

Fezile Dabl District Municipality John Vorster Road P.O Box 10 Sasolburg, 1947

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Aiming above the horizon

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Atmospheric Emissions Licence Holder: SASOL INFRACHEM

Atmospheric Emissions licence Reference Number: FDDM-MET-2013-23-P1

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 CHEMICAL INDUSTRIES (PTY) LTD in respect of their Sasolburg operations, formerly Infrachem, in terms of section 13of 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 as significant detrimental effects on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage: Part 2 General, Postponement of compliance time frames. In respect of listed activities No's 1.1; 2.1; 8.1; 7.1; 7.2; and 7.3.

The Atmospheric Emissions Licence has been issued on the basis of information provided in the company's application dated 25 March 2013and information that became available during processing of the application.

The Atmospheric Emissions Licence is valid until 31 March 2020.

The Atmospheric Emissions Licence is issued on the basis of information provided in Sasol Infrachem, application for postponement to meet certain minimum emissions in terms of Section 11 of National Air Quality Act: Listed Activities and Minimum Emissions Standards, submitted to the National Air Quality Officer and information that became available during processing of the application.

The reason for issuance of the current licence is varying of the Atmospheric Emission Licence: FDDM-MET-2013-23 to Atmospheric Emission Licence: FDDM-MET-2013-23-P1

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").

Air Quality Officer Signature: ......

(af.t..)f..... AEL No.: FD

### 1. ATMOSPHERIC EMISSIONS LICENCE ADMINISTRATION

Name of the Licensing Authority	Fezile Dabi District Municipality
Atmospheric Emissions Licence Number	FDDM-MET-2013-23
Atmospheric Emissions Licence Issue Date	Date of Signature by Air Quality Officer 30 March 2015
Atmospheric Emissions Licence Type	Final
Review Date, not later than	31 March 2020

### 2. ATMOSPHERIC EMISSIONS LICENCE HOLDER DETAILS

Enterprise Name	Sasol Chemical Industries Pty Ltd
Trading as	N/a
Enterprise Registration Number (Registration Numbers if Joint Venture)	1968/013914/07
Registered Address	1 Sturdee Avenue
	Rosebank
	2149
Postal Address	PO Box 1
	Sasolburg
	1947
Telephone Number (General)	016 960 1111
Industry Sector	Petrochemical Industry
Name of Responsible Officer	Louis Fourie
Name of Emission Control Officer	Ristoff van Zyl
Telephone Number	016 920 4913
Cell Phone Number	083 632 5975
Fax Number	011 219 2438
Email Address	ristoff.vanzyl@sasol.com
After Hours Contact Details	083 632 5975
Land Use Zoning as per Town Planning Scheme	Industrial

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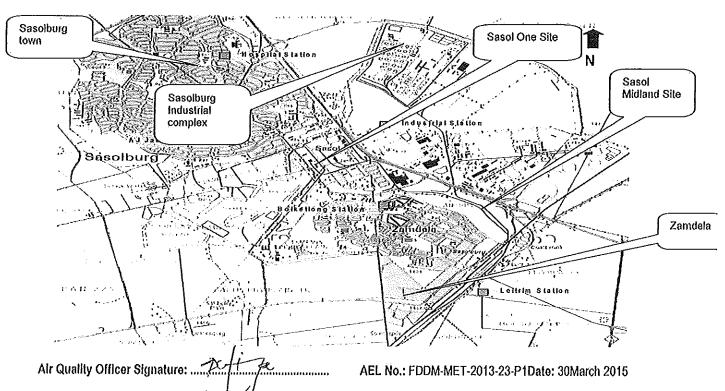
### 3. SITUATION AND EXTENT OF PLANT

### 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 Sallberry Plain, Roseberry Plain Flerewarde and Antrim and subdivision 5 of 4 of Montrose, District of Sasolburg, Free State.
Coordinates of Approximate Centre of	Sasol 1 Latitude: S 26.82678
Operations	Longitude: E 27.84206
Extent	15.51 km²
Elevation Above Mean Sea Level (m)	1 498 m
Province	Free State
District Municipality	Fezile Dabi
Local Municipality	Metsimaholo
Designated Priority Area	Vaal Triangle Priority Area

### 3.2 Description of Surrounding Land Use within 5 km radius

Within a 5 km radius from the Sasol One facility is the town of Sasolburg, a residential area as well as an informal settlement 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.



### Figure 1: Sasolburg Area layout

Within 5 km from the Sasol Midland site is mainly heavy industrial area as well as some farm land and game reserves operated and maintained by Sasol. The Zamdela also falls within the specified radius from the Midland site.

### 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 there under. 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 inform, 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 license holder will be subject to the sanctions set out in section 28 of the NEMA.

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### 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.

A definite offset implementation plan to reduce PM and SO<sub>2</sub> pollution in the ambient / receiving environment is to be presented to the NAQO and licensing authority by 30 June 2015, followed by an appropriate public participation process. The conditions around this will be included as an annexure to this AEL.

### 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 standards after consultation with the holder.

### 4.8 Non- Compliance with Conditions

If the 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

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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

### Steam Stations

Sasol Infrachem 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 assist Eskom by supplying electricity directly into the national grid during peak time periods when Eskom are nearing its maximum generating capacity. Emissions include combustion gasses (SO<sub>2</sub>, SO<sub>3</sub>, NO, NO<sub>2</sub>, Particulates, CO<sub>2</sub> and CO).

### **Auto Thermal Reformers**

Sasol Infrachem 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 startup when they are fired with natural gas. Emissions from the two Fired Heaters are combustion gas products, such as NO, NO<sub>2</sub>, CO and CO<sub>2</sub>. No sulphur compounds are present.

