NI- 14 /Raipur/22
Date:14/03/2022

CHHATTISGARH ENVIRONMENT CONSERVATION BOARD

Paryavas Bhawan, North Block, Sector - 19,
Nava Raipur Atal Nagar, District - Raipur (C.G.)
E-mail - hocecb@gmail.com

No. 9184 /TS/CECB/2022 Nava Raipur Atal Nagar, dated: 14 / 03 /2022

To,

M/s Real Ispat and Power Limited
Village – Bakulahi and Dhourabhata,
Tehsil – Bhatapara,
District – Balodabazar-Bhatapara (C.G.)

Sub: - "Permission to Establish" for Integrated Steel Plant consisting of Iron Ore Beneficiation (Beneficiated Ore) - 20,00,000 Metric Tonnes Per Year, Pellet Plant (2 x 0.8 Million Tonnes Per Year) - 16,00,000 Metric Tonnes Per Year, DRI Kilns (Sponge Iron 2x650 TPD + 2x350 TPD + 1x200 TPD) - 7,60,000 Metric Tonnes Per Year, Steel Melting Shop with CCM (Billets / Ingots / Hot Billets through Induction Furnace with CCM 5x30 Tonnes + 5x20 Tonnes + twin caster) - 7,50,000 Metric Tonnes Per Year, Ladle Refining Furnace (Billets / Ingots / Hot Billets through 2x25 Tonnes + 1x35 Tonnes) - 7,50,000 Metric Tonnes Per Year, Rolling Mill with Standby Reheating Furnace (50 TPH) for Rolled Products / TMT Bars / Structural Steel) - 7,00,000 Metric Tonnes Per Year (2x3,50,000 TPA), Ferro Alloys Unit {(FeSi / FeMn / SiMn / Pig Iron through 2x9 MVA furnace capacity) i.e. Ferro Silicon (FeSi) - 18,000 Metric Tonnes Per Year or Ferro Manganese (FeMn) - 66,000 Metric Tonnes Per Year or Silicon Manganese (SiMn) - 36,000 Metric Tonnes Per Year or Pig Iron - 72,000 Metric Tonnes Per Year}, Coal Gasifier + PCI for Pellet and Rolling Mill (10x8000 Nm^3/hr) - 80,000 Nm^3/hr and Power Plant (WHRB - 66 Megawatt and CFBC - 40 Megawatt) at Village – Bakulahi and Dhourabhata, Tehsil – Bhatapara, District- Balodabazar-Bhatapara (C.G.)

Ref: - 1. Environmental clearance issued by the Ministry of Environment, Forest and Climate Change, Government of India vide letter no. J-11011/411/2019-IA -II (I), dated: 23/11/2021 (EC Identification No. EC21A008CG110245).

2. Your online application dated: 02/12/2021 and subsequent correspondence ending dated: 15/01/2022 (online application no. 8640325).

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Without prejudice to the powers of this Board under the Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981 and without reducing your responsibilities under the said Acts, and after going through your proposal for achieving the effluent and gaseous emission standards, it is to inform you that this Board grants you permission to establish for Integrated Steel Plant consisting of Iron Ore

Beneficiation (Beneficiated Ore) - 20,00,000 Metric Tonnes Per Year, Pellet Plant (2 x 0.8 Million Tonnes Per Year) - 16,00,000 Metric Tonnes Per Year, DRI Kilns (Sponge Iron 2x650 TPD + 2x350 TPD + 1x200 TPD) - 7,60,000 Metric Tonnes Per Year, Steel Melting Shop with CCM (Billets / Ingots / Hot Billets through Induction Furnace with CCM 5x30 Tonnes + 5x20 Tonnes + twin caster) - 7,50,000 Metric Tonnes Per Year, Ladle Refining Furnace (Billets / Ingots / Hot Billets through 2x25 Tonnes + 1x35 Tonnes) - 7,50,000 Metric Tonnes Per Year, Rolling Mill with Standby Reheating Furnace (50 TPH) for Rolled Products / TMT Bars / Structural Steel) - 7,00,000 Metric Tonnes Per Year (2x3,50,000 TPA), Ferro Alloys Unit {(FeSi / FeMn / SiMn / Pig Iron through 2x9 MVA furnace capacity) i.e. Ferro Silicon (FeSi) - 18,000 Metric Tonnes Per Year or Ferro Manganese (FeMn) - 66,000 Metric Tonnes Per Year or Silicon Manganese (SiMn) - 36,000 Metric Tonnes Per Year or Pig Iron - 72,000 Metric Tonnes Per Year}, Coal Gasifier + PCI for Pellet and Rolling Mill (10x8000 Nm^3/hr) - 80,000 Nm^3/hr and Power Plant (WHRB - 66 Megawatt and CFBC - 40 Megawatt) at Village – Bakulahi and Dhourabhata, Tehsil – Bhatapara, District- Balodabazar-Bhatapara (C.G.), subject to fulfillment of following terms and conditions.

Terms & Conditions: -

1. Industry shall adhere to the stipulations incorporated in the environmental clearance issued by the Ministry of Environment, Forest and Climate Change, Government of India vide letter no. J-11011/411/2019-IA -II (I), dated: 23/11/2021 (EC Identification No. EC21A008CG110245).
2. Industry shall install fly ash brick / block / products manufacturing machine of capacity at-least 30,000 Nos. / Day for proper utilization of ash generated.
3. Industry shall use coal in sponge iron plant and mix of coal / char-dolochar in FBC power plant.
4. Industry shall use coal only to produce gas from the gasifiers and the gas shall be use as fuel in rolling mill and iron ore pellet plant. Coal shall not be used directly in the pallet plant and rolling mill either as a fuel or as raw material. Hot charging shall be achieved up to 85% and balance rolling shall be done through Reheating Furnace based on producer gas.
5. Industry shall provide adequate facility for proper treatment of industrial and domestic effluent before commissioning of the plant. Close circuit cooling system shall be provided to recycle / reuse cooling water. Acidic and alkaline effluent from DM water plant shall be neutralized in neutralization pit and mixed in central effluent monitoring tank along-with cooling tower blow down. Industry shall provide sewage treatment plant of adequate capacity for treatment of domestic effluent before commissioning of plant and also provide the facility of disinfection through chlorine / sodium hypochlorite etc. Industry shall not discharge any liquid effluent what so ever generated from various operations / processes, cooling blow down, boiler blow down, sewage / sludge, effluent treatment plant etc. into the river or any surface water bodies, and it shall be reused wholly after proper treatment in the process, dust suppression or for green belt development within premises. Industry

shall make proper arrangements of suitable drains / pipe networks to ensure adequate flow for full utilization of treated effluent inside the premises. The concept of zero discharge shall be adopted by the industry. Industry shall provide CCTV camera and online effluent monitoring systems (EQMS) at outlet of ETP(s). Industry shall ensure the treated effluent quality within the standard prescribed by Board published in Gazette notification dated 25/03/1988. The major parameters shall not exceed the following limits: -

a.	pH	5.5 - 9.0
b.	BOD	30 mg/L
c.	COD	250 mg/L
d.	Oil and Grease	10 mg/L
e.	Suspended Solids	100 mg/L

Chhattisgarh Environment Conservation Board may further stipulate stringent limit depending upon environmental conditions.

6. No industrial effluent i.e. Phenolic waste water generated from Coal Gasifiers condensate shall be discharged outside of the premises under any circumstances. Phenolic water shall be stored only in leak proof tanks and shall only be used for hot gas quenching in the After Burning Chamber (ABC) of Direct - Reduced Iron (DRI) kilns of own Sponge Iron Plant as per provisions of the Standard Operating Procedure (SOP) notified by Central Pollution Control Board (CPCB) for Utilization of Phenolic Waste Water generated from Coal Gasifier Condensate. If industry fails to comply this, the consent may be cancelled.

7. Industry shall not use ground water for industrial activities. Industry shall use water for industrial activities from Silva Anicut of Shivnath River as per permission by Department of Water Resources, Chhattisgarh Government. Industry shall obtain prior permission from central ground water authority for use of ground water for domestic purpose.

8. Industry shall provide adequate air pollution control arrangements at all point and non point sources of emission. Electro Static Precipitator(s) with bag filter of adequate capacity and high efficiency shall be installed to control emission generated from sponge iron plant (DRI kilns), CFBC based power plant and iron ore beneficiation plant / pellet plant. Moveable type collecting hoods and fume extraction system with bag filters of adequate capacity and high efficiency shall be installed in induction furnaces of steel melting shop with LRF and submerged arc furnace of ferro alloys unit. Collecting hoods and bag filters / scrubber of adequate capacity and high efficiency shall be installed in re-heating furnace(s) based rolling mill. Low NOx burners shall be installed in re-heating furnace(s) based rolling mill. Proper ventilation shall be provided in the steel melting shop and ferro alloys unit. Submerged arc furnace shall be provided with 4^{th} hole extraction. Air Cooled condensers shall be used in the captive power plant. Suitable & effective air pollution control equipments (adequate dust extraction system followed by bag filters) for the control of emission from processes / operations, transfer points, junction points and for the control of emission during the handling & transportation of raw materials

/ coal, dust, fly ash / bottom ash etc. shall be installed before commissioning of plant. All the conveying system, transfer points, junction points etc. shall be covered. In plant control measures for checking fugitive emissions from all the vulnerable sources like spillage / raw materials & coal handling, solid wastes handling etc. shall be provided. Adequate provision shall be made for dust suppression (chemical and dry fog type) and sprinkling of water at strategic locations for ensuring dust / ash does not get air borne. Regular sprinkling of water in vulnerable areas of the plant shall be ensured for controlling fugitive dust emission. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material. Particulate matter emission from any point source shall not exceed 30 mg/Nm^3 at any point of time. Chhattisgarh Environment Conservation Board may further stipulate stringent particulate matter and air pollutants emission limit depending upon environmental conditions. Ambient air quality within the factory premises shall be maintained within the standards prescribed by Board.

9. Industry shall ensure standards of other parameters (effluent, emission of fugitive dust and gaseous etc.) as prescribed by Ministry of Environment, Forest and Climate Change, New Delhi for sponge iron plant, power plant etc. Industry shall ensure the disposal of fly ash as per the MoEF&CC notification dated 31/12/2021.

10. Industry shall ensure transportation of raw materials / fuel by properly covered vehicles. Vehicles used for transporting the wastes / sludge shall be covered with tarpaulins and optimally loaded. Vehicular emissions shall be kept under control and regularly monitored. Industry shall also ensure use of mechanically covered vehicles for transportation of raw materials, fuel, dust generating products on or before 12/07/2023.

11. At no time, vehicles / trucks pertaining to the project shall be parked outside of the premises of project. At entry and exit points of plant, wheel wash system shall be provided to control wheel generated dust. Provision for monitoring of vehicles by installation of closed circuit cameras (CCTv) at suitable locations i.e. entry gate, weigh bridge, internal parking area etc. shall also be made to ensure the incoming and outgoing vehicles are properly / mechanically covered.

12. The height of all stacks attached with various particulate matter / air pollutants emission units shall be maximum of the following: -

    a. Based on $H=14(Q)^{0.3}$ (where Q is emission rate of SO_2 in Kg/Hr., and H is Stack height in meters) or;
    b. Based on the standards for minimum height of the stacks specified by Ministry of Environment, Forest and Climate Change, Government of India or;
    c. The minimum stack height for pallet plant - 61 meter, DRI kiln with WHRB (2 x 650) - 93 meter, DRI kiln with WHRB (2 x 350) - 77 meter, DRI kiln with WHRB (1 x 200) - 60 meter, induction furnace - 35 meter, ferro alloys plant - 30 meter, reheating based rolling mill - 62 meter and CFBC based power plant - 68 meter.

d. Minimum height of stack(s) - 30 meters.
Industry shall provide emission monitoring facilities like easy ladders, platform, porthole etc. in the stack(s) at appropriate height, as per Emission Regulation Part – 3 (ERP -3) norms issued by CPCB.

13. Industry shall install continuous online stack emission monitoring systems with calibration facility in all the stacks. Industry shall also install continuous ambient air quality monitoring stations in the plant area towards villages (at-least at four location one within and three outside the plant area at an angle of 120° each) covering upwind in the down wind direction as well as where maximum ground level concentrations of PM_{10}, $PM_{2.5}$, NO_X, CO and SO_2 are anticipated in consultation with the Board. Data on ambient air quality and stack emission shall be submitted to the Board every month. Calibration and validation of data shall be carried out of all CEMS and industry shall ensure availability of real time data in CECB / CPCB server.

14. Industry shall store all raw material and finished products such as iron ore / sponge iron / iron ore fines, bentonite / iron ore pellets / FeSi / FeMn / SiMn / Pig Iron / coal etc. above ground level with pucca platform in covered shed and appropriate dust suppression system shall be provided in the shed to control fugitive emission.

15. Industry shall provide safe and scientific arrangement for handling, storage and disposal of all solid wastes such as; coal fines, iron ore fines, sponge iron fines, sludge, slag, mill scale, end cutting, sinders, thickened tailings, tar and ESP dust collected in air pollution control devices, fly ash, bottom ash etc. 100 % solid waste generated in the facility shall be utilized. Maximum 90 days storage capacity shall be allowed inside the plant complex for solid wastes. Ash / dust generated from DRI kiln shall be used / given to brick manufacture and cement plant. The char and dolochar from the sponge iron will be used in CFBC boiler(s) as fuel. Accretion, slag and wet scrapper sludge shall be used in road construction / given to brick manufacture. Slag from induction furnace (after metal recovery) shall be utilized for road construction as well as filling low-lying areas within the plant premises, if found non-hazardous. Mill scales shall be reused in ferro alloys manufacturing and pallet plant. DM resin shall be disposed in properly cemented pit or back to supplier. Tar generated from Producer Gas Plant (PGP) shall be used as fuel in Pellet plant or sold to registered recycler**.** The sludge and tailings from iron ore beneficiation plant shall be de-watered and utilized in dry condition for brick / block / tile manufacturing and / or cement manufacturing. Industry shall not install any tailings pond(s) under any circumstance. Oily sludge, refractory waste etc. shall be sold to authorized recyclers / re-processors for proper disposal. Slag produced in Ferro Manganese (Fe-Mn) production shall be used in manufacture of Silico Manganese (Si-Mn). Slag produced in Ferro Silicone (Fe-Si) production shall be used in cast iron foundries. Slag produced in Silico- Mangnese (Si-Mn) production shall be used in road construction and cement making. No Ferro-Chrome (Fe-Cr) shall be manufactured without proper approval from the Ministry of Environment,

Forest and Climate Change, Government of India and Chhattisgarh Environment Conservation Board. The low-lying area within premises / outside premises filled by solid wastes shall be reclaimed by proper leveling, covering with soil and plantation without delay. All the other solid / non-hazardous waste generated shall be properly utilized or disposed off in environment friendly manner.

16. Industry shall adopt dry ash / dust extraction system and dry ash / dust disposal system. Ash / dust shall be utilized 100% for other beneficial uses such as brick / block making, road construction, cement making, low-lying areas filling, back filling of the abandoned mines etc. Industry shall provide ash / dust storage silos of sufficient capacity and regular disposal of ash / dust shall be ensured. If at any point of time all the storage silos completely filled with ash / dust, then in that case industry shall shut down the plant till such time the ash / dust disposed to other beneficial uses. Ash / dust shall not be stored in open areas under any circumstances. Industry shall follow the guidelines, notification etc. for utilization of fly ash / bottom ash issued by Central Government / State Government / Central Pollution Control Board / Chhattisgarh Environment Conservation Board from time to time.

17. Industry shall ensure fly ash ganerated from FBC based power plant shall be disposed of as per provisions of notification dated 31/12/2021 issued by MoEF & CC.

18. Industry shall use fly ash brick, fly ash block and fly ash based products in the construction/repairing activities.

19. As per characterization report, if any waste(s) / ETP sludge comes under the preview of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, industry shall obtain letter of authorization under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 form the Board (as amended up to date). Industry shall ensure proper safe and scientific collection, storage, transportation and disposal of all hazardous waste(s) such as any waste(s) / ETP sludge comes under the preview of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

20. Industry shall install separate electric metering arrangements with time totalizer and interlocking arrangement for the running of pollution control devices. These arrangements shall be made in such a fashion that any non-functioning of pollution control device / devices shall immediately stop the electric supply to the fuel / raw materials supply system and shall remain tripped till the pollution control device / devices are made functional again / rectified to achieve the desired efficiency. The record & log book of electricity and chemical consumption for running the pollution control equipments shall be maintained & submitted to Board every month.

21. All internal roads shall be made pucca before commissioning of the plant. Good house keeping practices shall be adopted by the industry.

22. Garland drains with appropriate check dams shall be provided all along the iron ore, coal, other raw materials, solid wastes storage areas etc. to avoid any possibility of erosion (wash-off) during rain. Sump capacity

shall also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains. The surface run-off shall be de-silted through a series of check dams and drains before re-use.

23. Industry shall develop rainwater-harvesting structures in the project area and residential area (if any) to harvest the rainwater for utilization in the lean season as well as to recharge the ground water table. Regular monitoring of ground water level and quality (including heavy metals) shall be carried out by establishing a network of existing wells and constructing new piezometers at suitable locations at the proponent's cost in and around project area in consultation with Regional Director, CGWB, Central Region, Bhopal. Regular monitoring of surface water quality shall also be carried out by establishing a network of stations at suitable locations. The frequency of monitoring shall be four time a year - pre-monsoon (April / May), monsoon (August), post-monsoon (November) and winter (January) seasons. Data generated from monitoring will be submitted to Chhattisgarh Environment Conservation Board, Raipur quarterly basis.

24. Industry shall provide proper arrangement to control the noise pollution. Industry shall install appropriate noise barriers / control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation to control the noise. The noise level shall not exceed the limit 75 dB(A) during the day time and 70 dB(A) during the night time within the plant premises. Adequate measures shall be taken for control of noise levels below 85 dB(A) in the work environment.

25. Green belt shall be developed in 33% of the total area all along the entire periphery of the area with a density of 2500 trees per ha. Greenbelt with a width of 100 meters shall be developed all around the plant towards Bakulahi village and Daurbhata located at distance of 150 meter south-east and 350 meter north-west from the project site. As far as possible maximum area of open spaces shall be utilized for plantation purpose. Industry shall abide by the decisions taken by Ministry of Environment, Forest and Climate Change, Government of India / Central Pollution Control Board / Government of Chhattisgarh / Chhattisgarh Environment Conservation Board from time to time in this regard.

26. Industry shall carry out environmental performance monitoring report all the pollution control devices by reputed Government Institution like IIT / NIT or recognized institution empanelled / accredited by Ministry of Environment, Forest and Climate Change, Government of India or NABL annually and the report shall be submitted to Board.

27. Construction of effluent treatment plant and installation of air pollution control equipments shall be taken up simultaneously with other civil / mechanical works. Industry shall provide adequate measures to control air pollution during the construction. The effluent from construction labour houses shall be treated properly and no effluent shall be discharged outside of the premises.

28. Industry shall obtain permission from competent authority to cut down trees prior to any construction (if any).

29. Industry shall establish an environmental management cell to carryout function relating to environmental management under the supervision of senior executive who will directly report to the head of organization. A full-fledged laboratory with qualified technical / scientific staff shall be provided to monitor the influent / effluent quality, ground water quality, storm water / runoff quality, surface water quality, soil quality, ambient air quality, stack emission and environmental samples etc.

30. Necessary fund shall be provided for implementation of the above conditions, conditions to be incorporated in the 'consent to operate' of the Board and for environmental safeguards.

31. Industry shall obtain all necessary statutory clearances / licenses / permissions from concerned Central Government / State Government Departments, Boards, Bodies and Corporations etc. before start of construction / establishment of the plant. Industry shall follow direction issued by Central Government / State Government, Central Pollution Control Board / Chhattisgarh Environment Conservation Board from time to time regarding control of water & air pollution and for environmental conservation.

32. Industry shall not claim any right on the basis of the "Permission to Establish" granted of the Board. The issuance of this permission does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Central, State or local laws or regulations.

33. Industry shall provide separate fund under CER activities in and around the project area as per direction of Central Government / Central Pollution Control Board / State Government / Chhattisgarh Environment Conservation Board.

34. Industry shall not commission and operate any of the unit without obtaining consents under section 25 of the Water (Prevention and Control of pollution) Act, 1974 and under section 21 of the Air (Prevention and Control of pollution) Act, 1981 of the Chhattisgarh Environment Conservation Board in any circumstances. Industry shall follow any other condition(s) given at the time of grant of consent under the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981.

35. Any change in production capacity, process, raw materials / fuel used, project profile etc. shall be intimated to the Board and prior permission of the Board shall be obtained for the same.

36. This permission to establish shall be valid for the period of five years effective from the date of issue of this letter. This permission to establish shall be treated as cancelled in case; no construction activity has been started on the site regarding establishment of the industry during this period. Chhattisgarh Environment Conservation Board reserves the right to extend the validity period / not to extend the validity period / cancel / withdraw the permission to establish of the industry, based on the construction activities carried out on the site regarding establishment of the industry.

37. Board reserves the right to amend / cancel any of the above conditions, stringent the emission / effluent limits stipulated above and add new conditions as and when deemed necessary in the interest of environmental protection, change in the project profile or non-satisfactory implementation of the stipulated conditions etc.

The consent (for operation) as required under the Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 shall be granted to your industry after fulfillment of all the conditions mentioned above. For this purpose you shall have to make an application to this Board in the prescribed Performa at least two months before the expected date of commissioning of the plant. The applicant shall not without valid consent (for operation) of the Board bring into use any out let for the discharge of effluent and particulate matter / gaseous emission.

For & on behalf of
Chhattisgarh Environment Conservation Board

Member Secretary
Chhattisgarh Environment Conservation Board
Nava Raipur Atal Nagar, District-Raipur (C.G.)

Endt. No. 9185 /TS/CECB/2022 Nava Raipur Atal Nagar, dated: 14 / 03 /2022

Copy to: -

Regional Officer, Regional Office, Chhattisgarh Environment Conservation Board, Raipur (C.G.). Please ensure compliance and report, if any condition/conditions are violated by the industry.

Sd/-
Member Secretary
Chhattisgarh Environment Conservation Board
Nava Raipur Atal Nagar, District-Raipur (C.G.)

Signature Not Verified

Digitally Signed by :R P Tiwari MS

Date: 2022.03.17 13:04:08 IST