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File No.: J-11015/483/2007-IA-II(M)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division
****

Dated **17/02/2025**

To,

Shri M JAYAPAL REDDY REDDY
M/s NMDC LIMITED
NMDC LIMITED REGD OFFICE 10-3-311/A KHANIJ BHAVAN, CASTLE HILLS, MASAB TANK HYDERABAD 500028 CASTLE HILLS, , Masabtank, HYDERABAD, TELANGANA, NEAR MASAB TANK FLY OVER, 500028
jayapalreddy@nmdc.co.in

Subject: **Expansion of Bailadila Iron Ore Deposit-14 NMZ for enhancement in production capacity of Iron Ore from 5.5 to 8.50 MTPA with 1.9 MTPA of waste excavation (total excavation from 6.3 to 10.4 MTPA) along with construction of one number of new Crushing Plant of 3,000 TPH & Downhill Conveyors in the ML area of 506.742 Ha by M/s NMDC located at Kirandul complex, South Bastar Dantewada District, Chhattisgarh - For Environment Clearance reg.**

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/CG/MIN/496067/2024 dated 27/09/2024 for grant of prior Environmental Clearance (EC) to the project under the provision of the EIA Notification 2006-and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC24A0000CG5635166N
(ii) File No.	J-11015/483/2007-IA-II(M)
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals,2(b) Mineral beneficiation
(vi) Sector	Non-Coal Mining
(vii) Name of Project	Proposal for Environmental Clearance of NMDC for expansion of Bailadila Iron Ore Deposit-14 NMZ, Kirandul complex, South Bastar Dantewada District, Chhattisgarh (Mining Lease area: 506.742 Ha. Mine expansion from the existing 5.5 MTPA to 8.50 MTPA ROM Iron Ore and 0.8 MTPA to 1.9 MTPA of waste excavation (total excavation from 6.3 to 10.4 MTPA) along-with construction of one

	number of new Crushing Plant of 3,000 TPH & Downhill Conveyors inside Mining Lease area.
(ix) Location of Project (District, State)	DANTEWADA, CHHATTISGARH
(x) Issuing Authority	MoEF&CC
(xii) Applicability of General Conditions	No

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

4. The above-mentioned proposal has been considered by EAC in the meeting held on 27/12/2024. 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. The EAC, in its meeting held on 27/12/2024, based on information submitted viz: Form 1 (Part A, B and C), EIA/EMP report etc & clarifications provided by the project proponent and after detailed deliberations on all technical aspects and public hearing issues and compliance thereto furnished by the Project Proponent, recommended the proposal for grant of Environment Clearance under the provision of EIA Notification, 2006 and as amended thereof subject to stipulation of Specific and Standard EC conditions as detailed in the point below. The details of the project along with the observation and recommendation of EAC as per approved minutes is given at Annexure (3).

6. The MoEF&CC has examined the proposal in accordance with the provisions contained in the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and based on the recommendations of the EAC hereby accords Environment Clearance for Expansion of Bailadila Iron Ore Deposit-14 NMZ for enhancement in production capacity of Iron Ore from 5.5 to 8.50 MTPA with 1.9 MTPA of waste excavation (total excavation from 6.3 to 10.4 MTPA) along with construction of one number of new Crushing Plant of 3,000 TPH & Downhill Conveyors in the ML area of 506.742 Ha by M/s NMDC located at Kirandul complex, South Bastar Dantewada District, Chhattisgarh under the provisions of EIA Notification, 2006 and as amended thereof subject to compliance of the Specific condition given at Annexure (1) and Standard EC conditions including mineral beneficiation condition for existing Screening Plant- I of 07 MTPA capacity and Screening Plant- II of 10 MTPA capacity is given at Annexure (2).

7. The Ministry reserves the right to stipulate additional conditions, if found necessary.

8. The Environmental Clearance to the aforementioned project is under provisions of EIA Notification, 2006. 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 PP is under obligation to implement commitments made in the Environment Management Plan, which forms part of this EC.

10. General Instructions:

    1. 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.

    2. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn must display the same for 30 days from the date of receipt.

    3. 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.

4. 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.

5. 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.

6. The Regional Office of this MoEF&CC shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

7. 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.

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

Copy To

i. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi-110 001.
ii. The Secretary, Department of Environment, Government of Chhattisgarh.
iii. The Secretary, Department of Mines and Geology, Government of Chhattisgarh, Chhattisgarh.
iv. The Chairman, Chhattisgarh Environment Conservation Board, Nanak Niwas, Civil Lines, Raipur, Chhattisgarh.
v. The DDG of Forests, Ministry of Environment, Forest and Climate Change, Regional Office, Aranya Bhawan, North Block, Sector-19, Naya Raipur, Atal Nagar, Chhattisgarh - 492002.
vi. The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
vii Director General, Directorate General of Mines Safety, Hirapur, Dhanbad, Jharkhand, 826001
viii. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
ix. The Member Secretary, Chhattisgarh Environment Conservation Board, Paryavas Bhavan, North Block Sector-19, Atal Nagar Dist- Raipur(C.G.)-492002.
x. The Member Secretary, Central Ground Water Authority, 18/11, Jam Nagar House, Man Singh Road, New Delhi-110011.
xi. The Chief Wildlife Warden, Govt. of Chattisgarh, Aranya Bhavan, Jail Road, Fafadih Chowk, Raipur - 492001.
xii. The District Collector, Dantewada District, Govt. of Chhattisgarh.
xiii. Guard File.
xiv. PARIVESH Portal.

Annexure 1

Specific EC Conditions for (Mining Of Minerals)

1. Specific Conditions

S. No	EC Conditions
1.1	The project proponent needs to completely remove the slime from the existing Kadampal tailing dam and ensure their utilization in the pellet manufacturing plant. The entire excercise should be completed by December 2027. PP should report the progress on half yearly basis to Ministry's Regional Office.

