

N. N. Nete
26/09/2018

To,
The Member Secretary,
Goa State Pollution Control Board,
Dempo Towers, 1st Floor,
EDC Patto Plaza,
Panaji, Goa

Goa State Pollution Control Board
Opp. Saligao Seminary Date: 19/09/2018
Saligao, Bardez Goa.

Sub: Submission of Environmental Statement for the Financial Year 2017-2018 for
Pig Iron Plant I.

Ref:- Consent To Operate No:-5/364/94-PCB/CI-2355 dated 14/12/2016, Pig Iron Plant I,
Amona, Bicholim-Goa

Sir,
With reference to above subject find enclosed herewith Environment Statement in
Form V for Vedanta Ltd.- Pig Iron Plant I, Amona, Bicholim-Goa for financial year
2017-2018 for your perusal.

Kindly acknowledge the receipt.

Thanking you,

Yours Faithfully,
For Vedanta Limited – Value Addition Business

Recd
N. N. Nete
Nitesh Nirala
Head Pig Iron Division

Encl: as above

FORM V

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING 31ST MARCH 2018

PART--- A

i	Name & address of the owner /occupier of the industry operation or process	Mr. G.R. Arun Kumar The Occupier Vedanta Limited – Pig Iron Division, Amona, Bicholim Goa 403107
ii	Industry category	Major
iii	Production capacity	2,92,000 T / Year Pig Iron
iv	Year of establishment	March 1992
v	Date of last environment statement submitted	24 th September 2017

PART ---- B

Water and Raw Material consumption

(1) Water consumption m³/d

(a)	Process	89.65 m ³ / Day
(b)	Cooling	1593.9 m ³ / Day
(c)	Domestic	92.57 m ³ / Day

	Name of the product	Process water consumption per unit of product out put	
		During previous financial year 2016-17	During current financial year 2017-18
1	Pig Iron	Process Water - 0.06 m ³ /t Pig Iron Cooling Water -1.95 m ³ /t of Pig Iron	Process Water - 0.126 m ³ /t Pig Iron Cooling Water -2.24 m ³ /t of Pig Iron

(2) Raw Material consumption

Name of the Raw Material	Name of the Product	Consumption of Raw Material per unit	
		During previous Financial year 2016-17	During current Financial year 2017-18
	Pig Iron		
a) Coke		637 Kg/T of product	623.68 Kg/T of product
b) Iron Ore		1037 Kg/T of product	1048.53 Kg/T of product
c) Limestone		65.37 Kg/T of product	53.19 Kg/T of product
d) Dolomite		79.77 Kg/T of product	65.8 Kg/T of product
e) Sinter		595.39 Kg/T of product	626.77 Kg/T of product
f) quartzite		45.15 Kg/T of product	45.84 Kg/T of product
g) Mn		0.063 Kg/T of product	----
h) Pulverized coal			19.41 Kg/T of product

The raw material consumption varies depending on the grade of the ore. Due to installation of APH/GPH (air pre-heater/gas pre-heater) at Blast Furnace - 1, there is decrease in the coke consumption rate. Also, Sinter partially replaces iron ore & other raw materials. Sinter was charged in Blast Furnace 1 & 2 from Dec'12 onwards. Depending on availability of grade (%Fe) of iron ore and production plan, sinter & iron ore is changed intermittently

PART-----C

POLLUTION DISCHARGED TO ENVIRONMENT / UNIT OF OUT PUT

	Pollution	Quantity of pollutants discharged (mass/day)	Concentration of pollutants in discharge (mass /day)	Percentage of variation from prescribed standards with reasons
(a)	Water	No effluents is discharged from PID		No Variation
(b)	Air	Monitoring carried out as per Consent conditions and is within permissible limit , and results submitted to GSPCB		

Note:

- (i) During Monsoons, only the storm water is let out through storm water drains after achieving settling in the settling pond.
- (ii) Due to continuous power supply from GEL (Goa Energy Ltd.), DG sets are used in case of extreme emergency only. One 590kVA DG set is installed at Sanquelim for pumping water from Valvonti Bandhara, in case of grid failure.
- (iii) The Blast furnace gas is diverted to waste heat recovery boiler of GEL, to generate clean energy. The Blast Furnace Gas is also used internally as fuel for Hot Blast Stoves, Slag drier and 5 TPH boiler. 19TPH boiler has been scrapped.

PART--- D

HAZARDOUS WASTES

(As specified under Hazardous Wastes (Management, Handling & transboundary movement) Rules, 2008.

		During the previous Financial year (2016-2017)	During the current Financial year (2017-18)
(a)	From process	N.A	N.A
(b)	From pollution control facilities	N.A	N.A

PART--- E

SOLID WASTES

		During the previous Financial year (2016-17)	During the current Financial year (2017-18)
(a)	From Process: (solid waste)	84033.94	91589.16
(b)	From Pollution Control Facility		
	Flue Dust	2752	3693
	Slurry	1155	1067
(c)	(1) Quantity recycled or re-utilized within the unit	Sent to sinter Plant as raw material	Sent to sinter Plant as raw material
	(2) Sold	77357.14	116468.4
	Flue Dust	Nil	Nil
	Slurry	Nil	Nil
	(3) Disposed	Nil	Nil

PART—F

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 2016-17 is 6244.4 Liters (5.62 MT).

Used/Discarded Paint Tins (Category 33.3) for the financial year 2016-17 is 326 nos.

No oil soaked cotton waste was disposed for FY 2016-17.

Hazardous Waste Authorization is valid up to 01/10/2018.

Annual Returns in Form 4 submitted to GSPCB on 27/06/2018

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

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.
- 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, which has reduced 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.
- 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.

PART--H

Additional measures/investment proposal for environmental protection including abatement of pollution, prevention of pollution.

- Proposal for setting up Bag house de dusting unit for Blast Furnace 2 is in place and the same is expected to be installed very soon.

PART—I

Any other particulars for improving the quality of the environment.

- About 450 trees have been planted in 2016-17, 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, as a fuel for slag drier plant, etc.
- Roads are cleaned regularly.
- 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.