### Rectisol

Sasol Infrachem operates the Rectisol plant on the Sasol One Site. The purpose of the Rectisol plant is "dew point correction" and "CO<sub>2</sub>" 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<sub>2</sub> emitted from the Steam Station 1 stacks.

### Thermal Oxidation

Sasol Infrachem operates a thermal oxidation unit where various waste streams from various business units are thermally oxidized to harmless components. As part of the oxidation process, heat is recovered by means of steam, which supplements the steam supply to the plants from the Steam Stations. Three incinerators are new/old high sulpher pitch incinerators as well as a caustic incinerator. The on high sulpher pitch incinerator have a bag house for particulate emission control, whilst the caustic incinerator have a caustic scrubber to have both SO<sub>2</sub> and particulate matter emission control.

Thermal Oxidation also operates two API storage dams on the Sasol 1 site. Historically a OSB dam was operated but this facility was decommissioned and capped.

### Benfield

Sasol Infrachem operates a Benfield unit as part of the ammonia plant on the Sasol One Site. The Benfield unit 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.

### 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<sub>2</sub>. The NO<sub>2</sub> is fed to a series of absorption columns where nitric acid is formed. The exhaust vent from the second tower, which contains NO<sub>2</sub>, and N<sub>2</sub>O is sent to the de-NOx reactor, where the gas is reduced over a catalyst to nitrogen and oxygen, which is released to atmosphere.

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### **Ammonium Nitrate solution**

Sasol Infrachem 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.

### **Ammonium Nitrate Prill**

Sasol Infrachem operates an ammonium nitrate prillian unit on the Sasol One Site. Aqueous ammonium nitrate is combined with off spec prill in a dissolving tank and then concentrated by means of parallel evaporators. The concentrated liquor is then fed to the top of the prill tower where after it is prayed through the prill nozzles to obtain a desired diameter. The spheres fall inside the prill tower through counter current air flow which cools the droplet and forming the prill. The upward air flow is passed through three scrubbers at the top of the prill plant before it is vented to the almosphere. The prill is fed to drying, cooling and screening units where off spec prill is recycled to the dissolving tank whilst the on spec prill is packaged as the 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.

### Ammonia

Nitrogen from the Air Products plant on site is combined with hydrogen from the Rectisol stream to form ammonia in the ammonia plant. Inert gasses and hydrogen are vented to ammonia flare and combustion gasses (CO<sub>2</sub>, CO, NO<sub>2</sub> and NO) are vented to atmosphere from the super heater.

### 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/Pov	ver Generatio	on (Steam Station	ns 1, 2)	
1	1	1.1	Solid Fuel Combustion installations	Solid fuels (excluding biomass) combustion installations used primarily for steam raising or electricity generation
Auto Theri	nal Reforme	rs (ATR) and Red	tisol	
2	2	2.1	Petroleum Industry	Petroleum industry, the production of gaseous and liquid fuels as well as petrochemicals from crude oil, coal, gas or biomass
Thermal O	xidation			
3 .	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			

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Listed Activity Number	Category of Listed Activity	Sub-category of the Listed Activity	Listed Activity Name		Description of the Listed Activity
4	7	7.1	Inorganic Industry	Chemical	The use of ammonia in the manufacturing of ammonia
5	7	7.2	Inorganic Industry	Chemical	The primary production of nitric acid in concentrations exceeding 10%
Ammonlui	m nitrate solu	ıtlon			
6	7	7.1	Inorganic Industry	Chemical	The use of ammonia in the manufacturing of ammonia
7	7	7.3	Inorganic Industry	Chemical	The manufacturing of ammonium nitrate and its processing into fertilisers
Ammoniur	n nitrate prill				
8	7	7.1	Inorganic Industry	Chemical	The use of ammonia in the manufacturing of ammonia
9	7	7.3	Inorganic Industry	Chemical	The manufacturing of ammonium nitrate and its processing into fertilisers
Ammonia					
10	7	7.1	Inorganic Industry	Chemical	The production of ammonia

### 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 reform gas	Continuous
Membrane separators	Purification of reformed gas	Continuous
Flares	Destruction of gas	Batch
Rectisol	1	
Rectisol	CO <sub>2</sub> removal and dew point correction	Continuous
Water and waste – Thern	nal 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 Causlic Storage F6903	Intermediate storage	Batch
Hydrocarbon Solvents F6963 A/B F6927 B	Intermediate storage	Batch
Sodium Carbonate	Intermediate storage	Batch

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Unit Process	Function of Unit Process	Batch or Continuous Process
F6954		
Caustic F6959 / F6975	Intermediate storage	Batch
B6930 High Sulphu 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	Batch
HOW tank F6938	Intermediate storage	Batch
BFW tank F6939	Intermediate storage	Batch
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	Batch
Steam Stations		
Fuel oil tanks	Holding fuel	Continuous
Coal bunkers/silos	Holding coal	Continuous
15 Boilers	Steam production	Continuous
Feed water tanks	Holding water	Continuous
Resins (HCL, caustic)	Holding chemicals	Continuous
NH₃ tank	Holding ammonia	Continuous
Blow down tank		Continuous
NITRIC ACID(NAP)		
NO reactor	Reaction of NH₃ and air to form NO	Continuous
Absober columns	Absorbtion of NO <sub>2</sub> to HNO <sub>3</sub>	Continuous
De-NOx reactor	Reduction of NOx to O <sub>2</sub> and N <sub>2</sub>	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 NH₄OH solution	Continuous-
Dry section	Drying of prilled NH₄OH	Continuous
Storage	Storage of prilled NH₄OH	Continuous