S. No	EC Conditions
1.2	PP should ensure that there is no spillage of slime on the roads and nearby areas during its removal. Transportation equipments used for slime transportation should be spill proof. Operators, Supervisors, contractor personal should be properly trained on environmental aspects of slime spillage and resultant air and water pollution. Record of above training of the personal, supervisor/officials should be submitted to Regional office of MoEF&CC.
1.3	PP should install the Downhill Conveyor belt system on or before the 36 months from the award of work. The award of work should be done within 6 months from the dated of issuance of EC to ensure timely completion of the installation of conveyor belt.
1.4	The Project Proponent needs to implement all possible mitigation measures while transporting the mineral by Road. Tarpaulins covered trucks should be used to prevent spillage and emission of dust.
1.5	The natural water bodies and or streams which are flowing in and around the mine lease area should not be disturbed. It should be ensured that no silt, slime from mine projects, tailing dam, flows into the nearby rivers/streams. PP shall get the water quality of nearby rivers/streams/Nallah especially near kadampal tailing dam monitored/analysed by Government institutes of National repute. This monitoring should be done periodically and the monitoring interval should not more than 3 months. The report should be shared with Ministry's Regional Office on half yearly basis.
1.6	The Project Proponent shall monitor the air quality, noise level, water quality, water level and ground vibration during drilling and blasting at the edge of the mine, near the village, and at other sensitive receptors and such collected data shall be submitted quarterly to the Ministry's Regional Office.
1.7	The Project Proponent should install Continuous Ambient Air Quality Monitoring Stations (CAAQMS - minimum three numbers) as per the scientific study and in consultation with CPCB/SPCB within 6 months of the issuance of this EC. 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.
1.8	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 minimise stress conditions for wild animals and to avoid Man-Animal conflict.
1.9	The Project Proponent shall take adequate measures to prevent the pilferage of mineral.
1.10	The Project Proponent needs to install the permanent water sprinklers in addition to mobile water tankers along the haul road and the approach road. Further, 6 nos. of fog/mist cannon sprayer of atleast 40 m throw shall be installed at various locations in the mine area and railway siding area. Effective dust suppression system shall also be adopted at other parts of the mining lease to arrest the fugitive dust emission.
1.11	The Project Proponent shall carryout the blasting in such a way that the direction of the blasting should be perpendicular to the village and guidelines of DGMS and provision of MMR 1961 should be followed.
1.12	The Project Proponent shall explore the possibility of using atleast 20% of Electric vehicles/CNG/Solar instead of diesel operation within three years.

S. No	EC Conditions
1.13	The air pollution control equipment's like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at areas prone to air pollution. PP shall take necessary measures to avoid generation of fugitive dust emissions
1.14	The Project Proponent should adopt the proper mitigation measures as proposed under EMP. The adoption of mitigation measures and monitoring of the same as proposed in the EMP shall be done under the supervision of the qualified environmental personnel. The implementation status of the same shall be submitted to the Ministry's Regional Office.
1.15	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 non-compliance or infringement should be reported to the concerned authority.
1.16	The Project Proponent shall conduct third party audit of compliance of EC condition at an interval one year and its report shall be submitted to RO Ranchi of MoEF&CC.
1.17	The Project Proponent shall ensure the survival rate of 95% for planting the gap plantation and new plantation (2500/ha). The Project Proponent shall make the actual count on the saplings planted 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 make provision for drip irrigation to conserve the water. PP should plant fruit bearing trees along with and allied species within the ML area.
1.18	To address the concerns raised by the public in the public hearing, PP should complete its public hearing commitments within 3 years. PP shall comply with all action plans made for public hearing concerns and make regular maintenance and record the progressive activity outcomes. The Project proponent shall ensure that the activities proposed under the public hearing is different from the CSR activities.
1.19	The Project Proponent needs to provide good quality drinking water supply and also by laying network of pipelines to the local people at free of cost.
1.20	The Project Proponent shall provide the rainwater harvesting structure at mine offices and quarters/colony to recharge the ground water.
1.21	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 outcome of the training, for the assessment of the training program should be analyzed periodically and improved accordingly.
1.22	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 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.

S. No	EC Conditions
1.23	The mobile water tankers should be used in the ML area for dust suppression and control. A logbook of water tankers should be maintained mentioning running hours, kilometer reading, maintenance hours of water tankers for each shift. PP may explore to use non-toxic chemicals for dust suppression in order to reduce the total water requirement.
1.24	The Project Proponent should take adequate measures to prevent the fly rock falling onto the nearby habitations and also the Project Proponent needs to set up a permanent monitoring in the nearby village to monitor the blast induced ground vibration and air over pressure.
1.25	The Project Proponent needs to reduce the dependency on the ground water, surface water (water from rivers, etc.) and it shall construct a 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.
1.26	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.
1.27	Approval/permission of the CGWA/SGWA shall be obtained before drawing ground water for the project activities, if applicable.
1.28	PP needs to comply the OM dated 24.07.2024 of MoEFCC, wherein it is stated that the plantation of saplings shall be carried out in the earmarked 33% greenbelt area as part of the tree plantation campaign " EK Ped Ma keNaam" (एकपेड़माँकेनाम) and the details of the same shall be uploaded inthe MeriLife portal(https://merilife.nic.in).
1.29	The Project Proponent should follow-up the status of implementation on Wildlife Conservation Plan from the Forest Officials and the same shall be submitted to the Ministry's Regional Office in the six monthly compliance report.

Annexure-2

STANDARD CONDITIONS (Mining of Minerals)

I. Statutory compliance

1) This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.

2) The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India &Ors before commencing the mining operations.

3) 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.

4) The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".

5) 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.

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.

7) The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional Office for compliance and record.

8) 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.

II. Air quality monitoring and preservation

9) 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.

10) Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/ Central Pollution Control Board.

III. Water quality monitoring and preservation

11) 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.

12) 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.

13) 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 Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

14) 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.

15) 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.

16) 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.

17) 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.

IV. Noise and vibration monitoring and prevention

18) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.

19) 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.

20) 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.

V. Mining plan

21) 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.).

22) 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.

VI. Land reclamation

23) 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.

24) 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.

25) 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.

26) 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.

VII. Transportation

27) No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers. [If applicable in case of road transport].

28) 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.

VIII. Green Belt

29) 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.

30) 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.

31) 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.

IX. Public hearing and human health issues

32) 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.

X. Corporate Environment Responsibility (CER)

33) 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.

XI. Miscellaneous

34) 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.

35) 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.

36) 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.

37) 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.

38) 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.

39) In pursuant to Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020 to comply with the direction made by Hon'ble 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.

40) The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

41) 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.

42) 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.

43) 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.

Standard EC Conditions for (Mineral beneficiation)

1 Statutory Compliance

1.1 The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

1.2 This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

1.3 The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forestland for non-forest purpose involved in the project.

1.4 The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

1.5 The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of Schedule-I species in the study area).

1.6 The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.

1.7 The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

1.8 The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

2 Air Quality Monitoring and Preservation

2.1 The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as 04/06 Nos. Continuous Ambient Air Quality Station (CAAQMS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories. (case to case basis small plants: Manual; Large plants: Continuous and their no's.)

2.2 The project proponent shall carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.

2.3 The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

2.4 Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.

