



File No: IA-J-11011/946/2007-IA-II(IND-I)

Government of India
Ministry of Environment, Forest and Climate Change
IA Division



Date 18/10/2024



To,

M/s. VEDANTA LIMITED VALUE ADDITION BUSINESS
Village Navelim, Taluka Bicholim, District North Goa Goa PIN 403505 Vedanta Limited 20,EDC
Complex, Patto, Panaji, Goa,403001, Amona & Navelim, NORTH GOA, GOA, Iron & Coke Complex
of Vedanta Limited, 403505
Email: navanath.vhatte@vedanta.co.in

Subject: Proposed expansion in production capacity of Pig Iron Plant from 1 MTPA to 1.2 MTPA by increasing the production capacity of existing BF3 (from 0.65 MTPA to 0.85 MTPA) [Total BF capacity from 1 MTPA to 1.2 MTPA] and sinter plant (from 1 MTPA to 1.2 MTPA) through debottlenecking and Installation of DI pipe Plant from 0.3 MTPA to 0.36 MTPA by M/s Vedanta Limited, located at villages: Amona and Navelim, Taluka: Bicholim, District: North Goa, Goa – Grant of EC under Para 7(ii) of EIA notification-Reg.

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/GA/IND1/457598/2024 dated 09/04/2024 for grant of prior Environmental Clearance (EC) to the proposed project under the provision of the EIA Notification 2006 and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC24A1001GA5281560N
(ii) File No.	IA-J-11011/946/2007-IA-II(IND-I)
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	3(a) Metallurgical Industries (ferrous and non ferrous)
(vi) Sector	Industrial Projects - 1 Proposed expansion in production capacity of Pig Iron Plant from 1 MTPA to 1.2 MTPA by increasing the production capacity of existing BF3 (from 0.65 MTPA to 0.85 MTPA) and sinter plant (from 1 MTPA to 1.2 MTPA) through debottlenecking and Installation of DI pipe Plant from 0.3 MTPA to 0.36 MTPA under clause 7(ii)
(vii) Name of Project	

	of EIA Notification 2006 amended from time to time At villages: Amona and Navelim, Taluka: Bicholim, District: North Goa (Goa)
(viii) Name of Company/Organization	VEDANTA LIMITED VALUE ADDITION BUSINESS
(ix) Location of Project (District, State)	NORTH GOA, GOA
(x) Issuing Authority	MoEF&CC
(xi) Applicability of General Conditions as per EIA Notification, 2006	No

3. The proposed project activity is listed at S. No. 3 (a) Metallurgical Industries (ferrous & non-ferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level. The proposed project activity is listed at schedule no. S. No. 3(a) Metallurgical Industries (ferrous & non-ferrous), under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central Level.

4. The instant proposal was considered in the 64th EAC Meeting held during 21st – 23rd August, 2024 wherein after detailed deliberations, the committee recommended the proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of specific conditions and general conditions. The proposal was further considered in 65th EAC meeting held on 5th, 6th & 9th September, 2024. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed at <https://parivesh.nic.in>.

5. The details of the proposal are as per the EIA/EMP report submitted by the proponent. The salient features of the proposal as presented during the above-mentioned meetings of EAC (Industry 1 Sector) are at Annexure-II.

6. The Unit configuration and capacity of the proposed project is at Annexure-III.

7. The EAC, in its 64th EAC Meeting held during 21st – 23rd August, 2024, inter-alia, deliberated the following:

i. The instant proposal is for expansion in production capacity of Pig Iron Plant from 1 MTPA to 1.2 MTPA by increasing the production capacity of existing BF3 (from 0.65 MTPA to 0.85 MTPA) [Total BF capacity from 1 MTPA to 1.2 MTPA] and sinter plant (from 1 MTPA to 1.2 MTPA) through debottlenecking and Installation of DI pipe Plant from 0.3 MTPA to 0.36 MTPA under para 7(ii) of EIA Notification, 2006 [OM dated 11.04.2022].

ii. The EAC deliberated on the justification provided by the Project Proponent for appraisal of instant proposal under para 7(ii) of EIA Notification, 2006 in pursuance to the Ministry’s O.M. dated 11.04.2022 and found it satisfactory. Further, since PP has prepared the Addendum EIA/EMP for seeking expansion of production capacity of existing BF3 and sinter plant upto 20% and considering the provisions mentioned in the O.M. dated 11.04.2022, the EAC agreed to apprise the proposal for expansion for the proposed 20% expansion in the blast furnace, sinter plant and DI pipe Plant in the instant case.

iii. The existing project was initially accorded environment clearance on 03/06/2009 for Mini Blast Furnace (0.90 MTPA), Sinter Plant (2 MTPA), Coke Plant (0.6 MTPA) and Waste Heat Recovery Power Plant (60 MW) in the name of M/s. Sesa Goa Limited. Subsequently, the EC got transferred in the name of M/s. Vedanta Limited on 5/9/2016. Thereafter, EC amendment in pursuance to the Order of Hon’ble National Green Tribunal in Appeal 47 of 2013 was accorded on 07/01/2020. BF-1 & 2 and its ancillary units are commissioned prior to EIA Notification 1994. Further, M/s. Vedanta Limited obtained environmental clearance vide letter dated 24/01/2022 for upgradation of Blast Furnaces (BF) to Enhance the Production Capacity of BF-1 & 2 from 2,92,000 TPA to 3,50,000 TPA, BF-3 from 5,40,000 TPA to 6,50,000 TPA, setting up of Additional Oxygen Plant, Installation of Ductile Iron Pipe Plant of 3,00,000 TPA Capacity, 4 Additional Met Coke Ovens, Setting Up of Fe-Si Plant of 5,000 TPA Capacity followed by amendment in specific condition (x) and (xiv) of Environmental clearance vide letter dated 14.03.2022. Consent to Operate for the existing unit was accorded by Goa State Pollution Control Board vide order. No. 12/2023-PCB/1754884/R00012787 dated 26.10.2023. The validity of CTO is up to 01.10.2028.

iv. The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in

various fields, examined the proposal submitted by the Project Proponent in desired format along with addendum to the EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

v. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

vi. The EAC also took into consideration the drone survey of the project site and kml file on the Google Earth presented by the project proponent along with DSS of the project site on PARIVESH and made following deliberations accordingly.

vii. The total project area is 161 ha and is under the possession of Vedanta Limited.. The proposed expansion will be carried out within the existing plant premises. No additional land is required for expansion of proposed project.

viii. As reported, Amona is at a distance of 0.3 km in WNW direction, Navelim-Maina at a distance of 0.4 km in SE direction of project site along with other sensitive areas within the study area of the project site. The EAC is of the opinion that PP shall prepare and strictly implement the environmental safeguard measures to minimise the impact of the project activities on these sensitive areas.

ix. Mandovi river is reported adjacent to plant site in SW direction, Cudnem River at 0.5 km in NNW direction of project site along with other water bodies within study area of the project site. The EAC is of the opinion that water bodies shall not be disturbed. Mitigation measures w.r.t. safeguarding the water bodies shall be implemented.

x. The total water requirement after the proposed expansion project is estimated as 13896 KLD which will be sourced from Bandhara Valvonti River for fresh water, saline water from Mandovi river, rain water from harvested pits and PWD water for domestic consumption. No ground water abstraction is being done and will not be done for the proposed expansion project. The EAC deliberated on the water requirement and is of the opinion that PP shall obtain necessary permission from the Competent Authority.

xi. The Committee has deliberated on the baseline data and incremental GLC due to the proposed project and is of the opinion that PP shall strictly implement the mitigation measures to minimise the pollution.

xii. There were 7 Schedule -1 Species viz. *Accipiter badius* (Shikra), *Pavo cristatus* (Indian Peafowl), *Crocodylus palustris* (Mugger / Marsh Crocodile), *Varanus bengalensis* (Common Indian Monitor Lizard), *Python molurus* (Indian Python), *Panthera pardus* (Leopard) and Gaur (*Bos Gauras*) were observed in study area. Wildlife conservation plan was approved from Deputy Conservator of Forests and Wildlife & Eco-Tourism (North) Division vide letter no. 1-576(PART) WL & ET(N)/2021-2022/554 dated 28.05.2021. The total budget allocated for implementation of Wildlife Conservation plan is Rs. 1 Crore. However, according to Amended Wild Life Act, 2022, there are 38 Schedule I species found within the study area during the survey. Letter regarding additional Sch I species according to Wildlife Amendment Act, 2022, submitted to Forest Department, Goa, vide letter number VAB/ENV/2023-24/35, dated: 5.12.2023, Authenticated list for 38 Schedule 1 species from DCF, Goa has been obtained vide letter no. 1-576-WL&ET(N)/2023-2024/3497 dated 13.12.2024. The EAC opined that PP shall strictly comply with the recommendations made in the Wildlife Conservation Plan as per the approval.

xiii. The Committee also deliberated on the earlier public hearing issues and the status of compliance of action plan submitted by the proponent to address the issues raised during the public hearing and is of the opinion that PP shall strictly comply with the revised timeline for completion of activities envisaged in the action plan. Further, EAC also deliberated on the additional action plan submitted by the proponent to address socio-economic issues and found it satisfactory.

xiv. The Committee deliberated on the baseline data along with pollution load assessment reported and observed that emission load is slightly increasing after the proposed expansion. Accordingly, the EAC found it satisfactory to appraise the instant proposal under para 7(ii) of EIA Notification, 2006.

xv. The PP reported that the existing greenbelt has already been developed in ~54 ha which is about ~33.5% of the total

project area of 161 ha., with total saplings of 3,00,000 Trees. The same will be maintained for the proposed expansion project. The EAC deliberated on the greenbelt and is of the opinion that greenbelt shall be maintained as per the norms.

xvi. The committee deliberated details of carbon foot prints and carbon sequestration study w.r.t. proposed project and found them to be satisfactory.

xvii. The Committee reviewed the certified compliance report from the Integrated Regional Office of MoEF&CC, along with the subsequent letter from the Compliance Monitoring Division (CMD) of MoEF&CC regarding instances of non-compliance or partial non-compliance, as referenced in letter no. IA-J-11014/76/2023-IA-I(M) dated 09.08.2023. The EAC also considered the Action Closure Letter (ACL) issued by the CMD, MoEF&CC, New Delhi, vide file no. IA-J-11014/76/2023-IA-I(M) dated 15.07.2024, which confirmed that all EC conditions applicable to the project are currently complied with. It was also noted that the specific condition (xii) of the EC concerning the Submerged Arc Furnace is still under construction and will be applicable in the future. The General Condition (v) regarding energy conservation measures and General Condition (i) on waste management were deemed not applicable, and thus, the Project Proponent was directed to apply for an amendment. During the appraisal, the EAC observed that the aforementioned General Condition (v) on energy conservation measures and General Condition (i) on waste management needs to be dropped. However, this has not been addressed in the current proposal or through a separate, fresh proposal for EC amendment by the project proponent. The EAC expressed its dissatisfaction to the PP/Consultant. The PP through written submission has requested for dropping the said conditions. Nonetheless, considering the direction issued by the CMD of MoEF&CC, the EAC decided that these EC conditions should be removed from the existing EC dated 24.01.2022 and shall also be excluded in the instant proposal.

xviii. The EAC noted that there are following court cases related to the project under consideration:

S. No.	Case No.	Court Name	Case Details
1.	47/2013	NGT Western Bench	Pune-An application has been filed by Village Panchayat of Navelim alleging that the GSPCB has issued separate peace meal consent to operate to each of Vedanta's expansion project at Navelim, even though the Environment Clearance and Consent to Establish is for all four plants together, thereby violating the EC conditions. This matter has been kept in abeyance since the identical issue was pending before the SC in another petition which was referred by the SC to NGT Delhi. NGT Delhi disposed the same without any adverse order against us (Vedanta) as far as EC is concerned. However, directed MoEF to add any additional EC Condition. Subsequently, MoEF&CC heard both the parties and disposed the matter by imposing additional conditions over and above the existing conditions. Orders/Directions of the court, if any and its relevance with the proposed project: No order having any adverse impact on the project. Now the matter is at final disposal.
2.	24/2015	District Court Mapusa	The Comunidade of Amona has filed a case against the project proponent claiming that the lease granted to the project proponent in terms of provisional possession for survey no. 42/1 and 43/1 has already expired in the year 2012 and has thus reverted back to the plaintiff in the year 2012 and to issue perpetual injunction against the project proponents from entering the said property. We (Vedanta) have filed our reply. Orders/Directions of the court, if any and its relevance with the proposed project: No order having any adverse impact on the project. Trial is ongoing in the civil suit. Matter is presently at the stage of Plaintiff Evidence.
3.	881/2017	Pravir Fadte Ors	v.Pravir P Fadte has filed a writ petition in the HC of Goa stating that the State of Goa &Project Proponent is not in compliance with NEERI's recommendations. The allegations were incorrect in nature. Orders/Directions of the court, if any and its relevance with the proposed project: No order having any adverse impact on the project. GSPCB has filed affidavit in High Court confirming Vedanta Compliance with NEERI's recommendations. There is

S. No.	Case No.	Court Name	Case Details
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no adverse order form HC. The case is to be taken up for final hearing.

The EAC opined that Environmental clearance shall be granted subject to final outcome of the aforesaid cases or any other case, as may be applicable to this project.

xix. It has been reported by the PP that the existing capacity of the Jetty (4 grabs) is 7 MTPA of material handling (loading as well as unloading) while the requirement of material to be handled for the entire complex after the proposed expansion will be maximum of 2.5 MTPA only. The jetty is in operation prior to CRZ Notification 1991. There is no expansion of the jetty capacities since the time of establishment. The existing jetty is capable of handling the additional load of the proposed expansion. In view of this, PP claimed that CRZ clearance for the jetty is not applicable.

xx. The EAC also deliberated on the reply to the ADS by the project proponent and found it satisfactory.

xxi. The EAC also deliberated on the written submission of project proponent and found it satisfactory.

xxii. The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for grant of environmental clearance.

xxiii. The environmental clearance recommended to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

xxiv. The EAC also reviewed the EC conditions (specific and general) pertaining to Industry-I projects and observed that some of the specific conditions stipulated so far in the previously recommended EC projects are common and applicable to most of the projects in general. In view of the same, the General Conditions (in case of EC projects) have been revised through reallocation of these common conditions from specific to General Conditions (in case of EC projects). Accordingly, the instant project is also being stipulated with the modified General conditions.

8. The EAC (Industry-1 Sector), in its 64th EAC Meeting held during 21st – 23rd August, 2024, based on information & clarifications provided by the project proponent and after detailed deliberations recommended the proposal for grant of Environment Clearance subject to stipulation of specific and general EC conditions as detailed in the point below.

9. PP through email dated 05.09.2024 requested correction in MoM of 64th EAC, and requested to exclude the following from the MoM part, along with the reasons:

S. No	Item no.	Specifications	Reasons for Changes
1.	Specific condition no. 1 under Air Quality Monitoring and Preservation in case of Ferro Alloy Plant	Briquetting and Jigging plant shall be installed in Ferro Alloys Plant	Slag generation at 5000 TPA Ferro Silicon plant is 50Kg/tons and this will be used in existing Blast Furnace process and also will be sold out hence Jigging plant is not viable. Most of the Raw material feed in Ferro Silicon plant is in lumps form and not fines hence briquetting plant is not feasible. In case fines are converted into briquetting form then cannot be viable for existing Ferro Silicon process plant
2.	Specific condition no. 2 under Air Quality Monitoring and Preservation in case of	The PP shall minimize the evaporation losses in jigging operation to less than 10% using suitable	Slag generation at 5000 TPA Ferro Silicon plant is 50Kg/tons and this will be used in existing Blast Furnace process and also will be sold out hence Jigging plant is not viable. In absence of Jigging plant, the said condition

S. No	Item no.	Specifications	Reasons for Changes
3.	Ferro Alloy Plant Specific condition no. 2 under Air Quality Monitoring and Preservation	advanced process. The project proponent shall carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions	may not be applicable. Four Continuous ambient air quality monitoring systems are available at the boundary of the plant. These CAAQMS are installed as per earlier Environmental Clearance in consultation with Goa State Pollution Control Board at the boundary of the plant towards the habitation.
4.	Specific condition no. 6 under Air Quality Monitoring and Preservation in case of Ferro Alloy Plant	Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke	PP has two coke oven batteries of non-recovery type with capacity 0.3MTPA and 0.322MTPA installed in the year 1996 and 2012 respectively. There is no expansion proposed at the existing non recovery type coke oven plant.
5.	Specific condition no. 1 under water Quality Monitoring and Preservation in case of Rolling Mills	The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to Coke oven plants) as amended from time to time	No Rolling mill at project site hence not applicable. The exiting coke oven operated are of non-recovery type coke ovens wherein water is not used in process other than coke quenching. Hence ETP is not applicable. Water is used only for quenching which is recirculated through settling ponds
6.	Specific condition no. 2 under water Quality Monitoring and Preservation in case of Rolling Mills	Treated water from ETP of COBP shall not be used for coke quenching.	The coke ovens operated are of non-recovery type coke ovens wherein water is not used in process other than coke quenching. Hence ETP is not applicable. Water is used only for quenching which is recirculated through settling ponds
7.	Not Applicable	Coke Dry Quenching (CDQ) shall be provided for the coke quenching for both recovery and non-recovery type coke ovens.	PP has two coke oven batteries of non-recovery type with capacity 0.3MTPA and 0.322MTPA installed in the year 1996 and 2012 respectively. There is no expansion proposed at the existing non recovery type coke oven plant.

10. Based on the above submission the proposal was re-considered in the 65th EAC Meeting of Industry-I sector held on 5th, 6th & 9th September, 2024.

Deliberations by the EAC in 65th Meeting

11. It was informed to the Committee members that PP has requested modifications in the MoM of 64th meeting of the EAC for Industry-I sector held on 21st – 23rd August, 2024 pertaining to proposal agenda no. 64.1 as referred above. It

was also conveyed PP has submitted the reasoning's for non-applicability of the conditions. The EAC deliberated the issue in detail and noted that the request for S.No. 1, 2 and 3 of the table mentioned above, can be considered in light of the reasonings provided that these aspects are either not feasible/ contemplated under the project or already being addressed through previous EC conditions.

With the regard to issues mentioned at S.No.4, 5, 6 and 7, the EAC categorically observed that provision of system of CDQ is not only an environment friendly measure but it is energy efficient also. The system significantly reduces dust emissions from coke oven process. However, considering PP's submission that the coke oven batteries were installed long back in 1996 and 2012, EAC noted that any further expansion in the coke oven batteries of capacities 0.3MTPA and 0.322MTPA shall not be undertaken until CDQ system is put in place. Further, it also suggested PP to prepare a techno-economically feasible plan for switching over to CDQ, and submit the same to concerned RO MoEFCC clearly indicating the timeline. With regard to the aspect of installation of ETP, it suggested that the expression of 'if applicable' may be brought in the relevant conditions rather than entirely removing the same.

Accordingly, the EAC decided that the aforementioned conditions shall stand modified, in light of the discussions made at Para above, in the Minutes of 64th EAC (Industry-1) meeting. The other information mentioned will remain the same.

Decision by MoEFCC

12.. The MoEF&CC has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the Expert Appraisal Committee (Industry-1 Sector) hereby decided to grant Environment Clearance for instant proposal of M/s. Vedanta Limited Value Addition Business under the provisions of EIA Notification, 2006 subject to the following specific conditions and general conditions (Annexure-I)

13. The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.

14. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.

15. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

16. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

17. This issues with approval of the competent authority.

(Dinesh Runiwal)
Scientist 'F'/Director
Tel: 011-20819346
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Copy To

1. Secretary, Department of Environment, Government of Goa, Panaji.
2. Chief Wildlife Warden, Government of Goa, Panaji.

3. Regional Officer, Ministry of Environment, Forest and Climate Change, Integrated Regional Office, Kendriya Sadan, 4th Floor, E&F Wings, 17th Main Road, Koramangala II Block, Bangalore – 560034
4. Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD- The Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
5. Chairman, Goa State Pollution Control Board, Dempo Tower, EDC Plaza, 1st Floor, Panaji, Goa- 403 001
6. Member Secretary, Central Ground Water Authority, A2, W- 3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
7. District Collector, North Goa, Govt. of Goa.

(Dinesh Runiwal)
Scientist 'F'/Director

Annexure 1

Specific EC Conditions for (Metallurgical Industries (Ferrous And Non Ferrous))

1. Specific

S. No	EC Conditions
1.1	This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.
1.2	The project proponent shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
1.3	The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.
1.4	As reported, Amona is at a distance of 0.3 km in WNW direction, Navelim-Maina at a distance of 0.4 km in SE direction of project site along with other sensitive areas within the study area of the project site. Proponent shall take appropriate environmental safeguard measures to minimise the impact on the habitation of the locals. The project proponent needs to strengthen green belt all around the plant area to reduce the dust pollution. The PP shall also include some of these locations in its environmental monitoring programme.
1.5	Mandovi river is reported adjacent to plant site in SW direction, Cudnem River at 0.5 km in NNW direction of project site along with other water bodies within study area of the project site. A robust and full proof Drainage Conservation scheme to protect the natural drainage and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be implemented. The ground water in the vicinity of the rivers must be monitored periodically and reported to the IRO.
1.6	The water requirement of 13896 KLD which shall be sourced from Bandhara Valvonti River for fresh water, saline water from Mandovi river, rain water from harvested pits and PWD water for domestic consumption. PP shall obtain necessary permission from the Competent Authority. No ground water abstraction is permitted.

S. No	EC Conditions
1.7	PP shall strictly implement the mitigation measures to minimise the pollution and undertake continuous monitoring of pollutants.
1.8	Three tier Green Belt shall be maintained in at least 33% of the project area along the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. PP shall also develop greenbelt in the form of shelter belt comprising of total of 6 rows of 2x2 m plantation with a width of 25 meters with tall trees & broad leaves with thick canopy along with windshield inside the plant premises to act as green barrier for air pollution & noise levels towards sensitive areas nearby project site such as Amona Village and Navelim village . PP shall practice geotagging of plant for better monitoring. PP shall also try to develop additional plantation in the nearby school in consultation with the school administration. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.
1.9	The PP is advised to undertake plantation in the earmarked 33% greenbelt area as a part of tree plantation campaign 'Ek Ped Maa Ke Naam' Campaign and the details of the same shall be uploaded on MeriLiFE portal at (https://merilife.nic.in)
1.10	All the commitments made towards socio-economic development of the nearby villages shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in accordance to the Ministry's OM dated 30.09.2020 shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF&CC. PP shall strictly comply with the revised timeline for completion of activities envisaged in the action plan of the earlier PH.
1.11	The project proponent shall undertake village adoption programme and prepare and implement the action plan to develop them into a model village.
1.12	The recommendations of the approved Site-Specific Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.
1.13	Top Recovery Turbine shall be installed in BF3. BF 1 & 2 shall be equipped with stove waste recovery, cast house and stock house ventilation system and slag granulation facility. Dry Gas Cleaning Plant shall be installed during next revamping of BF1 and BF2.
1.14	AAQ at Mosque and Siddhartha Caves archaeological sites shall be monitored once in a month as per the CPCB norms.
1.15	Parking area for trucks/dumpers shall be provided within the plant. No truck/dumper shall be parked outside the plant premises
1.16	Project proponent shall conserve wetlands located in the vicinity of the project site (Amona – 0.3km in Northern direction and Navelim – 0.6 km in Northern direction) by developing green belt development all along the boundary of the wet land.

S. No	EC Conditions
1.17	Water being used for cooling purposes in Waste Heat Recovery Power Plant (WHRPP) is the saline water drawn from Mandovi river (backwater). The blow down of cooling towers shall be discharged back to the saline backwaters as per the approval of the GSPCB. Project proponent shall periodically monitor the riverine water quality and report shall be submitted along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.
1.18	Secondary emission generated during charging, tapping of metal, slag tapping may be controlled by providing canopy hoods at proper elevation connected to air pollution control device without interfering with the production process.
1.19	Additional Filter beds, arrester wall shall be provided along the storm water drainage for settlement of suspended particles and to prevent siltation.
1.20	The recommendations contained in the storm water management plan shall be strictly adhered with. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.
1.21	CO sensors shall be installed in all units which generate CO gas.
1.22	In pursuance to the IA(CMD) communication dated 15.07.2024, the General Condition (v) on energy conservation measures, and General Condition (i) on waste management, as stipulated in EC dated 24.01.2022 shall be deemed dropped for future compliance.

Standard EC Conditions for (Metallurgical Industries (ferrous and non ferrous))

1. Statutory Compliance

S. No	EC Conditions
1.1	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.
1.2	This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

2. Air Quality Monitoring And Preservation

S. No	EC Conditions
2.1	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQMS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories. (already being addressed through previous EC conditions.)
2.2	The project proponent shall carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.(already being addressed through previous EC conditions.)
2.3	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
2.4	Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
2.5	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
2.6	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
2.7	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
2.8	Ensure covered transportation and conveying of raw material to prevent spillage and dust generation. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
2.9	Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
2.10	The project proponent shall provide primary and secondary fume extraction system at all heat treatment furnaces.
2.11	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
2.12	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.
2.13	Pollution control system in the plant shall be provided as per the CREP Guidelines of CPCB.

S. No	EC Conditions
2.14	The project proponent shall adopt the Clean Air practices like mechanical collectors, wet scrubbers, fabric filters (bag houses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation. Controlling emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels. Sufficient numbers of additional truck mounted Fog/Mist water cannons shall be procured and operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere.
2.15	Bag filters shall be cleaned regularly and efficiency of bag filter system shall be monitored at regular intervals.
2.16	Water Sprinklers/Water mist system shall be installed near raw material yards, operational units and other strategic locations to control fugitive emissions from the plant.
2.17	The particulate matter emissions from the process stacks shall be less than 30 mg/Nm ³ and measures shall be undertaken as per the submitted action plan. Efficient Air monitoring equipment shall be installed.
2.18	Following additional arrangements to control fugitive dust shall be provided: a. Fog / Mist Sprinklers at all on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas. b. Proper covered vehicle shall be used while transport of materials. c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.

3. Air Quality Monitoring And Preservation In Case Of Ferro Alloy Plants

S. No	EC Conditions
3.1	The 4th hole extraction system shall be provided in the Sub Merged Arc Furnaces and EAF.
3.2	Industry is going to use silica quartz in large quantities and going to produce Silico Manganese and Ferro Silicon alloy steel. Therefore, it is necessary to control silica/quartz exposures at production Departments, not only emission norms as per Indian Factories Act. The permissible limit for silica/quartz should be within 10 mg/m ³ for total dust as per Indian Factories Act. Therefore, it is recommended to monitor personal and area exposures for silica quartz dust in the process plants.
3.3	No Ferro-chrome production shall be carried out without prior Environmental clearance from MOEF&CC.
3.4	Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke-(Any further expansion in the coke oven batteries of capacities 0.3MTPA and 0.322MTPA shall not be undertaken until CDQ system is put in place. Further, it also suggested PP to prepare a techno-economically feasible plan for switching over to CDQ, and submit the same to concerned RO MoEFCC clearly indicating the timeline.)
3.5	Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility). Land-based APC system shall be installed to control coke pushing emissions.

S. No	EC Conditions
3.6	Monitor CO, HC and O2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.
3.7	Vapor absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.
3.8	The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.
3.9	Online stack monitoring system for IF and RHF shall be installed and monitoring report shall be submitted to the concerned Regional Office of the MoEF&CC along with the six monthly compliance report
3.10	Low NOx Burners will be installed at Reheating Furnace for control of Gaseous emissions generated while using PNG.

4. Air Quality Monitoring And Preservation In Case Of Di Pipe

S. No	EC Conditions
4.1	Ductile Iron (DI) plant shall have the following provisions: a. Bag filter for Zn coating and Mg converter area. b. Wet scrubbers in paint and bitumen coating area. c. Bag Filter in Cement lining area. d. PTFE dipped bags shall be used in the plant. e. PM emissions from BF in Zinc coating area shall be 5 mg/Nm3. f. ETP with recycling facility shall be included, if applicable.

5. Air Quality Monitoring And Preservation In Case Of Bof

S. No	EC Conditions
5.1	Basic Oxygen Furnace (BOF) gas shall be cleaned dry

6. Water Quality Monitoring And Preservation

S. No	EC Conditions
6.1	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
6.2	The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited

S. No	EC Conditions
	laboratories.
6.3	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.
6.4	Water meters shall be provided at the inlet to all unit processes in the steel plants.
6.5	The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.
6.6	The proposed project shall be designed as Zero Liquid Discharge Plant. ETP shall be installed and there shall be no discharge of effluent from the plant. Domestic effluent shall be treated in Sewage Treatment Plant. Suitable measures shall be adopted for sewage water handling to ensure no contamination of any kind of water body.
6.7	All stockyards shall have impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains and catch pits to trap the run off material and shall be implemented as per the action plan submitted in EIA/EMP report.
6.8	Rain water harvesting shall be implemented to recharge/harvest water as per the action plan submitted in the EIA/EMP report.

7. Water Quality Monitoring And Preservation In Case Of Rolling Mills

S. No	EC Conditions
7.1	The project proponent shall provide the ETP for effluents of rolling mills, if applicable, to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to Coke oven plants) as amended from time to time.
7.2	Treated water from ETP of COBP shall not be used for coke quenching, if applicable.

8. Noise Monitoring And Prevention

S. No	EC Conditions
8.1	Noise pollution shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and amendments thereof, and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
8.2	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

9. Energy Conservation Measures

S. No	EC Conditions
9.1	Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.
9.2	Restrict Gas flaring to < 1%.
9.3	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
9.4	Provide LED lights in their offices and residential areas.

10. Energy Conservation Measures In Case Of Reheating Furnace

S. No	EC Conditions
10.1	The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.
10.2	Practice hot charging of slabs and billets/blooms as far as possible.
10.3	Coke Dry Quenching (CDQ) shall be provided for coke quenching for both recovery and non-recovery type coke ovens.

11. Waste Management

S. No	EC Conditions
11.1	Kitchen waste shall be composted or converted to biogas for further use.
11.2	100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.
11.3	The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022. In this regard, CPCB has issued a direction to all the State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) on 30/06/2022 to ensure the compliance of Notification published by Ministry on 12/08/2021. The technical guidelines issued by the CPCB in this regard is available at https://cpcb.nic.in/technical-guidelines-3/ . All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the compliance of Notification published by this Ministry on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report being submitted by the project proponents.
11.4	A proper action plan must be implemented to dispose of the electronic waste generated in the industry.
11.5	Solid waste utilization: a. PP shall install a slag crusher to convert steel slag into aggregate for use

S. No	EC Conditions
	in construction industry, fine sand for use as flux in steel plant, sand in brick making and as lime in cement making. b. PP shall recycle/reuse solid waste generated in the plant as far as possible. c. Used refractories shall be recycled as far as possible.

12. Waste Management In Case Of Sinter Plant

S. No	EC Conditions
12.1	SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.
12.2	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.
12.3	Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.
12.4	In case of Non-Recovery coke ovens, the gas main carrying hot flue gases to the boiler, shall be insulated to conserve heat and to maximise heat recovery.
12.5	Tar Sludge and waste oil shall be blended with coal charged in coke ovens (applicable only to recovery type coke ovens).

13. Green Belt

S. No	EC Conditions
13.1	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration by trees.
13.2	Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.
13.3	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.
13.4	The PP shall provide additional green belt within the premises of the schools, in consultation with school authorities, within a radius of 1 K.M. from the Plant.

14. Public Hearing And Human Health Issues

S. No	EC Conditions
14.1	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
14.2	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.
14.3	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP. Safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
14.4	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

15. Environment Management

S. No	EC Conditions
15.1	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.
15.2	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
15.3	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
15.4	Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Integrated Regional Office of the MoEF&CC.

16. Miscellaneous

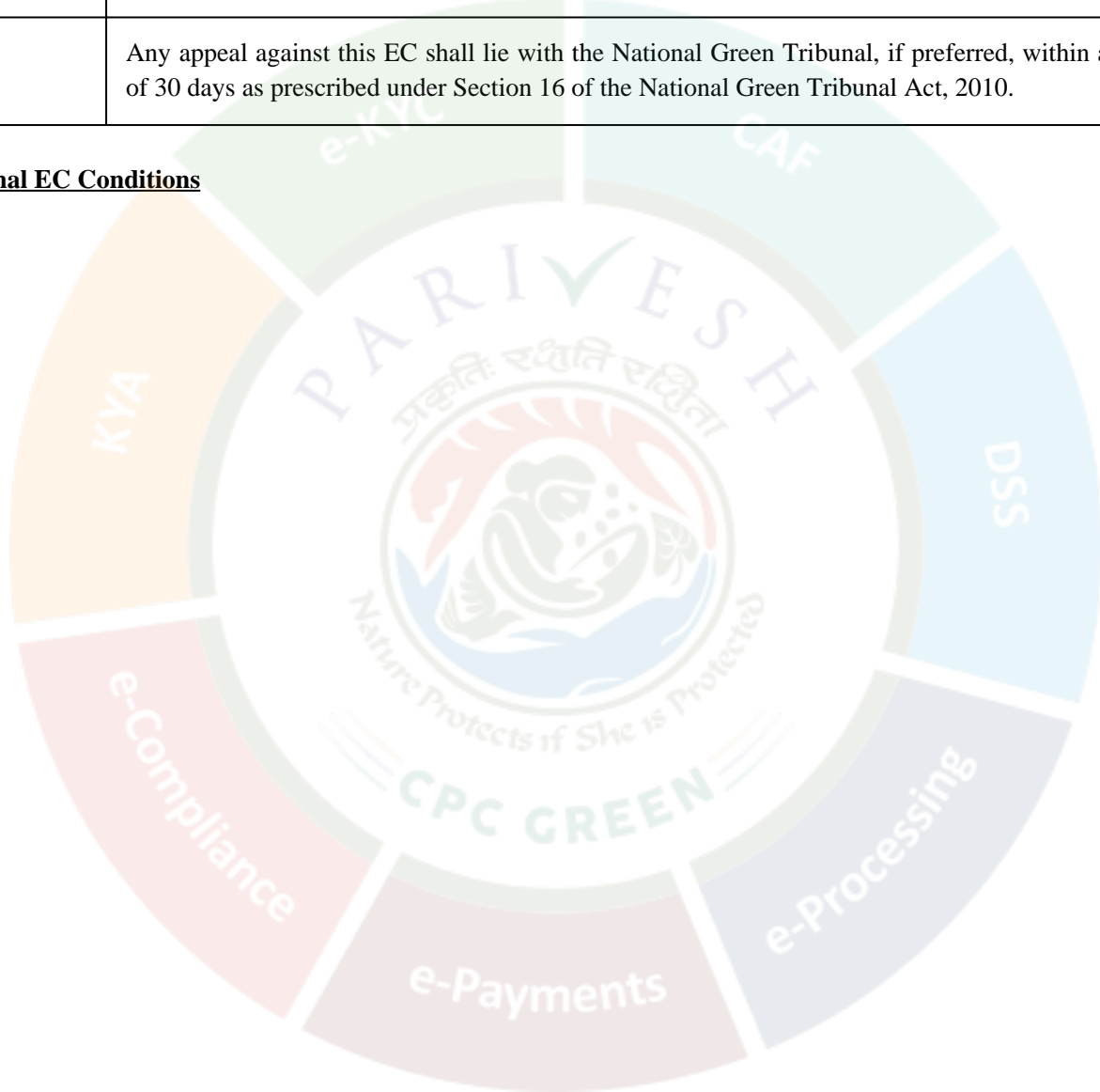
S. No	EC Conditions
16.1	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

S. No	EC Conditions
16.2	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
16.3	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
16.4	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
16.5	Action plan for developing connecting and internal road in terms of MSA as per IRC guidelines shall be implemented
16.6	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
16.7	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
16.8	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
16.9	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
16.10	The recommendations of the approved Site-Specific Wildlife Management Plan (in case of involvement of Schedule-I species) shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.
16.11	The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.
16.12	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
16.13	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

S. No	EC Conditions
16.14	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
16.15	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
16.16	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
16.17	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Additional EC Conditions

NA



S. No.	Particulars	Details									
a.	Terms of Reference for undertaking EIA study	Proposal under para 7(ii) of EIA Notification, 2006.									
b.	Period of baseline data collection	1 st March to 31 st May, 2023									
c.	Date of Public Consultation	The earlier public hearing was conducted for upgradation of Blast Furnaces (BF) to Enhance the Production Capacity of BF-1 & 2 from 2,92,000 TPA to 3,50,000 TPA, BF-3 from 5,40,000 TPA to 6,50,000 TPA, setting up of Additional Oxygen Plant, Installation of Ductile Iron Pipe Plant of 3,00,000 TPA Capacity, 4 Additional Met Coke Ovens, Setting Up of Fe-Si Plant of 5,000 TPA Capacity on 14.03.2021 & 21.03.2021. Public hearing has been exempted from this project in pursuance to the Ministry's O.M. dated 11.04.2022 for appraisal of instant proposal under para 7(ii) of EIA Notification, 2006.									
d.	Action plan to address the PH issues	Action plan as per MoEF&CC O.M. dated 30/09/2020 is given at annexure IV									
e.	Location of the project	located at at villages: Amona and Navelim, Taluka: Bicholim, District: North Goa, Goa									
f.	Total land	Total plant area of Vedanta Limited Value Added Business Complex is 161 ha and is under the possession of Vedanta Limited. Machinery set-ups - 30.49 ha, Raw material storage area and dispatch - 32.2 ha, finished product storage - 17.15 ha, Internal roads - 7.0 ha, Administration building, canteen, stores - 2.57 ha, green belt / Green cover - 54.0 ha, Water harvesting - 4.52 ha, Vacant land for future use - 9.46 ha, Utility area - 3.61 ha Out of the plant area (161 ha), 54 ha (33.5 %) area has already been developed under greenbelt/ plantation.									
g.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	The land is under the possession of the company.									
h.	Existence of habitation & involvement of R&R, if any	<p>Plant Site: No habitation exists within the plant site and as the proposed expansion will be done within the existing plant premises, which is already in possession of the company, therefore, no R&R is applicable for the proposed expansion project.</p> <p>Study Area: Village falling near to the plant site is given below:</p> <table border="1"> <thead> <tr> <th>Habitation</th> <th>Distance (km)</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>Amona</td> <td>~0.3</td> <td>WNW</td> </tr> <tr> <td>Navelim-Maina</td> <td>~0.4</td> <td>SE</td> </tr> </tbody> </table>	Habitation	Distance (km)	Direction	Amona	~0.3	WNW	Navelim-Maina	~0.4	SE
Habitation	Distance (km)	Direction									
Amona	~0.3	WNW									
Navelim-Maina	~0.4	SE									
i.	Elevation of the project site	16 m to 50 m above mean sea level.									

S. No.	Particulars	Details																																				
j.	Involvement of Forest land if any.	No Forest Land involved for the proposed expansion project																																				
k.	Water body exists within the project site as well as study area	<p>Project site: No water body passing through the plant site.</p> <p>Study area: Following water body fall within 10 km radius:</p> <table border="1" data-bbox="528 461 1390 958"> <thead> <tr> <th>Water body</th> <th>Distance (km)</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>Mandovi river</td> <td>Adjacent to plant site.</td> <td>SW</td> </tr> <tr> <td>Cudnem river</td> <td>~0.5</td> <td>NNW</td> </tr> <tr> <td>Valvanti river</td> <td>~2.1</td> <td>NNW</td> </tr> <tr> <td>Cumbarjua Canal</td> <td>~3.2</td> <td>WSW</td> </tr> <tr> <td>Bicholim river</td> <td>~3.9</td> <td>NNW</td> </tr> <tr> <td>Kudne Nadi</td> <td>~4.0</td> <td>NE</td> </tr> <tr> <td>Corlim Pond</td> <td>~5.5</td> <td>WSW</td> </tr> <tr> <td>Arekere Lake</td> <td>~6.5</td> <td>South</td> </tr> <tr> <td>Carambolim Lake</td> <td>~7.0</td> <td>WSW</td> </tr> <tr> <td>Mayam Lake</td> <td>~7.0</td> <td>NW</td> </tr> <tr> <td>Khandepar nadi</td> <td>~8.0</td> <td>SSE</td> </tr> </tbody> </table> <p>Apart from the above, study area is having many seasonal ponds, nallahs, water channels which are active during rainy season.</p>	Water body	Distance (km)	Direction	Mandovi river	Adjacent to plant site.	SW	Cudnem river	~0.5	NNW	Valvanti river	~2.1	NNW	Cumbarjua Canal	~3.2	WSW	Bicholim river	~3.9	NNW	Kudne Nadi	~4.0	NE	Corlim Pond	~5.5	WSW	Arekere Lake	~6.5	South	Carambolim Lake	~7.0	WSW	Mayam Lake	~7.0	NW	Khandepar nadi	~8.0	SSE
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l.	Existence of ESZ / ESA / national park / wildlife Sanctuary / biosphere Reserve / tiger reserve / elephant reserve etc. if any within the study area	<p>Study area</p> <p>No National Parks, Biosphere Reserve and protected forest falls within 10 km radius of the proposed plant site. Although, there is one Wildlife Sanctuary falling in 10 km radius of the project site i.e., Mhadei Wildlife Sanctuary.</p> <p>As per the ESZ boundary defined by MOEFCC, New Delhi as per Notification S.O. 616 (E) dated 25th Feb., 2015, the project site does not fall within the ESZ of the Sanctuary. Hence NBWL is not applicable for the project.</p> <ul style="list-style-type: none"> • Mhadei Wildlife Sanctuary <ul style="list-style-type: none"> - Distance from Mhadei WS (~ 9.8 km in ENE direction from plant site) - Distance from ESZ-1 point: (~ 8.7 km in ENE direction from plant site) <p>There are 05 Reserve Forest within 10 km radius of plant site. List of Reserved is as given below:</p> <ul style="list-style-type: none"> • RF near Amarkhane (~4.0 km in South Direction from the plant site) • RF near Querim (~5.8 km in South Direction from the plant site) • RF near Curti (~6.7 Km in SSE Direction from the plant site) • RF near Ponocem (~8.6 km in ESE Direction from the plant site) <p>RF near Usgaon (~9.7 km in SE Direction from the plant site)</p>																																				
m.	Project cost	The capital cost of the proposed project is Rs. 105 Crores																																				

S. No.	Particulars	Details		
		EMP	Capital (Rs. in Crores)	Recurring (Rs. in Crores)
n.	EMP cost		26	0.5 (Rs. 50 Lakh/annum)
o.	Employment opportunity	The employment generation from the proposed project is 2450 people		
p.	Water and Power requirement	Total water requirement will be 13896 m ³ /day. Power – Total power requirement for the proposed project will be around 66.5 MW.		
q.	CPA/SPA	The plant site is not located in CPA/SPA as identified by CPCB		



Unit configuration and capacity

The unit configuration and capacity of existing and proposed project is given as below:

S. No.	Units/Facilities	Capacity								Remarks
		Existing Granted as per EC dated 24.01.2022		Existing Operating		Additional		Total (Existing + Proposed) after expansion		
		Config	Cap	Config	Cap	Config	Cap	Config	Cap	
1	Blast Furnaces -1 & 2	2 No. x 173 m ³	3,50,000 TPA	2 No. x 173 m ³	350,000 TPA	Nil	Nil	2 No. x 173 m ³	3,50,000 TPA	No Change
2	Blast Furnace-3	1 No. x 450 m ³	6,50,000 TPA	1 No. x 450 m ³	650,000 TPA	1 No. x 628 m ³	2,00,000 TPA	1 No. x 628 m ³	8,50,000 TPA	Increase in production through capacity augmentation and technology upgradation
3	Met Coke Production	Battery 1:88 Ovens (non-recovery type) Battery 2:72 Ovens (Non-recovery Type)	6,22,000 TPA	Battery 1:84 Ovens (non-recovery type) Battery 2:72 Ovens (Non-recovery Type)	Battery 1: 3,22,000 TPA (Prior to EC Notification so CTO capacity mentioned) Battery 2: 3,00,000 (Phase 1 of EC Capacity 6,00,000 TPA)	Nil	Nil	Battery 1:88 Ovens (non-recovery type) Battery 2:72 Ovens (Non-recovery Type)	6,22,000 TPA	Implemented
4	Fe-Si Plant	1 x 7.5 MVA	5,000 TPA	Nil	Nil	Nil	Nil	1 x 7.5 MVA	5,000 TPA	Implemented
5	Ductile iron pipe plant	Nil	3,00,000 TPA	Nil	Nil	1 no. x 60,000 TPA	60,000 TPA	1 no. x 3,60,000 TPA	3,60,000 TPA	Installation of increased capacity is proposed
6	Waste heat recovery power plant	1 x 33 MW & 1 x 35 MW	595 million Units	1 x 33 MW & 1 x 35 MW	595 Million Units	Nil	Nil	1 x 33 MW & 1 x 35 MW	595 million Units	No Change
7	Sinter Plant	1 x 75 m ²	100000 TPA	1 x 75 m ²	10,00,000 TPA	1 x 84 m ²	2,00,000	1 x 84 m ²	120000 TPA	Increase in production through increase in sinter machine area,

S. No.	Units/Facilities	Capacity								Remarks
		Existing Granted as per EC dated 24.01.2022		Existing Operating		Additional		Total (Existing + Proposed) after expansion		
		Config	Cap	Config	Cap	Config	Cap	Config	Cap	
										upgradation of new ID fan, upgradation of new PMD & SMD and product quality improvement
8	Oxygen & Nitrogen Plant	1 x 100 TPD + 1 x 150 TPD Oxygen & 1 x 50 TPD Nitrogen	250 TPD Oxygen & 50 TPD Nitrogen	1 x 100 TPD + 1 x 150 TPD Oxygen & 1 x 50 TPD Nitrogen	250 TPD Oxygen & 50 TPD Nitrogen	Nil	Nil	1 x 100 TPD + 1 x 150 TPD Oxygen 1 x 50 TPD Nitrogen	250 TPD Oxygen & 50 TPD Nitrogen	No change

Action plan as per MoEF&CC O.M. dated 30/09/2020

S. No.	Physical activity and action plan		Year of Implementation			Total Budget (Crores)
			Plan FY 25	Plan FY 26	Plan FY 27	
A. Sanitation						
1	Repair and construction of household toilets for needy families and community toilets	Physical Nos of activities and Villages	Construction/Repair of 5 toilets each in Amona, Navelim and Khandola (total 15 toilets)	Construction/Repair of 5 toilets each in Amona, Navelim and Khandola (total 15 toilets)	Construction/Repair of 10 toilets each in Amona, Navelim and Khandola (total 30 toilets)	0.60
		Budget (Cr)	0.15	0.15	0.30	
2	Support with E-rickshaw for Garbage collection to village panchayats	Physical Nos of activities and Villages	One EV rickshaw to VP Navelim	One EV to VP Amona	-	0.1
		Budget (Cr)	0.05	0.05	-	
3	Garbage blackspots elimination program	Physical Nos of activities and Villages	-	Identification & management of 10 Blackspots for garbage by providing dustbins & CCTV surveillance	-	0.3
		Budget (Cr)	-	0.3		
B Women Empowerment						
1	Supporting Women entrepreneurs through skill training, capacity building and handholding for first year.	Physical Nos of activities and Villages	Supporting 5 women entrepreneurs with skill development, capacity building & support to procure tools & machineries	Supporting 5 women entrepreneurs with skill development, capacity building & support to procure tools & machineries	Supporting 5 women entrepreneurs with skill development, capacity building & support to procure tools & machineries	0.3

S. No.	Physical activity and action plan	Year of Implementation			Total Budget (Crores)	
		Plan FY 25	Plan FY 26	Plan FY 27		
			with maximum spend of Rs. 2 lac/enterprise	with maximum spend of Rs. 2 lac/enterprise	with maximum spend of Rs. 2 lac/enterprise	
		Budget (Cr)	0.1	0.1	0.1	
2	Skill Development support to Girl students through scholarships and targeted courses/trainings	Physical Nos of activities and Villages	20 Girl students to be supported	20 Girl students to be supported	20 Girl students to be supported	0.15
		Budget (Cr)	0.05	0.05	0.05	
3	Setting up of Sanitary pad vending machine and incinerators in schools	Physical Nos of activities and Villages			Setting up vending machine and incinerator in 2 High schools and 2 higher secondary schools	0.05
		Budget (Cr)			0.05	
	Total		0.35	0.65	0.55	1.50