Function of Unit Process	Batch or Continuous Process
,	
Remove moisture from the CO <sub>2</sub> stream	Continuous
Reacts CO + steam to form H <sub>2</sub>	Continuous
Removal of CO <sub>2</sub> from the process stream	Continuous
Production of LPH <sub>2</sub>	Continuous
N₂ purification	Continuous
Production of NH <sub>3</sub>	Continuous
Demineralized water	Continuous
	Remove moisture from the CO <sub>2</sub> stream  Reacts CO + steam to form H <sub>2</sub> Removal of CO <sub>2</sub> from the process stream  Production of LPH <sub>2</sub> N <sub>2</sub> purification  Production of NH <sub>3</sub>

### 5.4. HOURS OF OPERATIONS

Unit Process / Plant	Operating Hours	No. Days Operation per Year
	(e.g. 07h00 – 17h00)	
ATR	-	
Reformers	24 hours	365
Membrane separators	24 hours	365
Flares	Ad hoc	When required – upsets, start ups and shut downs
Wate	er and waste – 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		
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
NH3 tank	24 hours	365
Blowdowns tank	24 hours	365
NITRIC ACID		I
NO reactor	24 hours	365
Absober columns	24 hours	365

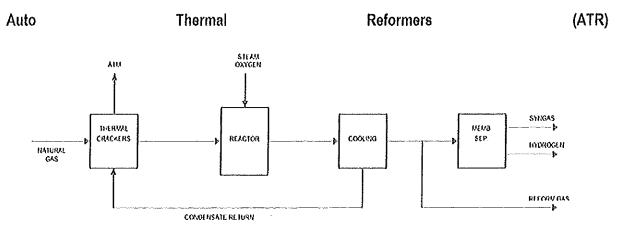
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Unit Process / Plant	Operating Hours (e.g. 07h00 – 17h00)	No. Days Operation per Year
De-NOx reactor	24 hours	365
AMMONIUM NITRATE	<u> </u>	***************************************
AN reactor	24 hours	365
Neutralizer	24 hours	365
AN solution tank	24 hours	365
PRILLAN		
Wet section	24 hours	365
Dry section	24 hours	365
Storage	24 hours	365
AMMONIA		the state of the s
CO <sub>2</sub> capture	24 hours	365
CO-shift	24 hours	365
Benfiled	24 hours	365
PSA	24 hours	365
Ammonia synthesis	24 hours	365
BFW	24 hours	365

### 5.5 GRAPHICAL PROCESS INFORMATION

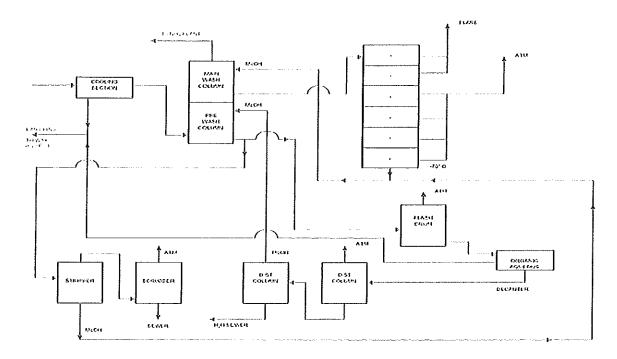
Simplified block diagram with the name of each unit process in a block; showing links between all unit processes or blocks.

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

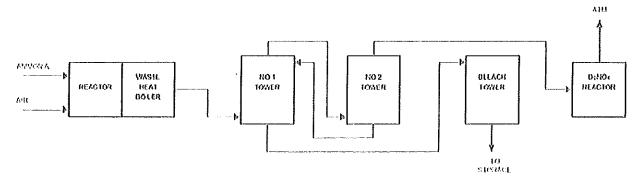


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### Rectisol

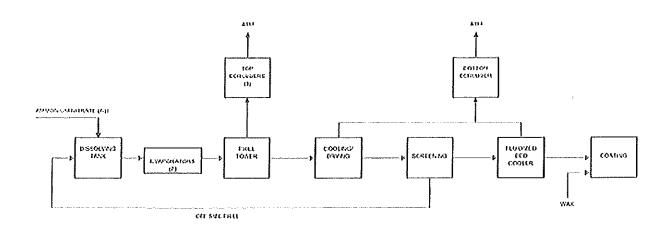


### Sasol Nitro - Nitric Acid Plant

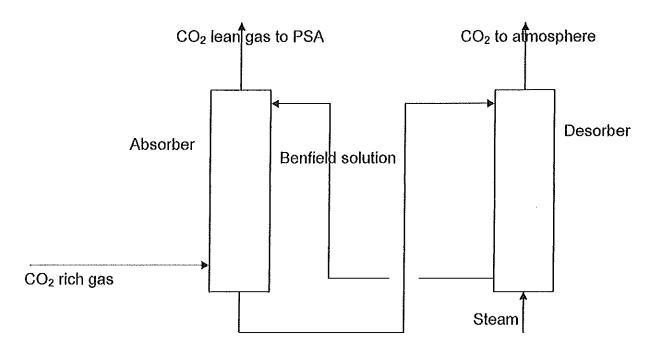


### **Ammonium Nitrate Prillan Plant**

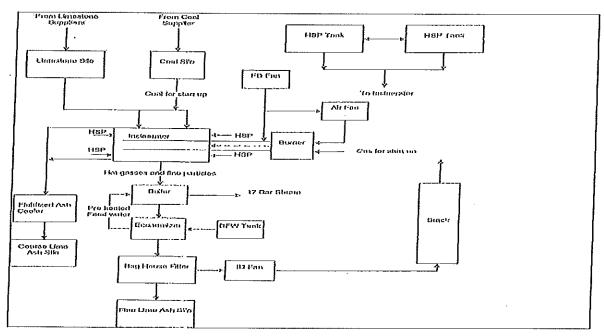
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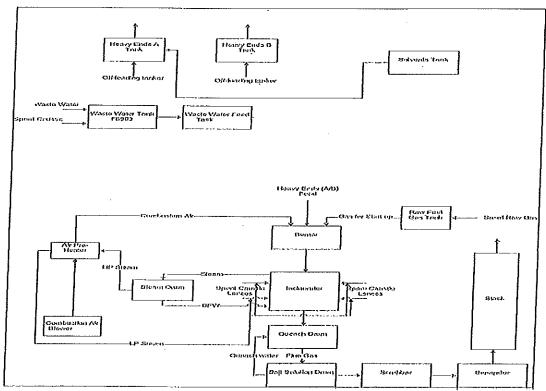
### Benfield Plant:



### **Thermal Oxidation**

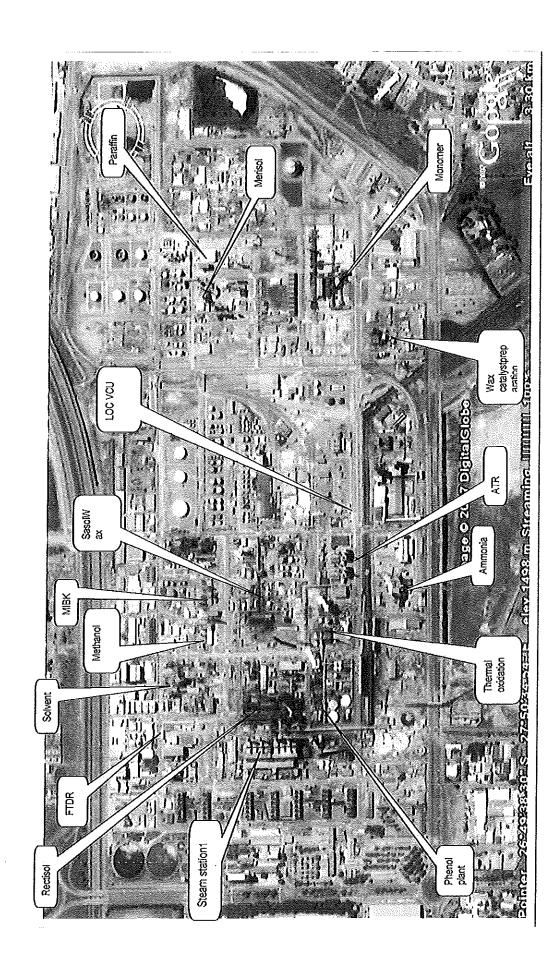


Block Flow Diagram of HSP Incinerator



Block Flow Diagram of Spent Caustle Incherator .

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).



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### 6. RAW MATERIALS AND PRODUCTS

### 6.1. Raw materials used

Raw Material Type	Maximum Permitted Consumption Rate (Quantity)	Units (quantity/period)
ATR		
Natural Gas		Nm³/h
Rectisol		<u> </u>
Gas mixture (CO, H <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub> )	150 000	Nm³/h
Water and waste – Therm	nal oxidation	
Spent Caustic	3.5	tons/year
Organic Solvents	1.5	tons/hour
High Sulphur Pitch	2.5	tons/hour
Organic Solvents	1.0	tons/hour
Limestone	3.0	tons/hour
Organic waste water	2.0	tons/hour
Off- specification waxes	60	tons/ month
Sasol spent catalyst	204	tons/ month
High sulphur pitch	730	tons/ month
Funda filter cake	220	tons/ month
Polyethylene wax	80	tons/ month
Other solid waste	150	tons/ month
High organic waste	400	tons/ month
Pitch/ tar waste Slop oils	150	tons/ month
Steam Stations		
Vater (Steam station 1)	1 304	tons/hour
Vater (Steam station 2)	1 467	tons/hour
Vater (Steam station 3)	255	tons/hour
Coal (Steam station 1)	245.2	tons/hour

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Coal (Steam station 2)	228.2	tons/hour
Coal (Steam Station 3)	35.5	tons/hour
Ammonia		-
Gas mixture (CO, H <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub> )		Nm³/hr
Nitrogen		Nm³/hr
Steam		tons/hour
Prillian		
Ammonia nitrate solution (88%)		tons/day
Nitric Acid/Ammonium N	itrate	
Ammonia	4.1%	tons/day

### 6.2. PRODUCTION RATES

Product Name	Maximum Permitted Production Capacity (Quantity)	Units (quantity/period)
ATR	•	
Reformed gas (CO and H <sub>2</sub> )		Nm³/h
Rectisol		
Gas mixture (CO, H <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub> )	110 000	Nm³/h
Thermal oxidation		
Sodium Carbonate	286.2	m³/day
Steam	20	tons/hour
Gypsum (Oxylime)	3	tons/hour
Catalyst	195	tons/month
Steam Stations		.•
Steam	163	Tons/hour per boiler
Ammonia		
Liquid ammonia		tons/day
H <sub>2</sub>		Nm <sup>3/</sup> hour
Process tail gas		Nm³/hour
Nitrogen		Nm³/h
CO <sub>2</sub>		tons/hour
Ammonia hydroxida		tons/month

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Low pressure steam	tons/hour
Prilled Ammonium Nitrate	
Prilled ammonium nitrate	tons/day
Nitric Acid/Ammonium Nitrate	
Nitric acid	tons/day
Ammonium nitrate	tons/day

By-Product Name	Maximum Permitted Production Capacity (Quantity)	Units (quantity/period)
Catalyst	500	tons/year

### 6.3. MATERIALS USED IN ENERGY SOURCES

Materials for Energy Source	Actual Consumption Rate (Quantity)	Units (quantity/period)	Materials Characteristics
Coal (Thermal Oxidation)	Approx 20 ton per annum for start up of incinerator B6930	<i>t</i> /a	Sulphur content: ±0.5% Ash Content: ±30%
Nitro Electricity	2857247 kWh	kWh	n/a
Infrachem Electricity	1372224247	kŴh	n/a
Process Tail Gas	35 000	Nm³/h	n/a
Start up Oil for bollers	6 000	m³/h	Ash: 0 Sulphur content: ±1.0%

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## 6.4. SOURCES OF ATMOSPHERIC EMISSIONS

### 6.4.1. Point source parameters

	(O	∞	7	THERMAL	တ	On	4	W	STEAM STATIONS	2	<b>&gt;</b>	ATR		Point Source Code
incinerator	Caustic	New HSP incinerator	Old HSP incinerator	IDATIO	SS2 Boiler 1 to	SS1 Boiler 7&8	SS1 Boiler 5&6	SS1 Boiler 4	ATIONS	Fired Heaters ATR B	Fired Heaters ATR A			Source Name
26.82544		26.82544	26.82556		26.82247	26.82272	26.82272	26.82272		26.82689	26.82653		South	Latitude (decimal degrees)
27.84086	,	27.84022	27.84044		27.84853	27.84008	27.84007	27.84006		27.84069	27.84331		East	Longitude (decimal degrees)
40		40	40	And the second s	145	75	75	75		යි	හි		Above Ground (m)	Height of Release
N/a		N/a	N/a		N/a	N/a	N/a	N/a		1			Building (m)	Height Above Nearby
12		1.53	ည်		7.8	2.5	2.5	2.5		3.32 2.32	3.32		Exit (m)	Diameter at Stack Tip / Vent
83		171	570		160	160	160	160		190	190			Actual Gas Exit Temperature (°C)
52522		173411	24811		1737413	505969	505969	260 000		769778	794710			Actual Gas Volumetric Flow (m³/hr)
12.9	•	26.2	3.9		10.1	7.158	7.158	3.7		24.7	25.5		(m/s)	Actual Gas Exit Velocity
	24 Hours	24 Hours	24 Hours		24 Hours	24 Hours	24 Hours	24 Hours		24 Hours	24 Hours			Emissions Hours
	Continuous	Continuous	Continuous		Continuous	Continuous	Continuous	Continuous		Continuous	Continuous		Batch)	Type of Emissions (Continuous /

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Source Code RECTISOL		(decimal degrees) South	(decimal degrees)	of Release Above Ground (m)	Above Nearby Building (m)	at Stack Tip / Vent Exit (m)	Temperature (°C)	Volumetric Flow (m³/hr)	Gas Exit Velocity (m/s)	Hours ·	Emissions (Continuous / Batch)
RECTISOL		South	East	Above Ground (m)	(m)	Exit (m)			(m/s)		Batch)
RECTISOL				(m)							
RECTISOL								And Street S	The state of the s		
	Rectisol E						The state of the s			24 Hours	Continuous
တ	stream off gas	26.82272	27.84006	75	N/a	ڻ.	Combined with Steam Station 1	Steam Station	<u></u>	- 1	
PRILLINIAN	PRILLIN/AMMONIUM NITRATE	ATE						i i i i i i i i i i i i i i i i i i i			Appropriate the same state and a six
10 F	Prill Tower	26.82881	27.84078	85	N/a	.) (5)	23.9	185 000	28.3	24 Hours	Batch
(0	Scrubber stack				N/a			80 000		24 Hours	Ratch
11		26.82881	27.84078	23			32		28	10000	Ç
	Scrubber stack				N/a			80 000		24 Hours	Datch
12 2	2	26.82881	27.84078	22	Š	1	32		28	1000	500
Nitric Acid PLANT	PLANT			•							
13 E	Effluent stack	26.82542	27.86047	75	N/a	ည	215	150 000	24	24 Hours	Continuous

### 6.4.2. Area and/or line source parameters

4 Fine	3 New	2 APIs	1 Old	Area Source Code
Fine ash dam 5	New OSBs		Old OSBs	Source Name
Solids dam containing fine ash	Water basin	Water basin	Water basin	Source Description
Š	separation	separation	separation	scription
26.844267	26.83283	26.83453	26.82731	Latitude (decimal degrees) of SW corner
27.817489	27.97206	27.84419	27.84106	Longitude (decimal degrees) of SW corner
40m	0	0	0	Height of Release Above Ground (m)
1 125	100	60	20	Length of Area (m)
875	20	50	15	Length of Width of Emissions Area (m) Area (m) Hours
24 hours	24 hours	24 hours	24 hours	Emissions Hours
Continuous	Continuous	Continuous	Continuous	Type of Emissions

# APPLIANCES AND MEASURES TO PREVENT AIR POLLUTION

### Appliances and control measures

Associated	Appliances		Military - 1-4 and 1-4	Abatement Eq	Abatement Equipment Control Technology	echnology					
Source Code	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 (%)
ယ	SS1 Bolier 4	Not available	Boiler4	Walter/ Lurgis	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
4	SS1 Bolier 5	Not available	Boiler5	Walter/ Lurgis	Not available	Not available	Not available	Electrostatic precipitators	Not available		96%
	SS1 Bolier 6	Not available	Boiler6	Walter/ Lurgis	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
On	SS1 Bolier	Not available	Boiler7	Walter/Lurg is	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
	SS1 Bolier 8	Not available	Boiler8	Walter/Lurg is	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
6 1 stack 7	SS2 Boiler	Not available	Boiler 9	Walter/Lurg is	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
poilers	SS2 Boiler 2	Not available	Boiler 10	Walter/Lurg is	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
	SS2 Boiler	Not available	Boiler 11	Walter/Lurg is	Not available	Not available	Not available	Electrostatic precipitators	Not available		96%
	4 Boller	Not available	Boiler 12	Walter/Lurg is	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%