2.5 Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

2.6 The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories. Monitor fugitive emissions in the plant premises.

2.7 The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.

2.8 Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

2.9 The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986. 9) The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to S02 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120'each). covering upwind and downwind directions.

2.10 Ensure covered transportation and conveying of raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash.

2.11 The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g., PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to S02 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120'each). covering upwind and downwind directions.

2.12 The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

2.13 Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

2.14 The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.

2.15 Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

2.16 The project proponent use leak proof trucks/dumpers carrying ore and other raw materials and cover them with tarpaulin.

2.17 The project proponent shall provide primary and secondary fume extraction system at all heat treatment furnaces.

2.18 Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

2.19 Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

2.20 Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.

2.21 Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

2.22 Pollution control system in the plant shall be provided as per the CREP Guidelines of CPCB.

2.23 The project proponent shall adopt the Clean Air practices like mechanical collectors, wet scrubbers, fabric filters (bag houses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation. Controlling emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels. Sufficient numbers of additional truck mounted Fog/Mist water cannons shall be procured and operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere.

2.24 Bag filters shall be cleaned regularly and efficiency of bag filter system shall be monitored at regular intervals.

2.25 Water Sprinklers/Water mist system shall be installed near raw material yards, operational units and other strategic locations to control fugitive emissions from the plant.

2.26 The particulate matter emissions from the process stacks shall be less than 30 mg/Nm3 and measures shall be undertaken as per the submitted action plan. Efficient Air monitoring equipment shall be installed.

2.27 Following additional arrangements to control fugitive dust shall be provided: a. Fog / Mist Sprinklers at all on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas. b. Proper covered vehicle shall be used while transport of materials. c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.

3 Water Quality Monitoring And Preservation

3.1 The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

3.2 The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

3.3 The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

3.4 The project proponent shall provide the slime disposal facility with impervious lining and collection wells for seepage. The water collected from the slime pond shall be treated and recycled.

3.5 Adhere to 'Zero Liquid Discharge'

3.6 Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

3.7 The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

3.8 Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

3.9 The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.

3.10 The project proponent shall practice rainwater harvesting to maximum possible extent.

3.11 Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

3.12 The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

3.13 Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

3.14 Tyre washing facilities shall be provided at the entrance of the plant gates.

3.15 Water meters shall be provided at the inlet to all unit processes in the steel plants.

3.16 The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

3.17 The proposed project shall be designed as Zero Liquid Discharge Plant. ETP shall be installed and there shall be no discharge of effluent from the plant. Domestic effluent shall be treated in Sewage Treatment Plant. Suitable measures shall be adopted for sewage water handling to ensure no contamination of any kind of water body.

3.18 All stockyards shall have impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains and catch pits to trap the run off material and shall be implemented as per the action plan submitted in EIA/EMP report.

3.19 Rain water harvesting shall be implemented to recharge/harvest water as per the action plan submitted in the EIA/EMP report.

4 Noise Monitoring And Prevention

4.1 Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

4.2 The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. dB(A) during day time and 70 dB(A) during night time.

4.3 Noise pollution shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and amendments thereof, and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

4.4 The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

5 Energy Conservation Measures

5.1 Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;

5.2 Provide LED lights in their offices and residential areas.

5.3 Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.

5.4 Restrict Gas flaring to < 1%.

5.5 Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;

5.6 Provide LED lights in their offices and residential areas.

6 Waste Management

6.1 The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.

6.2 Kitchen waste shall be composted or converted to biogas for further use.(to be decided on case to case basis depending on type and size of plant)

6.3 Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.

6.4 Kitchen waste shall be composted or converted to biogas for further use.

6.5 Used refractories shall be recycled as far as possible.

6.6 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufactures for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.

6.7 The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022. In this regard, CPCB has issued a direction to all the State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) on 30/06/2022 to ensure the compliance of Notification published by Ministry on 12/08/2021. The technical guidelines issued by the CPCB in this regard is available at https://cpcb.nic.in/technical- guidelines- 3/. All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the

compliance of Notification published by this Ministry on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report being submitted by the project proponents.

6.8 A proper action plan must be implemented to dispose of the electronic waste generated in the industry.

6.9 Solid waste utilization: a. PP shall install a slag crusher to convert steel slag into aggregate for use in construction industry, fine sand for use as flux in steel plant, sand in brick making and as lime in cement making. b. PP shall recycle/reuse solid waste generated in the plant as far as possible. c.Used refractories shall be recycled as far as possible.

7 Green Belt And EMP

7.1 Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant

7.2 The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

8 Water Quality Monitoring And Preservation In Case Of Beneficiation Plant

8.1 Tailing management plan shall be implemented as included in EIA report.

8.2 Tailings from Iron Ore beneficiation plant shall be dewatered in filter press and no slime /tailing pond shall be permitted.

9 Public Hearing And Human Health Issues

9.1 Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

9.2 The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

9.3 Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may

be in the form of temporary structures to be removed after the completion of the project.

9.4 Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

9.5 Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

9.6 The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.

9.7 Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP. Safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

9.8 Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

9.9 All the commitments made towards socio-econmic development of the nearby villages shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in accordance to the Ministry's OM dated 30.09.2020 shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF&CC. PP shall adopt nearby villages and prepare and implement a robust plan to develop them into model villages in next 10 years.

10 Corporate Environment Responsibility

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

10.2 The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest I wildlife norms / conditions and / or

shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

10.3 A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

10.4 Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

10.5 Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

10.6 All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Mineral Beneficiation plants shall be implemented.

11 Miscellaneous

11.1 The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

11.2 The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

11.3 The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

11.4 The project proponent shall monitor the criteria pollutants level namely; PM10, S02, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

11.5 The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

11.6 The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

11.7 The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

11.8 The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

11.9 The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

11.10 No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

11.11 The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/High Court and any other Court of Law relating to the subject matter.

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

11.13 The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

11.14 The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

11.15 The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

11.16 The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

11.17 Action plan for developing connecting and internal road in terms of MSA as per IRC guidelines shall be implemented

11.18 The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

11.19 The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

11.20 The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

11.21 The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

11.22 The recommendations of the approved Site-Specific Wildlife Management Plan (in case of involvement of Schedule-I species) shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.

11.23 The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.

11.24 No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

11.25 Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

11.26 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

11.27 The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

11.28 The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

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

12 Green Belt

12.1 The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration by trees.

12.2 Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.

12.3 Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.

13 Environment Management

13.1 The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.

13.2 The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or

shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

13.3 A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

13.4 Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Integrated Regional Office of the MoEF&CC.

Annexure-3

Details of the Project

The instant proposal for obtaining Environmental Clearance for expansion of Bailadila Iron Ore Deposit-14 NMZ for enhancement in production capacity of Iron Ore from 5.5 to 8.50 MTPA with 1.9 MTPA of waste excavation (total excavation from 6.3 to 10.4 MTPA) along with construction of one number of new Crushing Plant of 3,000 TPH & Downhill Conveyors in the ML area of 506.742 Ha by M/s NMDC located at Kirandul complex, South Bastar Dantewada District, Chhattisgarh.

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

i. The mine lease area is located between Latitude 18°36'44.0492" to 18°38'31.8650"N and Longitude 81°13'54.6335" to 81°15'24.1185"E.

ii. The mine lease area falls under the Survey of India Toposheet No. E44J2&J6 and falls in Seismic Zone II.

iii. The proposed project activity is listed at Schedule no. 1(a) Mining of Minerals and 2(b) Mineral beneficiation and falls under Category "A" as the mining lease area is greater than 250 ha, and therefore project is being considered at central level.

iv. The Project Proponent has obtained combined ToR for Deposit 14 & 14 NMZ vide letter no. J-11015/483/2007-IA. II (M) dated 22.03.2022.

v. ToR Details:

Date of Application	Proposal No/ File No	Consideration by EAC	Details of ToR	Date of accord
13.01.2022	IA/CG/MIN/251292/2022/J-11015/483/2007-IA.II(M)	Feb 17, 2022	Combined (Deposit 14 & 14 NMZ)TOR granted	22 Mar 2022

vi. Previous EC Details:

Date of application	Proposal No/ File No	Consideration by EAC	Details of EC	Date of accord
07/04/2021	Proposal No. IA/CG/MIN/204681/2021 File No: J-11015/483/2007-IA.II(M)	Jul 30, 2021 & Jun 10, 2021	MoEFCC File No. J-11015/483/2007-IA.II(M) dated 01/12/2021 (EC Amendment)	01/12/2021

--	Proposal No. IA/CG/MIN/19469/2007 , File No. J-11015/483/2007-IA.II (M)	--	MOEF&CC vide letter no. J-11015/483/2007-IA-II(M) dated 11/09/2007	11/09/2007

vii. Details of Mine Lease in chronological manner:

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	Government of Chhattisgarh	07.12.1965	Iron Ore	07.12.1965 to 06.12.1995 - 30 years	Govt. of Chhattisgarh	546.882 Ha
2	First Renewal of ML by Government of Chhattisgarh letter no. F 3 - 124/94/12/2	29-06-2002	Iron Ore	07.12.1995 to 06.12.2015 - 20 Years	Govt. of Chhattisgarh	506.742 Ha.
3	Extension by Government of Chhattisgarh, Mineral Resource Department, Nava Raipur, vide letter no. 4-41/2018/12	17/12/2019	Iron Ore	07.12.2015 to 06.12.2035- 20 years	Govt. of Chhattisgarh	506.742 Ha.

S. No	Details of grant of Mine Lease deed execution	Period of Grant		Name of the Mineral	Mine lease area in Ha
		From	To		
1	Mining Lease was executed on 10.01.2020	07.12.2015	06.12.2035	Iron Ore	506.742

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

Private land	0
Government land	0
Forest land	506.742 Ha
Total Mining lease area (MLA)	506.742 Ha
Private land for crusher, workshop & other infrastructure outside the MLA	-
Additional information (if any)	-

ix. Mining plan details:

Mining Plan including Progressive Mine Closure Plan (approved by Indian Bureau of Mines/DMG)	Letter No.	Dantewada/Fe/KHanij-1216/2019/Raipur/547
	Date	11/12/2019
	Mineral & (Major/Minor)	Iron Ore - Major Mineral
	Mine Lease Area, Ha	506.742
	Validity	01-04-2020 to 31-03-2025
Additional information (if any)	-	
Mining Parameters	Quantitative Description	
Method of Mining	Fully Mechanized Open Cast Method	
Drilling/Blasting	Primary drilling is being done by 250 mm dia. and 150 mm dia. blast hole drills. For mine development work, 100 mm dia. crawler-mounted drills are used. The holes are drilled in a rectangle or staggered pattern having S X B (spacing * burden), depending upon the different types of strata encountered for a bench height of 12 meters. Wet drilling is adopted to prevent dust generation at the source. Extra drilling, about 10–15% of bench height, is kept as sub-grade drilling. The above blast hole drilling pattern remains the same even during the proposed capacity expansion. Primary blasting is conducted using Site Mix Emulsion Explosives (SME) in conjunction with cast boosters and Nonel. Blast holes are drilled in a staggered or rectangular pattern for primary drilling	

Geological Resource	284.559 MT
Mineable Reserves	205.95 MT
Breakup of Total Excavation (Topsoil/OB/SB/IB/Mineral Rejects/ Waste, MTPA)	Mine expansion from the existing 5.5 MTPA to 8.50 MTPA ROM Iron Ore and 0.8 MTPA to 1.9 MTPA of waste excavation (total excavation from 6.3 to 10.4 MTPA) along-with construction of one number of new Crushing Plant of 3,000 TPH & Downhill Conveyors inside Mining Lease area.
Life of mine	25 years
Mine Bench Height & Bench Width	Mine Bench Height: 12 m in OB/Ore & Bench Width: 30-50 m (Operation phase) 15 m (Inactive Phase-Shale & Blue Dust) 12 m (Inactive Phase- Hard Formation)
No. of Mine Benches	11 benches
Existing Depth, m bgl	1006 mRL
Ultimate Depth of Mining, m bgl	910 MRL
Ground Water Table, m bgl	730 mRL
Details of ground water intersection	No
Individual bench slope	50 -70 degrees
Overall pit slope	<45 degree
Details of existing/ proposed Crusher	Existing Crushing plant of 2000 TPH Proposed New Crushing Plant of 3000 TPH
Mineral Beneficiation	Yes
RoM output size	-150mm
Transportation details including capacity of dumper/tipper, mode of transport and distance	The excavated material i.e. ROM iron ore is loaded on Dumpers of 85/100 Ton capacity for transportation from mine face to the Crushing Plant.
Generation of Topsoil/OB & its Management during plan period & conceptual period	Waste rock mainly consists of shale and BHQ. There is no top soil. The waste rock is also being mined along with ROM ore, which is dumped in an earmarked area
Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	Total waste= 5.082 MT and waste material is dumped in the waste dump located towards the south-western side of the Deposit-14 NMZ Mining Lease
Additional information (if any)	-

x. Water requirement

Total water requirement	Fresh water	17495
	Treated water	-
Source	Kirandul nala, Bacheli nala, and Malangir nala	

Permission for withdrawal/ intersection along with details of grant and its validity	The water permission has been obtained from Govt. of Chhattisgarh, Water resource department, Nava Raipur vide letter No. 810/29/13/2000/M/31/D4 dated 20.02.2023 for 6.735 million cum per annum (18,452 KLD)
Additional information (if any)	-

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

Particulars	Particular's Name	Distance & Directions
Village	Kirandul Perpa Pirnar Hiroli	– Adjacent – ENE - 3.44 km – ESE – 3.28 km – ESE – 3.77 km - SE
Town	Kirandul Township Bacheli township	– adjacent - 6.2 Km, N
Highway	SH-5 connecting Kirandul to Geedam	- 18.65 km - ENE
Interstate Boundary	Nil within 10 km radius	-
Railway Station/Railway line	Railway Station: Kirandul Railway line: Dantewada - Kirandul	- 0.61 km - E. 0.48 Km - NE
Water bodies	Koyar Nadi Malinger Nadi Madadi Nadi	– Passing NE to SW direction – 2.50 km – SSE – 2.73 km – E
Forest	Bailadila Reserved Forest	Total Mine lease area

xii. Presence of Environmentally Sensitive areas in the study area

Forest Land/Protected Area/Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant and remarks
Forest Land within the mine lease area and (if yes) status of Forest Clearance	Yes	Forest Clearance was obtained from MoEF & CC over 506.742 ha of lease area via Letter F. No. 8-40/97–FC dated 18-06-1999. Validity extension of FC co-terminus with ML period upto 06.12.2035.
National Park	No	-
Wildlife Sanctuary	No	-
Elephant/Tiger Reserve	No	-

Eco-Sensitive Zone (ESZ) /Eco-Sensitive Area (ESA)	No	-
Coastal Regulation Zone (CRZ)	No	-
Schedule-I species (No.s and name of schedule-I species with authenticated letter)	Yes	There are 22 Schedule-I fauna species reported as per Wild Life Protect Amendment Act, 2022. NMDC has obtained authentication of Flora and fauna studies as per Wildlife Protection Act, 1972 dated 02.07.2022. NMDC has further updated the list of schedule-I species as per Wildlife Protection Amendment Act, 2022 and revised report (22 numbers of schedule-1 species) has been submitted to Divisional Forest Officer, Dantewada dated 13/08/2024.
Wildlife Conservation Plan	Yes	Initial wildlife conservation plan (as per WLCP 1972) was approved for Rs.13.93 Cr on 4/2/2017. A separate wildlife conservation plan for entire Dantewada Forest Division was approved for Rs. 15.50 Cr on 7/12/2013. Revised Wildlife conservation plan as per WLPC 2022 was prepared and submitted for approval on 20/08/2024 for an amount of Rs.15.61 Cr. Thus, the total budget for implementation of WLCP works out to be Rs.45.04 Cr.

xiii. Green belt/plantation details:

Proposed area for green belt/plantation and no. of saplings proposed	Existing: 276 Ha with 5,04,733 sampling @1828 saplings per Ha. Proposed: 217.542 Ha totalling to 493.542 Ha during conceptually. Another 4,82,644 saplings will be planted.
Budget for green plant & plantation till the end of life of mine.	An amount of Rs.5047 Lakhs has been spent Additional amount of Rs. 10604.42 Lakhs is earmarked.

Budget for nursery	None
Details of existing plantation and its survival rate	• Existing Greenbelt: 276 Ha • Number of saplings:5,04,733 • Survival rate:80%
No. of tree cuts in the mine lease area and compensatory afforestation	0
Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m barrier & non-mineralized zone	During the life of the mine, NMDC will develop an area of 493.542 Ha under greenbelt
50 m safety zone of nallah, roads, electric lines	-
300 m safety zones of nearest habitation villages	-

xiv. Baseline details

Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/ others)	
Period of baseline data collection	01.03.2022 to 31.05.2022
Season (Summer / Pre-monsoon / Post-monsoon / Winter)	Summer Season 2022
Predominant Wind direction (From)	WSW-SW-SSW
Ambient Air Quality (no. of locations) and results	AAQ Parameters at 08Locations PM10 = 45.0 to 75.0 µg/m^3 PM2.5 = 14.0 to 38.0 µg/m^3 SO2 = 9.3 to 14.3 µg/m^3 NO2 = 10.3 to 15.8 µg/m^3 CO: less than 1 ppm
Noise level (no. of locations) and results	Noise Levels At 8 Locations ❖ <u>Industrial area</u> Leq day: 70.6 to 72.3 dB(A) Leq Night: 65.4 to 68.2 dB(A) ❖ <u>Residential area</u> Leq day: 49.6 to 53.2 dB(A) Leq Night: 41.3 to 43.5 dB(A) ❖ <u>Silence Zone</u>

	Leq day: 48.5 dB(A) Leq Night: 35.6 dB(A)
Water Quality (no. of locations) and results	Ground Water Quality At 07 Locations ❖ pH = 6.60-7.06 ❖ Total Hardness = 36 - 104 mg/l. ❖ Chlorides = 04 - 22 mg/l. ❖ Fluoride = <0.1 – 0.21 mg/l. ❖ Heavy Metals are within the Limits Surface Water Quality At 06 Locations pH: 6.72 – 7.90; DO: 5.3 – 5.6 mg/l BOD: <2 - 2 mg/l; Tap Water Quality At 01 Locations ❖ pH : 6.8 ❖ Total Hardness: 24 mg/l ❖ Chlorides : 08 mg/l ❖ Fluoride : < 0.1 mg/L ❖ Heavy Metals are within the Limits
Soil Quality (no. of locations) and results	Soil Quality 8 Locations Moderate fertility • pH Value of 1:2 aqueous extract Solution:6.37 – 6.71 • E.C, µS/cm of 1:2 aqueous extract Solution : 28 - 141 • Mineralized Nitrogen (Available Nitrogen), kg/ha : 157 - 391 • Available Phosphorous as P2O5, kg/Ha: 23 - 103 • Available Potassium as K2O, Kg/Ha : 16 - 243 • Organic Carbon, %: 0.31 – 0.83
Hydro geological study and results	The drainage system of rivers Berudi Nadi, Sankani, Malenger Nadi are tributaries of river Godavari, drains the study area. These forms intermittent elongated valleys in defined direction, indicating structural, lithological and topographical control. The drainage frequency and density is high and constant channel

	maintenance is low, inferring the zone is located in runoff zone. The drainage pattern is radial, parallel and sub dendritic indicating topographical and structural control. BIOM belt has been sub divided into three sub basins for hydrogeological investigation purpose. Out of these three sub basins, only Berudi Nadi, Sankani, Malengar Nadi sub basins catchment originates from hill slopes of BIOM range. The drainage pattern in the district is dendritic to sub-angular and the overall drainage density is high in the granitic terrain in comparison to protorozoic sedimentary formations, least drainage density is observed in the area covered with alluvium (along rivers Indravati and Sabri).
Traffic study (no. of locations) and results	Traffic Study was conducted on Road near Bacheli bus stand (SH-5 connecting Kirandul to Geedam). As per guidelines for capacity of roads in rural areas of IRC-106:1990, recommend design series volumes for Kirandul to Bacheli road is 18000 PCU/day (1500 PCU/Hr). The Level of Service which is at present in 'C' Category (Good) will retain the same for respective road after expansion

xv. Public Hearing (PH) Details

Advertisement for PH with date (name of major national daily and one regional vernacular daily newspaper)	Notice was issued in Newspapers on 14.02.2024 in "Times of India" (English) and "Hari Bhumi" (Hindi)
Date of PH	01.03.2024
Venue	BIOP Senior Secondary School, Kirandul
Chaired by	Sri. Rajesh Kumar Patra, Addl. District Magistrate, Dantewada Member Convener- Pramod Sekhar Pandya, CECB Dantewada.

Main issues raised during PH	Direct employment to locals, DMF Expenditure to surrounding villages, medical facilities and development works under CSR
Budget proposed for addressing issues raised during PH over 3 years	Action plan with CER budget including need-based activities of Rs. 670 lakhs is provided

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

Particulars	Details of Letter along with date of grant and validity
Consent to Establish	CTE No. 8697 /TS/CECB/2023 Nava Raipur Atal Nagar, dated: 16/03/2023
Consent to Operate	CTO vide No.4015/TS/CECB/2024 dated 08.08.2024 is valid up to December 31, 2025
Certified Compliance Report and Inspection date	Certified Compliance Report issued by Sub Office, MoEFCC, Nava Raipur vide letter no: 3-42/2007(Env)/132 dated 4/09/2024 Inspection date: 09/08/2024
Certified Production Details from the inception of the mine (in tabular form against the EC capacity)	The year-wise production details since 1994 are given. The production details duly authenticated by the District Mining Officer, Dantewada, dated 10.06.2021 & 13.08.2024 (Enclosed as Annexure 1)

xvii. Rehabilitation & Resettlement:

R & R details	Not Applicable

xviii. Court case details:

Court Case, No and its present Status	Compliance to Common Cause Judgement dated 2/8/2017 [In WP(CIVIL) NO: 114/2014) The District Collector, South Bastar Dantewada District vide letter nos: 1313 & 1454 dated 26/09/2019 and 15/11/2019 has issued show cause notice to Bailadila Deposit-14/11C, Kirandul for payment of Rs.407.87 Cr towards excess production done before grant of EC under EIA Notification 2006 on 11/09/2007 against the common cause judgement. The project vide letter no:

	KDL/CPLX/G&QC/Corr. State/DN/1 dated 20/11/2019 has deposited part payment of Rs.174 Cr under protest and this will not be construed as acceptance of demand made in the above notice. It has also been submitted that NMDC Limited also reserves its right to challenge the impugned demand notice no: 1454/Khanij/ML/2019-20 dated 15/11/2019 in the appropriate court or regulatory authority as deemed fit. In future, if outcome of such adjudication comes in favour of NMDC Limited, then amount deposited by NMDC as above will be liable to be adjusted towards future dues to the Government of Chhattisgarh from NMDC Limited. The project filled writ petition no: 612/2020 (Filling no: 1680/2020) in the High Court of Chhattisgarh, Bilaspur to allow the present writ petition by setting aside the impugned notice dated 15/11/2019 and any other relief as deem fit and proper by Hon'ble High Court in the facts and circumstance of the petition. The matter was listed on 19/2/2020 and Hon'ble court ordered the following: "Considering the fact that Petitioner has already deposited more than 600 Crore rupees (both for Kirandul and Bacheli projects) pursuant to the demand notice made, no coercive step further shall be taken against the petitioner till 12th March 2020. NMDC Ltd filed IA on Hon'ble High Court at Bilaspur, C.G. and prayed for the extension of interim relief/stay granted by the Hon'ble Court on 19.02.2024. The matter was heard by Hon'ble High Court at Bilaspur on 21/6/2024 and Hon'ble court ordered the following: "Submission made by the learned counsel for the petitioner with respect to the interim protection already granted earlier vide order dated 19.02.2020 is not opposed by State Counsel. Considering the submission made by learned counsel for the petitioner interim relief granted earlier is extended till the next date of hearing. List these cases in week commencing 29th July 2024." The matter was heard by Hon'ble High Court

	at Bilaspur on 30/7/2024 and Hon'ble court ordered the following: "Learned State Counsel as well as learned counsel for union of India seeks further two weeks time to file reply. In view of the above submissions made, list this case in the week commencing 17th of September 2024. The matter was heard by Hon'ble High Court at Bilaspur on 20/09/2024 and Hon'ble Court observed the following. "Shri Diwan praus time to file reply. As a last indulgence, 6 weeks time is granted to file reply. Post thereafter, interim order passed earlier in both the matters to continue till the next date of hearing. Next date of hearing is scheduled on 19/12/2024. It was mentioned in the TOR dated 22/3/2022 that as per the EC document and past production details, the committee mentioned that there is no violation w.r.t production permission granted vide EC dated 11/09/2007. (point no: 15, page no: 8 of 21).
Undertaking by Project Proponent w.r.t court case	PP has submitted the affidavit-bearing no. N 288817 dated 30.07.2024

xix. Affidavit/Undertaking details:

Affidavit as per Ministry's OM dated 30.05.2018	PP has submitted the affidavit bearing no. N 288817 dated 30.07.2024.
Undertaking by Project Proponent in EIA/EMP report	PP has submitted the undertaking certificate vide letter dated 12.09.2024.
Undertaking by Consultant in EIA/EMP report	Consultant has submitted the undertaking vide letter dated 21.09.2024.
Plagiarism Certificate	PP has submitted the certificate dated 21.09.2024.

xx. Project Proponent has submitted the following point-wise reply against the observation of EAC raise vide minutes of the 35th EAC meeting held during 28-29 October 2024:

S. No	Observation of EAC	Reply by Project Proponent
1	An action plan / SOP to ensure the complete removal of slime from the Kadampal tailing dam and its utilization in Pellet	The Screening plant has operated in dry mode since 2011 as per directives of CECB, Raipur. Hence, there is no fresh slime generation or discharge into Kadampal Tailing Dam. Total slime de-silted from 1994 to June 2024 was 70,09,200

	manufacturing following beneficiation.	$m^{3.}$ NMDC has also submitted a Bank Guarantee for ₹1.13 Cr to Chhattisgarh Environment Conservation Board, Raipur for complete removal of slimes from Kadampal Tailing Dam. Presently, two desilting work orders of 3.00 Lakh MT and 36.00 Lakh MT are under progress and expected to be completed by 19/2/2025 and 30/6/2025 respectively. Further, de-silting works of 4.00 Lakh MT and 33.29 Lakh MT are under tendering stage and will be awarded by January 25 and June 2025. The above de-silting works are expected to be completed by December 2025 and May 2029 respectively. The de-silted slimes are used for Pellet manufacturing. NMDC has also proposed gainful utilization of slimes for Pellet making by establishing Iron Ore Beneficiation Plant (IOBP), Slurry pipeline (SPL) from Bailadila to Nagarnar, Near Jagdalpur for transportation of beneficiated slimes and Pellet plant at Nagarnar. NMDC has obtained all statutory clearances and the civil / plant erection works of IOBP, SPL & Pellet Plant are under progress and expected to be completed by December 2025. The pellets produced at Nagarnar will be utilized in NMDC Steel Limited, which was recently commissioned.
2	A Detailed Report on the desilting of the Tailing dam and management of silt.	The de-silting of the Tailing dam has been awarded to civil contractors. The scope of work includes: • Excavation and removal of deposited slimes in dry/wet conditions. • Transportation to designated dumping yards (layered stacking). • Levelling, making necessary haulage roads and maintenance. • Dust suppression measures (e.g., water sprinkling) during hauling Management of Silt is further controlled by construction of check dams: • Upstream side of Tailing dam: 9 check dams. • Downstream side of Tailing dam: 5 check dams Environmental Compliance • Regular submission of reports to MOEFCC in parivesh 2.0. Reports include quantities of slime de-silted and check dam management.

3	Geotagged photographs of the existing garland drains, retaining walls, and siltation ponds within the ML area with a brief writeup mentioning total length of drains and retaining wall.	• Constructed garland drains within Mining Lease for collection and discharge of surface runoff during monsoon season to the lowermost benches. Temporary Garland Drains - Built around waste dumps. • Guiding rainwater to lowermost benches for settling and groundwater recharge. Drains are made every year before onset of monsoon • Siltation Ponds: Four number of siltation ponds were constructed at lower levels for settlement of surface run off water. • Retaining wall of 60 m length was constructed below the dump at Time Office towards stabilization measures • The area was stabilized with grass turfing and coir matting, water sprinkling arrangement was also made for watering the area during non-monsoon season. • NMDC has made an MOU with CG Forest Dept 01.02.2021 for implementation of ICFRE recommendations w.r.t engineering works for surface water management and waste dump management at a total cost of 16.15 crores for entire Kirandul complex. Out of 4 instalment payments, NMDC has released 1st and 2nd instalments on 5/2/2021 for Rs. 3.23 crores and on 8/9/2024 for Rs. 4.84 Cr respectively. Out of Rs.1615.222 Lakhs, the cost to be incurred against Deposit-14 NMZ is Rs.540.692 Lakhs. • The works executed includes construction of loose boulder check dams (18 no.s), stone masonry check dams (6 no.s) Gabion Check dams (2 no.s). The works to be undertaken are Gabion check dams (4 no.s), Gabion Toe wall (1 no.), Garland drain (2 no.s) and Toe walls (2 no.s). • Geo-tagged photographs are enclosed along with ADS reply-3.
4	A reply from the District Authority regarding tree felling activities in mineralized or non-	NMDC has obtained approvals from the Forest Department for tree felling activities, details are given below.

	mineralized areas, along with the current status of existing trees within ML area.	• felling of 12,458 trees over 13.476 Ha for construction of crushing plant at Deposit-14 NMZ ML area. For retaining of 9,882 trees without tree felling for waste dumping. For felling of 159 Nilgiri trees (planted during 1992-93 by Social Forestry Division. For felling of 901 trees over 8.30 Ha for plant in Dep-14 NMZ. • Number of trees planted since the year 1994-95 to 2023-2024 is 5,07,733 no.s over 277.135 Ha. The plantation is being carried out through the plantation division of Chhattisgarh Rajya Van Vikas Nigam Limited, CG Forest Dept in and around the mining leases. NMDC is undertaking gap plantation in the lease area for increasing the density of trees. • Supporting documents are enclosed as Annexure 4.1 to 4.6 along with ADS reply-4.
5	The status of grassing and plantations on the overburden (OB) dumps, with supporting geotagged photographs.	• Waste dump is in active stage with an average height of around 30 m. Toe wall being constructed at bottom of the dump. Stabilization measures: Broadcasting of grass seeds and bamboo plantation was done through Chhattisgarh Rajya Van Vikas Nigam Ltd. • Geotagged photographs are enclosed along with ADS Reply-5.
6	A comprehensive plan for the completion of the proposed downhill conveyor belt system, considering the tendering process and all associated engineering works.	• NMDC has prepared a Detailed Project Report (DPR) for the proposed capacity Expansion along with construction of one new Crushing Plant of 3,000 TPH & Downhill Conveyors inside Mining Lease. Capex of the project is Rs.799.83 crores. • The due diligence of DPR has been carried out by the appointed Consultant M/s. aXYKno Capital Services Pvt. Ltd. • The construction of a new crushing plant and downhill conveyor system will be executed on a total turnkey basis. • Letter of award of contract will be issued after obtaining Environmental clearance. • Project Schedule: 36 months from the award of work.

7	An action plan for establishing an in-situ laboratory within the ML area for regular water quality monitoring to enable timely mitigation measures	• NMDC has established a Chemical Laboratory in Kirandul Complex. The laboratory is having NABL accreditation i.e ISO/IEC 17025. • The laboratory is equipped with pH meter, HQd digital meter for dissolved oxygen, conductivity meter, turbidity meter, ICP for metals ions. • The laboratory is being utilized for analysis of some of the water quality parameters such as "Ph, Appearance, Suspended Solids, Dissolved Solids, Total Solids, Dissolved Oxygen, Chlorides, Total Hardness and heavy metal concentrations". • NABL certificate is enclosed as Annexure 7.1 and water quality test proforma is enclosed as Annexure 7.3 along with ADS reply-7.
8	The status of any tiger reserve or corridors within a 10 km radius of the ML area	• There are no National Parks / any tiger reserve / wildlife corridors exist within 10 KM radius of the ML area.
9	A plan detailing the mitigation measures to be implemented for road transportation	Major Iron Ore transportation is through Railway wagons except smaller quantities by road. The following mitigation measures are in practice for road transportation. • Iron Ore carrying trucks are covered with tarpaulins to prevent spillage and emission of dust • Limit the speed levels of trucks transporting iron ore less than 20 KMPH in Kirandul. • Regular sprinkle of water is done haulage roads from loading plant to Truck Owners Association office / outskirts of Kirandul town to reduce dust emission. • Dust suppression through wheel wetting is occasionally practiced to prevent the airborne dust. • The Kirandul is very well connected by State Highway upto Geedam and National Highway upto Raipur. • Photograph showing iron ore Trucks covered with Tarpaulin is enclosed along with ADS reply-9.
10	An action plan for setting up of additional fixed	Action plan for setting up of additional fixed water sprinkling system:

	sprinkling system and dust suppression measures within the ML area.	• 1 number of additional water sprinkler of 28 KL and 50 KL will be deployed. • To install a fixed-type water sprinkling system for areas undisturbed during mine development (Approx. 3.0 KM in Deposit-14 NMZ). New Crushing Plant • Sensor-Based Water Spray System: To install dry fog water sprays at the dumper platform for dust suppression during unloading. Downhill Conveyor System for Ore Transportation • Dust suppression systems at transfer points. • M.S. Sheet coverings to prevent airborne dust. • Speed control mechanisms to minimize fine ore spillage. Stockpile Management • Current Practice: Covering primary and secondary stockpiles with tarpaulin. • Proposed Improvement: Enclose stockpiles within space structures to contain dust emissions at the source The proposed dust suppression system (name of location & no.of nozzles) for new crushing plant and downhill conveyor system are given in Annexure-10.1.
11	An action plan for construction of rain water harvesting structure within the ML area	• Every year, an action plan / Monsoon Preparatory Plan is prepared before the onset of monsoon season. The surface run off from different mine benches is channelized so that it is collected at the lower most bench of the mine. The lowest bench of the mine is developed for collection of surface rain water which acts as Rain water harvesting. Peripheral bunds are constructed around the lowest benches to retain the rain water. • At present in Dep-14 NMZ ML, 1006 MRL is the lowest bench which is being used for rain water harvesting and for silt setting ponds. The capacity of this sump is 40,000 m^3. • Check dam number 2 & 3 were constructed within the Mining Lease area and run off is stored and allowed to settle suspended solids

		and turbid free water is discharged downstream over the spillway. • Photographs are enclosed along with ADS reply-11.
12	A closer report w.r. to partial complied / not complied conditions for the certified compliance report (CCR) dated 4.9.2024, as obtained from the Ministry's compliance and monitoring Division	• NMDC has submitted an Action Taken Report on 15/09/2024 for compliance of 6 observations as pointed out in the CCR dated 4/9/24. Compliance and Monitoring Division, MoEFCC vide letter dated on 5/12/2024 addressed to IRO, MOEFCC, Nagpur has sought the closure report from Sub Office, MoEFCC, Raipur. Status of compliance: • observation no: 1 & 2: Compliance is under progress and the same has also been raised as ADS and covered in reply to ADS-1 & 2. • Observation no: 3: Complied. Assessment of erosion potential and sedimentation plan has already been implemented by Forest Deptt by executing soil conservation works, check dams, buttress walls, retaining walls and some of the works as recommended by ICFRE are also being executed by Forest Deptt. • Observation no: 4: Compliance is under progress. One no. of CAAQM station is functioning since 2019. As per ToR conditions, action has already been initiated for procurement of 3 no.s of CAAQM stations for Deposit-14 NMZ ML area. Tender has been issued in the GEM portal. 9 firms participated in the bid. Technical and commercial evaluation is under progress. Will be awarded by February 2025. • Observation no: 5: Not Applicable • Observation no: 6: Complied. Public Liability Insurance Policy was obtained from Reliance General Insurance (3/9/24 to 2/9/25). • Supporting documents are enclosed as Annexure: 12.1 along with ADS reply-12.
13	A separate time-bound action plan for the public hearing specific to this	A separate time bound action plan has been prepared for the public hearing demands and following key infrastructure and community

	mine, including tangible, monitorable activities to be assessed annually by the Ministry's Regional Office.	development activities have been identified for execution: ✓ Construction of CC roads (80m, 500m, 700m). ✓ Digging of bore wells & installation of hand pumps. ✓ 3 culverts, 2 steel footbridges, retaining wall, RCC culverts. ✓ Community hall, shed at Anganwadi Centre, fencing (20 units). ✓ Construction of shopping complex ✓ Primary school building with kitchen and mess hall. ✓ Dome shed, boundary walls at middle school and Anganwadi Centre. ✓ Plantation at 2 Nagar Palikas & 7 Gram Panchayats. ✓ Mini tipper for garbage/waste transportation. ✓ Installation of solar high mast light at various places. • Detailed CER works identified at different villages are given along with ADS reply-13. • Total CER Budget proposed is Rs. 670 Lakhs. (Year 1: Rs. 307.5 Lakhs. Year 2: Rs. 242 Lakhs & Year 3: Rs. 120.5 Lakh).
14	A separate Environmental Management Plan (EMP) budget specific to this Mine.	• A Separate Environmental Management Plan has been prepared for Deposit-14 NMZ. The mine Specific budget includes various protective measures for waste dump management and to monitor various environmental attributes of air, water, noise, soil, ground water, free silica, fugitive dust, respirable dust, ground vibration, personal whole-body vibration etc. • The capital budget for EMP is Rs.16709.64 lakhs and recurring cost per year is Rs.1169.29 lakhs. • The EMP budget is given in Annexure-14.1 along with ADS reply-14.
15	PP needs to deploy electrically driven loading, hauling equipment and	• In the present scenario, the available electrical driven HEMM equipment in the Open Cast Mining are Excavators and Drills and all other

	come out with plan to reduce diesel consumption.	equipment such as Dumpers, Motor Graders, Dozers, water sprinkler, etc are diesel driven. • NMDC has already switched over to electrically driven HEMM in respect of Shovels (3 no.s) and Drills (3 no.s). • Presently the haulage of iron ore transportation from Mining face to Primary crushing is by way of Dumpers. • However, the haulage / transportation of iron ore from Primary crushing plant to loading plant is through a closed conveyors system only. The following measures are taken to reduce diesel consumption • