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 : Vedanta Ltd. Pig iron Plant

(ii) Industry category Primary-(STC Code) Secondary-(STC Code) : RED, Iron & Steel (involving processing from ore/ integrated steel plants) and or Sponge Iron units

(iii) Production capacity : 292000 Tonnes

Production Name	Production Capacity	Production Unit
pig Iron	292000	Metric Tonne

(iv) Year of establishment :

(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
Pig Iron Process Water	89.65 m3/day	116.427 m3/day
Pig Iron Cooling water	1593.9 m3/day	1748.7 m3/day
Pig Iron Domestic water	92.57 m3/day	91.27 m3/day
Pig Iron Process	0.126 m3/t pig iron	0.153 m3/t Pig Iron
Pig Iron Cooling water	2.24 m3/t Pig Iron	2.30 m3/t pig iron

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
Coke	Pig Iron	623.68 Kg/T of Product	626.97 kg/T of product

Iron Ore	Pig Iron	1048.53 Kg/T of Product	1045.90 Kg/T of Product
Limestone	pig iron	53.19 Kg/T of Product	50.57 Kg/T of Product
Dolomite	Pig Iron	65.8 Kg/T of Product	69.88 Kg/T of Product
Sinter	Pig Iron	626.77 Kg/T of Product	607.14 Kg/T of Product
Quartzite	pig iron	45.84 Kg/T of Product	38.60 Kg/T of Product
Mn Ore	Pig Iron	Nil	Nil
Pilverized coal	pig iron	19.41 Kg/T of Product	34.98 Kg/T of Product

*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	Nil	Nil	Nil
Air			
Air	Nil	Nil	AAQM Monitoring and stack monitoring is done as per CTO and results are submitted to GSPCB.

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	**NA**	**NA**
(b) From pollution control facilities	**NA**	**NA**

PART E
Solid Wastes

	Total Quantity	
	During the previous financial year	**During the current financial year**
(a) From process	**91589160**	**92995930**
(b) From pollution control facility	**4760000**	**7745000**

(c)(1) Quantity recycled or re-utilised within the unit	**Sent to Sinter Plant as raw material**	**Sent to sinter plant as raw material**
(2) Sold	**116468400**	**104692700**
(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) up to 13.5 MT/year; Oil soaked cotton rags/wastes (Category 5.2) up to 5 MT/year, and used discarded paint tins (category 33.3) 15 MT/annum.
Total spent oil disposed for the financial year 2017-18 is 3.64 MT.
Used/Discarded Paint Tins (Category 33.3) for the financial year 2017-18 is 0 Nos.
No oil soaked cotton waste was disposed for FY 2017-18.
Hazardous Waste Authorization is valid up to 1/10/2023.
Annual Returns in Form 4 submitted to GSPCB on 10/06/2019
Total spent oil disposed for the financial year 2018-19 is 3.54 MT. The Used/Discarded Paint Tins disposed was 0.77 MT and oil soaked cotton waste was disposed for FY 2018-19 is 0.039 MT.

2. Sludge: Gas cleaning Plant Water is treated in Settling Pond & Thickener. The Settled solids in thickener & settling pond are removed, dried and sent to Sinter Plant for use as raw material
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PART G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production • Process water is recycled and reused in a closed loop.

• 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.
• Rain guns are also installed in raw material yard to prevent the fugitive dust.
• In addition to rain guns, Fog/Mist cannons have been placed at strategic points to facilitate dust suppression at source itself.
• Also, air quality is monitored inside the plant in raw material area of blast furnaces, coke screening plant, slag drier plant, truck unloader, bag house area, etc.

• An industrial vacuum cleaner, costing Rs.11 lakhs is present for housekeeping. Thus protecting environment, free from pollution.

• Dry fog systems installed for dust suppression in the coke handling area and raw material hoppers and chutes which reduces the dust levels.

• Ladle tilting station de-dusting system has been installed & has resulted in reducing the dust levels of the area.

• A Bag house de dusting system has been installed for Blast Furnace 1.

• Windshields have been installed opposite to PCM Area.

• Wind shield setup is installed along raw material storage yard.
• 30 KLD Sewage Treatment Plant has been installed and is being maintained.
• We have installed facility to use PCI of 70-100 kg/T hot metal which will substitute some coke. This initiative will help to conserve scarce coking coal & consequently reduce GHG emissions.
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PART H

Additional measures/ investment proposal for environmental protection abatement of pollution, prevention of pollution • Work for setting up of Bag house de dusting unit for Blast Furnace 2 has started and the same is expected to be installed very soon.
• Dust and gas analyzers have been installed in Process stacks which is under trial and will be connected to CPCB and SPCB once trial is over.
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PART I

Any other particulars for improving the quality of the environment • About 300 trees have been planted in 2018-19, in the Plant premises.
• Excess BFG is utilized in Goa Energy Ltd. (GEL) boiler to generate clean power, after meeting the in house requirement for stove heating and as a fuel for slag drier plant, etc.
• Roads are cleaned regularly using Road Sweeping machine and tanker water spraying.
• Energy Conservation (ENCON) cell of Pig Iron Division is actively engaged in creating the awareness among employees and adopting various measures for reduction in energy consumption.
• 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 & Betki-Khandola villages have been taken.
In MT Raw material Cons. for Pig Iron
a) Coke 173671.8311
b) Iron Ore 289716.2035
c) Limestone 14091.08258
d) Dolomite 19356.88718
e) Sinter 168178.885
f) quartzite 10692.27025
g) Mn -
h) Pulverized coal 9689.523664

Pig Iron Production (THM):-277001.82 MT
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