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Associated Source Code	Appliances			Abatement Equipment Control Technology	linment Control T						
					arbinear control	eciliology					
	Appliance /	Appliance	Appliance	Abatement	Abatement	Commission	Date of	Technology		Minimum	Minimum
	Equipment	Number	Description	Technology	Equipment Technology	Date	Significant Modification /	Туре		Control Efficiency	Utilisation (%)
	Number			Name and Model	Manufacture Date		Upgrade			(%)	
	SS2 Boiler	Not	Boiler 13	Walter/Lurg	Not available	Not available	Not available	Electrostatic	Not	Not	96%
	1	available		N.			**************************************	precipitators	available	available	
	6 Boiler	Not available	Boiler 14	Walter/Lurg is	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
	SS2 Boiler 7	Not available	Boiler 15	Walter/Lurg is	Not available	Not available	Not available	Electrostatic precipitators	Not available	Not available	96%
Φ	Thermal Oxidation	Not available	New HSP incinerator	Not available	Not available	Not available	Not available	Baghouse	Not available	Not available	96%
9	Thermal Oxidation	Not available	Caustic incinerator	Not available	Not available	Not available	Not available	Venturi Scrubber	Not available	Not available	96%
10	Prillan Plant	Not available	Prill Tower	Not available	Not available	Not available	Not available	Scrubber	Not available	Not available	96%
<u></u>	Prillan Scrubber 1	Not available	Prill Tower	Not available	Not available	Not available	Not available	Scrubber	Not available	99.5	96%
12	Prillan Scrubber 2	Not available	Prill Tower	Not available	Not available	Not available	Not available	Scrubber	Not available	Not available	96%
ထဲ	NAP Plant	Not available	Effluent stack	Not available	Not available	Not available	Not available	Selective catalytic reduction	Not available	Not available	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%

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Appliances		Abatement Eq	uipment Control "	Technology					
Appliance / Appliance Process Serial Equipment Number 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 (%)
Factory Main Not flare 2* available	Factory Main flare 2*	Flare	Not available	Not available	Not available	Flare	Not available	Not available	
Ammonia Not flare* available	Ammonia flare*	Flare	Not available	Not available	Not available	Flare	Not available	Not available	96%
Ammonia Not storage available	Ammonia storage flare*	Flare	Not available	Not available	Not available	Flare	Not available	Not available	96%
	a a Main Ces	ces  ce / Appliance Type ent Number Descript  Main Not Factory available flare 2*  a Not Ammonia available storage fl	ces  ce / Appliance Type / Serial Type / Number Description  Main Not Factory Main available flare 2*  a Not Ammonia available storage flare*	ces  ce / Appliance Type / Serial Type / Number Description  Main Not Factory Main available flare 2*  a Not Ammonia available storage flare*	Appliance Appliance Abatement Equipment Control Toe / Serial Type / Equipment Number Description Technology Name and Manufacture available available available available available available Storage flare*  Appliance Appliance Abatement Equipment Date  Not Abatement Equipment Inchnology Manufacture Date  Not available flare Flare Not available available storage flare*	ce / Appliance   Abatement Equipment Control Technology   Serial   Type   Equipment   Equipment   Equipment   Equipment   Equipment   Equipment   Equipment   Technology   Technology   Technology   Manufacture   Date   Modification / Upgrade    Main   Not   Factory   Main   Flare   Not available   Ammonia   available   flare*   Flare   Not available   Not available	Appliance Serial Serial Serial Number Pescription Pescription Pescription Rame and Ravailable Requipment available Requipment available Requipment Requipment Requipment Requipment Pechnology Requipment Requipm	ces / Appliance Serial Serial Number	ce / Appliance Serial Pent Serial Number

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# 7.2. POINT SOURCE - MMINIMUM EMISSIONS STANDARDSAXIMUM EMISSIONS RATES (UNDER NORMAL WORKING CONDITIONS)

5
Boilers 7 & 8 SO <sub>2</sub>
FuelSteam Station 1: PM
NOx
Boilers 5 & 6 SO <sub>2</sub>
FuelSteam Station 1: PM
NO <sub>x</sub>
Boiler 4 SO <sub>2</sub>
FuelSteam Station 1: PM
NO <sub>x</sub>
SO <sub>2</sub>
Subcategory 2.1: CombustionATR B
NO <sub>X</sub>
SO <sub>2</sub>
Subcategory 2.1: CombustionATR A PM
Appliance Pollutant Name

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			<b>∞</b>														7			
			Treatment of Hazardous &(High														Sub-category 8.1: ThermalB6990			Combustion Installations
:	The state of the s		nalB6930 &(High Sulphur Pitch													j o j	nalB6990 &(Heavv Fnd			Boiler 9 – 15
<u>.</u>	SO <sub>2</sub>	8	NG	Exit gas temperatu 1000°C from 01 Apr	PCDD/PCDF	ng I-TEQ /Nm3 under normal cond 101.3 KPa, 10% oxygen, dry gas average basis	NH3	Toc	Cd & TI	H <sub>0</sub>	Sum of Pb, As, Sb, Cr, Co, Cu, Mn, Ni and V.	带	HCI	NOX (expressed a NO2)	SO2	8	PM	NOx		SO <sub>2</sub>
	1800	50	50	Exit gas temperatures must be between 500°C and 01 April 2020 - 31 March 2018 1000°C from 01 April 2015 to 31 March 2018.	Feed stream analysis.	ng I-TEQ /Nm3 under normal conditions of 273 K, 101.3 KPa, 10% oxygen, dry gas and on a daily average basis	10	25	No visible plume	Feed stream analysis	Sb,No visible plume , Ni	135	10	as360	50	75	No visible plume	1250	2000	3500
	01 April 2015 - 31 March 2018	01 April 2015 - 31 March 2020	01 April 2015 - 31 March 2018	01 April 2020 - 31 March 2018	01 Aprīl 2020 - 31 March 2018		01 April 2015 - 31 March 2020	01 April 2015 - 31 March 2018	01 April 2015 - 31 March 2018	01 April 2015 - 31 March 2020	01 April 2015 - 31 March 2018	01 April 2015 - 31 March 2020	01 April 2015 - 31 March 2020	01 April 2015 - 31 March 2018	01 April 2015 - 31 March 2020	01 April 2020 - 31 March 2025	01 April 2015 - 31 March 2020			
			Daily														Daily			
			Continuous														Continuous			

