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Department:
Economic Development, Environment, Conservation and Tourism
North West Provincial Government
REPUBLIC OF SOUTH AFRICA



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SUB-DIRECTORATE: AIR QUALITY MANAGEMENT

APPLICATION FORM FOR ATMOSPHERIC EMISSION LICENCE IN RESPECT OF THE NATIONAL ENVIRONMENT MANAGEMENT: AIR QUALITY ACT, 2004 (ACT NO. 39 OF 2004)

Name of enterprise: Astron Energy (Pty) Ltd

Declaration of accuracy of information provided:

Application in terms of Section 37(1)(2)(a)(b), read with the Section 21 of the National Environment Management: Air Quality Act, 2004 (Act No. 39 of 2004).

I, Morné Fortuin, declare that the information provided in this application form is in all respect factually true and correct.

Signed at 5 Century Boulevard, Century City, Cape Town on this 23
 day of January 2020

SIGNATURE

ES Advisor, Team Lead, Retail and C&I

CAPACITY OF SIGNATORY

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Please complete all sections. Mark with an X in spaces where applicable. If the space provided is insufficient, the required information may be submitted in the form of a memorandum. Attach required maps and sketches. Graphics must be clear, labelled and, where applicable, should include a true north arrow and scale. *No fax or copied applications will be accepted*

REASON FOR Application

Application for:

☐	New plant	☐	Change in releases	☐	
☐	Change in production	X	Other, specify: Transfer Application		
X	Renewal	☐			

Date(s) for start of New Activity, Change of Production, etc.	Not Applicable
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Current APPA Registration Certificate number (if applicable):	Not Applicable
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Enterprise Information

Entity Name:	Astron Energy (Pty) Ltd - Kroonstad
Trading as:	Astron Energy (Pty) Ltd - Kroonstad
Type of Entity, e.g. Company/Close Corporation/Trust, etc:	Proprietary Limited
Company/Close Corporation/Trust Registration Number (Registration Numbers if Joint Venture):	1911/001154/07
Registered Address:	5 Century Boulevard, Century City, Cape Town, SA, 8000
Postal Address:	5 Century Boulevard, Century City, Cape Town, SA, 8000
Telephone Number (General):	021-403 7911
Fax Number (General):	021-403 0600
Company Website:	www.astronenergy.co.za
Industry Type/Nature of Trade:	Storage and Handling of Petroleum Products
Name of the Landowner/s or Landlord/s:	Astron Energy
Name of Mortgage Bondholder/s (if any):	Astron Energy
Deeds Office Registration Number of Mortgage Bond:	Not available
Land Use Zoning as per Town Planning Scheme:	Industrial
Land Use Rights if outside Town Planning Scheme:	Industrial

Responsible Person Name:	Hennie Bolton
Responsible Person Post:	SHEQ Specialist
Telephone Number:	011 617 4910
Cell Phone Number:	068 212 3393
Fax Number:	018 464 1150
E-mail Address:	hbaa@astronenergy.co.za
After Hours Contact Details:	068 212 3393
Name of Safety, Health and Environmental Official:	Hennie Bolton

SITUATION AND EXTENT OF PLANT

Location and Extent of Plant

Physical Address of the Licenced Premises:	22 Fabriek Street, Industrial, Klerksdorp, (ERF 1418)
Description of Site (Where No Street Address):	Not Applicable
Property Registration Number (Surveyor-General Code):	Not Applicable
Coordinates (latitude, longitude) of Approximate Center of Operations (Decimal Degrees):	Latitude: -26.899812° Longitude: 26.659780°
Coordinates (UTM) of Approximate Center of Operations:	UTM reference – Grid Zone: North-south: 7024616.00 m S East-west: 466215.00 m E
Extent (km ²):	0.02959 km ²
Elevation Above Mean Sea Level (m)	1312 m
Province:	North West
District/Metropolitan Municipality:	Dr. Kenneth Kaunda District Municipality
Local Municipality:	City of Matlosana Municipality
Designated Priority Area (if applicable):	Not applicable

Description of Surrounding Land Use (within 5 km radius)

Provide a description of the surrounding land use within a 5 km radius, specifically noting the names and proximity of residential and commercial areas in relation to the site of the works.

The Astron Energy Klerksdorp Depot is located on the southern end of Klerksdorp Industrial, which is in an urbanised environment. The closest residential areas to the depot are Ellaton (90 m to the south), Naserhof (380 m to the north), Oudorp (800 m to the northwest) and Boetrand (1.1 km to the east). The Uitkomsdal Agricultural Holdings and the Kanana residential area are located 1.5 km and 3.2 km to the south of the depot. The Klerksdorp Central Business District (CBD) is located 3.5 km to the north of the depot while the Klerksdorp town is 2km to the north of the depot.

The residential areas of Dawkinsville, Pienaarsdorp, Irenepark, Elandia and Collerville are located between 3.3 km and 5 km to the north of the depot. The residential areas of the Roosheuvel and Uraniaville are both located 2.7 km to the northwest of the depot. A large industrial area is also located to the northwest of the depot, between Unraniaville are both located 2.7 km to the northwest of the depot. A large industrial area is also located to the northwest of the depot, between Uraniaville and Feemanville. The residential area of Jouberton is located 4km to the west of the depot.

A water treatment facility is located 3.5 km to the east of the depot and a golf course, 1.8 km to the north. A number of small and large scale mining operations occur to the northeast, east and southeast of the depot. The closest mining activity occurs within 2km and 2.5km to the east and northeast of the depot; while the mining operations to the southeast are 2.5km to 4km away.

Attach map(s), satellite image(s) and/or aerial photograph(s) detailing location of premises in relation to surrounding community.



NATURE OF PROCESS

Process Description

Please provide a detailed description of the entire production process including reference to the overall balance sheet of inputs, outputs and emissions at the site of the works.

The Astron Energy Klerksdorp Depot receives and stores refined fuels, which include diesel, petrol and illuminated kerosene. These fuels are received at the depot by pipeline and road truck from Natref. The fuels are then transported to a network of service stations by road trucks.

The depot has a total storage capacity of 7428 m³ and an annual throughput of 293531 m³. All tanks containing gasoline are equipped with floating roofs. The floating roofs of these tanks are fitted with secondary seals. Due to these emission control measures, total annual emissions are low.

Listed activities

List all listed activities, as specified in the Section 21 of the AQA, proposed to be conducted at the premises in terms of this application:

Listed activity number/category	Listed activity description:
2 – 2.4	Petroleum product storage tanks and product transfer facilities, except those used for liquefied petroleum gas.

List all Scheduled Process(es), as specified in the Second Schedule of the APPA, currently conducted at the premises by the applicant and applicable APPA Registration Certificate Number(s):

APPA Registration Certificate Number:	Date of Registration Certificate:	Scheduled Process Number:	Scheduled Process Description:

Unit Processes

List all unit processes associated with the scheduled processes in operation at the premises by the Registration Certificate Holder, highlighting processes proposed in respect of this application:

Unit Process	Function of Unit Process	Batch or Continuous Process
Storage Tanks	Storage of petroleum products	Continuous
Loading Gantry	Loading of petroleum products into road and rail tankers	Batch

Hours of Operation

Provide the hours of operation of all unit processes associated with the scheduled processes in operation at the premises by the Registration Certificate Holder, highlighting processes proposed in respect of this application:

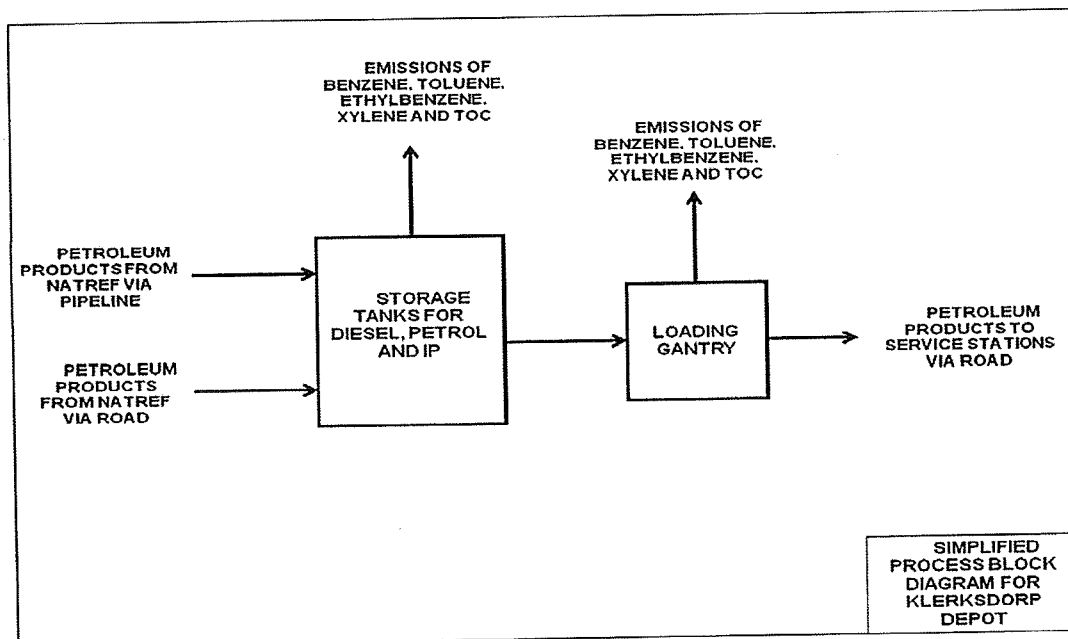
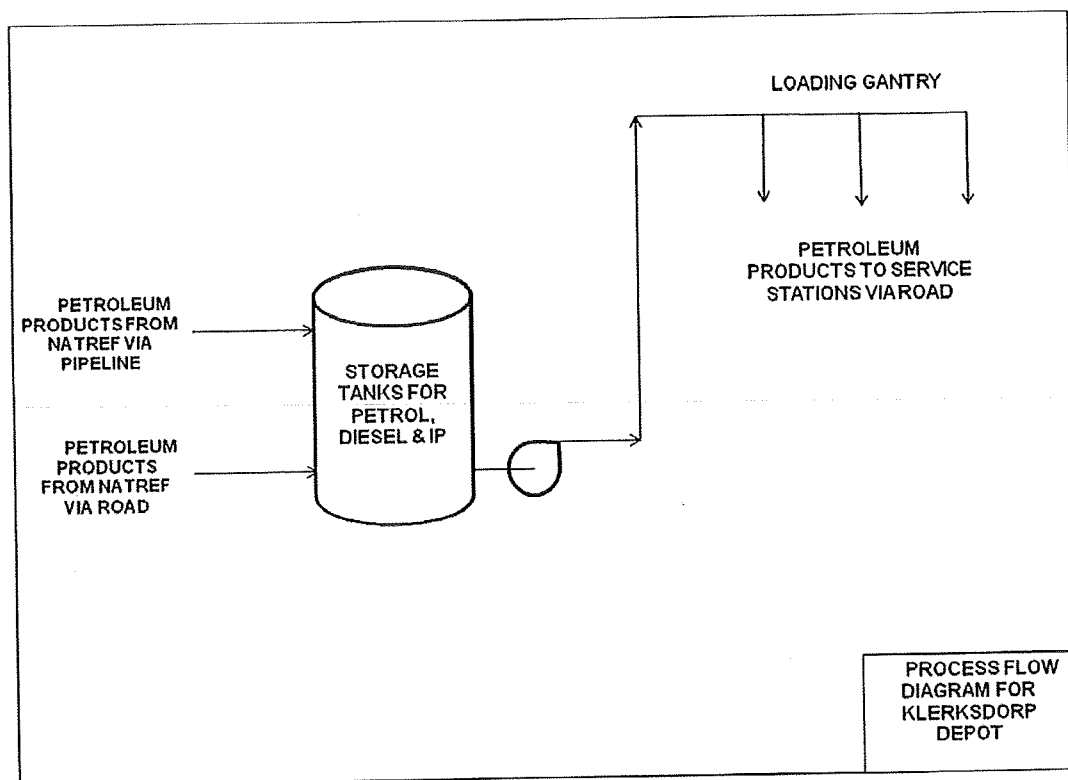
Unit Process / Plant	Operating Hours (e.g. 07h00 – 17h00)	No. Days Operation per Year
Storage Tanks	00:00 – 00:00	365
Loading Gantry	00:00 – 00:00	365

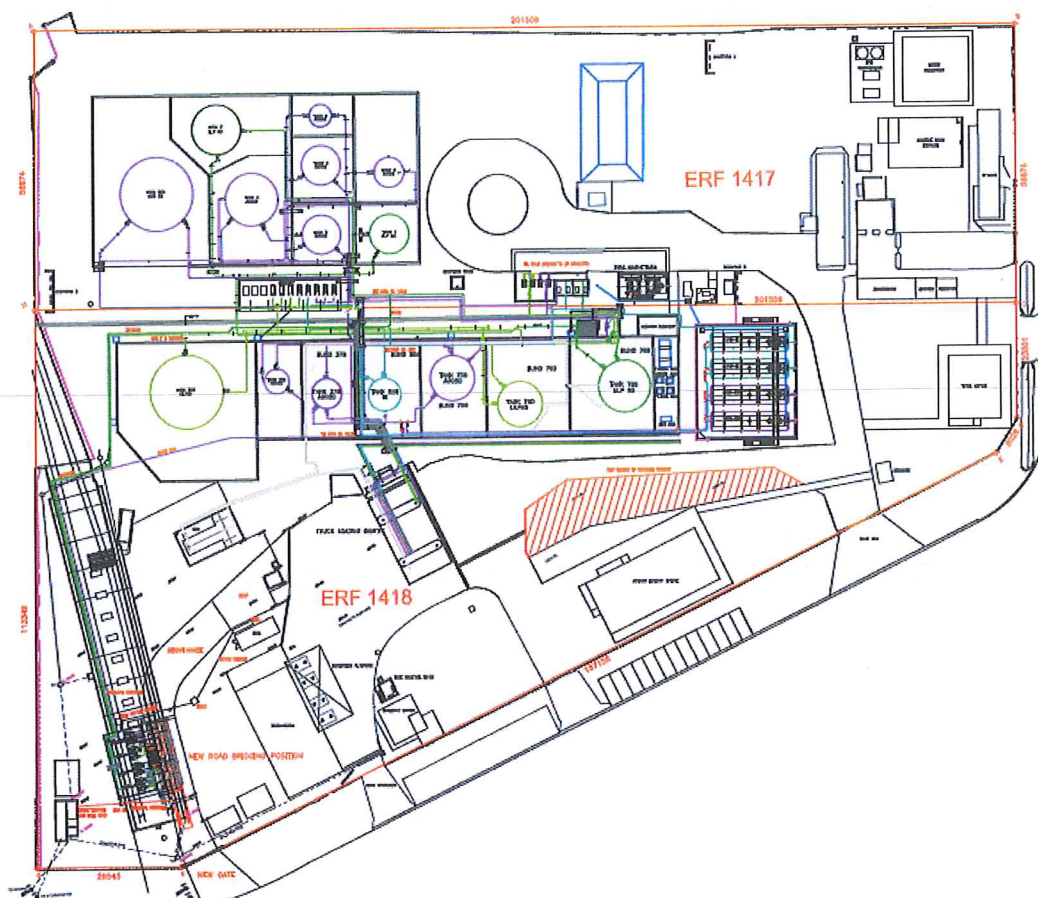
Graphical Process Information

Attach the following for the entire operation being undertaken at the site of the works:

- 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.
- 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).

Indicate clearly on the above graphics the process(es) applied for in this application. Alternatively, provide additional graphics for the process(es) applied for.





RAW MATERIALS AND PRODUCTS

Provide production and by-production rates, raw material information and emissions information.

Raw Materials Used

Not a production facility.

Raw Material Type	Maximum Permitted Consumption Rate (Volume)	Design Consumption Rate (Volume)	Actual Consumption Rate (Volume)	Units (quantity/period)
NA	NA	NA	NA	NA

Production Rates

The depot is not a production facility, but a storage facility. Production in the table below is tank capacities for the terminal.

Petroleum products are transported to the depot via pipelines and trucks from the refinery at Natref. No production activities take place at this site. The production capacities in the table below represent the product throughput that is transported to the site for distribution as estimated for 2012. These volumes will increase annually as dictated by market demand.

Production Name	Maximum Production Capacity Permitted (Volume)	Design Production Capacity (Volume)	Actual Production Capacity (Volume)	Units (quantity/period)
Unleaded Petrol		3470		m ³
Diesel		6456		m ³
Illuminated Kerosene		699		m ³

Energy Sources Used

Energy Source	Sulphur Content of Fuel (%) (if applicable)	Ash Content of Fuel (%) (if applicable)	Maximum Permitted Consumption Rate (Volume)	Design Consumption Rate (Volume)	Actual Consumption Rate (Volume)	Units (quantity/period)
NA	NA	NA	NA	NA	NA	NA

Point Source Parameters

[illegible]

Point Source Emissions

Point Source code	Pollutant Name	Maximum Hourly Release Rate			Maximum Daily Release Rate			Average Annual Release Rate			Emission Hours (e.g. 07h00 – 17h00)	Type of Emission (Continuous / but intermittent / emergency only)
		(mg/Nm ³)	(mg/Am ³)	(g/s)	(mg/Nm ³)	(mg/Am ³)	(tons/day)	(mg/Nm ³)	(mg/Am ³)	(tpa)		
A1 & A2	TOVC from vapour recovery	150									00:00 – 24:00	Continuous
	TOVC from vapour recovery (Non thermal treatment)	40									00:00 – 24:00	Continuous

Point Source code	Pollutant Name	Maximum Hourly Release Rate			Maximum Daily Release Rate			Average Annual Release Rate			Emission Hours (e.g. 07h00 – 17h00)	Type of Emission (Continuous / routine but intermittent / emergency only)
		(mg/Nm ³)	(mg/Am ³)	(g/s)	(mg/Nm ³)	(mg/Am ³)	(tons/day)	(mg/Nm ³)	(mg/Am ³)	(tpa)		

Area Source Emissions

[illegible]

Area Source Emission Estimation Information

Area Source code	Basis for Emission Rates
NA	NA

Spatial Representation of Processes and Sources

Attach site layout diagram(s) (plan view and to scale, include true north arrow and scale) indicating:

- location of unit processes, plants, buildings, stacks, stockpiles and roads.

- location of point and area sources listed with source codes specified.

Indicate clearly on the above graphics the process(es) applied for in this application. Alternatively, provide additional graphics for the process(es) applied for.

APPLIANCES AND MEASURES TO PREVENT AIR POLLUTION

Appliances and Control Measures

Provide information on appliances and measures implemented to prevent air pollution for the entire operation at the site of the works, highlighting information for process(es) proposed in respect of this application.

Appliances				Air Pollution Control Technology								Associated Source Code
Appliance / Process Equipment Number	Appliance Type / Description	Appliance Serial Number	Appliance Manufacture Date	Product Name and Model	Technology Type	Commission Date	Date of Significant Modification / Upgrade	Design Capacity	Nominal Capacity	Permitted Minimum Control Efficiency (%)	Permitted Minimum Utilization (%)	
NA	Internal floating roofs for petrol and jet fuel tanks	NA	NA	NA	Vapour loss prevention	NA	NA	NA	NA	NA	NA	NA
NA	Primary and Secondary seals on all floating roofs	NA	NA	NA	Vapour loss prevention	NA	NA	NA	NA	NA	NA	NA

Appliances				Air Pollution Control Technology								Associate d Source Code
Appliance / Process Equipment Number	Appliance Type / Description	Appliance Serial Number	Appliance Manufact ure Date	Product Name and Model	Technolo gy Type	Commissi on Date	Date of Significan t Modificati on / Upgrade	Design Capacity	Nominal Capacity	Permitted Minimum Control Efficiency (%)	Permitted Minimum Utilization (%)	
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Point Source – Permissible Emission Rates
Provide information on emission rates specified in currently held APPA Registration Certificates (as applicable) for existing operations at the site of the works.

AEL application form

Point Source – Emission Monitoring and Reporting Requirements

Provide information on emission monitoring and reporting requirements specified in currently held APPA Registration Certificates (as applicable) for existing operations at the site of the works.

[illegible]

Point Source code	Emission Sampling / Monitoring Method	Sampling Frequency	Sampling Duration	Parameters to be Measured	Parameters to be Reported	Reporting Frequency	Conditions under which Monitoring could be Stopped

Area Source – Management and Mitigation Measures

Provide information on management and mitigation measures specified in currently held APPA Registration Certificates (as applicable) for existing operations at the site of the works.

[illegible]

Abnormal Releases and Emergency Responses

List potential abnormal releases and associated emergency responses related to the operations at the site of the works, highlight possible releases and responses for the proposed process(es) in respect of the current application.

[illegible]

Environmental Management System

Permit holders are required to establish an Environmental Management System that gives effect to the principle of continuous improvement. The EMS must as a minimum provide for the actions listed below. Specify dates by which the following actions have been / will be taken for the entire operation at the site of the works:

Item	Action	Date Completed / Due Date
1	Identify and quantify potential for environmental impacts	Annual Aspects and Impacts Register
2	Prioritise the identified impacts	Annual Aspects and Impacts Register
3	Identify appropriate preventative and corrective actions	Loss Prevention System
4	Develop responsive management controls, systems and procedures	Emergency Response Procedure
5	Identify improvement projects to be added to the 5-Year Environmental Improvement Programme.	Recommended for ISO 14001 certification Sep 2019.

Ambient Air Pollution Monitoring

List ambient air pollution monitoring activities currently being conducted at the site of the works:

Monitoring Location	Pollutant to be Measured	Monitoring / Sampling Method	Monitoring Frequency	Monitoring Duration	Target	Reporting Frequency	Conditions under which Monitoring could Cease
North	BTEX	Axial passive samplers	Annually	2 weeks	BTEX	Annually	Instructions from the authorities
South	BTEX	Axial passive samplers	Annually	2 weeks	BTEX	Annually	Instructions from the authorities
East	BTEX	Axial passive samplers	Annually	2 weeks	BTEX	Annually	Instructions from the authorities
West	BTEX	Axial passive samplers	Annually	2 weeks	BTEX	Annually	Instructions from the authorities

List ambient air pollution monitoring activities proposed to be conducted for the planned process(es) being applied for (if applicable):

Monitoring Location	Pollutant to be Measured	Monitoring / Sampling Method	Monitoring Frequency	Monitoring Duration	Target	Reporting Frequency	Conditions under which Monitoring could Cease
NA	NA	NA	NA	NA	NA	NA	NA

Energy Conservation Measures

List activities to improve energy utilization and efficiency which are currently implemented at the site of the works, highlighting proposed measures to be implemented in respect of the proposed process(es).

Energy Conservation Measure	Date Implemented / to be Implemented	Target	Date by which to Achieve Target	Progress Monitoring & Reporting Method
NA	NA	NA	NA	NA

Cleaner Production Targets

List cleaner production measures which are currently implemented at the site of the works, highlighting proposed measures to be implemented in respect of the proposed process(es).

Cleaner Production Measure	Date Implemented / to be Implemented	Target	Date by which to Achieve Target	Progress Monitoring & Reporting Method
NA	NA	NA	NA	NA

Routine Reporting and Record-keeping

Complaints Register

Is a complaints register maintained for the operation?

X	Yes	
	No	
	To be initiated, by date:	

In the event that a complaints register is maintained, please provide a synopsis of complaints received over the past 2 years:

Nature of complaints	Actions taken to investigate complaints	Causes of complaints identified	Measures taken to avoid reoccurrences in instances where the
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				plant's operations were found to be the cause
Current year	No complaints received			
Previous year	No complaints received			

Non-compliance with Current Registration Certificate Conditions

If APPA Registration Certificates are currently held, summarise instances of non-compliance with the conditions of such registration certificates which have occurred over the past two years:

Source code / name	Pollutant released	Emission limit exceeded	Root cause analysis	Measures implemented to prevent recurrence	Date by which measures were / will be implemented
NA	NA	NA	NA	NA	NA

DISPOSAL OF WASTE AND EFFLUENTS ARISING FROM AIR POLLUTIN MITIGATION MEASURES

Provide the following information for any waste and effluent arising from any air pollution mitigation measures that are currently in place at the site of the works:

Source code / name	Waste / Effluent Type	Hazardous Components Present	Method of Disposal	Registration / Permit / License Status
NA	NA	NA	NA	NA

Provide information for any waste and effluent which will arise from air pollution mitigation measures proposed for implementation for the process(es) dealt with in this application:

Source code / name	Waste / Effluent Type	Hazardous Components Present	Method of Disposal	Registration / Permit / License Status
NA	NA	NA	NA	NA