



File No.: J-11015/351/2006-IA.II(M)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division



Dated 08/05/2025



To,

Mr. Himanshu Mishra
M/s. STEEL AUTHORITY OF INDIA LTD
ISPAT BHAWAN, LODI ROAD, NEW DELHI, DELHI, 110003
parivesh_sail@sail.in

Subject: Expansion of Barsua-Taldih-Kalta Iron Mines from 8.05 MTPA to 16.0 MTPA (ROM), handling of 2 MTPA Sub-grade dumps/ Tailings and 3.92 MTPA Topsoil/ OB/ IB (Total excavation 22 MTPA) and Dry Processing Plants of 7.0 MTPA for Taldih, 4 MTPA for Kalta, 3.5 MTPA Barsua Beneficiation Plant in the amalgamated mine lease area of 2558.581 ha, along with augmentation of associated infrastructure, in Koira Tehsil, Sundargarh District, Odisha. Amendment in Environmental Clearance reg.

Sir/Madam,

This is in reference to your online application No. IA/OR/MIN/523449/2025 dated 03/04/2025, submitted to this Ministry for the grant of prior amendment in Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 and its subsequent amendments, for the project titled *Expansion of Barsua-Taldih-Kalta Iron Mines from 8.05 MTPA to 16.0 MTPA (ROM)*. The project also includes handling of 2 MTPA sub-grade dumps/tailings, 3.92 MTPA topsoil/overburden/interburden (total excavation of 22 MTPA), and dry processing plants with capacities of 7.0 MTPA at Taldih, 4.0 MTPA at Kalta, and 3.5 MTPA at Barsua Beneficiation Plant, within the amalgamated mine lease area of 2558.581 ha, along with augmentation of the associated infrastructure in Koira Tehsil, Sundargarh District, Odisha.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC25A00000R5976497A
(ii) File No.	J-11015/351/2006-IA.II(M)
(iii) Clearance Type	Amendment in EC
(iv) Category	A
(v) Schedule No./ Project Activity	1(a) Mining of minerals
(vi) Sector	Non-Coal Mining
(vii) Name of Project	Proposal for amendment of EC of Barsua-Taldih-Kalta Iron Mines (ML Area - 2558.581 ha) of

(viii) Location of Project (District, State)	SAIL-Rourkela Steel Plant SUNDARGARH, ODISHA
(ix) Issuing Authority	MoEF&CC
(x) EC Date	03/04/2025
(xii) Applicability of General Conditions	YES
(xiii) Status of implementation of the project	

3. In view of the particulars given in the Para 1 above, the project proposal interalia including Form-2 (Part A, B and C)/ EIA & EMP Reports were submitted to the MoEF&CC for an appraisal by the EAC under the provision of EIA notification 2006 and its subsequent amendments.

4. The above-mentioned proposal has been considered by EAC in the meeting held on 22/04/2025. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed from the PARIVESH portal by scanning the QR Code above.

5. Observation and Recommendation of Committee:

The Committee deliberated the proposal for Amendment in Environmental Clearance dated 28.04.2023 for Barsua-Taldih-Kalta Iron Mines, which seeks a time extension of 2 years for Taldih Mines and 3 years for Kalta Mine to commence the operation of Belt Conveyor from these mines, and to continue road transportation from Taldih Mines and Kalta Mines to Barsua and Roxy Railway Sidings respectively during the extended period. The proposal includes amendment in the lease area from 2564.323 ha to 2558.581 ha. This change in ML area is attributed to the surrender of 5.742 ha of forestland, and a Supplementary Lease Deed for the revised area has been executed on 14.11.2024.

The Project Proponent and the Consultant presented the key site features through a KML file. PP informed that the total mining lease area has been revised from 2564.323 hectares, as mentioned in the existing Environmental Clearance (EC), to 2558.581 hectares in the present proposal. This reduction of 5.742 hectares is due to the surrender of forest land, and a Supplementary Lease Deed reflecting the revised area.

The Committee also observed that, as per the conditions stipulated in the existing EC dated 28.04.2023, the Project Proponent is required to commence the operation of the conveyer belt within two years from the date of EC issuance. Until the conveyer belt becomes operational, the State Pollution Control Board (SPCB) shall only grant Consent to Operate (CTO) for a capacity of up to 12 MTPA, comprising 4 MTPA from Barsua, 2 MTPA from Taldih, 4 MTPA from Kalta and 2 MTPA from Subgrade/Tailings. Accordingly, EAC asked the reasons for delay in installation of the conveyer belt. PP replied that there had been delays in finalizing the Mine Development Operator for both Taldih and Kalta mines.

PP added that they have issued a Letter of Award (LOA) on 27.09.2024 for the Taldih mine, and the Mine Service Agreement was executed on 20.11.2024. As informed, the development of the mine and installation of the conveyer belt are expected to take approximately two years. Accordingly, the Project Proponent has requested an extension of two years for commencement of the conveyer belt upto Barsua Railway siding. PP has also requested to permit transportation through road upto Barsua Railway siding till the commencement of the conveyer belt.

Further, in respect of Kalta Iron Mine, PP requested the Committee to provide a three-year extension for commencement of conveyer belt upto Roxy Railway Siding and to allow road transportation till then. EAC noted the submission of PP and enquired about seeking a three year time period whereas for Taldih mine PP is seeking two years.

PP submitted that conveyor belt from Kalta mine to Roxy Railway siding would require various statutory clearances including Forest Clearance and finalization of MDO. As of now, the route outside mining lease area upto Roxy Railway siding, along with the Feasibility Report has been finalized. The proposal is currently under evaluation for approval by the SAIL Board. EAC noted the submissions of PP and directed that PP should complete the installation and commencement of conveyor belt as committed above for both Taldih and Kalta mines. EAC also advised PP to take necessary precautions

while undertaking transportation through road upto the above mentioned railway sidings to prevent pilferage of mineral and air pollution.

The Site Inspection of Barsua, Taldih & Kalta Iron Mines was done by the Regional Office, MOEFCC, Bhubaneswar during 24th & 25th January, 2025 for reviewing & progress of jobs on the existing EC conditions. The Site Inspection / Monitoring Report have been issued on 05.03.2025 by RO Bhubaneswar. Subsequently, SAIL had submitted Action Taken Report (ATR) on 10.03.2025 against the observation given in site inspection/monitoring report. Based on the SAIL's ATR, MoEFCC Regional Office, Bhubaneswar has reviewed the compliances by doing another site inspection and issued comments (on ATR submitted by M/s SAIL) on 02.04.2025. Committee observed that as per the RO Bhubaneswar report dated 02.04.2025, PP has complied or assured to comply most of the conditions - as per the report majority of the conditions are being complied and/or assured to comply. EAC advised the PP to comply all the EC conditions within stipulated time as per the RO Report dated 02.04.2025 and PP's commitments. EAC specifically instructed PP to comply the conditions related to STP installation, installation of remaining fixed water sprinkling system, installation of remaining one CAAQMS and one manual AAQMS. ,within stipulated/ committed time period.

6. Based on the above discussions and presentation made by the Project Proponent and the Consultant, the EAC in its 43rd EAC meeting held during 22-23 April 2024 recommended the proposal of Amendment in Environmental Clearance dated 28.04.2023 for Barsua-Taldih-Kalta Iron Mines located in Koira Tehsil, Sundargarh District, Odisha under EIA notification 2006 (as amended) and permitted the transportation by road from Taldih mines to Barsua Railway siding for a period of two years upto 26.04.2027 and from Kalta Mines to Roxy Railway Siding for a period of 3years upto 26.04.2028 along with reduction in lease area from 2564.323 ha to 2558.581 ha in favour of M/s SAIL subject to the certain additional specific conditions (**Annexure I**).

7. The details of the project as per the information submitted by the Project Proponent are enclosed as Annexure (II).

8. The Ministry of Environment, Forest and Climate Change (MoEF&CC) has examined the proposal in accordance with the provisions of the Environmental Impact Assessment (EIA) Notification, 2006 and its subsequent amendments. Based on the recommendations of the Expert Appraisal Committee (EAC), the Ministry hereby accords amendment in the Environmental Clearance for the proposal pertaining to the expansion of the Barsua-Taldih-Kalta Iron Mines from 8.05 MTPA to 16.0 MTPA (ROM). The project involves handling of 2.0 MTPA sub-grade dumps/tailings, 3.92 MTPA topsoil/overburden/interburden (total excavation of 22.0 MTPA), and establishment of dry processing plants with capacities of 7.0 MTPA at Taldih, 4.0 MTPA at Kalta, and a 3.5 MTPA beneficiation plant at Barsua, within the amalgamated mine lease area of 2558.581 ha. The project also involves augmentation of associated infrastructure in Koira Tehsil, Sundargarh District, Odisha. This amendment is granted under the provisions of the EIA Notification, 2006 and its subsequent amendments, subject to compliance with the Specific and Standard Environmental Clearance conditions as specified in Annexure (I).

9. The Environmental Clearance to the aforementioned project is under provisions of EIA Notification, 2006, as amended. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

10. 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.

11. The above conditions will 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, the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 read with subsequent amendments therein.

12. The PP is under obligation to implement commitments made in the Environment Management Plan, which forms part of this EC.

13. General Instructions:

- a. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC website where it is displayed.
- b. 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 must display the same for 30 days from the date of receipt.
- c. The project proponent shall have a well laid down environmental policy duly approved by the Board of Directors (in case of Company) or competent authority, duly prescribing 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.
- d. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the project proponent (during construction phase) and authorized entity mandated with compliance of conditions (during operational phase) shall be prepared. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Six monthly progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.
- e. 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.
- f. The Regional Office of this MoEF&CC 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.
- g. 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.
- h. PP needs to comply the OM dated 24.07.2024 of MoEF&CC, where it is stated that the plantation of saplings shall be carried out in the earmarked 33% greenbelt area as part of the tree plantation campaign " EK Ped Ma ke Naam " (एक पेड़ माँ के नाम (and the details of the same shall be uploaded in the MeriLife portal (<https://merilife.nic.in>).

14. This issue with an approval of the Competent Authority.

Copy To

- i. **The Secretary**, Ministry of Mines, Government of India Shastri Bhawan, New Delhi.
- ii. **The Chief Secretary**, Government of Odisha, Secretariat, Bhubaneswar.
- iii. **The Secretary**, Department of Environment, Government of Odisha, Secretariat, Bhubaneswar.
- iv. **The Secretary**, Department of Mines and Geology, Government of Odisha, Secretariat, Bhubaneswar.
- v. **The Secretary**, Department of Forests, Government of Odisha, Secretariat, Bhubaneswar.
- vi. **The Secretary**, Department of Steel and Mines, Government of Odisha, Secretariat, Bhubaneswar.
- vii. **The Member Secretary**, Odisha Pollution Control Board, Parivesh Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012.
- viii. **The Deputy Director General of Forests (C)**, Ministry of Environment, Forest and Climate Change, Regional Office, A/3, Chandrasekharapur, Bhubaneswar – 751023.
- ix. **The Chief Wildlife Warden**, Prakurti Bhawan, 5th floor, BDA Apartment, Nilakanthanagar, Nayapalli, Bhubaneswar-751012, Odisha.
- x. **The Chairman**, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
- xi. **The Controller General**, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440001.
- xii. **Director General**, Directorate General of Mines Safety, Hirapur, Dhanbad-826001

- xiii. **The Member Secretary**, Central Ground Water Board, Ministry of Agriculture and Irrigation, 12/1 Jam Nagar House, Shahjahan road, New Delhi 110011.
- xiv. **The District Collector**, Sundargarh District, Govt. of Odisha.
- xv. **Guard File**.
- xvi. **PARIVESH Portal**.

Annexure 1

Specific EC Conditions for (Mining Of Minerals)

1. Specific Conditions

S. No	EC Conditions
1.1	The specific condition (iv) of EC letter dated 28.04.2023 shall now be read as “The Project Proponent shall commence the operation of the conveyer belt from Taldih mine to Barusa Railway siding by 26.04.2027 and from Kalta mines to Roxy Railway siding by 26.04.2028. SPCB shall grant CTO upto 12 MTPA only (consisting of 4 MTPA from Barsua, 2MTPA from Taldih and 4MTPA from Kalta and 2MTPA sub-grade/tailings). After the operation of conveyer belt, SPCB may grant CTO upto 16 MTPA [(4MTPA from Barsua, 8 MTPA from Taldih and 4 MTPA from Kalta) and 2 MTPA sub-grade/tailings] based on site inspection of compliance of this conditions.
1.2	Tarpaulin covering should be done appropriately with no scope for ore spillage. The Project Proponent shall take adequate measures to prevent the pilferage of mineral during its transportation. Drivers, truck operators should be imparted training on the adverse effects of dust pollution, water pollution due to ore spillage on roads.
1.3	The Project Proponent needs to implement all possible mitigation measures while transporting the mineral by Road. Mechanically covered trucks should also be explored. Operators, supervisors, contractor personal should be properly trained on environmental aspects of ore/ waste spillage and resultant air and water pollution. Record of above training of the personal, supervisor/officials should be submitted to Regional office of MoEF&CC.
1.4	PP shall ensure that there will be no dust generation during transportation of Iron ore to Barsua and Roxy railway siding. Wind screens can also be provided to prevent adjacent population from adverse effects of mineral transportation.
1.5	PP shall install the remaining four fog cannons in the ML area by October 2025.
1.6	PP has already installed 3 manual and 3 continuous ambient air quality monitoring station. PP shall install the remaining one continuous ambient air quality monitoring station till September 2025 and one Manual ambient air quality monitoring station by May 2025.
1.7	PP shall complete the installation of STP by December 2026.
1.8	PP shall complete the construction of remaining retaining wall/ gabion structure/garland drain by June 2025.
1.9	PP shall install the remaining permanent water sprinkling system by September 2025.
1.10	PP needs to comply the OM dated 24.07.2024 of MoEFCC, wherein it is stated that the plantation of saplings shall be carried out in the earmarked 33% greenbelt area as part of the tree plantation

S. No	EC Conditions
	campaign “ EK Ped Ma ke Naam” and the details of the same shall be uploaded in the Meri Life portal(https://merilife.nic.in).
1.11	All other terms and conditions of EC letter dated 28.04.2023 shall remain unchanged.

Standard EC Conditions for (Mining of minerals)

1.

S. No	EC Conditions
1.1	The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.
1.2	The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon’ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.

2. Statutory Compliance

S. No	EC Conditions
2.1	The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon’ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.
2.2	The Project proponent complies with all the statutory requirements and judgment of Hon’ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.
2.3	A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.
2.4	The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / 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. (in case of the presence of Schedule-I species in the study area).

S. No	EC Conditions
2.5	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
2.6	The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred. PP needs to apply for transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.
2.7	The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional Office for compliance and record.
2.8	State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.
2.9	The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area."
2.10	The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.
2.11	This Environmental Clearance (EC) is subject to orders/ judgment of Honble Supreme Court of India, Honble High Court, Honble NGT and any other Court of Law, Common Cause Conditions as may be applicable.
2.12	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
2.13	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
2.14	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

3. Air Quality Monitoring And Preservation

S. No	EC Conditions
3.1	The project proponent use leak proof trucks/dumpers carrying ore and other raw materials and cover them with tarpaulin.
3.2	Design the ventilation system for adequate air changes as per ACGIH document for all tunnels,

S. No	EC Conditions
	motor houses, Oil Cellars.
3.3	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986. 9) The project proponent shall install system to 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.
3.4	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission 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 recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories. Monitor fugitive emissions in the plant premises.
3.5	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.
3.6	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
3.7	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
3.8	The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.
3.9	Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/ Central Pollution Control Board.
3.10	The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM10 and PM2.5 in

S. No	EC Conditions
	reference to PM emission, and SO ₂ and NO _x in reference to SO ₂ and NO _x 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.

4. Water Quality Monitoring And Preservation

S. No	EC Conditions
4.1	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
4.2	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 recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
4.3	Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J- 20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.
4.4	In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.
4.5	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
4.6	Adhere to Zero Liquid Discharge
4.7	The project proponent shall provide the slime disposal facility with impervious lining and collection wells for seepage. The water collected from the slime pond shall be treated and recycled.
4.8	Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEFCC annually.
4.9	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

S. No	EC Conditions
	according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
4.10	The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.
4.11	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.
4.12	Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.
4.13	Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
4.14	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.
4.15	The project proponent shall practice rainwater harvesting to maximum possible extent.
4.16	The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease including upstream and downstream. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEF&CC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

5. Noise And Vibration Monitoring And Prevention

S. No	EC Conditions
5.1	The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers

S. No	EC Conditions
	are working without personal protective equipment.
5.2	The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
5.3	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.

6. Noise Monitoring And Prevention

S. No	EC Conditions
6.1	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.
6.2	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

7. Energy Conservation Measures

S. No	EC Conditions
7.1	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;
7.2	Provide LED lights in their offices and residential areas.

8. Mining Plan

S. No	EC Conditions
8.1	The Project Proponent shall adhere to approved mining plan, inter alia, including, total excavation (quantum of mineral, waste, over burden, inter burden and top soil etc.); mining technology; lease area; scope of working (method of mining, overburden & dump management, O.B& dump mining, mineral transportation mode, ultimate depth of mining, concurrent reclamation and reclamation at mine closure; land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life; etc.).
8.2	The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.

9. Land Reclamation

S. No	EC Conditions
9.1	The Overburden (O.B.), waste and topsoil generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB / waste dumps / topsoil dump like height, width and angle of slope shall be governed as per the approved Mining Plan and the guidelines/circulars issued by D.G.M.S. The topsoil shall be used for land reclamation and plantation.
9.2	Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.
9.3	The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.
9.4	Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.

10. Waste Management

S. No	EC Conditions
10.1	The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
10.2	Kitchen waste shall be composted or converted to biogas for further use.(to be decided on case to case basis depending on type and size of plant)

11. Green Belt And Emp

S. No	EC Conditions
11.1	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant

S. No	EC Conditions
11.2	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

12. Transportation

S. No	EC Conditions
12.1	The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.
12.2	No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers. [If applicable in case of road transport].

13. Public Hearing And Human Health Issues

S. No	EC Conditions
13.1	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.
13.2	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
13.3	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
13.4	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 of Factory Act.
13.5	Project Proponent shall make provision for the housing for workers/labors or shall construct labor

S. No	EC Conditions
	camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.

14. Green Belt

S. No	EC Conditions
14.1	The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

15. Corporate Environment Responsibility

S. No	EC Conditions
15.1	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
15.2	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
15.3	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Mineral Beneficiation plants shall be implemented.
15.4	The Project Proponent shall submit the time- bound action plan to the concerned regional office of the Ministry within 6 months from the date of issuance of environmental clearance for undertaking the activities committed during public consultation by the project proponent and as discussed by the EAC, in terms of the provisions of the MoEF&CC Office Memorandum No.22-65/2017-IA.III dated 30 September, 2020. The action plan shall be implemented within three years of commencement of the project.
15.5	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.
15.6	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 I wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall

S. No	EC Conditions
	be submitted to the MoEF&CC as a part of six-monthly report.

16. Miscellaneous

S. No	EC Conditions
16.1	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.
16.2	The above conditions will 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 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/High Court and any other Court of Law relating to the subject matter.
16.3	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.
16.4	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).
16.5	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.
16.6	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.
16.7	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.
16.8	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
16.9	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.
16.10	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.
16.11	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

S. No	EC Conditions
	company.
16.12	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 proponents website permanently.
16.13	Concealing factual data failure to comply with any or submission of false/ fabricated data and of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
16.14	The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
16.15	The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.
16.16	The above conditions will 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 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/High Court and any other Court of Law relating to the subject matter.
16.17	In pursuant to Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020 to comply with the direction made by Honble Supreme Court on 8.01.2020 in W.P. (Civil) No 114/2014 in the matter Common Cause vs Union of India, the mining lease holder shall after ceasing mining operations, undertake regrassing the mining area and any other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
16.18	The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data / information / monitoring reports.
16.19	A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC.
16.20	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.
16.21	The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.
16.22	The Ministry or any other competent authority may alter/modify the above conditions or stipulate

S. No	EC Conditions
	any further condition in the interest of environment protection.

17. Corporate Environment Responsibility (Cer)

S. No	EC Conditions
17.1	The Project Proponent shall submit the time- bound action plan to the concerned regional office of the Ministry within 6 months from the date of issuance of environmental clearance for undertaking the activities committed during public consultation by the project proponent and as discussed by the EAC, in terms of the provisions of the MoEF&CC Office Memorandum No.22-65/2017-IA.III dated 30 September, 2020. The action plan shall be implemented within three years of commencement of the project.

Standard EC Conditions for (Mineral beneficiation)

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	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
1.3	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.
1.4	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
1.5	The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / 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. (in case of the presence of Schedule-I species in the study area).
1.6	The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
1.7	The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

S. No	EC Conditions
1.8	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

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 04/06 Nos. 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. (case to case basis small plants: Manual; Large plants: Continuous and their no's.)
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.
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	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission 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 recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories. Monitor fugitive emissions in the plant premises.
2.8	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986. 9) The project proponent shall install system to 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.

S. No	EC Conditions
2.9	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
2.10	The project proponent shall install system to 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.
2.11	Ensure covered transportation and conveying of raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash.
2.12	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
2.13	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.
2.14	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.
2.15	The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
2.16	The project proponent shall provide primary and secondary fume extraction system at all heat treatment furnaces.
2.17	The project proponent use leak proof trucks/dumpers carrying ore and other raw materials and cover them with tarpaulin.
2.18	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
2.19	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
2.20	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.
2.21	Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.
2.22	Pollution control system in the plant shall be provided as per the CREP Guidelines of CPCB.
2.23	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

S. No	EC Conditions
	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.
2.24	Bag filters shall be cleaned regularly and efficiency of bag filter system shall be monitored at regular intervals.
2.25	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.
2.26	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.
2.27	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. Water Quality Monitoring And Preservation

S. No	EC Conditions
3.1	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 recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
3.2	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 recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
3.3	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
3.4	The project proponent shall provide the slime disposal facility with impervious lining and collection wells for seepage. The water collected from the slime pond shall be treated and recycled.
3.5	Adhere to 'Zero Liquid Discharge'
3.6	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

S. No	EC Conditions
3.7	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.
3.8	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.
3.9	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 laboratories.
3.10	The project proponent shall practice rainwater harvesting to maximum possible extent.
3.11	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
3.12	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.
3.13	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.
3.14	Tyre washing facilities shall be provided at the entrance of the plant gates.
3.15	Water meters shall be provided at the inlet to all unit processes in the steel plants.
3.16	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.
3.17	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.
3.18	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.
3.19	Rain water harvesting shall be implemented to recharge/harvest water as per the action plan submitted in the EIA/EMP report.

4. Noise Monitoring And Prevention

S. No	EC Conditions
4.1	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be

S. No	EC Conditions
	submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
4.2	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.
4.3	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.
4.4	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.

5. Energy Conservation Measures

S. No	EC Conditions
5.1	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;
5.2	Provide LED lights in their offices and residential areas.
5.3	Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.
5.4	Restrict Gas flaring to < 1%.
5.5	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;
5.6	Provide LED lights in their offices and residential areas.

6. Waste Management

S. No	EC Conditions
6.1	The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
6.2	Kitchen waste shall be composted or converted to biogas for further use.(to be decided on case to case basis depending on type and size of plant)
6.3	Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.
6.4	Kitchen waste shall be composted or converted to biogas for further use.
6.5	Used refractories shall be recycled as far as possible.

S. No	EC Conditions
6.6	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.
6.7	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.
6.8	A proper action plan must be implemented to dispose of the electronic waste generated in the industry.
6.9	Solid waste utilization: a. PP shall install a slag crusher to convert steel slag into aggregate for use 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.

7. Green Belt And Emp

S. No	EC Conditions
7.1	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
7.2	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

8. Water Quality Monitoring And Preservation In Case Of Beneficiation Plant

S. No	EC Conditions
8.1	Tailing management plan shall be implemented as included in EIA report.
8.2	Tailings from Iron Ore beneficiation plant shall be dewatered in filter press and no slime /tailing pond shall be permitted.

9. Public Hearing And Human Health Issues

S. No	EC Conditions
9.1	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and

S. No	EC Conditions
	Disaster Management Plan shall be implemented.
9.2	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 of Factory Act.
9.3	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.
9.4	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
9.5	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
9.6	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.
9.7	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.
9.8	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.
9.9	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 adopt nearby villages and prepare and implement a robust plan to develop them into model villages in next 10 years.

10. Corporate Environment Responsibility

S. No	EC Conditions
10.1	The Project Proponent shall submit the time- bound action plan to the concerned regional office of the Ministry within 6 months from the date of issuance of environmental clearance for undertaking the activities committed during public consultation by the project proponent and as discussed by the EAC, in terms of the provisions of the MoEF&CC Office Memorandum No.22-65/2017-IA.III dated 30 September, 2020. The action plan shall be implemented within three years of commencement of the project.
10.2	The company shall have a well laid down environmental policy duly approved 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

S. No	EC Conditions
	environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest I 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.
10.3	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.
10.4	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
10.5	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
10.6	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Mineral Beneficiation plants shall be implemented.

11. Miscellaneous

S. No	EC Conditions
11.1	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.
11.2	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.
11.3	44) 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.
11.4	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.
11.5	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.
11.6	The project proponent shall submit the environmental statement for each financial year in Form-V

S. No	EC Conditions
	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.
11.7	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.
11.8	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
11.9	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.
11.10	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).
11.11	The above conditions will 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 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/High Court and any other Court of Law relating to the subject matter.
11.12	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.
11.13	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.
11.14	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.
11.15	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.
11.16	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.
11.17	Action plan for developing connecting and internal road in terms of MSA as per IRC guidelines shall be implemented
11.18	The project proponent shall submit six-monthly reports on the status of the compliance of the

S. No	EC Conditions
	stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
11.19	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.
11.20	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.
11.21	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.
11.22	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.
11.23	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.
11.24	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).
11.25	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.
11.26	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
11.27	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
11.28	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.
11.29	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.

12. Green Belt

S. No	EC Conditions
12.1	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.
12.2	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.
12.3	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.

13. Environment Management

S. No	EC Conditions
13.1	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.
13.2	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.
13.3	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.
13.4	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.

Details of the project -

The details of the project as per the information submitted by the Project Proponent is given below -

2. The details of Project submitted by the Project Proponent are given as under:

i. Project details:

Name of the Proposal	Amendment in Environmental Clearance dated 28.04.2023 for Barsua-Taldih-Kalta Iron Mines, seeking a time extension of 2 years for Taldih Mines and 3 years for Kalta Mine to commence the operation of Belt Conveyor from these mines, and to continue road transportation from Taldih Mines and Kalta Mines to Barsua and Roxy Railway Sidings respectively during the extended period. The proposal also includes the incorporation of total mining lease area as 2558.581 ha.	
Location	Village	Tantra & Bahamba and Toda Reserve Forest
	Tehsil/Taluka	Koira
	District	Sundargarh
	State / UT	Odisha
	Latitudes	21°49'25.43880" N to 21°59'50.88516" N
	Longitudes	85°07'43.73832" E to 85°13'53.48136" E
	SoI Topo sheet No.	73G/1 (F45N1)
Company's Name	Barsua-Taldih-Kalta Iron Mines, Steel Authority of India Limited	
Accredited Consultant and certificate no.	MECON Limited, Ranchi has been engaged for baseline data generation and preparation of EIA-EMP report. Certificate No. NABET/EIA/24-27/RA 0342_Rev 01	
KML file	Attached	
Seismic zone	Seismic Zone II	

ii. Category details:

Category of the project	Category "A"
Provisions	Project Activity '1 (a)' & '2 (b)'
Mining lease Area (MLA) (in ha.)	2558.581 ha

iii. EC Details: PP has obtained the Environmental Clearance vide letter no. F.No. J-11015/351/2006-IA.II (M) dated 28.04.2023.

iv. Details of Mine Lease in Chronological manner:

ML detail	Date of the grant	Mine Lease Renewal of Detail	
ML-130 lease (2486.383 ha)	1. Date of entering into Original lease deed: 06.01.1960. 2. Date of expiry of Original lease deed: 05.01.1990.	1. Date of 1 st lease renewal: 06.01.1990 2. Whether renewal or deemed renewal: Deemed renewal. 3. Date of expiry of 1 st lease renewal/deemed renewal: 05.01.2010.	1. Date of 2 nd lease renewal: 06.01.2010 2. Whether renewal or deemed renewal: Lease renewed and lease deed executed on 13.11.2014 3. Date of expiry of 2 nd lease renewal/deemed renewal: 05.01.2030
ML-162 lease (77.94 ha)	1. Date of entering into Original lease deed: 29.04.1960. 2. Date of expiry of Original lease deed: 28.04.1980.	1. Date of 1 st lease renewal: Applied 2. Whether renewal or deemed renewal: Renewed by Govt. of Odisha. 3. Date of expiry of 1 st lease renewal: 28.04.2000.	1. Date of 2 nd lease renewal: 21.04.1999 2. Whether renewal or deemed renewal: Lease extended up to 28.04.2030 and lease deed executed on 24.09.2016. 3. Date of expiry of 2 nd lease renewal/deemed renewal: 28.04.2030
Amalgamation of ML-130 & ML-162 lease (2564.323 ha)	The above two mining leases (ML-130 & ML-162) were contiguous. Based on the SAIL's application, Dept. of Steel and Mines, Govt. of Odisha vide proceeding No. IV (B) SM-03/2020/10418/SM, Bhubaneswar, Dt. 02.12.2020, amalgamated the contiguous Mining Leases viz. ML-130 and ML-162 covering total area of 2564.323 ha having <u>validity up to 05.01.2030</u> . Lease deed of the amalgamated lease has been executed on 30.03.2021 and valid upto 05.01.2030.		
Amendment Lease Deed for 2558.581 ha.	In compliance to Specific Condition no. ii of EC, after careful consideration of SAIL's application, surrender of part area of 5.742 ha (out of the Amalgamated Mining Lease area over an area of 2564.323 ha) was accepted by Government of Odisha vide order dated 16.10.2023 under Rule 21(1) of MCR 2016 and SAIL is allowed to retain the balance area under their possession till expiry of the validity of the lease. Accordingly, Amendment Lease Deed (ALD) was executed on 14.11.2024 for the reduced area i.e., 2558.581 ha.		

v. Land Use/ Land Cover of the Mine Lease Area:

Private land	24.014 ha
Government land	114.696 ha
Total Mining lease area (MLA)	2558.581 ha
Private land for crusher, workshop & other infrastructure outside the MLA	164.626 ha acquired area adjacent to Mining Lease area at Barsua Valley and ~6.475 ha at Roxy Rly. Siding for installation of various allied facilities and infrastructure.
Additional information (if any)	Township outside the lease area: Tensa Township = 140.377 ha Barsua Valley Township = 53.29 ha Kalta Township = 31.10 ha

vi. Mining plan details:

Mining Plan including Progressive Mine Closure Plan (approved by Indian Bureau of Mines/DMG)	Letter No.	RMP 2317/2024-25/ IBM_RO_BBS
	Date	26.12.2024
	Mineral & Major/ Minor)	Iron Ore
	Mine Lease Area, Ha	2558.581 ha
	Validity	2025-26 to 2029-30
Mining Parameters	Quantitative Description	
Method of Mining	Fully Mechanized Open Cast Mining	
Drilling/Blasting	Deep hole drilling of 110 and 150 mm diameter and blasting with ammonium nitrate and slurry explosives.	
Geological Reserves	693.31 Million Tonnes	
Mineable Reserves	663.94 Million Tonnes	
Breakup of Total Excavation (Topsoil/OB/SB/IB/Mineral Rejects/ Waste, MTPA)	Iron ore production – 16.0 MTPA (ROM) Topsoil/OB/IB – 4.0 MTPA Mineral Rejects – 2.0 MTPA (Sub-grade dumps/Tailings) Total Excavation – 22 MTPA	
Life of mine	40 years.	
Mine Bench Height & Bench Width	10 m & 10 m / 6 m & 6 m	
No. of Mine Benches	16	
Existing Depth, m bgl	170 m	

Ultimate Depth of Mining, m bgl	195 m
Ground Water Table, m bgl	Barsua Block : 404 m - 408 m AMSL Taldih Block : 587 m - 593 m AMSL Kalta Block : 580 m - 586 m AMSL
Details of ground water intersection	The mine working will not intersect ground water table.
Individual bench slope	80°
Overall pit slope	37°
Details of existing/ proposed Crusher	Existing Crusher Primary Crushers: 2 x 700 TPH, 6 x 300 TPH Secondary Crushers: 2 x 450 TPH, 1 x 300 TPH, 2 x 250 TPH, 1 x 200 TPH Proposed Crusher Primary Crushers: 1 x 1800 TPH, 1 x 900 TPH, 1 x 300 TPH Secondary Crushers: 1 x 1800 TPH, 1 x 900 TPH Tertiary Crusher 1 x 1800 TPH, 1 x 900 TPH
Mineral Beneficiation	The operation of wet beneficiation in the ore processing plant of Barsua is being continuing. Other two mines, Taldih & Kalta are being operated in dry mode without beneficiation.
RoM output size	Iron Ore up to 40 mm
Transportation details including capacity of dumper/tipper, mode of transport and distance	Existing: Barsua Mine: 4.0 MTPA by conveyor to Barsua Rly. Siding and final dispatch by rail. Taldih Mine: 2.0 MTPA by Road to Barsua Rly. Siding by 10 to 25 tonner tippers / trucks over a distance of 11 km and final dispatch by rail. Kalta Mine: 4.0 MTPA by road to Roxy Rly. Siding by 10 to 25 tonner tippers / trucks over a distance of 22 km and final dispatch by rail. Proposed: Taldih Mine: Permission is sought for time extension to commence the operation of Belt Conveyor by

	<p>27.04.2027 and continuation of road transportation to Barsua Railway Siding till that time.</p> <p>Kalta Mine: Permission is sought for time extension to commence the operation of Belt Conveyor by 27.04.2028 and continuation of road transportation to Roxy Railway Siding till that time.</p> <p>Barsua Mine: No Change in transportation mode.</p>
Generation of Topsoil/OB & its Management during plan period & conceptual period	<p>Top Soil: 59690.60 m³</p> <p>OB: 13279431.69 m³ during plan period.</p> <p>OB will be dumped in 5 nos. of waste dump.</p> <p>Part of OB will be used for backfilling in 2 areas at BIM & KIM.</p>
Generation of Mineral Rejects/Waste & its Management during plan period & conceptual period	<p>Mineral Rejects: 10134573 Tonne</p> <p>Dispatch for direct sale in open market for selling or to SAIL steel plants for captive use directly or through beneficiation & pellet conversion agencies for converting the low-grade fines to pellets & supplying entire converted pellets to SAIL steel plants for captive use.</p>

vii. Water requirement:

Total water requirement	8845 m ³ /day	Fresh water	7766 m ³ /day
		Treated water	1079 m ³ /day
Source	Kuradih Nalla for Barsua & Taldih Mines / Najkura Nalla for Kalta Mines		
Permission	<p>Department of Water Resources, Govt. of Odisha has permitted allocation of 3.406 cusec (~8333 m³/day) of surface water from Kuradih Nalla vide Letter no.4897/WR dated 15.02.2021. Renewal of Water agreement of Barsua & Taldih Mines for 3.406 cusec for the purpose of industrial and commercial use has been made with Water resource department on 06.01.2024 which is valid till 05.01.2027.</p> <p>In respect of Kalta Iron Mines, The permitted drawl quantity from Najkura Nalla is 24110 m³/month (~803 m³/day). Accordingly, Water Allocation order issued by Water Resource Department for 0.328 cusec on 14.08.2024. Subsequently, Water agreement for the purpose of industrial and commercial use has been made with Water resource department on 28.01.2025 which is valid till 27.01.2028.</p>		

viii. Nearest village/town/ highway/interstate boundary/railway station/water bodies/monument/ forest

Particulars	Particular's Name	Distance & Directions
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Village	Tantra	Within Lease
Town	Koira	10 km
Highway	NH - 520	Passing through lease
Interstate Boundary	Odisha-Jharkhand Boundary	1.5 Km
Railway Station/Railway line	Barsua	1 Km
Water bodies	Samaj Nalla	Passing through lease
Forest	Toda RF	Within Lease

ix. Presence of Environmentally Sensitive areas in the study area

Forest Land/Protected Area / Environmental Sensitivity Zone	Yes / No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant and remarks
Forest Land within the mine lease area and (if yes) status of Forest Clearance	Yes	Out of 2558.581 ha amalgamated lease area, 2419.871 ha is Forest Land (Toda R.F.). Stage-II forest clearance for diversion of forest land over 2341.931 ha in ML – 130 was granted by MoEFCC vide F. No. 8-90/1996-FC (pt.), dated 06.03.2013. MoEFCC vide order no. F.No.8-18/2014-FC dated 23.10.2017 granted Stage-II FC for diversion of entire 77.94 ha of forestland under ML-162 for development of mining infrastructure. PP submitted an authenticated map issued by the Office of the DFO, Bonai Division dated 06.04.2022. As per the authenticated map, there are no National Park/Wildlife Sanctuary/ Biosphere Reserved/TigerReserve/Eco Sensitive Zone within 10 km radius. However, Karo-Karampada Elephant Corridor is located at a distance of 3.2 km
National Park	No	
Wildlife Sanctuary	No	
Elephant/Tiger Reserve	No	
Eco-Sensitive Zone(ESZ) /Eco-Sensitive Area (ESA)	No	
Coastal Regulation Zone (CRZ)	No	
Schedule-I species (Nos. and name of Schedule-I species with authenticated letter)	Yes	Core Zone: None, Buffer Zone: Indian Elephant, Sloth Bear, Wolf, Sloth Bear

Wildlife Conservation Plan		Two Site Specific Wildlife Conservation Plans (SSWCP) were approved by Chief Wildlife Warden, Odisha vide dated 25.02.2013 for 2486.313 ha & 13.01.2016 for 77.94 ha. An amount of Rs.17.82 Crores & Rs. 9.84 Crores were deposited for implementation of approved SSWCPs in Buffer Zone of Barsua-Taldih-Kalta Iron Mines.
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x. Green belt/plantation details:

Proposed area for green belt/plantation and no. of saplings proposed	1548.726 ha at the end of mining / 24,52,596 saplings
Budget for green plant & plantation till the end of life of mine.	Rs. 73,58,00,000/-
Budget for nursery	
Details of existing plantation and its survival rate	127.42 ha / 80 %
No. of tree cuts in the mine lease area and compensatory afforestation	
Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m barrier & non-mineralized zone	93.679 ha
50 m safety zone of Nallah, roads, electric lines	
500 m safety zones of nearest habitation villages	

xi. Baseline detail

Baseline Data (Air / Water / Noise / Soil / Ground water table/ others)	
Period of baseline data collection	Oct.- Nov.-Dec. 2024
Season (Summer / Pre-monsoon / Post-monsoon / Winter)	Post Monsoon, 2024
Predominant Wind direction (From)	Overall - North followed by North-East [Source: IMD, Keonjhar]
Ambient Air Quality (no. of locations) and results	No. of locations: 6; Results: Air quality values are well within the norms.
Noise level (no. of locations) and results	No. of locations: 7; Results: Mean noise levels at all locations are well within the respective norms of the type of area.
Water Quality (no. of locations) and results	No. of locations: 9 [Surface Water - 6; Ground Water – 3]; Results:

	<p>Surface Water can be classified as Class 'B' type [CPCB's Water Quality Criteria]</p> <p>Ground water quality at all locations are within IS:10500, (2012) limits</p>
Soil Quality (no. of locations) and results	<p>No. of locations: 2;</p> <p>Results: Soil samples are capable of retaining moisture, soil fertility is also good.</p>
Traffic study (no. of locations) and results	<p>No. of locations: 4;</p> <p>Results:</p> <p>Existing traffic load varies from 40% - 47% of existing road capacity.</p> <p>Level of Service – B & C.</p>

xii. Details of CTE/CTO, Certified Compliance Report, Certified Production Details from the inception of the mine:

Particulars	Details of Letter along with date of grant and validity
Consent to Establish	PP has obtained the CTE vide Letter No.: 9222/IND-II-CTE-6910, Date: 07.06.2023
Consent to Operate	PP has obtained the CTO Letter No. 6964/IND-I-CON-1(A), Date: 31.03.2025, valid up to 31.03.2026
Certified Compliance Report and Inspection date	<p>Certified EC compliance report has been issued by MoEFCC Regional Office, Bhubaneswar on 05.03.2025 and SAIL had submitted Action Taken Report (ATR) on 10.03.2025 against the observation given in CCR.</p> <p>Based on the SAIL's ATR, MoEFCC Regional Office, Bhubaneswar has reviewed the compliances by doing Site inspection and issued comments on ATR submitted by M/s SAIL on 02.04.2025.</p> <p>Inspection date: 24.01.2025 and 25.01.2025</p> <p>Re-Inspection date: 26.03.2025 and 27.03.2025</p>

Certified Production Details from the inception of the mine (in tabular form against the EC capacity)	Memo No. 6522/Mines, dated 13.12.2019, Memo No. 4004/Mines, dated 22.10.2021 & Memo No. 2599/Mines, dated 13.09.2022 issued by Dy. Director of Mines, Koira Mining Circle, Koira	
	Year	EC sanctioned Capacity (in tonnes/ year)
	2011-12	80,50,000
	2012-13	80,50,000
	2013-14	80,50,000
	2014-15	80,50,000
	2015-16	80,50,000
	2016-17	80,50,000
	2017-18	80,50,000
	2018-19	80,50,000
	2019-20	80,50,000
	2020-21	80,50,000
	2021-22	80,50,000
	2022-23	80,50,000
	2023-24	1,60,00,000
Actual production (in tonnes/ year)		
		26,87,921
		30,10,890
		28,64,831
		15,45,987
		12,67,840
		14,58,340
		21,33,560
		38,45,242
		46,99,847
		58,74,431
		69,74,691
		68,26,932
		69,80,529

xiii. Rehabilitation & Resettlement:

R & R details	Not Applicable as no private land acquired for the project nor there is any proposal to do so
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xiv. Court case details:

Court Case, No and its present status	WP(C) No. 24282/2017 Subsequent to the judgment of Apex Court dated 02.08.2017, the Governments of Odisha has issued demand notices to Barsua-Kalta Mines for payment of compensation towards excess production on or before 31 st December 2017 against EC / CTO capacity. Dy. Director of Mines (DDM), Koira vide letter dated 02.09.2017 issued a demand notice for payment of Rs. 66,89,42,779.50/- in respect of Barsua/ Kalta Iron Mines to recover price of mineral produced without / beyond EC alone under Section 21 (5) of MMDR Act, 1957. The said amount was deposited on 29.12.2017 under protest. Further, letter No.5962/Mines dtd 24.10.2017 of DDM, Koira has directed to pay compensation of Rs.90,19,71,684.40/- for mining more than the permissible limit under the Consent to Operate. Against the above stated demands, SAIL had filed a Writ Petition bearing WP (C) No- 24282/2017 in
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	High Court of Odisha, Cuttack. The matter was heard, and Hon'ble High Court had passed the stay order on 04.04.2018 & matter is sub-judice.
Undertaking by Project Proponent w.r.t court case	PP has submitted an Affidavit vide letter dated 06.02.2025.

xv. Affidavit/ Undertaking details:

Affidavit/ Undertaking	PP has submitted an Affidavit vide letter dated 06.02.2025.
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xvi. Project Proponent has submitted the point-wise reply against the EDS raised on 21.02.2025 vide letter dated 10.03.2025 as mentioned below:

S. No.	Observation of MoEF	Reply by PP
I.	It has been noted that Regional office Bhubaneswar has done the site inspection of the project recently. PP should submit the site inspection / monitoring report of the Regional office w.r.to the compliance of EC conditions.	The Site Inspection of Barsua, Taldih & Kalta Iron Mines done by the Regional Office, MOEFCC, Bhubaneswar during 24 th & 25 th January, 2025 for reviewing & progress of jobs on the existing EC conditions. The Certified EC compliance report / Site Inspection / Monitoring Report have been issued on 05.03.2025. Subsequently, SAIL had submitted Action Taken Report (ATR) on 10.03.2025 against the observation given in CCR. Based on the SAIL's ATR, MoEFCC Regional Office, Bhubaneswar has reviewed the compliances by doing Site inspection and issued comments on ATR submitted by M/s SAIL on 02.04.2025.
II.	PP should also submit the compliance of NEERI condition with regard to Suggested Ore Transport Mode (SOTM).	Amalgamated Barsua-Taldih-Kalta Iron Mining Lease (erstwhile ML -130 & ML-162 leases) spread over an area of 2558.581 ha comprises of three mines with their own quarries, mineral processing plants, mineral despatch facilities and other infrastructure. Mode of material transportation: - <ul style="list-style-type: none"> Entire ore from the Barsua is being transported by downhill conveyors from mines to SAIL's Pvt. Barsua Railway Siding. In case of Taldih, the processed ore being transported by trucks to Barsua Railway Siding which is 11 km haulage of public road. In case of Kalta the entire production is sent by trucks Roxy Rly. Siding. The haulage comprises.

		<ul style="list-style-type: none"> • ~4.0 km of internal roads and ~18 km of public roads (NH-520 which is a 4-lane road with a divider). <p>In compliance to the recommendation of NEERI on Suggested Ore Transport Mode (SOTM), evacuation of entire ore from Tal dih & Kalta Mines through long distance belt conveyors (LDBC) to Railway Sidings at Barsua and Roxy respectively is envisaged under the 16 MTPA expansions of the mines. However, during the construction phase, Taldih Iron Mine shall continue to transport 2.0 MTPA of iron ore through existing transport road to Barsua Railway Siding and Kalta Iron Mines shall continue to transport 4.0 MTPA iron ore through existing transport road to Roxy Siding.</p> <p>The Iron Ore from Barsua Iron Mines is transported through Belt conveyor since beginning of the Mines. PP has submitted detail status report and action plan for installation of Long-Distance Belt Conveyor at Taldih and Kalta Iron Mine.</p>
III.	PP should submit a brief write-up and supporting geotagged photographs regarding the steps taken so that there is no spillage of mineral/ore during ore transportation through road.	<p>The following regular steps are being taken at Barsua-Taldih-Kalta Iron Mines during transportation of iron ore to prevent spillage during transportation:</p> <ol style="list-style-type: none"> 1. Checking of dumpers at security gate for any damaged body. 2. Covering of bottom of the dumper with tarpaulin. 3. Loading of dumpers with appropriate size of backhoe. 4. Load Adjustment with the help of Weigh Bridge. 5. Ore carrying dumpers are covered with tarpaulin sheets. <p>PP has submitted Geotagged recent photographs (with date, time & location stamps) of the above measures in operation</p>
IV.	PP should submit copy of record of training details imparted to operators, supervisors, workers regarding steps to be followed to ensure that there is no spillage of mineral/ore during ore transportation through road.	PP has submitted a copy of record of training details imparted to drivers, operators, and supervisors.

xvii. Details of the Environmental Management Plan (EMP):

Activities	Capital cost (Crores)	Recurring cost (Lakhs/annum)
Pollution Control		
A. Water Pollution Control	16.00	190.00
B. Air Pollution Control	20.95	491.00
C. Solid Waste Management	0.55	40.00
Occupational Safety & Health	0.30	15.00
Green Belt development	73.58	0.00
Wildlife conservation & management	0.00	142.00
Pollution Monitoring	0.00	40.00
Rainwater Harvesting	0.50	5.00
Cost for Environmental Protection Measures (in Rs. Lakhs)	111.88	923.00

xviii. Details of project cost and employment:

Particulars	(Rs. In Crore)
Total cost of EMP (Capital Cost of EMP + capital cost of public hearing)	Rs. 133.76 Crores
Project Cost	Rs. 2740.88 Crores
Employment (Nos.)	1133