
Benfield	24 hours	365
PSA	24 hours	365
Ammonia synthesis	24 hours	365
BFW	24 hours	365
De-Oxo	24 hours	365
N-Base, Cresol, Paraffin, ATAR, TNPE and Phenol		
Flares	Ad hoc	When required
Phenol producing column	24 hours	350
Feedstock storage	24 hours	365
Rundown tanks	24 hours	350
Final product tanks	24 hours	365
Stabiliser tanks	24 hours	350
Condensate system	24 hours	350
Relief system	24 hours	350
HP steam	24 hours	350
HOW Storage tanks	24 hours	350
Sand Filtration	24 hours	350
Extraction	24 hours	350
C stream distillation	24 hours	350
Stripping section	24 hours	350
Crude tar acids storage	24 hours	350
Separators	24 hours	350
Storage Tanks	24 hours	365 (except for statutory inspection)
Intermediate / Product Tanks	24 hours	365 days/year (except for statutory inspections
SGEPP		
Sasol Gas Engine Power Plant	24 hours	365
Monomers		
Ethylene unit 4600	24 hours	365
Ethylene storage tank	24 hours	365
Ethane storage sphere	24 hours	365

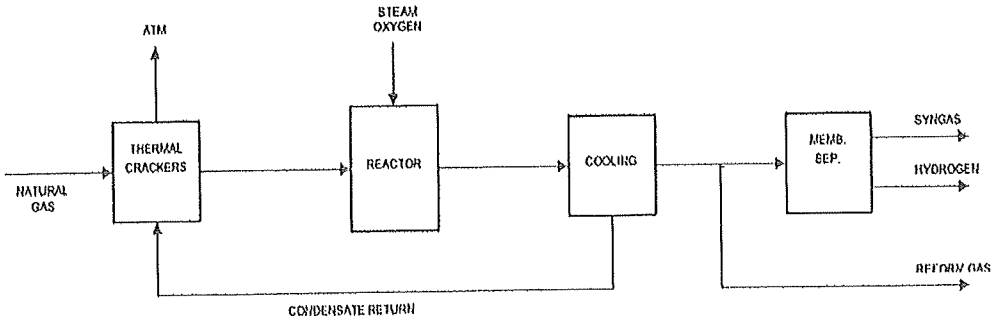
Unit Process / Plant	Operating Hours (e.g. 07h00 – 17h00)	No. Days Operation per Year
Propylene storage sphere and bullets	24 hours	365
Cracker system	24 hours per day (there are 3 furnaces, 2 should always be online while the 3rd one is on decoking)	365
Cooling water system	24 hours	365
Loading bay facility	24 hours	365
Feed gas preparation	24 hours	365
Compression	24 hours	365
Flare system	24 hours	365
Cold separation	24 hours	365
Liquefaction	24 hours	365
Pre-cooling and drying	24 hours	365
Utilities	24 hours	365

5.5 GRAPHICAL PROCESS INFORMATION

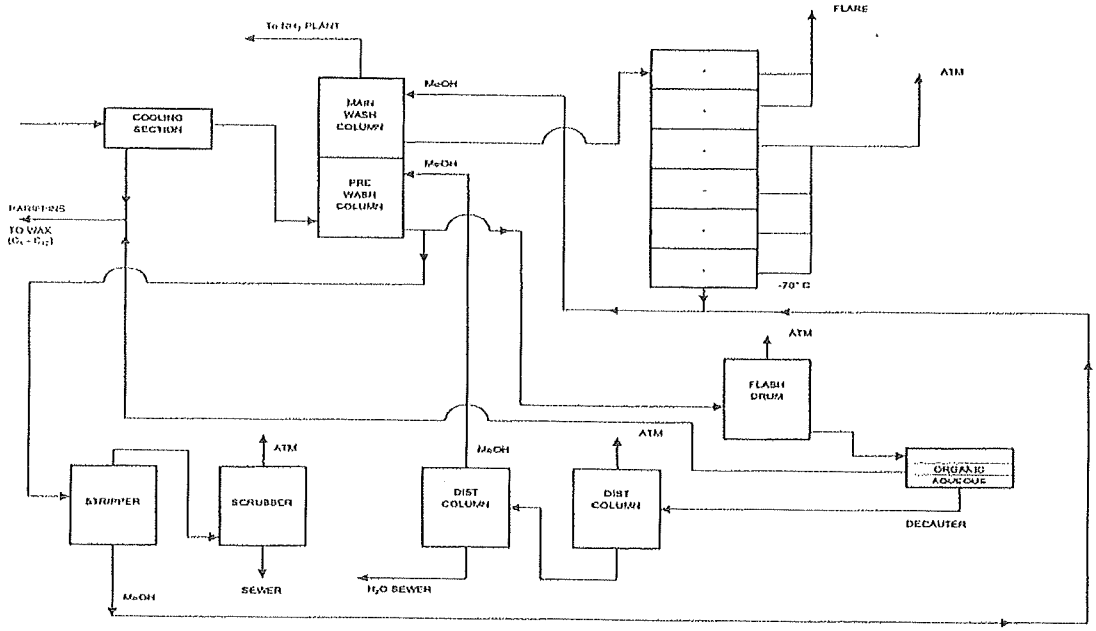
(a) Simplified block diagram with the name of each unit process in a block; showing links between all unit processes or blocks.

(b) Process flow chart(s) clearly indicating inputs, outputs and emissions at the site of works, including points of potential fugitive emissions and emergency releases.

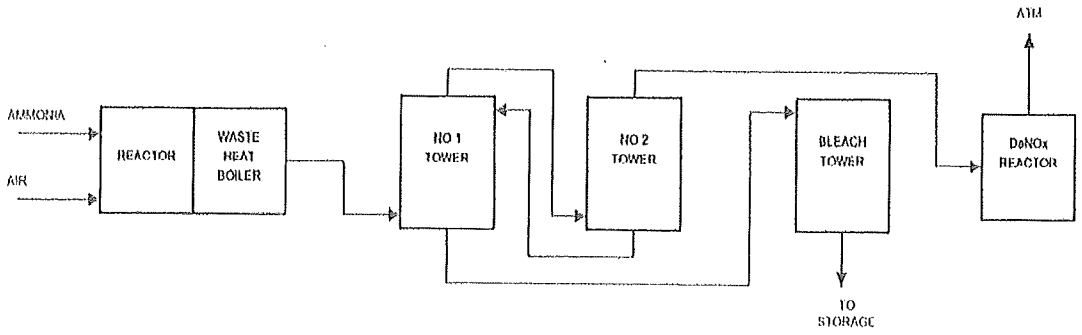
Auto Thermal Reformers (ATR)



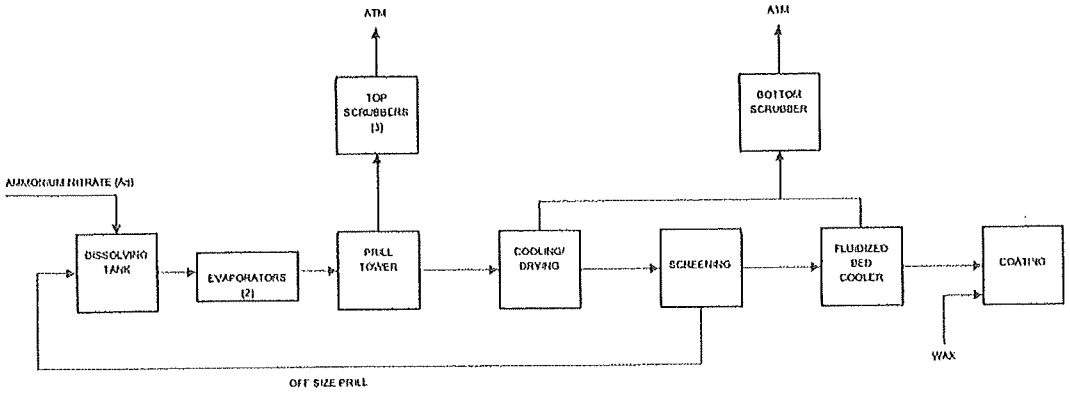
(c) Rectisol



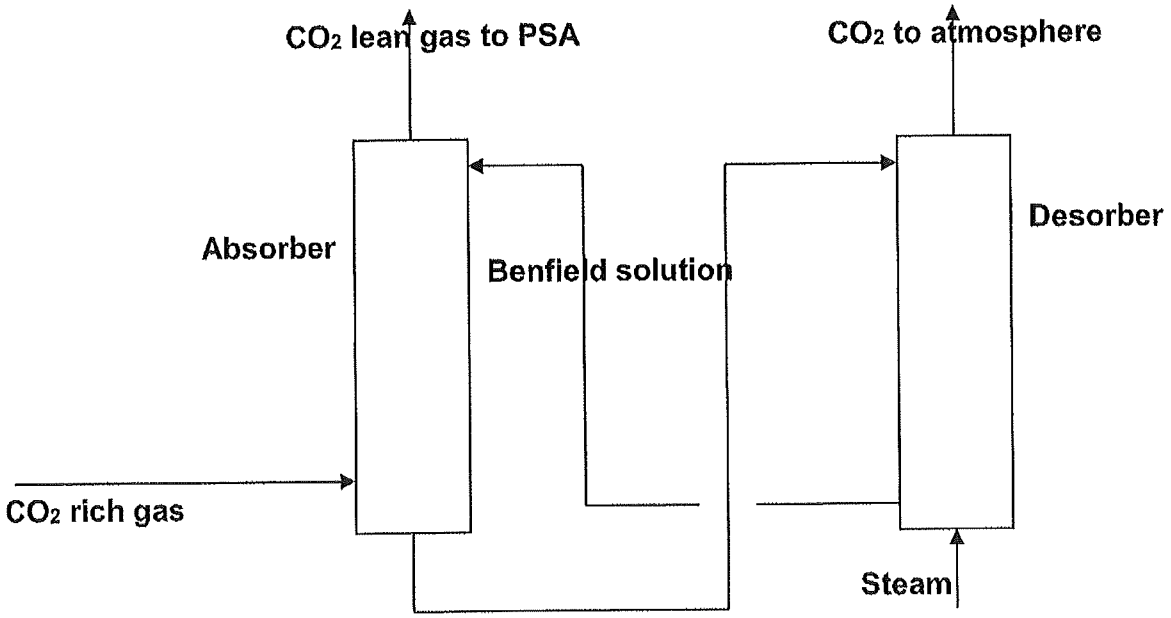
(d) Sasol Nitro – Nitric Acid Plant



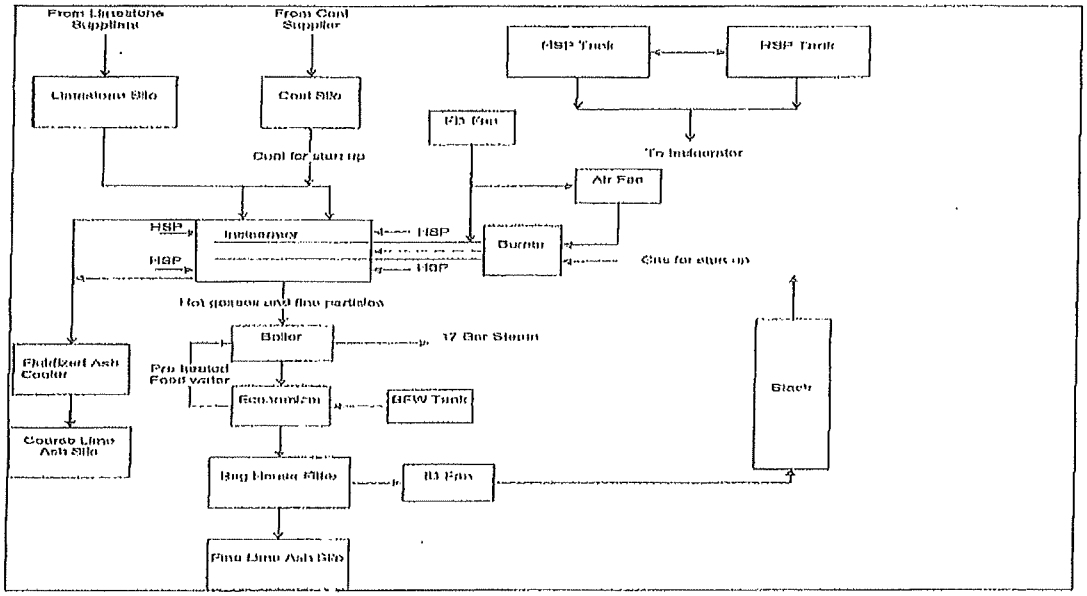
(e) Ammonium Nitrate Prillan Plant



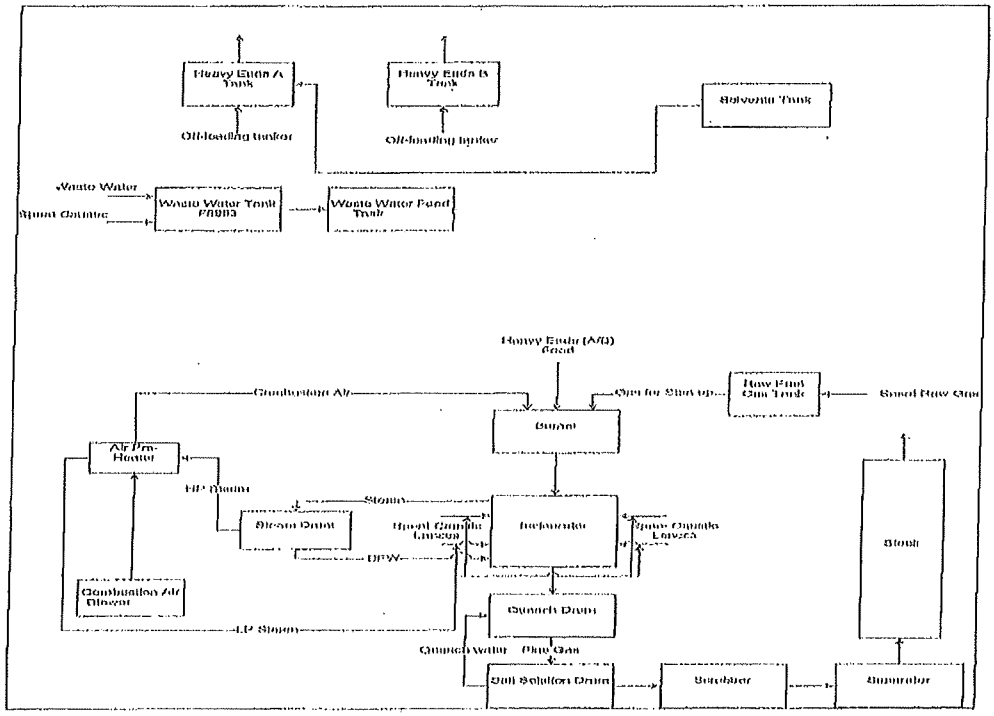
(f) Benfield Plant:



(g) Thermal Oxidation

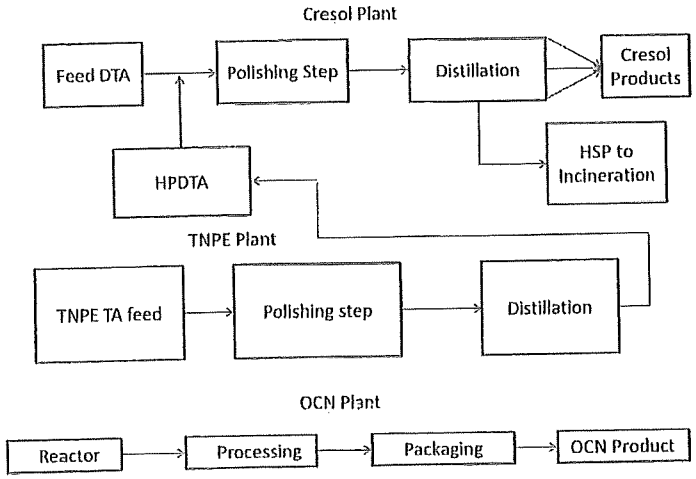


Block Flow Diagram of HSP Incinerator

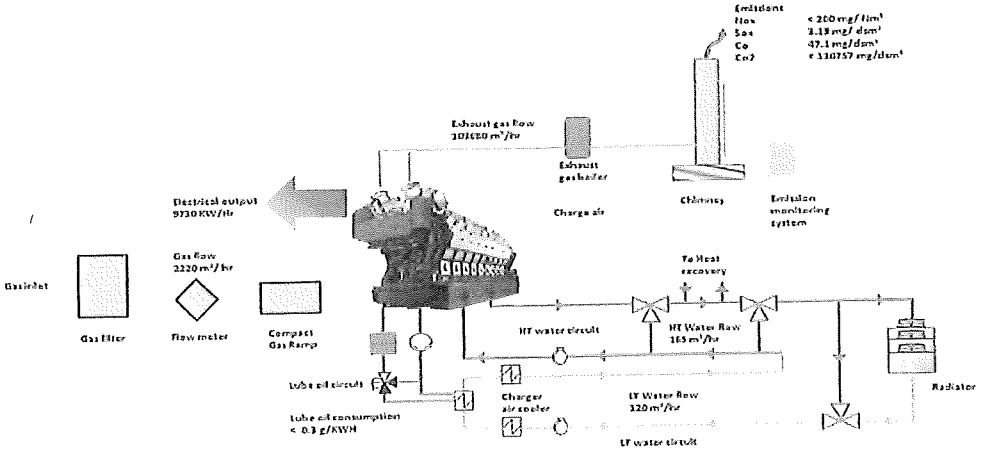


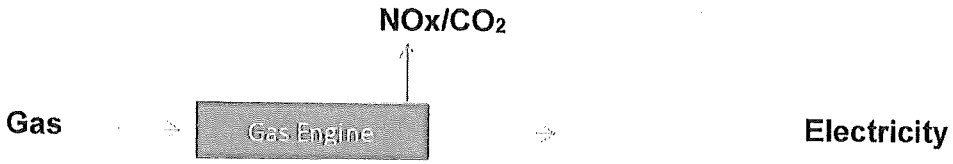
Block Flow Diagram of Spent Caustic Incinerator

Cresol and TNPE



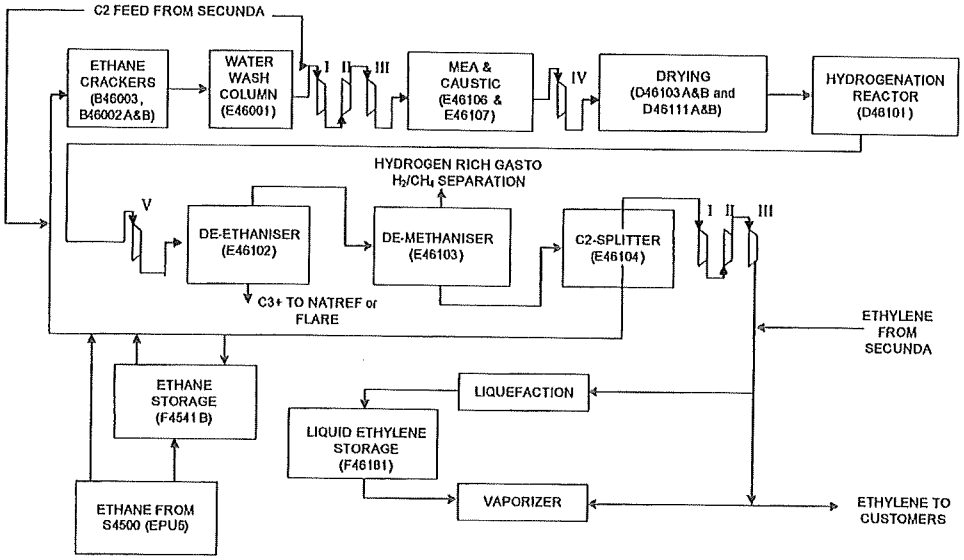
Sasol Gas Engine Power Plant



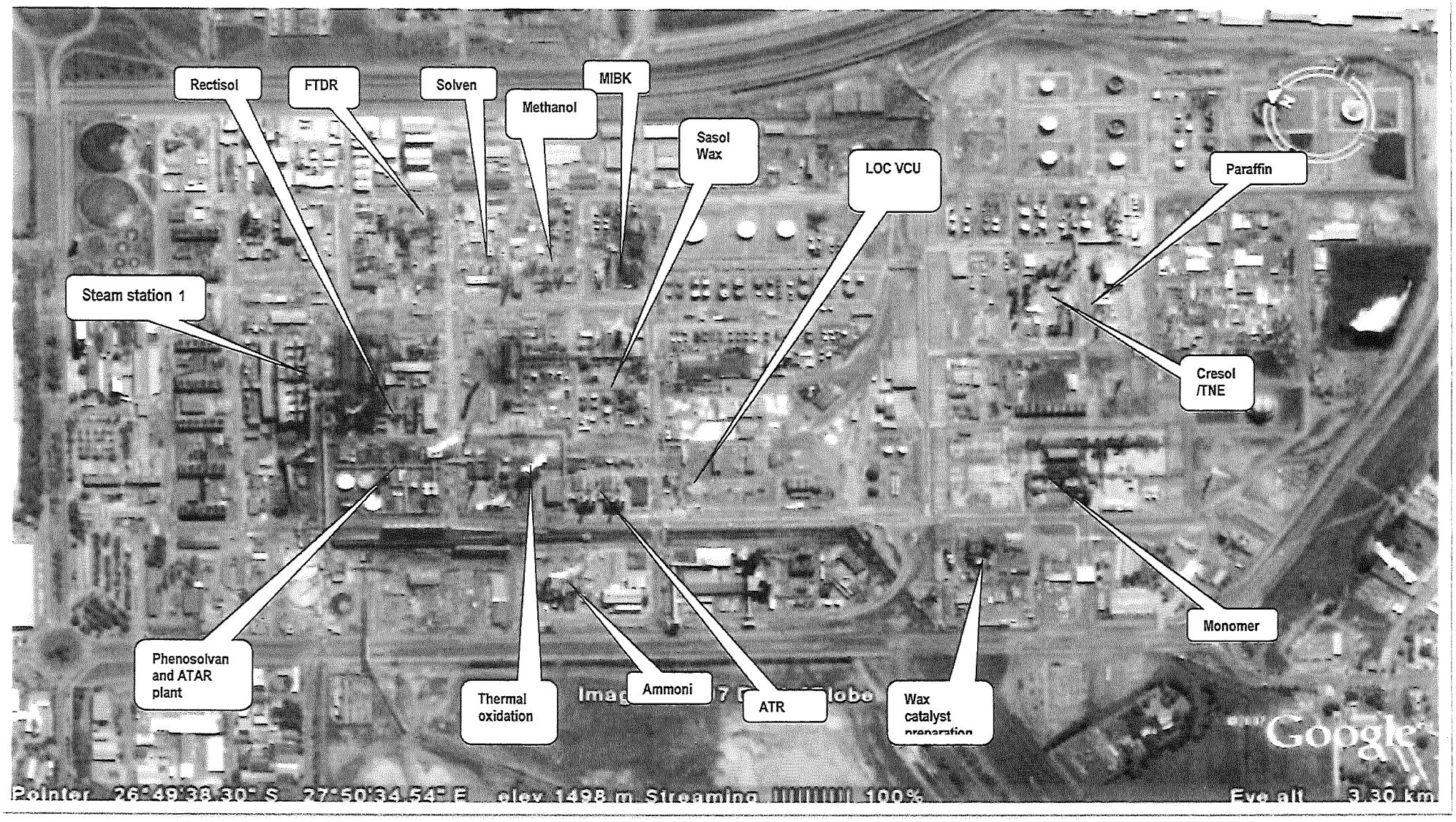


Simple block diagram of Sasol Gas Engine Power Generation Plant layout

Monomers plant



(h) Site layout diagram (plan view and to scale) indicating location of unit processes, plants, buildings, stacks, stockpiles and roads (include true north arrow and scale).


Rectisol
FTDR
Solven
Methanol
MIBK
Sasol Wax
LOC VCU
Paraffin
Steam station 1
Cresol /TNE
Phenosolvan and ATAR plant
Thermal oxidation
Ammoni
ATR
Wax catalyst
Monomer
Google

6. RAW MATERIALS AND PRODUCTS

6.1. Raw materials used

Raw material name	Maximum Permitted Consumption Capacity (Quantity)	Units (quantity/period)
ATR		
[redacted]	[redacted]	kNm³/a
Rectisol		
[redacted]	[redacted]	kNm³/a
Thermal Oxidation		
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	kNm³/a
[redacted]	[redacted]	m³/a
Steam station 1 and Steam station 2		
[redacted]	[redacted]	kt/a
[redacted]	[redacted]	kt/a
[redacted]	[redacted]	kt/a
[redacted]	[redacted]	kt/a
Ammonia		

[redacted]	[redacted]	kNm³/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
Prillan		
[redacted]	[redacted]	t/a
Nitric Acid/Ammonium Nitrate		
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
N-Base, Cresol, Paraffin, ATAR, TNPE and Phenol		
*	*	*
SGEPP		
[redacted]	[redacted]	kg/a
Monomers		
[redacted]	[redacted]	

6.2. PRODUCTION RATES

Product Name	Maximum Production Capacity (Volume)	Units (quantity/period)
ATR		
[redacted]	[redacted]	kNm³/a
Rectisol		
[redacted]	[redacted]	kNm³/a
Thermal Oxidation		
[redacted]	[redacted]	
[redacted]	[redacted]	t/a

[redacted]	[redacted]	t/a
[redacted]	[redacted]	
Steam station 1 and Steam station 2		
[redacted]	[redacted]	Ton/a per boiler
[redacted]	[redacted]	Ton/a per boiler
[redacted]	[redacted]	Ton/a per boiler
Ammonia		
[redacted]	[redacted]	t/a
[redacted]	[redacted]	kNm³/a
[redacted]	[redacted]	kNm³/a
[redacted]	[redacted]	kNm³/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
Prillan		
[redacted]	[redacted]	t/a
Nitric Acid/Ammonium Nitrate		
[redacted]	[redacted]	t/a
[redacted]	[redacted]	t/a
N-Base, Cresol, Paraffins, ATAR, TNPE and Phenol		
[redacted]	[redacted]	[redacted]
SGEPP		
[redacted]	[redacted]	MWh/h
Monomers		
[redacted]	[redacted]	ton/a

By-Product Name	Maximum Permitted Production Capacity (Quantity)	Units (quantity/period)
N-Base, Cresol, Paraffins, ATAR, TNPE and Phenol		
[redacted]	[redacted]	[redacted]

* I.P. – available at Plant

6.3. MATERIALS USED IN ENERGY SOURCES

Materials for Energy Source	Actual Consumption Rate (Quantity)	Units (quantity/period)	Materials Characteristics
[redacted]	[redacted]	t/a	[redacted]
[redacted]	[redacted]	Litres/a	[redacted]
[redacted]	[redacted]	MW	n/a
[redacted]	[redacted]	Nm^3/h	n/a
[redacted]	[redacted]	kg/a	n/a

6.4. SOURCES OF ATMOSPHERIC EMISSIONS

6.4.1. Point source parameters

Point Source code	Source name	Latitude (decimal degrees)	Longitude (decimal degrees)	Height of Release Above Ground (m)	Height Above Nearby Building (m)	Diameter at Stack Tip / Vent Exit (m)	Actual Gas Exit Temperature (°C)	Actual Gas Volumetric Flow (m³/hr)	Actual Gas Exit Velocity (m/s)
ATR and Rectisol (ATR sources)									
1	Fired Heaters ATR A	26.82653	27.84331	65	N/a	3.32	190	794 710	25.5
2	Fired Heaters ATR B	26.82689	27.84069	65	N/a	3.32	190	769 778	24.7
Steam Stations 1&2									
3	SS1 Boiler 4	26.82272	27.84006	75	N/a	2.5	160	260 000	14.7
4	SS1 Boiler 5&6	26.82272	27.84007	75	N/a	2.5	160	505 969	28.6
5	SS1 Boiler 7&8	26.82272	27.84008	75	N/a	2.5	160	505 969	28.6
6	SS2 Boilers 9 to 15	26.82247	27.84853	145	N/a	7.8	160	1 737 413	10.1
Thermal Oxidation									
7	B6930	26.82544	27.84022	40	N/a	1.53	171	173 411	26.2
8	B6993	26.82544	27.84086	40	N/a	1.2	83	52 522	12.9
ATR and Rectisol (Rectisol sources)									
10	Rectisol E stream off gas	26.82272	27.84006	75	N/a	5	Combined with Steam Station 1		
Ammonia and Prillan plant (NAP Plant)									
11	NAP stack	26.82542	27.86047	76	-	1.42	235	90 000	22.3

Point Source code	Source name	Latitude (decimal degrees)	Longitude (decimal degrees)	Height of Release Above Ground (m)	Height Above Nearby Building (m)	Diameter at Stack Tip / Vent Exit (m)	Actual Gas Exit Temperature (°C)	Actual Gas Volumetric Flow (m^3/hr)	Actual Gas Exit Velocity (m/s)
Ammonia and Prillan plant (Prillan sources)									
12	Prill Tower	26.82881	27.84078	85	N/a	1.5	23.9	185 000	28.3
12a	Scrubber Stack 1	26.82881	27.84078	22	N/a	1.0	32	80 000	28
12b	Scrubber Stack 2	26.82881	27.84078	22	N/a	1.0	32	80 000	28
Ammonia plant and Prillan (Ammonia sources)									
13	Benfield tower	26.82644	27.83922	55	N/a	1.5	85	10 179	1.6
Flares (2 x Factory main flare, 1 x ammonia flare, 1 x ammonia storage flare, 1 x N-Base, Cresol, Paraffins, ATAR, TNPE and Phenosolvan flare)									
FMF 1	Factory Main flare 1*	26.82469	27.84078						
FMF 2	Factory Main flare 2*	26.82497	27.83981						
AF 1	Ammonia flare*	26.82639	27.83856						
ASF 1	Ammonia storage flare*	26.4938	27.5126						
CF	N-Base, Cresol, Paraffins and TNPE	26.831706	27.845865						
MF	Elevated Flare (B101)	26.83351	27.84492						
MTF	Tank Flare (B180)	26.83408	27.84626						

Point Source code	Source name	Latitude (decimal degrees)	Longitude (decimal degrees)	Height of Release Above Ground (m)	Height Above Nearby Building (m)	Diameter at Stack Tip / Vent Exit (m)	Actual Gas Exit Temperature (°C)	Actual Gas Volumetric Flow (m^3/hr)	Actual Gas Exit Velocity (m/s)
MGF	Ground Flare (B009)	26.83342	27.84558						
N-Base, Cresol, Phenol and TNPE									
14	Fuel gas furnace	26.83031	27.84717	40	N/a	0.11	98.5	164	4.8
15	SOx scrubber on N-base units	26.83017	27.84686	12	N/a	0.11	124	1 998	58.4
16	Phenosolvan	26.823927	27.839275	30	N/a	0.2	21	1.1	0.60
SGEPP									
17	Exhaust stack	26o49.179'	27o50.863'	27	13	1,224	369	230 000	55
18	Exhaust stack	26o49.179'	27o50.863'	27	13	1,224	369	230 000	55
19	Exhaust stack	26o49.179'	27o50.863'	27	13	1,224	369	230 000	55
20	Exhaust stack	26o49.179'	27o50.863'	27	13	1,224	369	230 000	55
21	Exhaust stack	26o49.179'	27o50.863'	27	13	1,224	369	230 000	55
22	Exhaust stack	26o49.179'	27o50.863'	27	13	1,224	369	230 000	55
23	Exhaust stack	26o49.164'	27o50.890'	27	13	1,224	369	230 000	55
24	Exhaust stack	26o49.164'	27o50.890'	27	13	1,224	369	230 000	55
25	Exhaust stack	26o49.164'	27o50.890'	27	13	1,224	369	230 000	55
26	Exhaust stack	26o49.164'	27o50.890'	27	13	1,224	369	230 000	55
27	Exhaust stack	26o49.164'	27o50.890'	27	13	1,224	369	230 000	55
28	Exhaust stack	26o49.164'	27o50.890'	27	13	1,224	369	230 000	55
29	Exhaust stack	26o49.151'	27o50.916'	27	13	1,224	369	230 000	55
30	Exhaust stack	26o49.151'	27o50.916'	27	13	1,224	369	230 000	55
31	Exhaust stack	26o49.151'	27o50.916'	27	13	1,224	369	230 000	55
32	Exhaust stack	26o49.151'	27o50.916'	27	13	1,224	369	230 000	55
33	Exhaust stack	26o49.151'	27o50.916'	27	13	1,224	369	230 000	55
34	Exhaust stack	26o49.151'	27o50.916'	27	13	1,224	369	230 000	55
Paraffin									
35	Oven B 4701	26.83.058	27.84.625	26	N/a	1	409	18 378	6.5

Point Source code	Source name	Latitude (decimal degrees)	Longitude (decimal degrees)	Height of Release Above Ground (m)	Height Above Nearby Building (m)	Diameter at Stack Tip / Vent Exit (m)	Actual Gas Exit Temperature (°C)	Actual Gas Volumetric Flow (m^3/hr)	Actual Gas Exit Velocity (m/s)
36	Oven B 4702	26.83.058	27.84.625	26	N/a	1	320	18 661	6.6
37	Oven B 4801	26.83.069	27.84.644	26	N/a	1.25	165	23 856	5.4
38	Oven B 4802	26.83.069	27.84.644	26	N/a	1.25	285	30 925	7
Monomers									
39	Steam cracker furnaces, B002A/B	26.832	27.84386	20	N/a	1.8	417	26 978 x 2	5.9
40	Steam cracker furnaces, B003	26.832	27.84386	26.275	N/a	1.2 x 2	200	69 183 (both stacks)	8.5

6.4.2. Area and/or line source parameters

Area Source Code	Source Name	Source Description	Latitude (decimal degrees) of SW corner	Longitude (decimal degrees) of SW corner	Height of Release Above Ground (m)	Length of Area (m)	Width of Area (m)	Emissions Hours	Type of Emissions
1	Old OSBs	Water separation basin	26.82731	27.84106	0	20	15	24 hours	Continuous
2	APIs	Water separation basin	26.83453	27.84419	0	60	50	24 hours	Continuous
3	New OSBs	Water separation basin	26.83283	27.97206	0	100	20	24 hours	Continuous
4	Fine ash dam 5	Solids dams containing fine ash	26.844076	27.816837	40m	880	810	24 hours	Continuous
5	Fine ash dam 4	Solids dams containing fine ash	26.838832	27.82662	50m	709	696	24 hours	Continuous
6	Fine ash dam 3	Solids dams containing fine ash	26.834657	27.833084	40m	780	595	24 hours	Continuous

7. APPLIANCES AND MEASURES TO PREVENT AIR POLLUTION

7.1. Appliances and control measures

Associated Source Code	Appliances			Abatement Equipment Control Technology							
	Appliance / Process Equipment Number	Appliance Serial Number	Appliance Type / Description	Abatement Equipment Technology Name and Model	Abatement Equipment Technology Manufacture Date	Commission Date	Date of Significant Modification / Upgrade	Technology Type	Design Capacity	Minimum Control Efficiency (%)	Minimum Utilisation (%)
3	SS1 Boiler 4	Not available	Boiler4	Walter/ Lurgis	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
4	SS1 Boiler 5	Not available	Boiler5	Walter/ Lurgis	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
	SS1 Boiler 6	Not available	Boiler6	Walter/ Lurgis	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
5	SS1 Boiler 7	Not available	Boiler7	Walter/Lurgis	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
	SS1 Boiler 8	Not available	Boiler8	Walter/Lurgis	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
6	SS2 Boiler 9	Not available	Boiler 9	Walter/Lurgis	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
	SS2 Boiler 10	Not available	Boiler 10	Walter/Lurgis	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
	SS2 Boiler 11	Not available	Boiler 11	Walter/Lurgis	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%

Associated Source Code	Appliances			Abatement Equipment Control Technology							
	Appliance / Process Equipment Number	Appliance Serial Number	Appliance Type / Description	Abatement Equipment Technology Name and Model	Abatement Equipment Technology Manufacture Date	Commission Date	Date of Significant Modification / Upgrade	Technology Type	Design Capacity	Minimum Control Efficiency (%)	Minimum Utilisation (%)
	SS2 Boiler 12	Not available	Boiler 12	Walter/Lurgis	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
	SS2 Boiler 13	Not available	Boiler 13	Walter/Lurgis	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
	SS2 Boiler 14	Not available	Boiler 14	Walter/Lurgis	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
	SS2 Boiler 15	Not available	Boiler 15	Walter/Lurgis	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
8	Thermal Oxidation	Not available	B6930	Not available	Not available	Not available	Not available	Baghouse	Not available	Not available	96%
9	Thermal Oxidation	Not available	B6993	Not available	Not available	Not available	Not available	Venturi Scrubber	Not available	Not available	96%
11	NAP Plant	Not available	Effluent stack	DeNOx reactor	Not available	Not available	Not available	Selective catalytic reduction	Not available	Not available	96%
12	Prillan Plant	Not available	Prill Tower	Not available	Not available	Not available	Not available	Scrubber	Not available	Not available	96%
12a	Prillan Scrubber 1	Not available	Prill Tower	Not available	Not available	Not available	Not available	Scrubber	Not available	99.5	96%
12b	Prillan Scrubber 2	Not available	Prill Tower	Not available	Not available	Not available	Not available	Scrubber	Not available	Not available	96%

Associated Source Code	Appliances			Abatement Equipment Control Technology							
	Appliance / Process Equipment Number	Appliance Serial Number	Appliance Type / Description	Abatement Equipment Technology Name and Model	Abatement Equipment Technology Manufacture Date	Commission Date	Date of Significant Modification / Upgrade	Technology Type	Design Capacity	Minimum Control Efficiency (%)	Minimum Utilisation (%)
15	E4331/01	H2O/Phenol/ Sox Scrubber	Not available	Not available	Not available	Scrubber	2003	N/a	1984kg/h gas	Not applicable	96%
17	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
18	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
19	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
20	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
21	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
22	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
23	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%

Associated Source Code	Appliances			Abatement Equipment Control Technology							
	Appliance / Process Equipment Number	Appliance Serial Number	Appliance Type / Description	Abatement Equipment Technology Name and Model	Abatement Equipment Technology Manufacture Date	Commission Date	Date of Significant Modification / Upgrade	Technology Type	Design Capacity	Minimum Control Efficiency (%)	Minimum Utilisation (%)
24	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
25	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
26	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
27	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
28	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
29	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
30	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
31	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%

Associated Source Code	Appliances			Abatement Equipment Control Technology							
	Appliance / Process Equipment Number	Appliance Serial Number	Appliance Type / Description	Abatement Equipment Technology Name and Model	Abatement Equipment Technology Manufacture Date	Commission Date	Date of Significant Modification / Upgrade	Technology Type	Design Capacity	Minimum Control Efficiency (%)	Minimum Utilisation (%)
32	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
33	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
34	YBA 011	Integrated Oxidation Catalyst	DBAC203277	12/09/2011	Wärtsilä Finland OY	DN 500 – DN2000	14/12/2012	N/A		Not applicable	96%
FMF 1	Factory Main flare 1*	Not available	Factory Main flare 1*	Flare	Not available	Not available	Not available	Flare	Not available	Not available	96%
FMF 2	Factory Main flare 2*	Not available	Factory Main flare 2*	Flare	Not available	Not available	Not available	Flare	Not available	Not available	
AF 1	Ammonia flare*	Not available	Ammonia flare*	Flare	Not available	Not available	Not available	Flare	Not available	Not available	96%
ASF 1	Ammonia storage flare*	Not available	Ammonia storage flare*	Flare	Not available	Not available	Not available	Flare	Not available	Not available	96%

7.2. POINT SOURCE – MINIMUM EMISSIONS STANDARDSAXIMUM EMISSIONS RATES (UNDER NORMAL WORKING CONDITIONS)

Point Source Code	Category	Appliance	Pollutant Name	Maximum Release Rate			Duration of Emissions
				(mg/Nm³)*	Compliance Time Frame	Average Period	
1	Subcategory 2.1: Combustion Installations	ATR A	PM			Hourly	Continuous
				70			
			SO_2				
				1 000			
			NO_X				
				400			
2	Subcategory 2.1: Combustion Installations	ATR B	PM			Hourly	Continuous
				70			
			SO_2				
				1 000			
			NO_X				
				400			
3	Subcategory 1.1: Solid Fuel Combustion Installations	Steam Station 1: Boiler 4	PM	165	01 April 2020 - 31 March 2025	Daily	Continuous
				50	01 April 2025		
			SO_2	2 000	01 April 2020 - 31 March 2025		
				1 000	01 April 2025		
			NO_X	1450	01 April 2020 - 31 March 2025		
				750	01 April 2025		
4	Subcategory 1.1: Solid Fuel Combustion Installations	Steam Station 1: Boilers 5 & 6	PM	165	01 April 2020 - 31 March 2025	Daily	Continuous
				50	01 April 2025		
			SO_2	2 000	01 April 2020 - 31 March 2025		
				1 000	01 April 2025		
			NO_X	1450	01 April 2020 - 31 March 2025		
				750	01 April 2025		
5	Subcategory 1.1: Solid Fuel	Steam Station 1: Boilers 7 & 8	PM	165	01 April 2020 - 31 March 2025	Daily	Continuous
				50	01 April 2025		
			SO_2	2 000	01 April 2020 - 31 March 2025		

	Combustion Installations			1 000	01 April 2025		
			NO_X	1450	01 April 2020 - 31 March 2025		
				750	01 April 2025		
6	Subcategory 1.1: Solid Fuel Combustion Installations	Steam Station 2: Boiler 9 – 15	PM	165	01 April 2020 - 31 March 2025	Daily	Continuous
				50	01 April 2025		
			SO_2	2 000	01 April 2020 - 31 March 2025		
				1 000	01 April 2025		
			NO_X	1250	01 April 2020 - 31 March 2025		
				750	01 April 2025		
7	Sub-category 8.1: Thermal Treatment of Hazardous & General Waste	B6930 (High Sulphur Pitch Incinerator)	PM	100	01 April 2010 - 31 March 2025	Daily	Continuous
				10	01 April 2025		
			CO				
				50	01 April 2025		
			SO_2	3 600	01 April 2020 - 31 March 2025		
				50	01 April 2025		
			NOx (expressed as NO2)	800	01 April 2020 - 31 March 2025		
				200	01 April 2025		
			HCl	10			
			HF	1			
			Sum of Pb, As, Sb, Cr, Co, Cu, Mn, Ni and V.	6	01 April 2020 - 31 March 2025		
				0.5	01 April 2025		
			Hg	0.05			
			Cd & Tl	0.05			
			TOC	15	01 April 2020 - 31 March 2025		
				10	01 April 2025		
			NH_3	10			
			ng I-TEQ /Nm3 under normal conditions of 273 K, 101.3 KPa, 10% oxygen, dry gas and on a daily average basis				
			PCDD/PCDF	0.1			
8	Sub-category 8.1: Thermal	B6993	PM	300	01 April 2020 - 31 March 2025	Daily	Continuous

	Treatment of Hazardous & General Waste	(Spent Caustic Incinerator)		50	01 April 2025		
			CO	1 110	01 April 2020 - 31 March 2025		
				50	01 April 2025		
			SO_2	260	01 April 2020 - 31 March 2025		
				50	01 April 2025		
			NOx (expressed as NO_2)	420	01 April 2020 - 31 March 2025		
				200	01 April 2025		
			HCl	10			
			HF	1			
			Sum of Pb, As, Sb, Cr, Co, Cu, Mn, Ni and V.	20	01 April 2020 - 31 March 2025		
				0.5	01 April 2025		
			Hg	0.05			
			Cd & Tl	0.05			
			TOC	20	01 April 2020 - 31 March 2025		
				10	01 April 2025		
			NH_3	10			
			ng I-TEQ /Nm3 under normal conditions of 273 K, 101.3 KPa, 10% oxygen, dry gas and on a daily average basis				
			PCDD/PCDF	0.1			
10	Sub-category 6: Organics Chemical Industry	Rectisol E stream off gas	VOCs	40 000		Hourly	Continuous
11	Sub-Category 7.2 Production of acids	NAP stack	NOx			Hourly	Continuous
				350			
12	Sub-Category 7.3 Production of Chemical Fertilisers	Prill Tower	Particulates	50		Hourly	Batch
			NH_3			Hourly	Batch
				50			
12a		Scrubber Stack 1	Particulates	50		Hourly	Batch
			NH_3			Hourly	Batch
				50			
12b			Particulates	50		Hourly	Batch

		Scrubber Stack 2	NH_3			Hourly	Batch
				50			
14	Subcategory 2.1: Combustion installations	Fuel gas furnace	PM			Hourly	Continues
				70			
			SO_2				
				1 000			
			NOx				
				400			
15	Subcategory 6: Organic Chemical Industry	SOx scrubber on N-base units	SO_3			Hourly	Continues
				30			
			VOCs	40 000			
16	Subcategory 6: Organic Chemical Industry	Phenol	VOCs	40 000		Hourly	Continuous
17	Subcategory 1.5: Reciprocating Engines	Exhaust stack 1	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
18		Exhaust stack 2	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
19		Exhaust stack 3	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
20		Exhaust stack 4	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
21		Exhaust stack 5	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
22		Exhaust stack 6	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
23		Exhaust stack 7	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			

24		Exhaust stack 8	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
25		Exhaust stack 9	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
26		Exhaust stack 10	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
27		Exhaust stack 11	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
28		Exhaust stack 12	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
29		Exhaust stack 13	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
30		Exhaust stack 14	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
31		Exhaust stack 15	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
32		Exhaust stack 16	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
33		Exhaust stack 17	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
34		Exhaust stack 18	NOx	400		Hourly	Continues
			PM	50			
			SO_2	1 170			
35	Subcategory	Oven B 4701	PM			Hourly	Continues
				70			
			SO_2				

	2.1: Combustion installations		NOx	1 000			
				400			
36	Subcategory 2.1: Combustion installations	Oven B 4702	PM			Hourly	Continues
				70			
			SO_2				
				1 000			
			NOx				
				400			
37	Subcategory 2.1: Combustion installations	Oven B 4801	PM			Hourly	Continues
				70			
			SO_2				
				1 000			
			NOx				
				400			
38	Subcategory 2.1: Combustion installations	Oven B 4802	PM			Hourly	Continues
				70			
			SO_2				
				1 000			
			NOx				
				400			
39	Subcategory 2.1: Combustion installations	Steam cracker furnaces, B002A/B	PM			Hourly	Continues
				70			
			SO_2				
				1 000			
			NOx				
				400			
40	Subcategory 2.1: Combustion installations	Steam cracker furnaces, B003	PM			Hourly	Continues
				70			
			SO_2				
				1 000			
			NOx				
				400			

*: No halogenated components may be combusted in any of the incinerators
Point sources 1 – 9, 14, 35, 36, 37, 38, 39, 40 expressed at 10% O_2, dry gas

Point source 17 – 34 expressed at 15% O_2, dry gas.
Point sources 10 – 12, 15 and 16 expressed under prevailing oxygen conditions, dry gas
Point source – operating requirements

7.2.1 The licence holder must report any non-compliance with the condition stipulated in the license

7.2. 2 Since the licence holder's activities are carried out in a national air pollution priority area (Vaal Triangle Air shed Priority Area), further stricter condition may be introduced should it be found prudent to do so

7.2.3 The licence holder is responsible for ensuring compliance with conditions stipulated in this licence.

7.2.4 All records of compliance and noncompliance must be maintained and be kept for at least five (5) years.

7.2.5 Any abnormalities experienced shall form part of the normal part of the monthly reporting and be forwarded to the licensing authority.

7.2.6 The licence holder must comply with air emissions reporting requirements as stipulated in the listed activities and associated minimum emissions standards in terms of the National Environmental Management: Air Quality Act (39 of 2004) (Government Notice No. 248, Gazette No. 33064 dated 30 March 2010 as amended in Government Notice No.893, Gazette No.37054 dated 22 November 2013)

7.2.7 The licence holder must comply with air emissions monitoring or sampling requirements as stipulated in the listed activities and associated minimum emissions standards in terms of the National Environmental Management: Air Quality Act (39 of 2004) (Government Notice No. 248, Gazette No. 33064 dated 30 March 2010 as amended in Government Notice No.893, Gazette No.37054 dated 22 November 2013). Section 4.3 of the licence should be taken into account should the facility wish to use another sampling method

7.2.8 Due to the extended shut down of the B6993 and B6930 units, a once off extended start-up of 6 months will be allowed per incinerator to allow for calibrations of all online monitoring equipment and stabilisation of the units, after which the conditions as per the above table will apply. The start-up date must be communicated to the Licensing Officer to determine the start of the 6 month period.

7.2.9 Since new abatement technology will be installed on the Thermal Oxidation plant, the first 3 months after the start-up of the newly installed abatement technology will be exempted from the standards as mentioned in Section 7.1 to allow for the stabilisation and optimisation of the units. Subsequently the standards as mentioned in Table 7.1 will apply. Prior notification of the start-up must be sent to the FDDM AQO prior to commencing with the activities.

7.2.10 Since low NOx burners will be installed in the various boilers, the first start-up and stabilisation of the Low NOx burner, after completion of the project, can last for 7 days. Subsequently all standards and start-up, shut down and upset conditions are applicable.

7.2.11 In the case of a limit value exceedance of a parameter not monitored through online monitoring but via a third party, the following shall apply:

- The air quality officer shall be notified within 24-hours from the time that Sasol becomes aware of the exceedance

- Within 14 days after the notification of the air quality officer, a plan on how the facility will manage the upset condition and the plant be brought back into compliance, must be presented to the air quality officer together with a dispersion model, where relevant, for approval.
- On acceptance of the plan with its associated impact, the Air Quality officer will issue a written approval for the implementation of the plan and the necessary reporting and tracking to bring the plant back into compliance
- Failing to adhere to the above mentioned under 7.2.11 or the plan will constitute non-compliance

7.2.12 The license holder must comply with the National Atmospheric Emission Reporting Regulations (Government Notice No.R. 283 of 2 April 2015) and also follow the guidelines provided in the NAEIS reporting guidelines to their annual emissions

7.3. POINT SOURCE OPERATING CONDITIONS (UNDER START-UP, MAINTENANCE AND SHUT-DOWN CONDITIONS)

The following conditions must be adhered to as a minimum during start up, maintenance/upset and shut down conditions:

Should normal start up, maintenance/upset and shutdown conditions exceed a period of 48 hours, Section 30 of the National Environmental Management Act, 1998 (Act No. 107 of 1998), shall apply.

Should normal start up, maintenance/upset and shut down conditions exceed a period of 96 hours for the B6930, B6990 and B6993 point sources, Section 30 of the National Environmental Management Act, 1998 (Act No 107 of 1998), shall apply.

Technical and Engineering testing work will be considered extraordinary maintenance to which conditions in Section 7.2 and normal start-up, shut down and maintenance/upset conditions do not apply. Prior notification must be given to the Air Quality Officer to confirm the start and end date of this testing work.

7.4. POINT SOURCE – EMISSIONS MONITORING AND REPORTING REQUIREMENTS

Point Source Code	Emissions Sampling / Monitoring Method	Sampling Frequency	Sampling Duration	Parameters to be measured	Parameters to be reported	Conditions under which monitoring should be stopped	Reporting Frequency
1	Periodic emission monitoring As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	At least Annually	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Particulate matter, SO_2 and NOx	Particulate matter, SO_2 and NOx	Upon written approval by the Air Quality Officer	Annually
2	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	At least Annually	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Particulates, SO_2 and NOx	Particulates, SO_2 and NOx	Upon written approval by the Air Quality Officer	Annually
3	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Continuous emission monitoring for particulates, SO_2 and NOx	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Particulates, SO_2 and NOx	Particulates, SO_2 and NOx	Upon written approval by the Air Quality Officer	Annually
4	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004)	Continuous emission monitoring for	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004)	Particulates, SO_2 and NOx	Particulates, SO_2 and NOx	Upon written approval by the Air Quality Officer	Annually

	Standards and Regulations (Refer to Schedule A)	particulates, SO_2 and NOx	Standards and Regulations (Refer to Schedule A)				
5	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Continuous emission monitoring for particulates, SO_2 and NOx	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Particulates, SO_2 and NOx	Particulates, SO_2 and NOx	Upon written approval by the Air Quality Officer	Annually
6	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Continuous emission monitoring for particulates, SO_2 and NOx	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Particulates, SO_2 and NOx	Particulates, SO_2 and NOx	Upon written approval by the Air Quality Officer	Annually
7	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Continuous emission monitoring as per Minimum Emission Standards All other parameters, at least annually	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Particulates, SO_2, NOx, CO, HCl, HF, NH_3, Pb, As, Sb, Cr, Co, Cu, Mn, Ni, V, Hg, Cd, Tl, TOC, dioxins&furans	Particulates, SO_2, NOx, CO, HCl, HF, NH_3, Pb, As, Sb, Cr, Co, Cu, Mn, Ni, V, Hg, Cd, Tl, TOC, dioxins&furans	Upon written approval by the Air Quality Officer	Annually

8	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Continuous emission monitoring as per Minimum Emission Standards All other parameters, at least annually	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Particulates, SO_2, NOx, CO, HCl, HF, NH_3, Pb, As, Sb, Cr, Co, Cu, Mn, Ni, V, Hg, Cd, Tl, TOC, dioxins&furans	Particulates, SO_2, NOx, CO, HCl, HF, NH_3, Pb, As, Sb, Cr, Co, Cu, Mn, Ni, V, Hg, Cd, Tl, TOC, dioxins&furans	Upon written approval by the Air Quality Officer	Annually
9	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Continuous emission monitoring as per Minimum Emission Standards, excluding particulates and flow due to the high temperatures All other parameters, including particulates and flow at least annually	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Particulates, SO_2, NOx, CO, HCl, HF, NH_3, Pb, As, Sb, Cr, Co, Cu, Mn, Ni, V, Hg, Cd, Tl, TOC, dioxins&furans	Particulates, SO_2, NOx, CO, HCl, HF, NH_3, Pb, As, Sb, Cr, Co, Cu, Mn, Ni, V, Hg, Cd, Tl, TOC, dioxins&furans	Upon written approval by the Air Quality Officer	Annually

10	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	At least Annually	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	VOCs	VOCs	Upon written approval by the Air Quality Officer	Annually
11	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	At least Annually	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	NOx	NOx	Upon written approval by the Air Quality Officer	Annually
12	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	At least Annually	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Particulates and NH_3	Particulates and NH_3	Upon written approval by the Air Quality Officer	Annually
12a	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	At least Annually	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Particulates and NH_3	Particulates and NH_3	Upon written approval by the Air Quality Officer	Annually

12b	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	At least Annually	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Particulates and NH_3	Particulates and NH_3	Upon written approval by the Air Quality Officer	Annually
14	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	At least Annually	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Particulates, SO_2 and NOx	Particulates, SO_2 and NOx	Upon written approval by the Air Quality Officer	Annually
15	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	At least Annually	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	SO_3 and VOCs	SO_3 and VOCs	Upon written approval by the Air Quality Officer	Annually
16	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	At least Annually	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	VOCs	VOCs	Upon written approval by the Air Quality Officer	Annually

17-34	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	At least Annually	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Particulates, SO_2 and NOx	Particulates, SO_2 and NOx	Upon written approval by the Air Quality Officer	Annually
35 - 40	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	At least Annually	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Particulates, SO_2 and NOx	Particulates, SO_2 and NOx	Upon written approval by the Air Quality Officer	Annually

7.5. AREA AND/OR LINE SOURCE – MANAGEMENT AND MITIGATION MEASURES

Area and/or Line Source Code	Area and/or Line Source Description	Description of Specific Measures	Timeframe for Achieving Required Control Efficiency	Method of Monitoring Measures Effectiveness	Contingency Measures
None					

7.6. ROUTINE REPORTING AND RECORD-KEEPING

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, monthly, report to the licencing 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:

(i) Source code / name;
(j) Root cause analysis;
(k) Calculation of impacts / emissions associated with incidents and dispersion modelling of pollutants, where applicable;
(l) Measures implemented or to be implemented to prevent recurrence; and
(m) 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.

7.7 REPORTING

7.7.1 Annual reporting

The licence holder must complete and submit to the licensing authority an annual report. 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 60 (sixty) days after the end of each reporting period. The annual report must include, amongst others, the following items:

(a) Pollutant emissions trend;

(b) Compliance audit report(s);

(c) Major upgrades projects (i.e. abatement equipment or process equipment); and

(d) Greenhouse gas emissions: Reporting in terms of S43 (1) (i) shall be done in accordance with the Greenhouse Gas Reporting Regulations.

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

7.7.2 Reporting of abnormal releases and emergency responses

The holder must prevent deviations from normal operating conditions that would result in pollution exceeding specified limit values. If any conditions exist that will result in excessive emissions or nuisance must be immediately reported to the Air Quality Officer. Section 30 NEMA incidence must also be reported to the Air Quality Officer within 24 hours. Where excessive emissions occur, which could cause adverse health and environmental impacts or nuisance, urgent corrective measures must be taken by the holder to contain or minimise the emissions through operational interventions.

Remediation, if required shall be carried out to the satisfaction of the licensing authority and/or any other government agencies.

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

The disposal of any waste and effluent arising from the abatement equipment control technology must comply with the relevant legislation and requirements of the relevant authorities.

Unique Stack or Area ID (As per 5.4.1 or 5.4.5 above)	Waste / Effluent Type	Hazardous Components Present	Method of Disposal	Registration / Permit / License Status
4	*Ash*	*None*	*Land filling*	*n/a*
7	*Gypsum*	*None*	*Land filling*	*n/a*
All scrubber liquor and water effluent are treated at the Sasol bio- and water works facility				

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

Failure to comply with any of the licence and relevant statutory conditions and/or requirements is an offence, and licence holder, if convicted, will be subjected to those penalties as set out in section 52 of the AQA.

10. REPORTING OF ABNORMAL RELEASES AND EMERGENCY RESPONSES

The holder must prevent deviations from normal operating conditions that would result in pollution exceeding specified limit values. If any conditions exist that will result in excessive emissions or nuisance must be immediately reported to the Air Quality Officer. Section 30 NEMA incidence must also be reported to the Air Quality Officer within 24 hours. Where excessive emissions occur, which could cause adverse health and environmental impacts or nuisance, urgent corrective measures must be taken by the holder to contain or minimise the emissions through operational interventions. Remediation, if required shall be carried out to the satisfaction of the licensing authority and/or any other government agencies.

11. APPEAL OF ATMOSPHERIC EMISSIONS LICENCE

11.1 The holder of the authorization must notify every registered interested and affected party, in writing and within five (5) working days of the date of issue, of the holder's receipt of this atmospheric emissions licence.

11.2 The written notification referred to in Condition 11.1 above must –

11.2.1 Specify the date on which the atmospheric emissions licence was issued;

11.2.2 Inform interested and affected parties of the appeal procedure provided for in Chapter 7 the GN No R543 of 18 June 2010; and

11.2.3 Advise interested and affected parties that a copy of the atmospheric emissions licence and reasons for the decision will be furnished on request

11.3 An appeal against the decisions contained in this atmospheric emissions licence must be lodged and addressed to: Municipal Manager, Fezile Dabi District Municipality, P.O. Box 10, Sasolburg, 1949, Tel No:016 970 8600, Fax No: 016 973 1582

12. REVIEW

12.1 The authority shall have the right to review the licence continuously within the period as stipulated in clause 1 above or as and when such review is deemed necessary by the Air Quality Officer;

12.2 Such review shall be done as a result of amendments in legislation or by virtue of findings from regular inspections done by the Air Quality Officer;

12.3 The authority shall serve the license holder with a 30(thirty) day notice when such a necessity arises;

12.4 The authority shall under no circumstances be barred by license holder from reviewing the license upon receiving notice of review.