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10 10 10 11 11 11 12 10 10 10 10 10 10 10 10 10 10 10 10 10									0										
HCI 10 HCI 10 HCI 10 HCI 10 HF 1 Sum of Pb, As, Sb <sub>1</sub> Cr, Co, Cu, Mn, Ni and V. 50 NH <sub>3</sub> 0.05 Cd & TI 0.05  TOC 50 NH <sub>3</sub> 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 PM 180 CCustic CO 1050 NOX (expressed as 420 NO2) HCI 15 HCI 15 Cr, Co, Cu, Mn, Ni and V. Hg 0.05									o. I. Inem f Hazardous	9									
HCI 10 HCI 10 HCI 10 HCI 10 HF 1 Sum of Pb, As, Sb,1 Cr, Co, Cu, Mn, Nij and V. Hg 0.05 Cd & TI 0.05  TOC 50 NH3 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 PM 180 CO 1050 SO2 50 NOX (expressed as420 NOX (expressed as420 NOZ) HCI 15 HCI 15 Un of Pb, As, Sb,22 Cr, Co, Cu, Mn, Nij and V. 100								ator)									-		
10 10 0.05 0.05 0.05 0.05 0.05 0.05 0.1 180 190 190 190 190 190 190 190 19	Cd & T1	H <sub>Q</sub>	Sum of Pb, As, S Cr, Co, Cu, Mn, I and V.	<b>1</b>	HCI	(expressed	SO2	CO	austic PM	PCDD/PCDF	ng I-TEQ /Nm3 to 101.3 KPa, 10% average basis		700	Cd & TI	Hg	ρ Ω,Β	Walter Land	ΗO	NOX (expressed as750 NO2)
	0.05	0.05	b. 22	1.2	15	35420	50	1050	180	0.1	under normal conditions of 273 K oxygen, dry gas and on a daily	10	50	0.05	0.05	L'N		10	as750
	01 April 2015 - 31 March 2020	01 April 2015 - 31 March 2020	01 April 2015 - 31 March 2018	01 April 2015 - 31 March 2018	01 April 2015 - 31 March 2018	01 April 2015 - 31 March 2018	01 April 2015 - 31 March 2020	01 April 2015 - 31 March 2018	01 April 2015 - 31 March 2018	01 April 2015 - 31 March 2020		- 1	01 April 2015 - 31 March 2018	01 April 2015 - 31 March 2020	01 April 2015 - 31 March 2020	01 April 2015 - 31 March 2018	01 April 2015 - 31 March 2020	01 April 2015 - 31 March 2020	01 April 2015 - 31 March 2018
									Continuous										



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NH3 10 01 April 2015 - 31 March 2020  ng I-TEQ /Nm3 under normal conditions of 273 K, 101.3 KPa, 10% oxygen, dry gas and on a daily average basis
ng I-TEQ /Nm3 under normal conditions of 273 K, 101.3 KPa, 10% oxygen, dry gas and on a daily average basis
average basis
PCDD/PCDF 0.1 01 April 2015 - 31 March 2020
10 Sub-Category 7.3: Production PM 50 01 April 2015 - 31 March 2020 Pails Batch
NH <sub>3</sub> 100 01 April 2015 - 31 March 2020 Daily Batch
11 Sub-Category 7.3: Production PM 50 01 April 2015 - 31 March 2020 Daily Batch
NH <sub>3</sub> 100 01 April 2015 - 31 March 2020 Daily Batch
roduction Scrubber stack 2 PM 50 01 April 2015 - 31 March 2020 hair.
AT CHAINCEL CITION
NH <sub>3</sub> 100 01 April 2015 - 31 March 2020 Daily Batch

No halogenated components may be combusted in any of the incinerators

Point sources 1 – 9 expressed at 10% O<sub>2</sub>, dry gas

Point sources 10 – 13 expressed under prevailing oxygen conditions, dry gas

Air Quality Officer Signature:

### Point source - operating requirements

- 7.2.1The 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.
- 7.2.5Any 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

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

The following conditions must be adhered to at minimum during start up, maintenance and shut down conditions:

Should normal start up, maintenance 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.

Air Quality Officer Signature: ...., 70 + 1

### 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 ATRA	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 <sub>2</sub> and NOx	Particulates, SO <sub>2</sub> and NOx	Upon written approval by the Air Quality Officer	Annually
ATR B	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 <sub>2</sub> and NOx	Particulates, SO <sub>2</sub> and NOx	Upon written approval by the Air Quality Officer	Annually
3 SS1, Boiler 4	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 <sub>2</sub> and NOx	Particulates, SO <sub>2</sub> and NOx	Upon written approval by the Air Quality Officer	Annually
SS1 Boiler	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004)	At least annually	As Indicated in the National Environmental Management: Air Quality	Particulates, SO <sub>2</sub> and NOx	Particulates, SO <sub>2</sub> and NOx	Upon written approval by the Air Quality Officer	Annually

		7 B6990	SS2	5 SS1 Boiler 7&8	5&6
	/0 T	-			
Particulates, metals and PCDD/PCDF emissions monitoring as Indicated in the National Environmental Management: Air Quality Act	Hg and PCDD/PCDF: stream analysis	Particulates and metals: Camera monitoring the plume visibility	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	As Indicated in the National Environmental Management Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Standards and Regu (Refer to Schedule A)
als and emissions ted in the ironmental tuality. Act	Feed	metals: plume	the National Management: (39 of 2004) Regulations e A)	ne National lanagement: 9 of 2004) Regulations A)	Regulations A)
Hg and PCDD/PCDF feed stream analysis on a	Camera recording of visibility of stack plume	Particulates and metals: Video	At least annually	At least annually	
	Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	As Indicated in the National Environmental Management: Air Quality	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	As Indicated in the National Environmental Management Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	Act (39 of 2004) Standards and Regulations (Refer to Schedule A)
	SO <sub>2</sub> , NO <sub>3</sub> , CO, HCI, HF, NH <sub>3</sub> , TOC,	PM, PCDD/PCDF metals,	Particulates, SO <sub>2</sub> and NOx	Particulates, SO <sub>2</sub> and NOx	
	SO <sub>2</sub> NO <sub>X</sub> , CO, HCl, HF, NH <sub>3</sub> , TOC	PM, PCDD/PCDF metals.	Particulates, SO <sub>2</sub> and NOx	Particulates, SO <sub>2</sub> and NOx	
		Upon written approval by the Air Quality Officer	Upon written approval by the Air Quality Officer	Upon written approval by the Air Quality Officer	
on a quarterly basis until 1 April 2018	Particulates , metals and PCDD/PCD PCDD/PCD	Annually	Annually	Annually	

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10 Prillian	B6993	B6930	
As Indicated in the National Environmental Management Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	As Indicated in the National Environmental Management Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	(39 of 2004) Standards and Regulations (Refer to Schedule A)
At least Annually	At least annually	At least annually	weekly basis Gaseous pollutants at least annually
As Indicated in the National Environmental Management Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	
Particulates and NH <sub>3</sub>	Particulates, SO <sub>2</sub> , NOx, CO, HCI, HF, NH <sub>3</sub> , Pb, As, Sb, Cr, Co, Cu, Mn, Ni, V, Hg, Cd, Tl, TOC, dioxins&furans	Particulates, SO <sub>2</sub> , NO <sub>X</sub> , CO, HCI, HF, NH <sub>3</sub> , Pb, As, Sb, Cr, Co, Cu, Mn, Ni, V, Hg, Cd, Tl, TOC, dioxins&furans	
Particulates and NH <sub>3</sub>	Particulates, SO <sub>2</sub> , NOx, CO, HCI, HF, NH <sub>3</sub> , Pb, As, Sb, Cr, Co, Cu, Mn, Ni, V, Hg, Cd, Tl, TOC, dioxins&furans	Particulates, SO <sub>2</sub> , NO <sub>X</sub> , CO, HCI, HF, NH <sub>3</sub> , Pb, As, Sb, Cr, Co, Cu, Mn, Ni, V, Hg, Cd, Tl, TOC, dioxins&furans	
Upon written approval by the Air Quality Officer	Upon written approval by the Air Quality Officer	Upon written approval by the Air Quality Officer	
Annually	Annually	Annually	

13 Nitric acid, Bunsen street	12 Prillian Scrubbe r 2	Prillian Scrubbe r 1
<u> </u>	Ō	
As Indicated in the National Environmental Management. Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	As Indicated in the National Environmental Management. Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)
At least Annually	At least Annually	At least Annually
As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	As Indicated in the National Environmental Management: Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)	As Indicated in the National Environmental Management Air Quality Act (39 of 2004) Standards and Regulations (Refer to Schedule A)
NOx	Particulates and NH <sub>3</sub>	Particulates and NH <sub>3</sub>
NO <sub>X</sub>	Particulates and NH <sub>3</sub>	Particulates and NH <sub>3</sub>
Upon written approval by the Air Quality Officer	Upon written approval by the Air Quality Officer	Upon written approval by the Air Quality Officer
Annually	Annually	Annually

### 7.5. 5. AREA AND/OR LINE SOURCE - MANAGEMENT AND MITIGATION MEASURES

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

Air Quality Officer Signature: AST &

### 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:

- (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. REPORTING

### 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.

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

### 7.2Reporting 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 S	asol 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. APPEAL OF ATMOSPHERIC EMISSIONS LICENCE

- 10.1 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.
- 10.2 The written notification referred to in Condition 11.1 above must
  - 10.2.1 Specify the date on which the atmospheric emissions licence was issued;
  - 10.2.2 Inform interested and affected parties of the appeal procedure provided for in Chapter 7 the GN No R543 of 18 June 2010; and
  - 10.2.3 Advise interested and affected parties that a copy of the atmospheric emissions licence and reasons for the decision will be furnished on request
- An appeal against the decisions contained in this atmospheric emissions licence must be lodged, in writing with the: Director: Environmental Health and Emergency Services, Fezile Dabi District Municipality, PO Box 10, Sasolburg, 1949, Tel No:016 970 8600, Fax No: 016 973 1582

### 11. REVIEW

11.1 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;

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- 11.2 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;
- 11.3 The authority shall serve the license holder with a 30(thirty) day notice when such a necessity arises;
- 11.4 The authority shall under no circumstances be barred by license holder from reviewing the license upon receiving notice of review.

Air Quality Officer Signature: