सत्यमेव जयते

File No.: J-11015/418/2008-IA.II(M)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division
****

Dated **07/08/2026**

To,

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

Subject: **Enhancement of iron ore production capacity from 12 MTPA to 14.4 MTPA along with augmentation of the aggregate installed crushing capacity from 5,650 TPH to 6,750 TPH and with dry & wet circuit screening plant for Bolani 5.1 sq. miles ML, 1321.45 ha by M/s Steel Authority of India Ltd located at Champua sub-division, Keonjhar district, Odisha in accordance with the MoEFCC Office Memorandums dated 11.04.2022 and 30.05.2022 under Para 7(ii)(a) of the EIA Notification, 2006 - Environmental Clearance regarding.**

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/OR/MIN/575612/2026 dated 26/05/2026 for grant of Environmental Clearance (EC) for the project mentioned above under the provisions of the EIA Notification 2006-and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC26A0000OR5286391N
(ii) File No.	J-11015/418/2008-IA.II(M)
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vi) Sector	Non-Coal Mining
(vii) Name of Project	Proposal for enhancement of production capacity of Iron ore from 12 MTPA to 14.4 MTPA under provisions of para 7(ii) of EIA Notification, 2006 for Bolani 5.1 sq. miles ML, 1321.45 ha located in Champua sub-division, Keonjhar district, Odisha
(viii) Location of Project (District, State)	KENDUJHAR, ODISHA
(ix) Issuing Authority	MoEF&CC

(x) Applicability of General Conditions No

3. In view of the particulars given in the Para 1 above, the project proposal interalia including Common Application Form and Part A, B and C 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 and recommended by EAC in the 9th meeting held on 17/07/2026. 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. Based on the discussions held, the EAC in its meeting held on 17th July 2026 under the provisions of EIA Notification, 2006 and its subsequent amendments therein recommended the proposal of Environmental Clearance for Enhancement of iron ore production capacity from 12 MTPA to 14.4 MTPA along with augmentation of the aggregate installed crushing capacity from 5,650 TPH to 6,750 TPH and with dry & wet circuit screening plant for Bolani 5.1 sq. miles ML, 1321.45 ha by M/s Steel Authority of India Ltd located at Champua sub-division, Keonjhar district, Odisha in accordance with the MoEFCC Office Memorandums dated 11.04.2022 and 30.05.2022 under Para 7(ii)(a) of the EIA Notification, 2006 subject to certain additional specific conditions. (Annexure - 1). All other Terms and condition shall remain unchanged as per the EC letter dated 21.12.2012 and its subsequent amendments.

6. The details of the project as per the information submitted by the Project Proponent are enclosed as (Annexure - 2).

7. The Ministry has examined the proposal in accordance with the provisions of the Environmental Impact Assessment (EIA) Notification, 2006, and its subsequent amendments, and based on the recommendations of the Expert Appraisal Committee (EAC), the Ministry hereby accords Environmental Clearance (EC) to Enhancement of iron ore production capacity from 12 MTPA to 14.4 MTPA along with augmentation of the aggregate installed crushing capacity from 5,650 TPH to 6,750 TPH and with dry & wet circuit screening plant for Bolani 5.1 sq. miles ML, 1321.45 ha by M/s Steel Authority of India Ltd located at Champua sub-division, Keonjhar district, Odisha in accordance with the MoEFCC Office Memorandums dated 11.04.2022 and 30.05.2022 under Para 7(ii)(a) of the EIA Notification, 2006. The clearance is subject to compliance with the specific conditions prescribed for this project, in addition to the standard conditions applicable to non-coal mining projects as detailed in Annexure 1.

8. 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.

9. 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.

10. 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.

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

12. 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&CCshall 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 MoEFCC, 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).

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

Copy To

1. The The Controller General, Indian Bureau of Mines, Indian Bureau Of Mines Indira Bhavan Civil Lines Nagpur-440001, Nagpur, Maharashtra, ccom@ibm.gov.in

2. The Director General, Directorate General of Mines Safety, Directorate General Of Mines Safety Hirapur Dhanbad

Jharkhand 826001, Dhanbad, Jharkhand, dg@dgms.gov.in
3. The Member Secretary, CGWA, 18/11 Jamnagar House Man Singh Road, Central, Delhi, cgwa@nic.in
4. The Member Secretary, CPCB, Parivesh Bhawan Cbd-Cum-Office Complex East Arjun Nagar, East, Delhi, mscb.cpcb@nic.in
5. The Monitoring Cell MoEFCC, Compliance & Monitoring Division, Indira Paryavaran Bhawan Jor Bagh Road New Delhi, South, Delhi, moefcc-monitoring@gov.in
6. The Deputy Director General, Regional Office, "Deputy Director General Of Forests (C) Ministry Of Environment Forest And Climate Change Regional Office A/3 Chandshekharpur Bhubaneswar-751023", N/A, N/A, roez.bsr-mef@nic.in
7. The Secretary, Ministry of Mines, Ministry Of Mines Shastri Bhawan, New Delhi, Delhi, secy-mines@nic.in
8. The PCCF & CWLW, Odisha Forest Department Government of Odisha., Prakruti Bhavan 5th Floor Govt.Bda Apartments Nilakantha Nagar Naya Palli Bhubaneshwar-751012, Khordha, Odisha, pccfwl@odisha.gov.in
9. The Member Secretary, SPCB/PCC, Paribesh Bhawan A-118 Nilakantha Nagar Unit-Viii, Bhubaneswar, Odisha, membersecretary@ospcboard.org
10. The District Collector, DC Office, Collectorate Keonjhar Odisha, Kendujhar, Odisha, dm-keonjhar@nic.in

Annexure 1

Specific EC Conditions for (Mining Of Minerals)

1. Specific Conditions

S. No	EC Conditions
1.1	All the environmental safeguards prescribed by the OSPCB vide its memo dated 17.06.2026 except the safeguard regarding green belt development of at least 15 m all along the lease boundary for the instant proposal shall be complied with. Compliance in this regard shall be submitted to the Regional Office of MoEF&CC along with the six-monthly compliance report.
1.2	Out of the total mineral production of 14.4 MTPA, 10.4 MTPA of mineral from the mine shall be transported by rail network only. The remaining quantity of mineral shall be transported by road as committed.
1.3	Project proponent shall carryout regular maintenance of the potholes on roads, repair and maintenance of roads, scrapping of material fallen on roads, and removal of scraps from mining areas. Along with this, PP shall make sure that all the pollution control equipments are in good working condition and maintenance of that equipment is regularly carried out. Shoulders of the road shall be strengthened. Also, on both the sides of the mineral transportation road, plantation with the native and fast-growing species shall be carried out by using saplings of height not less than 4 feet.
1.4	Project proponent shall comply with the final order of W.P. (C) No. 24279 of 2017 before the Hon’ble High Court of Odisha.
1.5	PP needs to ensure that no silt is discharged into the nallahs present within the ML area Proper gabions, check dams, drains and other structures should be erected constructed accordingly.
1.6	All partially complied conditions identified in the Review of Certified Compliance Report dated 22.04.2026 shall be fully complied with within the timelines committed by the PP. Status of each condition shall be separately reported in six-monthly compliance report submitted to the Regional Office.

S. No	EC Conditions
1.7	PP shall undertake a scientific study for characterization of overburden and associated waste materials to assess the potential presence and feasible recovery of rare earth elements / critical minerals, if any, in accordance with the applicable guidelines of the Ministry of Mines. In case the study establishes the presence of rare earth elements / critical minerals, the PP shall also examine the scope for their utilization and assess their market potential / value.
1.8	Periodic monitoring of dumps stability shall be carried out. Dump management & monitoring should be done in consultation with DGMS as per MMR.
1.9	PP needs to adopt all possible mitigation measures to prevent ore spillage while transporting the mineral by road. Tarpaulin covered trucks should be used to prevent spillage and emission of dust. Tarpaulin covering should be effective with no scope for any ore mineral spillage left. Geotagged photos of Tarpaulin covering during road transportation should be taken and submitted to Regional office of MoEFCC with six monthly compliance report. Proper training of drivers, operators, and supervisors should be imparted regarding adverse effects of ore spillage on air, water, soil quality, safety and wildlife. An action taken report in this regard needs to be submitted to Ministry's Regional Office with six monthly compliance report.
1.10	PP needs to ensure that the reject/ waste shall be dumped in a scientifically designed and stabilized manner within the lease area, ensuring proper catch drains, toe walls and sedimentation pits to prevent erosion and siltation of nearby areas.
1.11	The Project Proponent needs to use modern equipment's such as Camera Traps for ensuring presence and movement of wild animals in the study area in consultation with Wildlife Wing of Forest Department. Appropriate interventions shall be taken to minimize stress conditions for wild animals and to avoid Man-Animal conflict. Project Proponent should follow up with State Forest Department regarding approval and implementation of Wildlife Conservation Plan. An implementation report in this regard needs to be submitted to Ministry's Regional office in half yearly compliance report.
1.12	PP needs to undertake water sprinkling along the transportation road, wherever necessary. Wind Screens and avenue plantation needs to be undertaken wherever necessary.
1.13	The Project Proponent needs to reduce the dependency upon surface water (water from rivers, etc.) and it shall construct a rain water harvesting structure/ water reservoir within the lease area for meeting its day-to-day water needs. An implementation report in this regard needs to submitted to Ministry's Regional Office.
1.14	The mobile water tankers should be used in the ML area for dust suppression and control mitigation. A logbook of water tankers should be maintained mentioning running hours, kilometre reading, and maintenance hours of water tankers for each shift.
1.15	The Project Proponent shall also organize employment-based apprenticeship/ internship training program every year with appropriate stipend for the youth and other programs to enhance the skill of the local people. The data should be maintained for the training imparted to the persons and the

S. No	EC Conditions
	outcome of the training, for the assessment of the training program should be analyzed periodically and improved accordingly. The preference shall be given to the local people for the purpose of employment. Local villagers can be imparted training on mobile, laptop repairing, other electrical appliances repairing, welding, etc. so that they can get employments/ jobs. An implementation report in this regard shall be submitted to Ministry's Regional Office on an annual basis.
1.16	The Project Proponent shall monitor the air quality, noise level, water quality, water level at the edge of the mine, crusher, near the village and at other sensitive receptors and such collected data shall be submitted quarterly to the Ministry's Regional Office.
1.17	The Project Proponent needs to install the permanent fixed water sprinklers along the haul road and the approach road. Further, 08 nos. of fog canons/mist sprayer of atleast 40 m throw shall be installed at various locations in the mine area (and/or other area prone to dust pollution). Effective dust suppression system shall also be adopted at other parts of the mining lease to arrest the fugitive dust emission. PP shall also install fog cannons at railway siding in consultation with Railway Department.
1.18	The air pollution control equipment's like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed near areas prone to air pollution. PP shall take necessary measures to avoid generation of fugitive dust emissions.
1.19	The Project Proponent needs to explore the possibility to reduce the water consumption by using non-toxic chemicals for haul road dust suppression.
1.20	The Project Proponent needs to complete the entire 7.5 m peripheral plantation, safety barrier plantation and gap plantation within three years. The Project Proponent should plant quality sapling of appropriate height of native and fruit bearing species. In case of tall transplants (seedlings) the seedlings should have proper trained root stock with root biomass commensurate with seedling height to ensure good growth after out planting. Plantation shall be undertaken in consultation with the State Forest Department. Project Proponent shall make the actual count on the saplings planted (2500/ha) and its survival rate and in case of failure of achievement of 95% survival rate, action plan for achieving the target survival rate shall be submitted to the Ministry's Regional Office. PP shall also ensure a minimum of 20% plantation through Miyawaki technique. A well-qualified horticulture specialist should be kept in the Environment Management Cell of the Project.
1.21	The Project Proponent should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground). A dedicated team to oversee environment management shall be setup at site which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis instead of engaging environment monitoring laboratories/consultants. Any noncompliance or infringement should be reported to the concerned authority.
1.22	The budget proposed for Public Hearing Commitments is 47.63 Crores along with a recurring budget of Rs 41.53 crores. The budget proposed shall be kept in a separate account and audited annually. Project proponent shall implement the action plan within a time frame of 3 years from the date of grant of EC. PP shall submit the progress report regarding the implementation of action plan to concerned RO along with the six-monthly compliance report.

S. No	EC Conditions
1.23	PP shall implement the protective measure proposed in Environment Management Plan (EMP) in a time-bound manner. The additional budget earmarked for the same is Rs 2.40 Cr.and Rs. 03 Crore/Annum (recurring) and should be kept in separate accounts and audited annually. The implementation status along with the amount spent with documentary proof shall be submitted to the concerned Regional Office for the activities carried out during the previous year.
1.24	The Project Proponent shall explore the possibility of using atleast 20% of Electric vehicles/CNG/Solar instead of diesel operation within three years from the date of grant of EC.
1.25	Approval/permission of the CGWA/SGWA shall be obtained before drawing ground water for the project activities, if applicable. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.
1.26	The Project Proponent should periodically monitor and maintain the health records of the mine workers digitally prior to mining operations, at the time of operation of mine and post mining operations. Regular surveillance on Silicosis shall be carried through regular occupational health check-up every year for mine workers. PP shall also organize medical camp for the benefit of the local people and also the monitor the health impacts due to mining activity.
1.27	The mining lease holders shall, after ceasing mining operations, undertake regrassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. The implementation report of the above said condition shall be submitted to the Ministry's Regional Office.
1.28	The Project Proponent shall conduct third party audit of compliance of EC condition at an interval of one year and its report shall be submitted to RO, MoEFCC.
1.29	Project proponent shall install one additional CAAQMS (in addition to already existing 4 nos of CAAQMS) in the buffer zone, in consultation with the SPCB, within 1 year from the date of grant of EC and the same shall be connected to the server of OSPCB and CPCB.The real time data so generated should be displayed digitally at entry and exit gate of mine lease area for public display and shall be linked to server of CPCB/SPCB.
1.30	PP should utilise the Oil & Grease Trap for washing of trucks, HEMM operational in their mine project. Disposal of the used oil & drums should be through authorized recyclers and as per rules. Copy of logbook of Oil withdrawn from Oil & Grease Trap should be submitted to the Regional Office of the Ministry.
1.31	PP shall ensure that all type of plastic waste generated from the mines shall be stored separately in isolated area and disposed of strictly adhering to the Plastic Waste Management Rules 2016 and its amendments. In pursuant to Ministry's OM dated 18/07/2022 PP shall also create awareness among the people working in the project area as well as in its surrounding area on the ban on Single Use Plastic (SUP) in order to ensure compliance of Ministry's Notification published by the Ministry on 12/08/2021. A report along with photograph on the measures taken shall be submitted to Ministry's

S. No	EC Conditions
	Regional Office.
1.32	Project proponent is advised to implement the 'Ek Ped Maa Ke Naam' Campaign which was launched on 5th June 2024 on the occasion of the World Environment Day to increase the forest cover across the Country. This plantation drive is other than Greenbelt development. The action in this regard shall be submitted concerned RO in six monthly compliance report and the details of the same shall be uploaded inthe MeriLife portal (https://merilife.nic.in).
1.33	All other conditions stipulated in the Environmental Clearance issued vide letter no. EC vide J-11015/418/2008-IA.II (M) dated 21.12.2012 and its subsequent amendments shall remain unchanged.

Standard EC Conditions for (Mining of minerals)

1. Statutory Compliance

S. No	EC Conditions
1.1	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.
1.2	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.
1.3	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.
1.4	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.
1.5	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.
1.6	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.
1.7	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

S. No	EC Conditions
	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.“
1.8	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.

S. No	EC Conditions
2.1	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.
2.2	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.

3. Air Quality Monitoring And Preservation

S. No	EC Conditions
3.1	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.
3.2	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

S. No	EC Conditions
	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.

4. Water Quality Monitoring And Preservation

S. No	EC Conditions
4.1	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.
4.2	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.
4.3	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.
4.4	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	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.
4.6	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 MoEFCC. 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

S. No	EC Conditions
	Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.
4.7	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.

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 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. Mining Plan

S. No	EC Conditions
6.1	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.
6.2	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.).

7. Land Reclamation

S. No	EC Conditions
7.1	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.
7.2	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.
7.3	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.
7.4	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.

8. Transportation

S. No	EC Conditions
8.1	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.
8.2	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

S. No	EC Conditions
	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].

9. Green Belt

S. No	EC Conditions
9.1	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.

10. Public Hearing And Human Health Issues

S. No	EC Conditions
10.1	Project Proponent shall make provision for the housing for workers/labors or shall construct labor 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.

11. Corporate Environment Responsibility

S. No	EC Conditions
11.1	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.

12. Miscellaneous

S. No	EC Conditions
12.1	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.
12.2	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

S. No	EC Conditions
	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.
12.3	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.
12.4	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.
12.5	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.
12.6	In pursuant to Ministrys 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.
12.7	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.
12.8	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.
12.9	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.
12.10	The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

Additional EC Conditions

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.

Annexure 2

Enhancement of iron ore production capacity from 12 MTPA to 14.4 MTPA along with augmentation of the aggregate installed crushing capacity from 5,650 TPH to 6,750 TPH and with dry & wet circuit screening plant for Bolani 5.1 sq. miles ML, 1321.45 ha by M/s Steel Authority of India Ltd located at Champua sub-division, Keonjhar district, Odisha in accordance with the MoEFCC Office Memorandums dated 11.04.2022 and 30.05.2022 under Para 7(ii)(a) of the EIA Notification, 2006

The details of the project as per the information submitted by the Project Proponent are given under:

9.6.1: The instant proposal is of Environmental Clearance for enhancement of production capacity of Iron ore from 12 MTPA to 14.4 MTPA for Bolani 5.1 sq. miles ML, 1321.45 ha along with three-stage crushing system comprising primary (gyratory and jaw crushers), secondary (cone crushers) and tertiary (cone crushers), with augmentation of the aggregate installed crushing capacity from about 5,650 TPH to about 6,750 TPH through enhancement of the primary gyratory crusher from 1,600 TPH to 1,800 TPH and installation of three additional 300 TPH in-pit mobile jaw crushers by M/s Steel Authority of India Ltd located at Champua sub-division, Keonjhar district, Odisha in accordance with the MoEFCC Office Memorandums dated 11.04.2022 and 30.05.2022 under Para 7(ii)(a) of the EIA Notification, 2006..

9.6.2:The details of the project submitted by the Project Proponent are given under:

i. Bolani Iron Ore mine, SAIL has made an application online vide proposal no. IA/OR/MIN/575612/2026 dated 22.04.2026 along with the application in prescribed format (Form-I), and EIA/EMP. The proposed project activity is listed at Item No. 1(a) under Category "A" of the schedule of the EIA Notification, 2006 and is appraised at Central Level. The project attracts general conditions to the schedule of EIA Notification, 2006 as the ML area is flanked by the Kiriburu-Meghahatuburu mines of SAIL on western side, the common boundary being defined by the interstate boundary between Jharkhand and Odisha.

ii. Name of the project/activity

Applicable item no as per schedule of EIA, 2006	Project/ activity	Capacity in Million Tons Per Annum	Area in Hectares (Ha)	Technological details
1(a)	a. Mineral name – iron ore	Iron ore Existing: 12 MTPA Proposed: 14.4 MTPA	1321.45	Fully Mechanized Opencast Mine
	b. Crusher	**Existing** Primary: 1600 TPH + 600 TPH + 6 × 300 TPH Secondary: 750 TPH, 300 TPH Tertiary: 600 TPH **Proposed**	Within ML (1321.45 ha)	Three-stage crushing system comprising primary (gyratory and jaw crushers), secondary (cone crushers) and tertiary (cone crushers) crushing units with an aggregate installed

Applicable item no as per schedule of EIA, 2006	Project/ activity	Capacity in Million Tons Per Annum	Area in Hectares (Ha)	Technological details
		Primary: 200 TPH + 3 × 300 TPH **Total: 6750 TPH**		crushing capacity of about 5,650 TPH for further augmentation, involving enhancement of the primary gyratory crusher capacity from 1,600 TPH to 1,800 TPH and installation of three additional 300 TPH in-pit mobile jaw crushers, the aggregate installed crushing capacity will increase to about 6,750 TPH.
	c. Screening plant	**a) Dry Circuit:** **Existing Capacity** i. Fixed Screens a. 2 nos x 900 TPH b. 2 nos x 400 TPH ii. Mobile Screens a. 6 nos x 300 TPH *Total Throughput capacity of screens: 4400 TPH* **Capacity after expansion:** i. Fixed Screens a. 2 nos x 900 TPH b. 2 nos x 400 TPH ii. Mobile Screens a. 9 nos x 300 TPH *Total Throughput capacity of screens: 5300 TPH* **(b) Wet Circuit** **Existing Capacity** i. Fixed Screens a. 2 nos x 900 TPH *Total throughput capacity of Wet Screens: 1800 TPH* **Capacity after Expansion:**	Within ML (1321.45 ha)	1. Materials after processing in the Crushing is fed to Dry Screening / Wet Screening (Washing Plant) for separation of CLO and Fines. 2. In dry screening, additional 03 (three) nos of 300 TPH mobile Screening Plants will be installed in the expansion phase. 3. Hence in the expansion phase, the throughput screening capacity of dry circuit will be enhanced from 4400 TPH to 5300 TPH. 4. Throughput capacity of the wet circuit will remain same i.e. 1800 TPH. .

Applicable item no as per schedule of EIA, 2006	Project/ activity	Capacity in Million Tons Per Annum	Area in Hectares (Ha)	Technological details
		No change *Total throughput capacity of Wet Screens: 1800 TPH*		

iii. NOC from Ministry of Defence if mine lease area (existing/proposed) is located within 20 km distance from International Boundary/Seaboard Frontier - Not Applicable

iv. SEIAA approved District survey report for Minor Minerals - Not Applicable

v. Previous approvals in chronological order:

S. No.	Details of Letter No.	EC/Expansion EC/Amendment in EC/Validity extension /Transfer of EC	Capacity (MTPA)	Area (Ha)	Date of Issuance	Status of implementation
1.	J-11015/276/94-IA-II(M)	EC	3.44	1321.45	23.04.1998	Fully implemented
2.	J-11015/470/2006-IA.II(M)	EC	5.65	1321.45	04.12.2007	Fully implemented
3.	J-11015/418/2008-IA.II(M)	EC	12	1321.45	21.12.2012	Partially implemented [12 MTPA Beneficiation plant and 4 MTPA Pellet Plant not installed so far]
4.	J-11015/418/2008-IA.II(M)	Amendment in EC	12	1321.45	17.02.2014	
5.	J-11015/418/2008-IA.II(M)	Amendment in EC	12	1321.45	30.07.2020	
6.	Extension of validity vide J-11015/418/2008-IA.II(M) for 1(one) year	Extension of EC	12	1321.45	05.08.2021	
7.	Extension of validity vide J-11015/418/2008-IA.II(M) for 1(one) year	Extension of EC	12	1321.45	19.09.2022	
8.	Extension of validity vide J-	Extension of EC	12	1321.45	13.09.2023	

S. No.	Details of Letter No.	EC/Expansion EC/Amendment in EC/Validity extension /Transfer of EC	Capacity (MTPA)	Area (Ha)	Date of Issuance	Status of implementation
	11015/418/2008-IA.II(M) For 2(two) years					
9.	Amendment vide J-11015/418/2008-IA.II(M) dt 24.07.2025	Amendment in EC	12	1321.45	24.07.2025	

The mine is under operation since 1989 based on the consent from the State Pollution Control Board. CTO renewal has been obtained from the SPCB and is valid up to 31.03.2027. The details of the production since 1993 to 2026-27 (till May, 2026) is furnished as below:

Year	EC Capacity (MTPA)	Actual mineral Production (Million Tonnes)	Excess Production beyond the EC sanctioned capacity (Million Tonnes)
1993	-	1.9805621	-
1994	-	1.955416	-
1995	-	1.743930	-
1996	-	2.309401	-
1997	-	2.282294	-
1998	3.44	1.992378	Nil
1999	3.44	2.072599	Nil
2000	3.44	2.673429	Nil
2000-01	3.44	2.775874	Nil
2001-02	3.44	0	Nil
2002-03	3.44	3.080894	Nil
2003-04	3.44	3.314709	Nil
2004-05	3.44	3.324188	Nil
2005-06	3.44	3.427278	Nil
2006-07	3.44	3.439464	Nil
2007-08	5.65	3.878584	Nil
2008-09	5.65	3.472501	Nil
2009-10	5.65	3.818108	Nil
2010-11	5.65	3.746541	Nil
2011-12	5.65	3.566752	Nil
2012-13	12.0	2.947402	Nil
2013-14	12.0	3.693317	Nil
2014-15	12.0	4.103619	Nil
2015-16	12.0	5.271554	Nil
2016-17	12.0	5.584858	Nil
2017-18	12.0	5.236671	Nil
2018-19	12.0	5.625053	Nil
2019-20	12.0	5.946096	Nil
2020-21	12.0	6.320642	Nil

Year	EC Capacity (MTPA)	Actual mineral Production (Million Tonnes)	Excess Production beyond the EC sanctioned capacity (Million Tonnes)
2021-22	12.0	7.416717	Nil
2022-23	12.0	7.202585	Nil
2023-24	12.0	7.709258	Nil
2024-25	12.0	7.459295	Nil
2025-26	12.0	8.756202	Nil
2026-27 (till June 2026)	12.0	2.465468	Nil

vi. Implementation status of the existing EC :

S. No.	Details	Capacity	As per EC dated	Implementation Status as on July 2026	Production as per CTO
1.	EC Letter dated 23.04.1998	3.44 MTPA	23.04.1998	Fully Implemented	3.44 MTPA
2.	EC letter dated 04.12.2007	5.65 MTPA	04.12.2007	Fully Implemented	5.65 MTPA
3.	EC vide J-11015/418/2008-IA.II(M) dt 21.12.2012 and its subsequent amendment	12 MTPA	21.12.2012	Partially Implemented*	12 MTPA

*** Note- 12 MTPA Beneficiation plant and 4 MTPA Pellet Plant not installed sofar.**

vii. Certified compliance report from Regional Office: The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar *vide* letter no. File No. 101-474/22/EPE dated 25.02.2026 in the name of M/s. SAIL. Based on the observations contained therein, necessary corrective measures were undertaken by Bolani Iron Ore Mines, M/s SAIL and an Action Taken Report (ATR) addressing all partially complied conditions was submitted to the Regional Office, MoEFCC, Bhubaneswar. The Action Taken Report submitted vide letter no. CGM/B-1304 dated 13.04.2026 has been examined by the MoEFCC Regional Office, Bhubaneswar, and compliance has been considered vide RO's letter dated 22.04.2026. The revised compliance status as accepted by the Regional Office are presented below:

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
1.	Wind shelter fence and chemical spraying shall be provided on the	The PP has reported that dust control measures at raw material stockpiles include deployment of	24.07.2025	3.2		Comprehensive study for the implementation of wind shelter fencing and chemical dust suppression at stock

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
	raw material stock piles.	rotating and mobile fog/mist cannons, regular water sprinkling for moisture maintenance, slope stabilization and compaction of stockpiles, peripheral greenbelt development, and enclosed conveyor systems to minimize dust generation. Ambient air quality monitoring indicates that PM_{10} and $PM_{2.5}$ levels are maintained within the standards prescribed by the Ministry of Environment, Forest and Climate Change and the Central Pollution Control Board. The PP has further stated that feasibility assessment for installation of wind shelter fencing and application of suitable chemical dust suppressants is under progress, and these measures will be implemented in a phased manner to further strengthen dust control.				pile has been taken up by the project proponent and has also communicated to Kharagpur for undertaking technical IIT survey and evaluation. The project needs to expedite the implementation of the stipulated conditions.

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
2.	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.	As reported by the project proponents, the project proponents have not laid any impervious lining in the tailing pond. From the site visit, it was noted that the tailing pond has not been in use since the year 2017. It is submitted by the project authorities that the pond area is composed of compacted clayey strata and naturally occurring low permeability lateritic formations, functioning as an impervious lining. It is viewed by the Regional Office that a study on the percolation of the soil and its impact on the environment as well as recommendations for improvement of the existing tailing pond may be undertaken by an Institute of national repute like IIT/IISc/NIT/CSIR . The project proponents have submitted with an assurance that a	24.07.2025	4.15		From the reports submitted by the project proponent the project it is noted that has communicated to various reputed institutes/organisations for undertaking scientific studies. The project needs to expedite the implementation of the stipulated conditions.

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
		closed loop recirculation system for recovering and reusing clarified tailing water in the washing plant is proposed to be installed and this system would ensure zero discharge. The project proponents need to submit an action plan along with implementation schedule for completion of the proposed project to this Office.				
3.	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;	The project proponents have submitted that, a proposal has been prepared for installation of solar power generation with a capacity of 350 kW at an estimated cost of Rs. 1.2 cores, covering office and residential buildings along with solar lighting systems for common areas, STP areas, street lights, and parking zones. The project proponents need to provide action plan along with implementation	24.07.2025	7.2		The project has already issued work order for installation of solar power over buildings and lighting systems for common areas vide letter dated 23.03.2026

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
		schedule for compliance to the stipulation.				
4.	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.	As reported, for FY 2024–25, the Project Proponent has carried out a preliminary estimation of Greenhouse Gas (GHG) emissions using standard emission factors, resulting in total emissions of 27,449.63 tCO_2e for Bolani Iron Ore Mines. Of this, Scope-2 emissions from electricity consumption account for 17,501.62 tCO_2e (~64%), while Scope-1 emissions from diesel, lubricant oil and explosives contribute 9,948.01 tCO_2e (~36%), with diesel being the dominant direct emission source. It is submitted that, the inventory establishes a baseline for future carbon budgeting and decarbonisation planning, and the figures are proposed to be validated through engagement of an expert agency, for which the	24.07.2025	11.2		The project has initiated studies on the GHG emission inventory in the project area since 2024-25 and for the year 2025-26. However, final programme for reduction of GHG including carbon sequestration through plantations, along with time bound action plan needs to be submitted to the Regional office.

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
		tendering process is already underway. The project proponents need to expedite the process and action taken with respect to the study and the implementation of the recommendations need to be submitted to this Office.				
5.	Action plan for developing connecting and internal road in terms of MSA as per IRC guidelines shall be implemented.	The Project Proponent developing and strengthening the connecting and internal roads in accordance with MSA requirements and IRC guidelines to support safe movement of mining vehicles. During inspection it was observed that grading, compaction, dust suppression and installation of safety measures such as signage and speed control are being carried out, with periodic review of road conditions. However, it is viewed that regular maintenance of the roads needs to be undertaken by the project, especially	24.07.2025		11.17	The Project Proponent has taken action for amelioration of the deficiencies observed during the last monitoring. It is assured to be completed before the coming monsoon season.

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
		after the monsoon season.				
6.	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.	As reported, the Project Proponent is abiding by all commitments and recommendations made in the EIA/EMP Report, during the Public Hearing and before the Expert Appraisal Committee, which have been integrated into the Environmental Management Plan and are under continuous implementation, with progress being reflected in the six-monthly compliance submissions to the Ministry of Environment, Forest and Climate Change. However, the project proponents need to take up measures to reduce dust emissions from the roads, loading and unloading sites, especially during the summer season.	24.07.2025		11.21	From the reports submitted by the project proponents, it is observed that the project has initiated efforts for dust control measures like deployment of additional water tankers and mechanical road sweeping machines in the project as well as township.
7.	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the	The project proponents have reported for FY 2024–25 that they have carried out a preliminary estimation of Greenhouse Gas (GHG) emissions	24.07.2025		12.1	The project has initiated studies on the GHG emission inventory in the project area since 2024-25 and for the year 2025-26.

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
	same including carbon sequestration by trees.	using standard emission factors resulting in total emissions of 27,449.63 tCO_2e for Bolani Iron Ore Mines. Of this, Scope-2 emissions from electricity consumption account for 17,501.62 tCO_2e (~64%), while Scope-1 emissions from diesel, lubricant oil and explosives contribute 9,948.01 tCO_2e (~36%), with diesel being the dominant direct emission source. It is submitted by the project proponents that, the inventory establishes a baseline for future carbon budgeting and decarbonisation planning, and the figures are proposed to be validated through engagement of an expert agency, for which the tendering process is already underway. However, the project proponents need to get a comprehensive study on carbon emissions and sequestration through an institute of National Repute				

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
		and implement the recommendations accordingly.				
8.	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.	The project proponents have initiated action for compliance with the Decarbonisation condition by commencing engagement of a qualified expert agency for preparation of a comprehensive GHG Emissions Inventory by tender selection process. The project proponents need to expedite the process and action taken with respect to the study and the implementation of the recommendations need to be submitted to this Office.	24.07.2025		12.2	The project has initiated studies on the GHG emission inventory in the project area since 2024-25 and for the year 2025-26. However, final programme for reduction of GHG including carbon sequestration through plantations, along with time bound action plan needs to be submitted to the Regional office.

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
9.	The project proponent should restore the Mine lease area by planting with native species only.	Plantation has been being raised on the degraded land inside the ML area as per the technically approved plan in consultation with DFO Keonjhar. The areas include 7.5m wide green belt in the safety zone around the mining lease and areas viz OB dumps, reclaimed/backfilled area, mine benches, along the roads, degraded lands within ML The project proponent may take up gap plantations where ever needed along with three tier plantations along the roads/ avenues to arrest fugitive emissions.	19.09.2022	i		The project has undertaken plantation activities an around the project area. The native species have been observed who have been selected for plantation in the area. The project needs to fence the plantations to ensure good survival rate.
10.	PP shall deploy of at least 10 no's of fog cannon with adequate throw length for mitigation of fugitive dust on the haul road, storage yard, crushers, during handling at fines loading unit and transportation route in addition of already proposed	The deployment of Fog/Mist canons at the mining and allied activities of Bolani Ores Mines is as follows:	19.09.2022	vii		The proponents submitted project have that procurement of mechanical devices like high-capacity fog/mist canons have been initiated and these would be installed in the project in three phases for fugitive dust generated due to transportation of vehicles as well as at sites of loading and unloading areas.

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
	Fugitive Dust Mitigation Measures implemented at BOM.					

Sl	Location	Status	No's	Throw length	Year of commissioning
1	Rotating Fog canon at Fines stockpile of Lump Loading Plant (departmental)6.90 ML)	Installed	2	50m , 100m	2024
2	Rotating Fog canon at Fines Loading Plant (departmental)6.90 ML)	Installed	2	50m , 100m	2024
3	Rotating Fog canon at Secondary Stockpile (departmental)	Installed	2	50m	2023
4	Truck mounted mist Cannon vehicle of 50m throw for Mitigation of forest fire and fugitive dusts on approach road	Installed	1	50 m	2022
5	Truck / Trolley mounted Rotating Fog canon one each in-pit F-Area, G-area near shovel-dumper operation (departmental) and New Fines stacking Loading/Reclaimer	Proposed, procurement in process	3	50m	Proposed to be completed in 2025-26
6	Rotating Fog canon Near Fines handling area during loading to dumpers and stacking	Will be ensured through condition in raising contract of D area and Panposh till procurement by BOM			
7	Rotating Fog canon at Panposh & D area (contractual) and in-pit crushing and screening units	Will be ensured through condition in auction/fines selling contract, till procurement by BOM			

11.	The Project Proponent shall also ensure that the dispatch by road should be	As per the report submitted by the project proponent road transportation of Iron ore from	05.08.2021	iv		It is observed that project proponents have prepared a checklist to be adopted by

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
	as per the standard practice.	Mines along with dump fines are dispatched on public Bolani – Barbil road (which are State Highway and PWD roads),within total approved capacity of 2 MTPA by road . As such, Road transport does not pass through any sensitive location such as schools, hospitals etc. In this regard it is suggested that, the project proponent may stipulate a condition in the auction contract/selling contracts to follow all the standard practices applicable in the region.				transporters while transporting of ores and materials to end from project site including covering of the truck etc.
12.	Plantation shall be raised in an area of 33.487 ha including a 7.5m wide green belt in the safety zone around the mining lease by planting the native species around OB dumps, reclaimed area, mine benches, along the roads etc. in consultation with the local	During visit plantation has been observed in site. Project proponents reported that Plantation in an area of Green Belt-329.20 ha, Dumps-0 9.8Ha and back filled .Plantation has been raised in an area of 60.0 ha which includes 7.5m wide green belt in the safety zone around the mining lease and	21.12.2021	xiv		The project has undertaken plantation activities in an around the project area. The native species have been observed who have been selected for plantation in the area. The project needs to fence the plantations to ensure good survival rate.

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
	DFO/Agriculture Department. The density of the trees should be around 2500 plants per hectare. Greenbelt shall be developed all along the mine lease areas in a phased manner and shall be completed within first five years.	areas viz. OB dumps, reclaimed/backfilled area, mine benches, along the roads, degraded lands within ML, etc. in consultation with the local DFO / Forest Department. Technical schemes have been prepared in consultation with DFO Keonjhar and the same is being implemented. 1. Total Green Belt area = 329.20 Ha (The intermediate degraded forest land inside ML is considered as greenbelt) 2. Total area with natural preserved forests= 529.46 Ha. 3. Total safety zone area= 73.2 Ha. 4. Plantations carried out in safety zone= 11 Ha. 5. Number of Plantations carried out in safety zone= 8,000. 6. Native species have been planted such as				

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
		Karanj, Mahaneem, Neem, Mango, Jackfruit, Krishnachura, Radhachura, Teak, Sal, Jamun, Tamarind, Aonla, etc. 7.Density of plantation in intermediate forest land = 2500 per Ha. However, the same is siting specific as gap plantation in ANR 1600/Ha and 800/ha is also resorted where standing trees exist. 8.Greenbelt has been developed inside the mine lease area where ever gaps or vacant spaces were available.Year wise plantation of last 3 years is as below: The project proponents need to carry out gap plantations, where ever necessary and also replantation may be carried out in areas where survival of the plantations carried				

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
		out earlier has been low.				

Year	Location	No of saplings	Area	Survival
2021-22	85°17'20.05"E, 22°5'35.15"N Casualty replacement in Planation near Kiriburu	4000	2.0 ha	80%
2022-23	85°19'26.40"E, 22° 5'58.34"N (Rehabilitation of fines excavation site)	2000	0.75 ha	65%
2023-24	Casualty replacement in Safety zone near Kiriburu, Casualty replacement in plantation site near Kiriburu, Casualty replacement near B&C area plantation site,Safety zone near D-area, Near Sinter fines, OB Dumps	9084	3.4 ha	97%

13.	Sewage treatment plant should be installed for the colony. ETP should also be provided for the workshop and wastewater generated during mining operation.	Sewage treatment plant in colony is in construction stage in the township. As such, individual septic tanks followed by soaking pits have been provided in all quarters and office locations. 2 nos. of ETPs (Oil and Grease catch traps) have been provided at mechanical workshops and equipment washing junctions, to collect and treat workshop effluent. During 2024, Revamping of these ETPs (Oil and Grease catch traps) at	21.12.2021	25		The project has constructed STP and is yet to be commissioned. It is assured that the water discharge from workshop and township would be treated in the ETP.

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Re-assessment by RO / Response by PP
			EC date	Specific	General	
		mechanical workshop is being done and as on date of preparation of report, the job is in progress.				

viii. Environmental Site Settings: The ML area is covered under Survey of India Topo sheet no F45H8 and is bounded by the geographical coordinates ranging from 22°05′11.670″ N to 22°07′39.432″ N and Longitude 85°16′52.813″ E to 85°19′44.700″ E. Project does not fall in the Critically Polluted Area (CPA)/Severally Polluted Area (SPA), as per CEPI Assessment, 2018. Project falls in seismic Zone II of seismic zonation map of India.

Forest Area: The project involved total 1312.86 ha of forest land. The details of the approvals already obtained or applied for the forest land are as follows:

S. No.	Obtained vide letter no. and date	Area (ha)	Stage-I/II	Validity
1.	F. No. 8-17/1997-FC (pt) dated 11.12.2012	1152.58	Stage-II	Valid till life of mine
2.	F. No. 8-17/1997-FC (pt) dated 12.11.2014	73.12	Stage-II	Valid till life of mine
3.	F. No. 8-17/2016-FC dated 06.11.2019	87.09	Stage-II	Valid till life of mine
Total		1312.86		

Protected Area: The project is not located within 10 KM of any ESZ/ ESA/ national park/ wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve/tiger corridor etc. Certificate dated 13.04.2026 has been submitted by PP in this regard.

ix. Letter of Intent/ Lease deed:

S. No.	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of the Grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine Lease Area in Ha
1.	Initial grant of Mining Lease	11.04.1960	Iron Ore Major	30 years (Up to 10.04.1990)	Govt. of Odisha	1321.45
2.	1st Extension	11.03.2002	Iron Ore Major	20 years From (10.04.1990 to 09.04.2010)	Govt. of Odisha	1321.45
3.	2nd Renewal vide Letter no. III (A)SM-1/97-10731 /SM	14.11.2014	Iron Ore Major	20 years From (10.04.2010 to 09.04.2030)	Govt. of Odisha	1321.45

x. Sensitive Receptors:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>1.</td><td>Total ML area</td><td>1321.45 ha [Private: 8.59 ha; Forest: 1312.86 ha]</td><td>Land use: Mining and allied infrastructure</td></tr>
<tr><td>2.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>Core zone: Nil
<u>Buffer zone (Within 500 m):</u>
<table><tr><td>Habitation</td><td>Distance</td><td>Direction</td></tr><tr><td>Balani</td><td>0.5 km</td><td>SE</td></tr><tr><td>Balagoda</td><td>0.7 km</td><td>E</td></tr></table></td><td></td></tr>
<tr><td>3.</td><td>Existence of school and hospitals if any.</td><td><u>A. School</u>
<u>Core Zone</u>: None
<u>Buffer zone (Within 500 m):</u>
<table><tr><td>School</td><td>Distance</td><td>Direction</td></tr><tr><td>DAV School</td><td>300 m</td><td>ENE</td></tr></table><u>B. Hospital (Within 500 m):</u>
<u>Core zone</u>: None
<u>Buffer zone (Within 500 m)::</u>
<table><tr><td>Hospital</td><td>Distance</td><td>Direction</td></tr><tr><td>SAIL Hospital, Bolani</td><td>200 m</td><td>East</td></tr></table></td><td></td></tr>
<tr><td>4.</td><td>Elevation of the project site</td><td>490-910 M above mean sea level</td><td></td></tr>
<tr><td>5.</td><td>Involvement of Forest land if any.</td><td>Area of the forest land involved: 1312.86 ha</td><td>The entire forest land (1312.86 ha) has been duly diverted under Section 2(ii) of the Forest (Conservation) Act, 1980, vide approval letters viz. F. No. 8-17/1997-FC (pt) dated 11.12.2012, letter F. No. 8-17/1997-FC (pt.) dated 09.07.2013, letter F.No. 8-17/1997-FC (pt) dated 12.11.2014 and letter F. No. 8-17/2016-FC dated 06.11.2019 of MoEF&CC, GOI.</td></tr>
<tr><td>6.</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.)</td><td><u>Core Zone:</u>
Perennial Nalas- Jhikaria Nala, Champua Nala, Panposh Nala
Seasonal Nalas- Balagoda Nala, Limtur Nala
<u>Buffer zone (Within 500 m):</u></td><td></td></tr>
</table>

S. No.	Particulars	Details	Remarks
	exists within the project site as well as study area	<table><tr><td>Water body</td><td>Distance</td><td>Direction</td></tr><tr><td>Karo River</td><td>~ 2km</td><td>SE</td></tr></table>	
7.	Railway Line	Core Zone: Buffer zone (Within 500 m): The integrated project features a dedicated captive railway siding directly terminating at the Bolani Khadan Railway Station (BLKN) under South Eastern Railway for mineral evacuation.	All statutory siding agreements, land licensing permissions, and rake loading approvals have been duly executed with the Railway Authorities. The infrastructure complies with the safety distances mandated under the Metalliferous Mines Regulations (MMR), 1961.
8.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ Tiger Corridor/ Elephant Corridor /elephant reserve etc. if any within the study area	There is No National Park, Sanctuary, Biosphere Reserve or Tiger Reserve within 10 km of the mine lease. Name of the ESZ/ESA: N.A Status of Notification: N.A Distance of project from ESZ/ESA: N.A Authenticated map of ESZ projecting distance of ESZ from project site: N.A Status of NBWL approval: Not Required List of Reserved and Protected forests: Ghatkuri R. F, Karampada R.F, Thakurani R. F, Lakrhaghat R.F, Uliburu R.F, Siddhamatha, Kodolibad R.F, Tatiba P.F, Gua R.F, Nuia R.F	PP submitted a authenticated map dated 13.04.2026 by DFO Keonjhar
9.	Archaeological sites monuments/ historical temples etc.	None within 10 km radius of the project boundary	
10.	Involvement of Critically Polluted Area/Severely Polluted area as per 2018 CEPI score	Involvement of CPA/SPA – None Proximity to CPA/SPA Not Applicable	
11.	Projects	Not Applicable	

S. No.	Particulars	Details	Remarks
	located adjacent to Aravalli/ GIB Priority area/ either fully (or) partially within GIB area /Taj Trapezium Zone		
12.	Projects located in the State of Odisha Keonjhar, Sundergarh and Mayubhanj District	Submitted	Compliance to CSIR-NEERI recommendation in respect of SAIL-Bolani Ore mines (5.1 sq. Mile ML), Dist.: Keonjhar, Odisha is submitted.

xi. Diversions proposed/ previously diverted if any - Not Applicable

xii. Mitigation measures proposed for the sensitive receptors:

S.No	Receptors	Proposed mitigation measures
a)	Habitation	Mandatory tarpaulin covering of loaded ore trucks, Speed restriction and traffic calming measures, Controlled blasting scheduling, Continuous noise attenuation bund, Multi-tier green barrier plantation, Biomass pellets and smokeless chulha distribution etc.
b)	School	Mandatory tarpaulin covering of loaded ore trucks, Speed restriction and traffic calming measures, Controlled blasting scheduling, Continuous noise attenuation bund, Multi-tier green barrier plantation etc.
c)	Water Body	Zero untreated mine water discharge, Check dams, stilling basins and filters, Garland drain and sedimentation pond, Periodic desiltation of drains and nallas, Bio-engineering of stream banks, Restriction on ore stock-piling near river, Renovation of village ponds
d)	Other	-

xiii. Mining Plan and Progressive Mine Closure Plan If available): The mining plan & mine closure plan for the project was approved by the IBM vide letter no. MRMP-2429/2025-26-IBM_RO_BBS dated 13.02.2026.

SN	Items	Details
1)	Geological Mineral Resources in Tonnes	823.661 million Tonnes as on 17.11.2025
2)	Mineable Mineral reserve in tonnes	764.498 Million Tonnes
3)	Type of mining (opencast/ Underground/Both)	Fully Mechanized Opencast

SN	Items	Details
4)	Proposed production (MTPA)	14.4
5)	Life of mines with proposed production capacity in years	53
6)	Blasting methodology	Controlled Blasting using slurry explosives (large dia)
7)	Details of transportation:	
8)	a) Pit to Surface/Crusher	Dumper
9)	b) Surface to siding	Dumper
10)	c) Siding to loading	Loader/ RLS (proposed)
11)	d) Quantity being transported by Road/Rail/Jetty/Sea tanker/conveyer: By Rail: ------ MTPA & Road: ---- MTPA	By rail: up to 10.4 MTPA By road: up to 4 MTPA (within the maximum dispatch limit of 14.4 MTPA)
12)	Crushing details type / capacity per hr and protective measure proposed	**Existing** Primary: 1600 TPH + 600 TPH + 6 × 300 TPH Secondary: 750 TPH, 300 TPH Tertiary: 600 TPH **Proposed** Primary: 200 TPH + 3 × 300 TPH **Total: 6750 TPH**

xiv. Year wise Development & Production

Year	Waste Quantity (t)	ROM Quantity (t)	Total Handling (t)	Saleable ore (t)	Mineral Reject (t)	OB to Ore Ratio
2026-27	7548786.41	12900000	20448786.41	10779330	2120670	0.59
2027-28	9217253.49	15300000	24517253.49	13583750	1716250	0.60
2028-29	9736438.93	16500000	26236438.93	13794969	2705031	0.59
2029-30	9495148.2	16500000	25995148.28	14916415	1583585	0.58
Total	**35,997,627.03**	**61,200,000**	**97197627.11**	**53074464**	**8,125,536**	

xv. Proposed Dump Configuration

	The proposed final dump configuration is as follows			
	Dump Type	**Area (ha)**	**Height (m)**	**Quantity Mm^3**
(i)	Waste	24.97	67	1733953
(ii)	Waste	46.86	40	1669716
(iii)	Waste	21.11	30	912231
(iv)	Waste	7.46	20	376815
(v)	Waste	7.7	20	254311
(vi)	Waste	35.16	40	2273787

xvi. Existing Dump Configuration

	The existing final dump configuration is as follows			
	Dump Type	**Area (ha)**	**Height (m)**	**Quantity Mm^3**
(i)	Waste	1.23	42	1.014
(ii)	Waste	1.03	13	0.079
(iii)	Waste	3.14	31	0.635
(iv)	Waste	1.92	21	0.308
(v)	Waste	6.70	54	1.819
(vi)	Waste	1.17	24	0.353
(vii)	Waste	6.30	70	2.280
(viii)	Waste	2.70	14	0.283
(ix)	Waste	3.20	17	0.110
(x)	Waste	16.97	45	7.023

xvii. Details of topsoil dump (Existing/Proposed) – Not Applicable as No topsoil dump is existing or envisaged during the plan period

xviii. Waste Management

S. No	**Particular**	**Quantity (Million Tonnes)**	**Waste Management**						
			Dump			**Backfilling**			**Others (Specify)**
			Dump area (Ha)	**Quantity (Million Tonnes)**	**Height (m)**	**Backfilled area (Ha)**	**Quantity (Tonnes)**	**Depth (m)**	
1.	Since Inception (In case, proposal is for expansion)	32.81	44.36	32.81	45 (max)	-	-	-	
2.	Plan Period	17.06	153.24	17.04	20 (max)	10.1824	6746520	30 (max)	
3.	Conceptual Period		74.88		60 (max)	724.07			

xix. Details of Solid and Hazardous Waste Management: The details of solid and hazardous waste generation along with its mode of treatment/disposal are furnished as below:

Sl. No.	**Type of Waste**	**Source**	**Quantity (TPA)**	**Mode of Treatment**	**Disposal**
1.	Battery waste	Workshop, UPS, Battery room	6	Shall be sold off to authorized recyclers	Shall be sold off to authorized recyclers
2	E-waste	Mine office	0.5	Shall be sold off to authorized recyclers	Shall be sold off to authorized recyclers
3	Plastic waste	Workshop area (Packaging of	0.5	Shall be sold off to authorized recyclers	Shall be sold off to authorized recyclers

Sl. No.	Type of Waste	Source	Quantity (TPA)	Mode of Treatment	Disposal
		lubricants, machinery spares used etc.			
4	ETP sludge	ETP	0.5	Impervious pits	Impervious pits
5	Waste/ Residue Containing oil	Workshop/ Mine area	35	Shall be sold off to authorized recyclers	Shall be sold off to authorized recyclers

xx. Land use and land change

A	Pre-mining land use pattern:	Within ML Area (ha)
a)	Agricultural Land	-
b)	Forest land	1312.86
c)	Barren Land	-
d)	Waste Land	-
e)	Grazing Land	-
f)	Surface Water Bodies	-
g)	Settlements	-
h)	Other	8.59
	Total	1321.45 ha

B. Post Mining Land use						
Sn	Type of land use	Post Land Use Plan (ha)				
		Plantation	Water Body	Public Use	Undisturbed area	Total
1	Area under excavation Void Backfilled area	- 724.07	30.77 -	- -	- -	30.77 724.07
2	Storage for top soil/ Overburden dump/ Mineral Rejects Dump	74.86	-	-	-	74.86
3	Mineral separation plant including conveyor route	-	-	9.28	-	9.28
4	Infrastructure (office, rest shed, weigh bridge etc.)	-	-	-	-	-
5	Roads	-	-	18.30	-	18.30
6	Railways	-	-	-	-	-
7	Tailing Pond	-	-	-	-	-
8	Effluent Treatment Plant	-	-	1.20	-	1.20
9	Township	-	-	15.10	-	15.10
Sub-Total (active utilization)						873.58
9	Green belt	92.27	-	-	-	92.27
10	Undisturbed Lease Area		-	-	355.60	355.60
	TOTAL	891.20	30.77	43.88	355.60	1321.45

xxi. **Details of Water Requirement:** PP submitted that the total water requirement for the said project is 11500 KLD. Source of water shall be Karo River and Jhikaria Nallah
Source of Water: Karo River and Jhikaria Nallah
Ground Water Intersection: No
Water Requirement: 11500 KLD
NOC (For surface water): Permission available to draw 7 cusec of water from Karo River and Jhikaria Nala. Agreement no. 940 Dt.17.02.2026 from Baitarani Irrigation Division, Salapada.
NOC (Ground Water): Not Applicable

xxii. **Details of Power Requirement:** The power requirement of the said project has been estimated to be 13.5 MW

xxiii. **Plantation:** Existing plantation has been developed in 329.2 ha area which is about 25% of the total ML area of 1321.45 ha with total sapling of 20000 Trees (Only for expansion cases). Proposed greenbelt will be developed in 92.27 ha at the conceptual stage which is about 6% of the total ML area. A 7.5 m wide greenbelt, consisting of at least 3 tiers around mine boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 20000 saplings will be planted and nurtured in 8 hectares in 4 years of plan period.
In case of expansion, if
1) trees have been cut then their number and location of trees planted in lieu of felled trees- 8338 trees have been felled during second RML period and compensatory afforestation has already been complied as per FC conditions.
2) success percentage of green belt and other plantations raised- 80%
3) area showing plantation on ML area in KML- presented during the meeting.

(i) Existing Status of greenbelt and plantation, in case of expansion and clause 7(ii) proposal

S. No	Particular	Area (Ha)	No of plants	Survival rate	Plant species
1.	Greenbelt along 7.5 m lease periphery	28.16	33,792 (≈33,800)	≥80%	Neem, Karanj, Kusum, Gamhar, Arjun, Bamboo, Acacia auriculiformis, Cassia siamea, Teak, Mango, Jamun, Jackfruit, Semal
2.	Plantation				
	Backfilled Area	10.50	12,600	≥80%	Native mixed species
	Safety zone on nala	8.00	9,600	≥80%	Native riparian species
	Safety zone of road	5.00	6,000	≥80%	Neem, Karanj, Gamhar, Arjun
	Safety zone of habitation	3.50	4,200	≥80%	Neem, Mango, Jamun, Karanj
	Safety zone of power line	1.20	1,440	≥80%	Low-height native species and shrubs
	Stabilized Waste dump	19.00	22,800	≥80%	Bamboo, Karanj, Vetiver grass

S. No	Particular	Area (Ha)	No of plants	Survival rate	Plant species
	Intervening degraded/unutilised land within ML	253.84	304,608	≥80%	Native mixed species
	Grand Total	329.20	395,040 (≈395,000)	≥80%	Predominantly native and site-specific species

(ii) Proposed Action plan for greenbelt and plantation

Year	Greenbelt on 7.5 m lease periphery		Backfilled Area		Bench Slope Plantation		Plantation on Safety zones around village Abadi & Road		Total	
	Area (ha)	No. of Trees	Area (ha)	No. of Trees	Area (ha)	No. of Trees	Area (ha)	No. of Trees	Area (ha)	No. of Trees
Existing (31.03.2026)	28.16	33,800	10.50	12,600	272.84	326,200	17.70	22,400	329.20	395,000
1st Year	1.00	2,000	1.02	1,275	0.00	–	1.00	1,200	3.02	4,475
2nd Year	1.00	2,000	0.82	1,025	0.00	–	1.50	1,800	3.32	4,825
3rd Year	1.00	2,000	4.80	6,000	0.00	–	2.00	2,400	7.80	10,400
4th Year	1.00	2,000	3.55	4,438	0.00	–	2.00	2,400	6.55	8,838
5th Year	1.00	2,000	0.00	–	0.00	–	2.00	2,400	3.00	4,400
6th year onwards to life of Mine	25.00	50,000	165.81	207,212	322.84	387,408	25.66	30,882	539.31	675,502
Total	58.16	93,800	186.50 *	231,350	595.68	713,608	51.86	64,182	891.20	10,69,440
Note: Local trees/plant species will be planted @ 2500 trees /ha. Plantation density may vary depending on terrain, site conditions and the presence of natural regeneration, while every effort shall be made to achieve up to 2,500 saplings/ha wherever feasible. * *Includes plantation over degraded land within the mining lease, existing OB dumps, inactive dump slopes, exhausted benches, and other plantation areas developed since inception.*										

xxiv. **Rehabilitation &Resettlement Plan: Not applicable**, as no private land has been acquired or is proposed to be acquired under the instant proposal. Hence, no Rehabilitation & Resettlement (R&R) issues are involved.

xxv. **Project Cost:** The total cost of the project is Rs. 390.20 Crores.

xxvi. **Baseline Environmental status and impact assessment:** Baseline Data collected for Winter season (1st Dec. 2025 to 28th Feb. 2026)

Period	Baseline Data collected for the period Dec'25 – Jan'26 – Feb'26
AAQ parameters at 12 Locations (min and max)	Core Zone: $PM_{2.5}$ = 35 to 50 µg/m^3

	PM_{10} = 68 to 87 µg/m^3 SO_2 = 7.8 to 16.1 µg/m^3 NO_x = 13.9 to 28.5 µg/m^3 Buffer Zone: $PM_{2.5}$ = 21 to 55 µg/m^3 PM_{10} = 52 to 91 µg/m^3 SO_2 = 5.5 to 20.8 µg/m^3 NO_x = 8.3 to 34.8 µg/m^3
Incremental GLC level	$PM_{2.5}$ = 3.649 µg/m^3 (Level at (A3) DAV Public School 0.3 km in ENE Direction). PM_{10} =7.623 µg/m^3 (Level at A1 (Bolani ML near CISF Camp – Adj. in SE direction) SO_2 = 0.437 µg/m^3 (Level at A6 (Matkembeda village 2.7 km in NE direction) NOx = 0.659 µg/m^3 (Level at A7 (Serenda 7.3 km in ESE direction)
Noise levels Leq (Day and Night) at --- locations (min and max) (Day and Night)	Industrial zone: Day time 72.6 dBA and Night time 64.4 dBA Residential zone: Day time 54.5 dBA and Night time 44.4 dBA Commercial Zone: Day time 64.1 dBA and Night time 54.4 dBA Silence Zone: Day time 49.8 dBA and Night time 39.7 dBA
Ground water quality at 7 Locations	Core Zone: pH: 6.52 to 6.52 Total Dissolved solids: 114 to 114 mg/l; Hardness: 50.9 to 50.9 mg/l; Chlorides: 12.9 to 12.9 mg/l, Fluoride: 0.1 to 0.1 mg/l. Heavy Metals: Iron: 0.04 to 0.04 mg/l, Copper: 0.03 to 0.03 mg/l Buffer Zone: pH: 6.58 to 7.13 Total Dissolved solids: 36 to 364 mg/l; Hardness: 15.6 to 192 mg/l; Chlorides: 6.9 to 13.8 mg/l, Fluoride: 0.1 to 0.164 mg/l. Heavy Metals Iron: 0.036 to 0.1 mg/l, Copper: 0.03 to 0.03 mg/l
Surface water quality at 9 Locations	Core Zone: pH: 6.82 to 6.82, TDS: 88 to 88 mg/l, DO: 7.2 to 7.2 mg/l, Buffer Zone: pH: 6.58 to 7.36, TDS: 104 to 146 mg/l, DO: 5.3 to 7.4 mg/l,
Soil quality analysis at 8 locations	• pH: Soil pH ranged from 5.52 to 6.38, indicating slightly to moderately acidic conditions • Colour: Soil colour varied from light yellowish, Yellowish brown to dark brown, suggesting differences in mineral composition and organic matter

<table>
<tr><td></td><td>

Texture: predominantly sandy-loam, with some areas showing loamy sand or sandy-clay loam characteristics
Water Holding Capacity (WHC): WHC varied from 42.2% to 57.2%
Among the micronutrients in soil, the concentration trend observed was Mn > Fe > Cu > Zn. Mn levels were generally high, ranging from 2.312 to 43.04 mg/kg, indicating sufficient availability for plant growth.

Overall, the soil samples reflect moderate fertility with localized nutrient deficiencies (notably phosphorus and zinc), necessitating site-specific soil management and nutrient supplementation for sustainable agricultural productivity
</td></tr>
<tr><td>Effluent generation details and its treatment</td><td>To ensure that domestic and industrial wastewater generated within the Bolani Iron Ore Mine and associated township, dedicated Sewage Treatment Plant (STP) and Effluent Treatment Plant (ETP) facilities have been established/proposed. The installed capacity of the STP is 2.4 MLD (2400 m³/day) and the treatment system is based on Activated Carbon Filter (ACF) PSF. The 2 nos Effluent Treatment Plant (ETP) has been provided to treat wastewater generated from HEMM washing, workshop activities, and vehicle maintenance operations. The installed capacity of each of the ETP is 10 KLD (m³/day)</td></tr>
<tr><td>Traffic assessment study findings</td><td>

Traffic study has been conducted at 3 locations (Bolani-Barbil Road near Karo over Bridge, Barbil Road near W. Huttings, and Road to Bolani Public Siding near W. Hutting) on Intermediate-lane Road which is approximately 2 km (max) from the plant site.
Transportation of raw material will be done by rail/ road.
Rail dispatch: Up to 14.9 MTPA through the existing/proposed railway siding and Rapid Loading System (RLS).
Road dispatch: Up to 4.0 MTPA by 40 tonner trucks, within the overall dispatch limit of 14.9 MTPA.

Existing PCU is 6855 PCU/hr (maximum observed) on Barbil Road near W. Huttings (Intermediate-lane Road) and existing level of service (LOS) is: C

<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>Intermediate-lane Road</td><td>6855</td><td>11000</td><td>0.62</td><td>C</td></tr>
</table>

PCU load after proposed project will be 6855 (Existing) + 822 (Additional) PCU/hr and level of service (LOS) will be: D

<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Proposed V/C Ratio</th><th>LOS</th></tr>
<tr><td>Intermediate-lane Road</td><td>7677</td><td>11000</td><td>0.69</td><td>D</td></tr>
</table>
* Note: Capacity as per IRC-64-1990 Guide line for capacity for roads.
(Only for road transport)
</td></tr>
</table>

	Conclusion: The level of service will become D after including additional traffic due to proposed project.
Flora and fauna	• Schedule-I species (~26 species) as identified by the Forest department to be found in the study area includes *Indian Elephant, Leopard, Sloth Bear, Deer Species: Sambar Deer, Indian Fox, Jackal, Jungle Cat, Monitor Lizard, Cobra, Russel's Viper, Shikra, Small minivet, Yellow-crowned woodpecker and etc.* • A Site-Specific Wildlife Conservation Plan was approved by the PCCF (WL) & CWLW, Odisha, vide Order No. 4506/1 WL(C)SSP-126/2012 dated 23.06.2014, with a total financial outlay of ₹1,676.41 lakh for the conservation of various Schedule-I faunal species found within the study area. SSWCP is being revised as per Wildlife (Protection) Amendment Act, 2022 and updated guidelines. Revised SSWCP plan with additional financial allocation of ₹642.00 lakh has been submitted to DFO, Keonjhar for approval on 31.01.2026.
Hydrogeology study	The proposed mining operations during the plan period (2026–2030) will not intersect the groundwater table. However, during the conceptual stage, mining in Quarry-D is envisaged up to 380 m AMSL, while the merged quarry comprising Quarry B & C and Quarry G is proposed to be worked up to 440 m AMSL. At these depths, both pits are expected to intersect the ground water table (occurring at approx. 451 m AMSL). Accordingly, a Comprehensive Hydrogeological Report (CHR) will be prepared by a QCI-NABET accredited Ground Water Consultant Organization. Based on the findings of the study, the above details will be furnished in the Revised EIA-EMP report for subsequent phases. Necessary permissions/NOC for mine dewatering will be obtained from the Central Ground Water Authority (CGWA), prior to intersection of the groundwater table.
Impact study on bio-diversity and aquatic ecology	No significant adverse impact on biodiversity and aquatic ecology is anticipated due to the proposed project.

xxvii. Public Consultation:

The instant proposal is submitted for the Phase-I expansion of production from 12.0 MTPA to 14.4 MTPA (20% increase) for Bolani Iron Ore Mine under provisions of Para 7(ii) of EIA Notification, 2006 and thus exempted from conducting PH at this Stage-I of expansion. However, the details of the Public Hearing conducted for the earlier Environmental Clearance for 12 MTPA are furnished below for information and appraisal by the Hon'ble EAC.

Details of advertisement given	23.09.2011
Date of public consultation	Public Hearing was conducted on 24.10.2011
Venue and distance from project site	At Balagoda village, of Barbil Ttahasil, Keonjhar District, Odisha (within 500 meters from the project site)
Presiding Officer	Sri Brajakishore Nayak, OAS(S) Addl. District Magistrate Keonjhar, Odisha Sri Bishi Kesan Nayak, Regional Officer, OSPCB Keonjhar Odisha

Number of representations received in writing from the district and outside of district:	Verbal Representations: As recorded during the Public Hearing proceedings. Written Representations: Not available in the records presently available with the Project Proponent.
Major issues raised	**i. Employment and livelihood opportunities for local people, including land losers.** ii. **Drinking water, healthcare and sanitation facilities.** iii. **Development of village infrastructure and civic amenities.** iv. **Environmental protection through pollution control and plantation.** v. **Community welfare and socio-economic development of peripheral villages.**
No. of people attended	A total of 264 participants signed the attendance register maintained during the Public Hearing.

xxviii. Action plan as per MoEF&CC O.M. dated 30/09/2020 – All the commitments made during the Public Hearing have been substantially fulfilled and are under continuous implementation by the Project Proponent. In accordance with the MoEF&CC Office Memorandum dated 30.09.2020, the following need-based, time-bound physical activity and action plan has been provisioned for implementation over the next three years to sustain and further strengthen environmental protection measures and community development initiatives in and around the project area :

S. No	Physical activity and action plan		Year of implementation (Budget in INR)			Total Expenditure (Rs. in Crores)	Recuring Expenditure (Rs. in Crores)
	Name of the Activity	Physical Targets	1st	2nd	3rd		
1	Education & Skill Development	Continued operation of ITI, free education in SAIL schools, vocational training, scholarships, deployment of teachers, educational support to peripheral villages, and replacement/upgradation of training aids & educational equipment.	2.00	1.50	1.50	5.00	4.80
2	Health & Hygiene	Hospital services, mobile medical unit, medical camps, ambulance, medicines, sanitation & public health programmes, and replacement/upgradation of essential medical equipment.	1.90	1.55	1.55	5.00	4.60
3	Drinking Water Supply	Construction/augmentation of bore wells, overhead tanks, pipelines, drinking water facilities and their operation & maintenance.	1.20	0.15	0.15	1.50	0.60
4	Road, Connectivity & Electricity	Improvement of village roads, transformers, street lighting and allied public	1.80	0.10	0.10	2.00	0.40

S. No	Physical activity and action plan		Year of implementation (Budget in INR)			Total Expenditure (Rs. in Crores)	Recuring Expenditure (Rs. in Crores)
	Name of the Activity	Physical Targets	1st	2nd	3rd		
		infrastructure; routine maintenance thereafter.					
5	Employment, Livelihood & Community Development	Employment of local persons, livelihood assistance, SHG support, women empowerment, community welfare programmes and skill enhancement. Capital component limited to training materials and livelihood assets.	10.50	9.75	9.75	30.00	29.50
6	Environmental Mitigation Measures (Sensitive Eco-receptor Action Plan)	Air pollution control & dust suppression; water management (garland drains, sedimentation ponds, check dams & desiltation); noise & blasting management; ecological restoration; traffic management & road safety; environmental awareness; greenbelt development & village buffer plantation.	2.72	0.71	0.70	4.13	1.63
	Grand Total		20.12	13.76	13.75	47.63	41.53

xxix. Existing capital cost of project was Rs 1085.83crore. The capital cost of the proposed project is Rs. 390.2 Crore and the capital cost for environmental protection measures is proposed as Rs. 2.40 Crore. The annual recurring cost towards the environmental protection measures is proposed as Rs. 3.0 Crore. The employment generation from the proposed project / expansion is 1685.

The details of cost for environmental protection measures is as follows:

Sl. No.	Description of Item	Existing (Rs. In Crore)		Proposed (Rs. In Crore)	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost
(i).	Air Pollution Control	13.4	22.1	1.14	1.20
(ii).	Noise control	0.1	-	0.06	0.04
(iii).	Water Pollution Control	14.2	28.9	0.78	0.22
(iv).	Environmental Monitoring and Management	1.2	7.0	0.06	0.44
(v).	Green Belt Development	1.6	3.7	0.06	0.50
(vi).	Occupational health, safety		0.25	0.12	0.36
(vii).	Land reclamation, soil conservation, Tailings dam management	1.4	0.35	0.18	0.18

Sl. No.	Description of Item	Existing (Rs. In Crore)		Proposed (Rs. In Crore)	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost
(viii).	Environmental Management Cell	0.65	0.14	-	0.06
	TOTAL	32.55	62.44	2.40	3.0

Breakup of the proposed EMP is given as under:

Sr. No.	Activities	Capital cost (₹ Lakhs)	Recurring cost (₹ Lakhs)
1.	Air Pollution Control		
a.	Two (2) nos. of Water Tankers for dust suppression on main haul road, drilling areas, loading and unloading sites	40	60
b.	Three (3) units Fixed Dust Suppression System at crushers, transfer points, and screening plants.	36	40
c.	Two (2) nos. of Mist Cannons	20	10
d.	One (1) no. mechanical road sweeping machine	18	10
	Sub Total	114	120
2.	Water Pollution Control		
a.	Construction of garland drains and retaining walls to prevent runoff contamination.	30	06
b.	Installation of sedimentation ponds / settling tanks to remove suspended solids from runoff water.	25	05
c.	ETP (oil & grease trap) for workshop	05	03
d.	STP for mines and township	18	08
	Sub Total	78	22
3.	Noise Pollution Control & Blasting Management		
a.	Provision of acoustic enclosures for DG sets, silencers for compressors and equipment, noise barrier panels near crusher etc.	4.5	1.5
b.	Ground vibration monitoring, control blasting measures, training and supervision of blasting operations	1.5	2.5
	Sub Total	06	04
4.	Land reclamation, Soil Conservation & Tailings Dam Management		
a.	Topsoil preservation and reuse for reclamation and plantation.	06	04
b.	Progressive mine reclamation and rehabilitation of mined-out areas.	12	08
c.	Assessment of Structural stability of Tailing Dam, maintenance of Tailings dam, seepage control measures.	-	06
	Sub Total	18	18

Sr. No.	Activities	Capital cost (₹ Lakhs)	Recurring cost (₹ Lakhs)
4.	Environmental Monitoring, Reporting and Compliance	06	44
5.	Occupational Health & Safety [Health monitoring facilities, dust monitoring instruments and PPE]	12	36
6.	Green Belt Development / Plantation [along mine boundary, dumps, roads and reclaimed areas]	06	50
7.	Environment Management Cell (E&L)	-	06
	Total	**240**	**300**

xxx. Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration shall be furnished.

A. Summary of court cases

S. No	Case No/ Title	Name of the Court	Brief summary of the case	Last date of hearing	Next date of hearing	Direction/ Action taken by the PP
1	W.P. (C) No. 24279 of 2017	Hon'ble High Court of Orissa	Pursuant to the Hon'ble Supreme Court judgment dated 02.08.2017, the Government of Odisha issued a demand notice dated 23.10.2017 to SAIL-Bolani Iron Ore Mine seeking recovery of ₹47.49 crore towards the alleged production of minerals beyond the approved CTO capacity. Aggrieved by the demand notice, SAIL filed Writ Petition (Civil) No. 24279 of 2017 before the Hon'ble High Court of Orissa at Cuttack. The Hon'ble High Court, vide order dated 04.04.2018, granted a stay on the aforesaid demand notice.	24.04.2024	-	The matter is presently sub judice before the Hon'ble High Court of Orissa.
PP has submitted an undertaking dated 09.07.2026 stating that No Court case pending against the project other than above.						

B. Summary of active Show Cause Notices : None

C. Summary of violation: None

i. Compliance to the observations of sub-committee site visit report (Only in case of site visit by the sub-committee) - Not Applicable Date of site visit: NA

ii. Comments of State Pollution Control Board, Odisha as per Ministry's OM dated 14.01.2025 and SOP dated 08.10.2025, has been obtained vide letter no. 9306/IND-II-CTE-247 dated 17.06.2026. The Environmental safeguards as follows:

The CTE for proposed enhancement i.e. 20% of production capacity of iron ore from 12 MTPA to 14.4 MTPA under provisions of para 7(ii) of EIA notification, 2006 for Bolani

5.1 Sq. Miles ML, 1321.45 Ha located in Champua Sub-Division, Keonjhar District, Odisha may be integrated with the EC subject to following conditions.

- **Environmental Safeguards**

General

1. The mine shall comply to the provisions of Environment (Protection) Act, 1986 and the rules made thereunder with their amendments from time to time such as the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 as amended from time to time, Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 etc. and amendments thereunder. The mine shall also comply with the provisions of Public Liability Insurance Act, 1991.
2. The mine shall apply for grant of Consent to Operate under section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 & 21 of Air (Prevention & Control of Pollution) Act, 1981 at least 3 (three) months before the production enhancement and obtain Consent to Operate from this Board.
3. Mine shall develop & maintain at least 15 m green belt all along its Lease boundary & at least 7.5 m Green Belt all around the existing villages in & around Lease area to act as a barrier & to protect from dust. Mines may include at least 1000 numbers of Banyan & Peepal trees each in its green belt for supporting local biodiversity & environment.
4. Mine shall implement the recommendations of CSIR-NEERI Nagpur for sustainable Mining.
5. Utmost care should be taken to avoid cutting big trees unless it is unavoidable.
6. **Carbon Footprint:** In Order to reduce Carbon Footprint of the Mines followings are recommended:
    - **i.** Industry must furnish detailed carbon footprint report (Scope I & II) of its Mines for assessment of carbon emissions.
    - **ii.** Replacement of Diesel operated Transportation vehicles & Mineral Processing Plants (Crushers & Screens) with Electric/ Hydrogen operated vehicles/systems Tippers/Trucks for transportation of Minerals both internal as well as to the destinations along with other internal domestic transportation.
    - **iii.** Installations of windmills/ Solar Power Plants or combination of both to meet at least 50% of Domestic power requirements of the Mines and adjoining residential colonies, promoting Renewable Energy utilization.
    - **iv.** Implementation of Advance Carbon Sequestration Technologies/methods to proceed towards Net Zero emissions.
7. **Circular Economy:** The OB being generated by Mines contains BHJ with other materials & get dumped without exploring its further use. Since these BHJ Can be used as non-magnetic fractions from processing yield ferrosilicon alloys (around 20% silicon) for metallurgical uses, reducing reliance on high-grade ores and silica. So the Mines:
    - **i.** Explore the feasibility of utilization of BHJ in its downstream
    - **ii.** Also explore other materials available in the OB to further use in its downstream.
    - **iii.** Remaining waste shall be used in back filling the quarry pit by properly maintaining the topography of the site as feasible as possible.
8. Mine must maintain Zero liquid discharge (ZLD) during dry season, Low & moderate rain condition.
9. The mine shall transport at least 70% of Iron ore by Rail to minimize air pollution problems in the locality.
10. The mine should provide at least six CAAQMS at appropriate locations for monitoring Ambient Air Quality and should be connected to the SPCB, Odisha server, through RTDAS portal.

11. Project must obtain all statutory clearances as well as permission from Central / State Government as applicable from time to time.
12. Adequate measures should be taken for control of noise levels in the work environment of plant (crushing & screening) area so that noise levels shall not exceed 75 dB (A) during daytime (06:00 AM to 10:00 PM) and 70 dB(A) during nighttime (10:00 PM to 06:00 AM).
13. Protective barriers shall be provided for the lights to prevent illumination towards the forest area during night hours.
14. Adequate capacity of RO system must be installed for proper treatment of Mine pit water to make it suitable for meeting the Domestic demand of the Mine.
15. Mines should provide in-stream storage check dams (up to 2.0m height) across drainage channels in Lease area at appropriate places as per the Department of Water Resources, Odisha guidelines to manage runoff, reduce sediment transport, support local eco systems and facilitate ground water recharge-achieving Net Zero abstract (withdrawal Vs. Recharge) for ensuring adequate flow in Stream and River.
16. Project proponent must provide a net Barrier of 15m Height of adequate length before Green Belt towards nearby Village / Residential side to contain the fugitive dust to be emitted during transportation & process activities to avoid any dust nuisance in its surrounding residential & other areas.

- **Water Pollution**

1. Mines must ensure that all natural streams exist within the Mines Lease area or passes adjacent to it should be properly protected & maintained from any contamination. In no case any wash out/Mine effluent shall be allowed to discharge into local streams, Nallah & ultimately to River.
2. Mines should explore the use of Quarry pit water of nearby Mines to meet the additional water requirements for expansion Production enhancement of the Mines to maintain Water Neutrality in the Zone.
3. Mines pit drainage water if any shall be adequately treated in ETP & shall be reused in Dust suppression / Plantation purposes & meeting Domestic demand to maximum possible extent & surplus if any may be discharged to nearby nallah/ canal/ water bodies/ rivers after adequate treatment & meeting prescribed discharge standards for inland surface water.
4. Run-off Outlets of the Mines shall be properly identified & demarcated along with the receiving body.
5. Mine must develop proper storm drains at all its internal roads, haul roads terminating at guard ponds/Mine pit to avoid discharge of any untreated reddish runoff to nearby land/water bodies.
6. Mine has to carry out complete study & preparation of action plan for proper runoff management system of Mines by reputed agencies / In-house shall be submitted to the Board for proper implementation.
7. Run off from Mines area other than leading to Mines pit should be properly channelized & terminated at Masonry Guard Ponds (impervious bottom) with spill way provision at opposite end of inlet for proper settling & Treatment followed by Fabric Filtration system prior to discharge during heavy rains. Storm Drains should be properly lined with Geosynthetic Cementitious Composite Mats (GCCMs) or concrete canvas / other suitable liners to avoid percolations & subsequent contamination of Ground water/ Streams/Rivers/ nearby water bodies.
8. Guard Ponds should be designed to hold the runoff during low & moderate rains (Zero discharge) & in case heavy rain the overflow shall pass through spillway followed by Fabric Filtration system. The Guard ponds should be equipped with Coagulant dosing facilities at Inlet end & Pumping facilities at outlet end to recycle/reuse the runoff for dust suppressions/ Plantation/wheel washing systems etc.

9. The proponent shall have valid NOC from CGWA for using ground water before obtaining consent to operate from the Board. The proponent shall apply for allocation of water from Department of Water Resources, Govt. of Odisha in the GO-SWIFT Portal/E-Jalabantan portal.
10. Mines shall provide properly designed Retaining wall of adequate height with garland drain terminating at Guard Pond all along the side of OB Dumps, Topsoil Dumps, Iron ores & fines dumps to prevent any wash out & subsequent contamination of nearby water bodies.
11. Mine shall provide diversion drains wherever required at lease boundary to avoid entry of runoff from outside to Mining area to avoid contamination of runoff.
12. Mines shall regularly monitor the water quality of the Streams/Nallha/River/Water bodies flowing within & adjacent of the lease area & analysis reports shall be submitted to the Board at least twice a year. Mine must monitor the groundwater quality of the area at least twice a year.
13. Mine shall install multiple wheels washing facilities in Parallel covering dispatch route to ensure whole body washing of transporting vehicles i.e. Tippers/ trucks etc to avoid carryover of dust and mud to public roads. The wash effluent of wheel washing systems shall be 100% recycled through settling Tanks.

- **Air Pollution**

1. Mines shall provide adequate capacity Truck Parking Plaza equipped with dust suppression, Run-off management & treatment system within its Lease area to avoid any parking & congestion in Public Roads.
2. Mine shall submit the duly approved Transportation Management Plan to avoid any Parking of Trucks/Tippers, etc. on roads prior to going for expansion so that local traffic should not suffer.
3. Mine needs to provide sensor based fixed type sprinklers along major unpaved haul roads & ensure proper water sprinkling on internal unpaved haul roads & Transportation Roads for control of road dust emission during plying of transportation vehicles.
4. Main Haul roads, Approach roads & other internal public roads of the Mines should be concreted & Mine has to deploy adequate nos. of Mechanized Road Sweeping Systems (Vacuum type) at main paved roads, paved parking zones, etc. to maintain roads & area dust free.
5. Mines shall make provision of Belt / Pipe Conveyors for transportation of Iron ore from Quarry Pit to Mineral Stack Yard within Lease Boundary to minimize internal transportation through Haul Roads & to reduce air Pollution.
6. The ore stack yards shall be provided with adequate height of Toe wall all around & Rain guns shall be installed at appropriate intervals along Toe wall for dust suppression during dry season.
7. Mine must provide Truck Loading Silos equipped with DFS to minimize fugitive dust emissions during loading process.
8. Mine must provide and ensure proper functioning of DFS at all transfer points of Iron Ore Screening & Crushing Plant to avoid any fugitive dust emissions.
9. Mine must deploy adequate nos. of Fixed/mobile Fog cannons at all dust prone areas, Loading/Unloading areas of the mines for effective control of fugitive dust emissions in order to maintain AAQ within the Limit.
10. Mines must explore the possibilities of converting all Kachha (Earthen) Transportation Roads to Polymer Roads for efficient management of Road dust nuisance. A proposal should be furnished to the Board within 15 days for Trial implementation.
11. The mine shall carry out plantation at inactive dumps and other vacant areas.

12. Mine must ensure adequate dust control measures at Road (Kachha) connecting from its Exit Gate to Main Road to avoid fugitive road dust emissions during Transportation of its Iron ores to prevent adverse impact on its surroundings & on Human settlements.

- **Solid & Hazardous Wastes Management**

1. The Mines area should be declared as single use plastic free area.
2. The Garbage/solid wastes to be generated from the Mines should be collected & disposed off in accordance with the provision under Solid Waste Management Rule 2022.
3. Hazardous wastes shall be disposed off in accordance with the Provisions under Hazardous and other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and its amendments thereof.
4. OB dumps of the Mines should be properly stabilized with Coir matting followed by plantation to avoid any wash out & subsequent Pollution.
5. The unit shall develop dedicated facilities for 90 days storage of Hazardous & Other Wastes to be generated & such wastes shall be disposed of in accordance with the provisions under the Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016 and its amendments thereof.

iii. **Name of the EIA consultant:** M/s MECON Limited [S. No. 168, List of ACOs with their Certificate no. NABET/EIA-EMP/24-27/ SA 0255; Valid up to 09.02.2027.

iv. **Undertaking/Affidavit:** PP vide letter dated CGM/B-707 dated 07.07.2026 submitted that, the information provided in CAF, Form-1 (CAF, PART A, PART B & PART C) in pdf format & in PARIVESH-2.0 to the Ministry / EAC members and PPT presentation during the EAC meeting to be held on 17.07.2026 have no deviation in respect of the proposal no. IA/OR/MIN/575612/2026 for enhancement of production capacity of Iron ore from 12 MTPA to 14.4 MTPA under provisions of para 7(ii) of EIA Notification, 2006 for Bolani 5.1 sq. miles ML, 1321.45 ha located in Champua sub-division, Keonjhar district, Odisha. It is further certified that there are no data entry errors in the information uploaded in PARIVESH system including names/email-id/mobile numbers/address of the project proponent, authorized person, etc. It is also certified that the supporting documents uploaded on PARIVESH portal are correct and duly authenticated by the Authorized Signatory. In case of any deviation in data found in any of the documents, the Authorized Signatory shall be held responsible and furthermore, the above said project shall be rejected for grant of Environmental Clearance.

Affidavit: PP has submitted an affidavit dated 20.06.2026 as per OM dated 30.05.2018

****

Signature Not Verified

Digitally Signed by : Sundar Ramanathan
Member Secretary, MoEFCC (EC)

Date: 07/08/2026