GOA STATE POLLUTION CONTROL BOARD

FORM V

(See Rule 14)

Environmental Statement for the financial year ending on 31st March on or before 30th of September every year.

PART A

(i)	Name and address of the owner/ occupier of the industry operation or process	:	N L Vhatte
(ii)	Industry category Primary-(STC Code) Secondary-(STC Code)	:	RED, Coke making , liquefaction, coal tar distillation or fuel gas making
(iii)	Production capacity	:	Mili Liter

Production Name	Production Capacity	Production Unit
Met coke	300000 TPA	Metric Tonnes/Year
Generation of power	35 MW	Megawatt

(iv)	Year of establishment	:	1900
(v)	Date of the last environment statement submitted	:	

PART B

1. Water consumption m3/ d

Process :

Cooling :

Domestic :

Name of products	Process water consumption per unit of product output	
	During the previous financial year	During the current financial year
Metallurgical coke	For coke Quenching 0.66 m3/t coke	For Coke Quenching 0.67 m3/t coke
Power from waste heat of COFG & BFG	0.193 m3 for 1 MWh Power Generation	0.211 m3 for 1 MWH power Generation
WHRPP 2 Cooling Water	1930 m3/day	2100.5 m3/day
WHRPP2 Domestic water	1.96 m3/day	2.0 m3/day
Coke Oven Expansion cooling	484 m3/day	620 m3/day (Including Road Spray)
Coke Oven Expansion Domestic	6.08 m3/day	6 m3/day

2. Raw material consumption

Name of raw materials	Name of products	Consumption of raw material per unit	
		During the previous financial year	During the current financial year
Coking Coal	Metallurgical Coke	1341 kg/T of product	1324.7 Kg/T of product
Waste Heat of coke Oven Flue gas and blast furnace gas	Power	3.248 Mill Kcal for 1MWh generation	3.391 Mil kcal for 1Mwh generation

*Industry may use codes if disclosing details of raw materials would violate contractual obligations, otherwise all industries have to name the raw material used.

PART C

Pollution discharged to environment/ unit of output.

Pollution	Quantity of pollutants discharged(mass/day)	Concentration of pollutants in discharges(mass/volume)	Percentage of variation from prescribed standards with reasons
Water			
Water	No effluent discharged from coke plant	NIL	No variation
Water	Avg. Cooling Tower blow down is 211.77 m3/day	Nil	Nil
Air			
Air	PP2 -Air emission is within permissible limit	NIL	Nil
Air	Coke oven- Flue gas let out is used in Power plant	NIL	NA

PART D
Hazardous Wastes

(as specified under Hazardous Wastes (Management and Handling) Rules, 1989)

Hazardous Wastes	Total Quantity (Kg)	
	During the previous financial year	During the current financial year
(a) From process	N.A	N.A
(b) From pollution control facilities	N.A	N.A

PART E
Solid Wastes

	Total Quantity	
	During the previous financial year	During the current financial year

(a) From process	**Nil**	**Nil**
(b) From pollution control facility	**Nil**	**Nil**
(c)(1) Quantity recycled or re-utilised within the unit	**Nil**	**Nil**
(2) Sold	**NIL**	**NIL**
(3) Disposed	**NIL**	**NIL**

PART F

Please specify the characterization (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes 1. Hazardous Waste: Occupier is authorized to handle used oil/Spent oil (Category 5.1) upto 30,000 liters per annum, Oil soaked cotton rags/wastes (Category 5.2) up to 21,000 kg/Annum, and Used/Discarded Paint Tins (Category 33.3) up to 3,000 nos/Annum.
Total Spent oil was disposed off to authorized recycler for the financial Year 18-19 – 3.78 MT (Approx. 3978.94)
Oil soaked cotton waste disposed for the financial year 2018-2019 –0.059 MT
Paint tins disposed for year 2018-2019 – 1.053 MT (Approx. 400)

Form-4 submitted to GSPCB on 10/06/2019.
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PART G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production 1. The water used for coke quenching is recycled & recirculated, after settling in the tanks.
2. Grit arrestors provided at quench tower.
3. Coke Oven Flue Gas (COFG), having sensible heat, is utilized for generating Clean Power, using Waste Heat Recovery Boiler (WHRB).
4. Air Pollution control devices - Bag filters provided for Coke Screening Plant, Coal Crushing Plant charging machine/ for individual coke ovens along coal cake charging side.
5. Ambient Air Quality monitoring station installed at different places, monitoring is carried out twice a week for all 12 parameters as per NAAQS and reports are submitted to Pollution Control Board on monthly basis.
6. Grit arrestors provided at quench tower.
7. Coke Oven Flue Gas (COFG) having sensible heat, is utilized for generating Clean Power, using Waste Heat Recovery Boiler (WHRB).
8. Continuous Ambient Air Quality Monitoring System (CAAQMS) has been installed at Navelim side to monitor Particulate Matter (PM10 & PM2.5) and same is connected to CPCB on regular basis.
9. Continuous Sound level meter installed to monitor Noise.
10. Windshields have been set up along the coke yard.
11. Continuous Effluent monitoring system connected to Blow down water to measure pH, Temperature & T.S.S.
12. Online dust analyzer connected to Boiler stacks to monitor PM transmitting continuous data to statutory authorities.
13. This is a clean Technology as WHRB PP is designed to operate on waste gases of Coke Oven Plant and the Blast Furnace, to generate Power.
14. The excess Power Generated is evacuated to Goa Electricity (GED) which helps the state of Goa to meet part of Power Requirement.

15. Green belt development through yearly plantation in monsoon.

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PART H

Additional measures/ investment proposal for environmental protection abatement of pollution, prevention of pollution Flue gas from Non Recovery coke ovens are used to generate waste heat recovery power plant. Waste Heat Recovery Based power plant is itself a Clean Process which generates power from waste heat. Rain guns, water tankers and at source dust suppressant fog/mist cannons are used.

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PART I

Any other particulars for improving the quality of the environment • Total of 1100 saplings were planted in the plant premises of Met Coke Division, Coke Oven Plant (Expansion) & Power Plant for the year 2018-19.

• Deployed Dulevo machine on transport road to extract dust in order to control fugitive dust on roads.
• Stakeholder engagement is carried out, by virtue of which, various socio-economic programs on the front of education, health, infrastructure, agriculture & livelihood development for overall community development in Amona and Navelim village has been taken.
Raw Material Cons. for COEP:- 319155 DMT Coal
COEP Production:-240923

WHRPP 2 Raw Material:- 783321 MKCal
WHRPP 2 Production:- 231000 MWh/annum .