

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
WESTERN ZONE, PUNE**

In

APPEAL NO. 18 OF 2022 (WZ)

Pravir Prabhakar Fadte & Ors.Applicants

Vs.

MoEF & ors. ... Respondents

MEMO

MAY IT PLEASE YOUR HONOUR

The Respondent No. 2 is producing on record following documents:

- 1) Vedanta Audit Findings/Personal Hearing Status.
- 2) Consent to Establish Dated 20/01/2023.

It is therefore prayed that the same may be taken on record.

Date: 10/04/2023

Place Panjim Goa



Advocate for Respondent No. 2

GOA STATE POLLUTION CONTROL BOARD

गोंय राज्य प्रदूषण नियंत्रण मंडळ

An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified Board)

Phone Nos : 0832- 2407700,
2407701, 2407702
Tel/Fax No: 0832- 2407700



Email Id's:
Chairman, GSPCB, chairman-gspcb.goa@nic.in
Member Secretary, GSPCB, ms-gspcb.goa@nic.in
Office, mail.gspcb@gov.in

No.12/2022-PCB/1186806/R0009212

Date: 20/01/2023

Consent to Establish under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981

[To be referred as Water Act, Air Act respectively]

Consent to Establish (Expansion) is hereby granted to:

**M/s. VEDANTA LIMITED:-VALUE ADDED BUSINESS
(Represented by: Mr. Saptesh Sardesai)
(Red Category)
(Expansion of the Unit)**

Survey No. 29/1, 31/1, 32, 72, 39, 41, 44/3,44/5,
45 (part), 42/1, 43/1, 54(part), 56/17 (part) of Amona Village
Survey no. 8 (par), 61// (part), 61/3, 62, 63(part),
120/1, 120/2 (part), 177(part), 205(part), 206(part),
207(part) of Navelim Village Bicholim - Goa

Located in the area declared under the provisions of the Water Act, Air Act, subject to the provisions of the Act and the Rules and the Orders that may be made further and subject to the following terms and conditions:

1. The Consent to Establish (Expansion) is valid up to commissioning of the unit or 3 years whichever is earlier.
2. This Consent to Establish (Expansion) is valid for the activity of:

Sr. No	Description	Existing Capacity	Proposed Capacity	Total Capacity (Existing + Proposed)
1.	Pig Iron from BF-1 & BF2	2,92,000 TPA	58,000 TPA (Increase by process improvement)	3,50,000 TPA
2.	Pig Iron from BF3	5,40,000 TPA	1,10,000 TPA (with technology upgradation & process improvement)	6,50,000 TPA
3.	Met coke production	Battery 1: 84 Ovens (non-recovery- 3,22,000 TPA) Battery 2: 72 Ovens (non-recovery- 3,00,000 TPA)	Battery 1: Additional 4 Ovens will be added to achieve existing production	6,22,000 TPA
4.	Fe-Si plant	Nil	7.5 MVA 5000 TPA	7.5 MVA 5000 TPA
5.	Ductile Iron Pipe plant	Nil	3,00,000 TPA	3,00,000 TPA
6.	Oxygen and Nitrogen Plant	1 x 100 TPD Oxygen & 1 x 50 TPD Nitrogen	1 x 150 TPD Oxygen	250 TPD Oxygen (1 x 100 TPD and 1 x 150 TPD) 50 TPD Nitrogen

3. **CONDITIONS REQUIRED TO BE COMPLIED UNDER THE WATER ACT:**

- (i) The additional daily quantity of industrial effluent from the unit shall not exceed **NIL**
- (ii) The additional daily quantity of domestic effluent from the unit shall not exceed **250 KLD**

(iii) **Sewage Treatment Plant:**

The establishment shall install additional sewage treatment plant (30 KLD capacity) of MBBR technology, as proposed, consisting of primary treatment comprising of Bar screen & oil & grease trap, secondary treatment comprising of aeration / MBR reactor & clarifier tank and tertiary treatment comprising of pressure sand filter & activated carbon filter as is warranted with reference to influent quality and operate & maintain the same continuously so as to achieve the quality of the treated effluent to the following standards:

pH	Between	5.5 & 9.0
Suspended Solids	Not to exceed	Not more than 20
BOD, 3 days, 27° C	Not to exceed	10 mg/l
COD	Not to exceed	50 mg/l
Oil & Grease	Not to exceed	10 mg/l
NH4-N	Not to exceed	5 mg/l
N-total	Not to exceed	10 mg/l
Fecal Coliform	Less than	100 MPN/100 ml

(iv) **Sewage and Effluent Disposal:**

The treated effluent from the Sewage Treatment Plant should be used for quenching/ operations and if used for gardening then the effluent should meet the standards prescribed at 3(iii).

- (v) The remaining domestic waste water shall be treated in a properly designed septic-tank and discharged on land for percolation through soak-pit of adequate size within the premises.

- (vi) The unit should empty septic tank and soak pit periodically through night soil tankers for safe disposal and submit the copies of the receipts to the Board on regular basis.
- (vii) A good house-keeping shall be maintained within the factory premises. All pipes, valves and drains shall be maintained in leak-proof condition. Floor washings shall be maintained to the effluent collection system only and shall not be allowed to find way in open areas.

(viii) **Non-Hazardous Solid Waste:**

All the Solid wastes arising in the premises shall be properly classified and disposed off to the satisfaction of the Board. The total quantity shall be segregated and treated as follows:

Sr. no.	Type of segregated solid waste	Quantity	Disposal
1.	Iron scrap	25,000 TPA	Sold to foundry units for re-melting and re-use
2.	Slag	88,830 TPA	Sold to cement industry and partly used in sinter plant and partly in road making
3.	Waste core sand	10,000 TPA	Construction fill/road bases/ land fill/ reused in cast house of B.F
4.	Magnesium oxide waste	20 TPA	Re-used in the sinter plant
5.	Cement slurry	10,500 TPA	Internally used for road laying
6.	Fe-dust collected from bag filter	1250 TPA	Re-used in the sinter plant
7.	Flue dust	10,000 TPA	Recycled through sinter plant

- (ix) The applicant should upload monthly statement (below format) regarding the solid waste generation online.

Sr. No.	Date	Quantity of wet/dry waste	Name of agency the wet/dry waste	Authorized signatory

- (x) The unit should ensure spraying of water on stacked ore and the roads.
- (xi) The unit should ensure that no storm water should enter the adjoining water bodies directly.
- (xii) The unit shall install/ establish machinery /equipment/facility for converting bio- degradable / organic waste generated from the unit to compost so as to meet the standard for compost prescribed in the Solid Waste Management Rule, 2016.
- (xiii) The unit should have zero discharge policy. i.e, the treated waste water may be re-used in process- green belt development / or any other use as deemed fit by the unit with due permission from the Board.

4. **CONDITIONS REQUIRED TO BE COMPLIED UNDER THE AIR ACT:**

- (i) The coke oven flue gases shall be utilized in waste heat recovery Boiler for generation of power.
- (ii) The Stack Port Hole and Platform is to be designed as per CPCB guidelines Method 1 Part 1 of Stack Monitoring – Material & methodology for isokinetic sampling.

- (iii) The unit shall take adequate measures for control of noise levels from its own sources within the premises. The limits are as follows.

Category of Area/ Zone	Limits in dB (A) Leq	
	Day time	Night time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Day time is reckoned between 6 a.m. to 10 p.m. and night time is reckoned between 10 p.m. to 6 a.m.

- (iv) The unit shall operate and maintain all Continuous Online Ambient Air Quality Monitoring system in the premises and Online Stack Monitoring System for the applicable stacks and the data so generated should be available to GSPCB and CPCB servers.
- (v) Adequate mitigation measures shall be taken to control emission of SO₂, NO₂, PM_{2.5} RSPM. Applicant shall achieve following Ambient Air Quality standards:

Sr. No.	Pollutant	Time weighted	Concentration in Ambient Air	
			Industrial residential rural & other area	Ecologically sensitive area (notified by Central Government)
1.	Sulphur Dioxide (SO ₂), µg/m ³	Annual* 24 hours**	50 80	20 80
2.	Nitrogen Dioxide (NO ₂), µg/m ³	Annual* 24 hours**	40 80	30 80
3.	Particulate Matter (size less than 10 µm) or PM ₁₀ µg/m ³	Annual* 24 hours**	60 100	60 100
4.	Particulate Matter (size less than 2.5 µm) or PM _{2.5} µg/m ³	Annual* 24 hours**	40 60	40 60
5.	Ozone (O ₃) µg/m ³	8 hours** 1 hour**	100 180	100 180
6.	Lead (Pb) µg/m ³	Annual* 24 hours**	0.50 1.0	0.50 1.0
7.	Carbon Monoxide (CO) mg/m ³	8 hours** 1 hour**	02 04	02 04
8.	Ammonia (NH ₃) µg/m ³	Annual* 24 hours**	100 400	100 400
9.	Benzene (C ₆ H ₆) µg/m ³	Annual*	05	05
10.	Benzo (a) Pyrene (BaP) – particulate phase only, ng/m ³	Annual*	01	01
11.	Arsenic (AS), ng/m ³	Annual*	06	06
12.	Nickel (Ni) ng/m ³	Annual*	20	20

*Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

** 24 hourly or 8 hourly or 1 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

- (vi) The unit shall maintain and operate continuous Ambient Air Quality Monitoring System transfer the data to the Board sever and CPCB server.
- (vii) The SMS/email alerts will be sent to the unit if found to be non-complying to the standards prescribed in Consent. In case the unit is found to be non-complying for three consecutive occasions, necessary action will be initiated.

5 GENERAL CONDITIONS:-

- (i) The applicant shall not change or alter the quantity, the rates of discharge, temperature and the mode of disposal of the effluent without previous written permission of the Board.
- (ii) The applicant shall provide facilities for collection of the samples to the Board staff.
- (iii) The unit shall discharge the treated effluents preferably on land for irrigation/ gardening/ lawn within their own premises or re-use after suitable treatment.
- (iv) Stack heights for a (Diesel generator set(s) shall be as follows:
 - (a) Diesel Generator set(s): The minimum height of the stack to be provided with each generator shall be as per the formula $H = h + \sqrt[3]{KVA}$ where H = total height of the stack in meters, h = height of the building in meters where the generators is installed and KVA = total generator capacity of the set in KVA.
 - (b) The generator shall be installed in a closed area with a silencer and suitable noise absorption systems so as to comply with the ambient noise level standards as mentioned below:
 - (c) The ambient noise level shall not exceed 75 dB (A) at a distance of 5 meters from the source.
- (v) The applicant shall provide ports in the chimney / stack and facilities such as ladder, platform etc. as per the directions of Pollution Control Board for monitoring the air emissions and the same shall be open for inspection and use the Board's staff. The chimney / stack attached to various sources of emissions shall be designated by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
- (vi) The unit shall implement the following Rules and Regulations notified by the Ministry of Environment and Forests, Govt. of India.
 - a) Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016; as amended thereafter.
 - b) Manufacture, storage and Import of Hazardous Chemicals Rules, 1989;
 - c) Rules for the Manufacture, Use, Import and Storage of Hazardous Micro-organism/- Genetically Engineered Organisms or Cell, 1989.
- (vii) There shall not be any perceptible odour outside the industrial premises.
- (viii) All the Rules and Regulations notified by the Ministry of Environment and Forests, Govt. of India in respect of noise pollution control measures shall be followed to avoid nuisance to public.
- (ix) Notwithstanding anything contained in this conditional letter of consent, the Board hereby reserves its right and powers under section 27(2) of the Water (Prevention and Control of Pollution) Act 1974 and under section 21(4) of the Air (Prevention and Control of Pollution) Act 1981 to review any or all the conditions imposed hereby.
- (x) Any change in the details made after the submission of the application/ after obtaining the Consent to Establish shall be brought to the notice of the Board immediately.

- (xi) This Consent to Establish is granted without any prejudice to any other permission(s) required under any laws, bye – laws and regulations in force. This Consent to Establish is confined to matters out of the Air Act and Water Act only.
- (xii) The unit should obtain permission from the Forest Department/ Wild Life Board wherever applicable.
- (xiii) Reliable flow meter shall be installed to maintain record of water consumption / waste water consumption per day. This records so maintained shall be made available to the Board officials whenever required.
- (xiv) The unit/ generator shall be responsible for safe and scientific collection, transportation, treatment and disposal of Bio-Medical Waste as per the provisions made under the Bio-Medical Waste (Management & Handling) Rules, 1998. Any activity as defined under BMW (M&H) Rules has to obtain a separate Authorization from Goa State Pollution Control Board.
- (xv) The unit should obtain all permissions / approvals as required under the prevalent Rules / Acts in force.
- (xvi) The unit shall apply for Consents to Operate of the Board as required under section 25(1) (b & c) of the Water (Prevention and Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention and Control of Pollution) Act, 1981 in the prescribed application form, 45 days before commissioning of the plant.
- (xvii) The unit shall bear the cost of analysis / monitoring in case of complaints received by the Board / re inspections due to non- compliances observed by the Board & Monitoring carried by the Board.
- (xviii) The unit shall submit the details of the Public Liability Insurance Policy under the PLI Act 1991, to the Board office as applicable.
- (xix) The unit shall submit returns for disposal of batteries under the Batteries (Management & Handling) Rules 2001, if applicable.
- (xx) The unit shall submit returns for disposal of e-waste under the E- Waste Management Rules 2016, as amended thereafter, if applicable.
- (xxi) The unit shall submit returns for disposal of plastic under the Plastic Waste Management Rules 2016, as amended thereafter, if applicable.
- (xxii) The applicant shall comply to the guidelines and DUST Mitigation measures in handing Construction material and C and D waste issued by Central Pollution Control Board and are placed on Board website goaspcb.gov.in.
- (xxiii) The import, stocking, distribution, sale and use of use of plastic, including polystyrene and expanded polystyrene, commodities as per the Plastic Waste Management Rules 2016, as amended thereafter, shall be prohibited with effect from the 1st July, 2022.
- (xxiv) The unit has to obtain no objection certificate from the Central Ground water Authority, or the concerned State authority for any ground water abstraction, if applicable.

- (xxv) The unit shall comply with all the conditions stipulated in the Environmental Clearance.
- (xxvi) The Consent to Establish is granted subject to the condition that the unit has to comply to the Audit findings prior to obtaining Consent to Operate of the Board.

To,
M/s. VEDANTA LIMITED:-VALUE ADDED BUSINESS
 Amona, Navelim, Sanquelim,
 Bicholim - Goa

Copy to:- 1 Accounts Section 2 Concerned File 3 Guard File

Received Consent fee of: The capital Investment of the unit is Rs. 701,00,00,000/-

Challan no.	Amount	Date
2380353678	Rs. 160400.00/-	04/02/2022
2415143898	Rs.1042300.00/-	25/03/2022

DR
SHAMILA
MONTEIRO
 Digitally signed
 by DR SHAMILA
 MONTEIRO
 Date: 2023.01.20
 15:34:21 +05'30'
 (Dr. Shamila Monteiro)
 Member Secretary
 Goa State Pollution Control Board

Goa State Pollution Control Board

QEHS-CIE-F(06-03)

CUSTOMER FEEDBACK

Dear Citizen / Customer,

We appreciate you for sparing a few minutes for giving us your valuable feedback on our services

Name : Contact

Address:.....
.....

Email: Date

Name of the service availed:

Are you aware that service standards are included in the Citizen's Charter as available on Board's website :www.goaspcb.gov.in?

Yes No

If yes, is the Citizen Charter simple and easy to understand?

Yes No

Description of service delivery parameters (Consents/Authorisation/RTI's/Complaints etc.)	Excellent	Good	Fair	Average	Poor	Reason for grading
Time taken to deliver service in comparison to service standards mentioned in Citizen's Charter						
Quality of service (accuracy, completeness)						
Knowledge of dealing hand / staff regarding services/schemes						
Courtesy of staff						
Board's response in view of your query/requirement is to your satisfaction						
Date of your visit to the office and your overall experience						

Suggestions for improvement, if any
.....

Signature & date

To,
The Member Secretary,
Goa State Pollution Control Board,
Near Pilerne Industrial Estate, Opposite Saligao Seminary, Saligao, Bardez, Goa. 403511

❖ Please note that your feedback is considered essential for overall improvement and development of Board functions in service of environment.

Near Pilerne Industrial Estate, Opp.- Saligao Seminary, Saligao-Bardez Goa-403511

VEDANTA AUDIT FINDINGS/ PERSONAL HEARING STATUS

As directed the undersigned, Mr. Prathmesh Gauns Dessai (JEE) inspected Vedanta limited Navelim, Bicholim-Goa for the compliance with respect to environmental audit on 05/04/2023.

Sr. No.	Audit personal hearing recommendations	Verification on (19/01/2023)	Verification on (05/04/2023)
1	Treatability study to select proper polyelectrolyte and standardise the dosing to increase the efficiency of thickener to be completed by May 2022. Impact Assessment on the ecosystem of Mandovi River due to Cooling tower bleed water discharge shall be conducted. Monitoring shall be conducted 100m upstream and 100m downstream from the point of discharge during high tide and nip tide once every month.	Complied	Complied
2	The APCD installed with the existing units shall be upgraded to meet the Particulate Matter Emission Norms of 30 mg/Nm ³ . The Particulate Matter Emission Norms from Sinter Plant shall not exceed 50 mg/Nm ³	Design is completed. (new baghouse BF-1) Installation is under progress. Letter issued to maintain PM from Sinter as per consent (100 mg/Nm ³)	BF-1) Bag house installed and commissioned
3	Technical assessment of CEMS installed shall be conducted with regards to their suitability to monitor low level PM emissions. The study shall be completed before May 31 st 2022 and based on the outcome of the study replacement of CEMS found not suitable, will be undertaken and	Technical Assessment has been completed Installation is under process.	Installation completed and data is communicated with the GSPCB

	completed by December 31 st 2022		
4	Isokinetic sampling for APCD should be completed in 2 months i.e before April 30 2022. Assessment of APCDs once a year.	Performance evaluation report of APCDs submitted.	Performance evaluation report of APCDs submitted.
5	Suitable manpower shall be in place to validate the data and ensure that uninterrupted data is displayed on the electronic display board at 3 gates.	Complied	complied
6	Area of all stock piles shall be demarcated and plan submitted to the Board. Garland drains with catch pits shall be provided around stock piles to ensure no carryover of the material. Storm water Final Settling Pond provided before discharge of storm water shall be lined.	Complied	complied
7	The up gradation / modifications of secondary hood for control of fugitive emission from BF-1 shall be completed by December 31st, 2022 ongoing.	Installation is under progress. To be complied (31/12/2022)	BF-1) Bag house installed and commissioned
8	Correctness of 3rd party analysis report shall be ensured and analysis of trend maintained	Complied	Complied
9	The Green Belt along the plant boundary near BF-1 & BF-2 towards Amona and Navelim villages shall be strengthened by September 2022.	Plantation has been carried out. As submitted Hard rock area – 1110 nos. Other green belt – 450 nos. In community – 1850 nos.	Plantation has been carried out. As submitted Hard rock area – 1110 nos. Other green belt – 450 nos. In community – 1850 nos.
	Additional 260m of Wind shield at BF1 and BF2	Complied	Complied

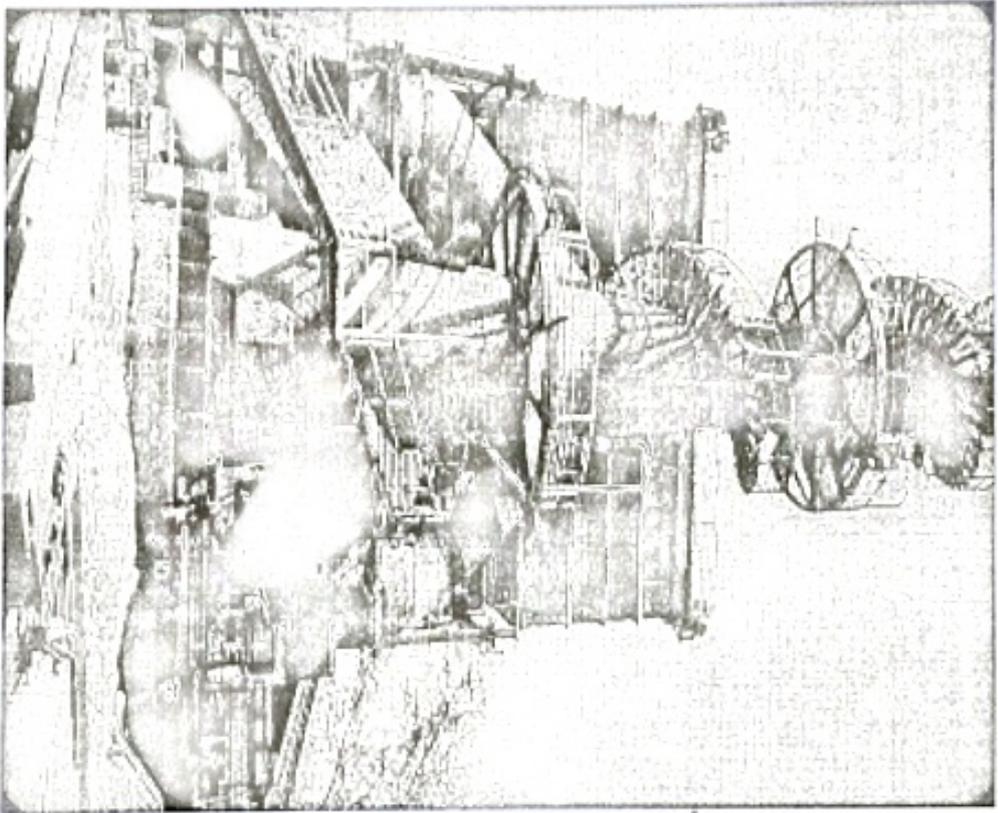
	shall be completed by March 2022.		
A	Graphite issue and complaints: One Manual Air quality monitoring station shall be established towards Amona and Navelim villages in consultation with Goa SPCB and ambient air quality monitored as per CPCB norms.	Complied	Complied
B	6.38Km internal plant road shall be asphalted/black topped by April 2022	Complied	Complied
C	AAQMS: 1 Additional Manual and 1 CAAQMS shall be installed in consultation with Goa SPCB	Manual AAQMS is already installed and is in operation and for Continuous AAQMS site has been identified and installation is under process.	Complied
D	Monitoring at Mosque and Siddhartha Caves at Tar Surla:- Ambient Air Quality shall be monitored once a month preferably during November to April.	Complied	Complied
E	All the legacy stored slag shall be disposed by May, 2022. Covered storage for slag storage shall be completed by May 31 st 2022. The maximum onsite storage of slag shall not exceed more than the 3 months of slag generation.	Complied	Complied
F	For Ambient Air Monitoring Station: Monitoring of Benzo(a)pyrene shall be initiated at all the monitoring locations.	Complied	Complied

Name of the Inspecting Official:


 Mr. Prathmesh Gauns Dessai (JEE)

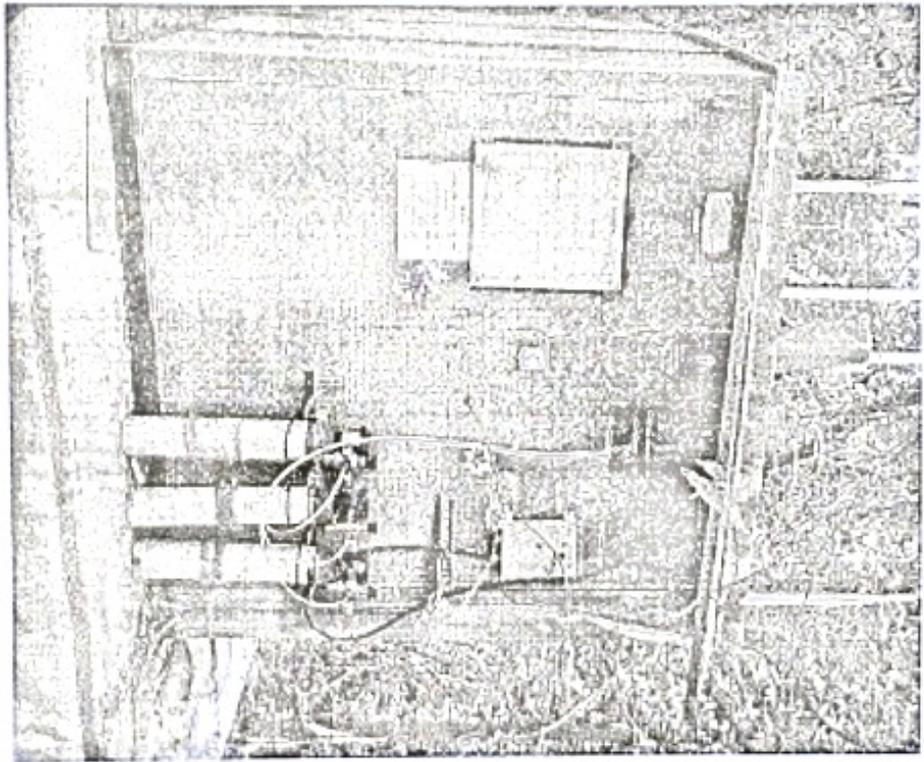
*Goa State Pollution Control Board
Saligao-Cas*

Photos for reference:-



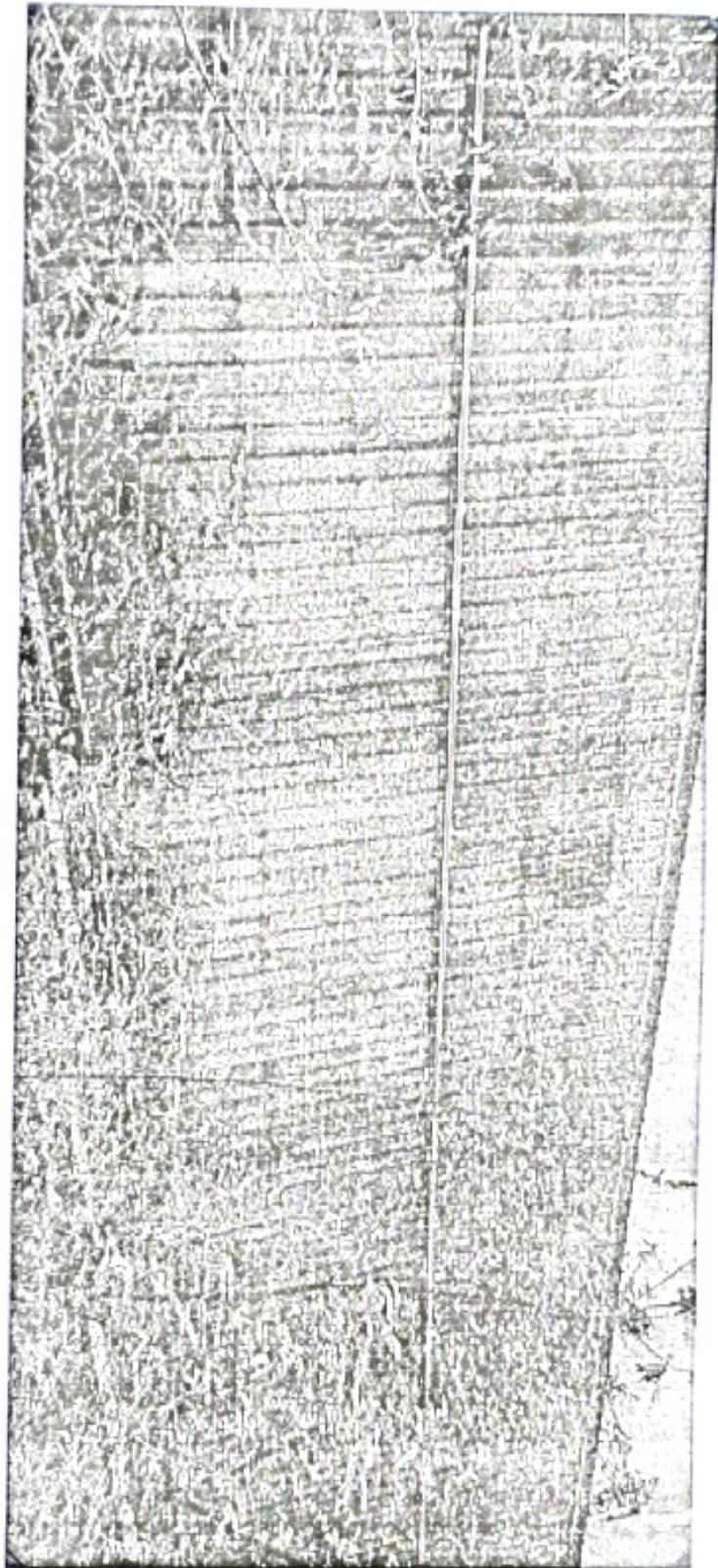
Bag house for Blast Furnace 1 (envt audit point no.2)

Govt State Pollution Control Board
Safignoo-Goon



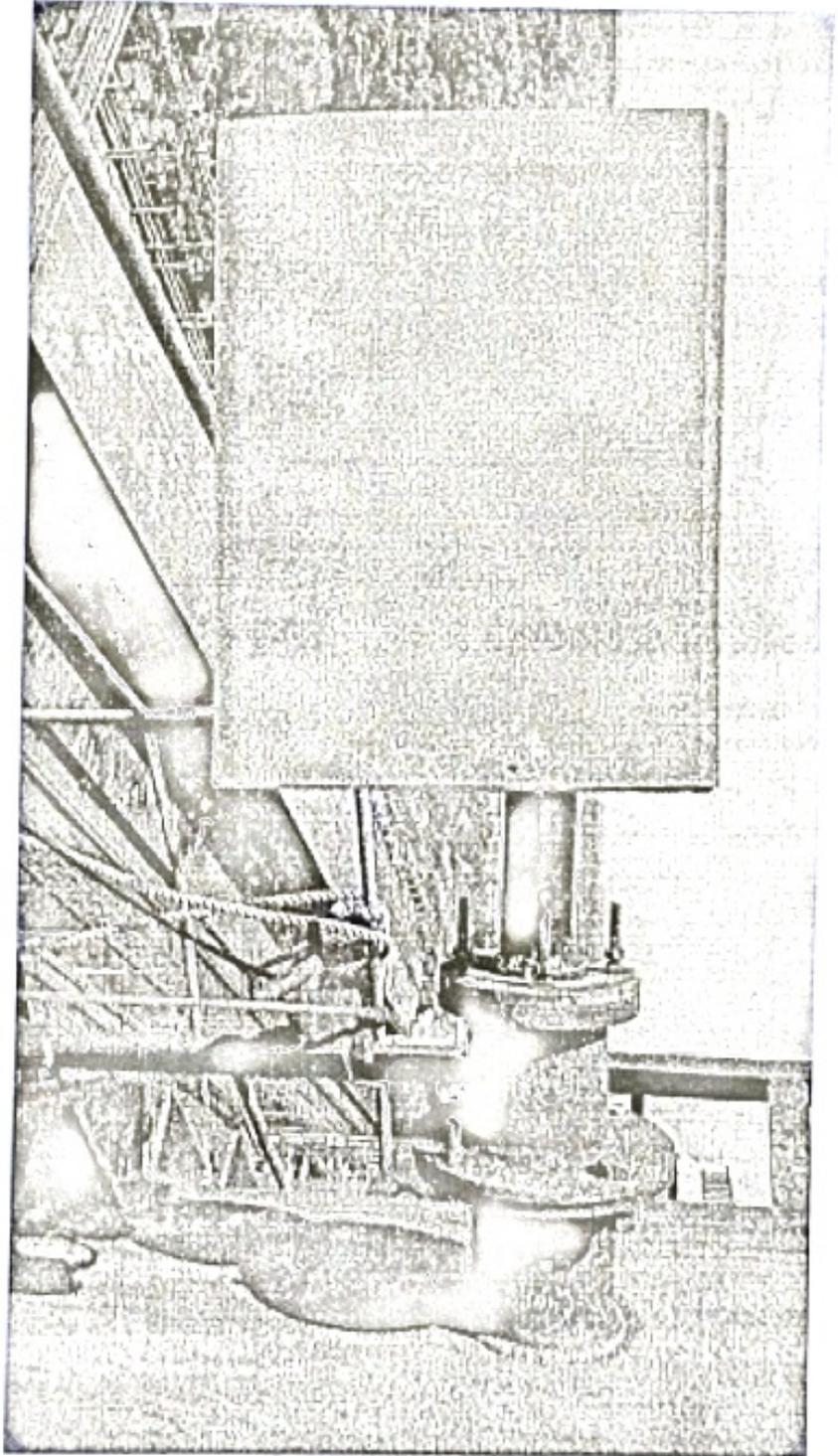
New CAAQMS installation (envt audit point no. 9c)

Goa State Pollution Control Board
Saligao-Goa



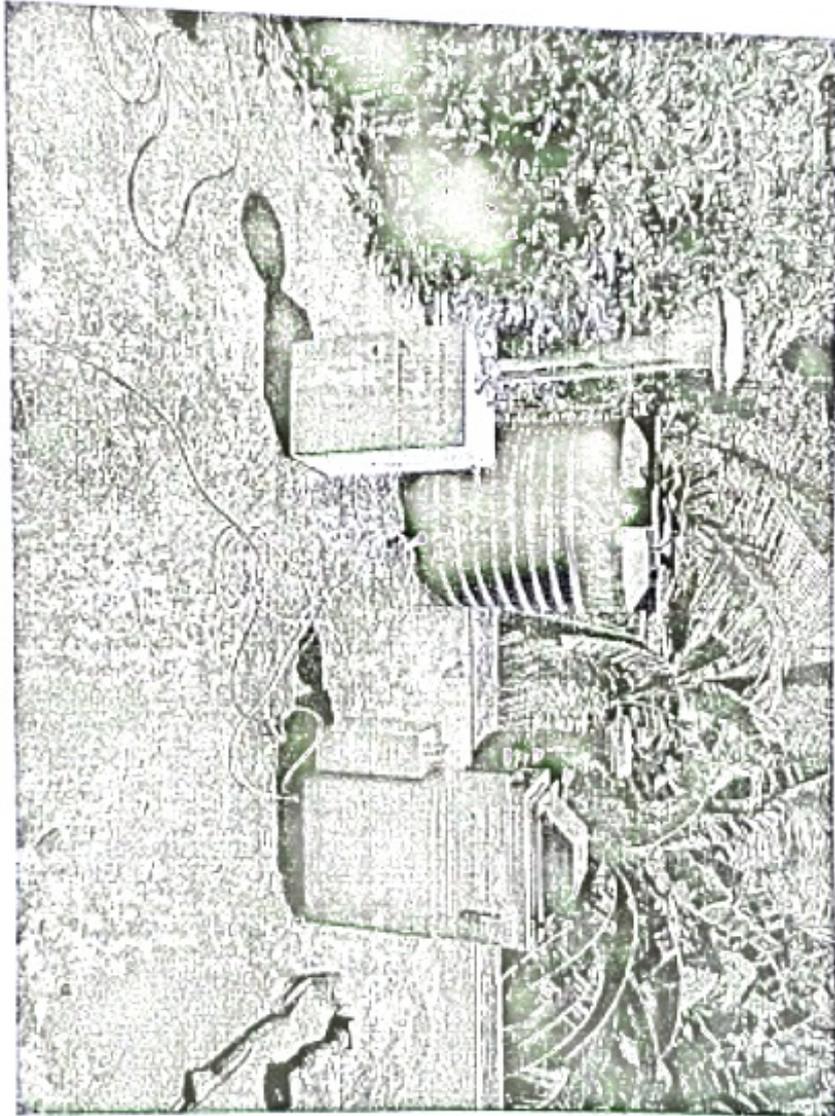
Wind shield installed at the boundary (Envt Audit point no. 9)

*Govt State Pollution Control Board
Saligao-Coo*



*Goa State Pollution Control Board
Safrey-Goo*

Replacement of CEMs (Env't audit no. 3)



Manual AQM at Navelim Village

Kisa State Pollution Control Board
Sulligoor-Goon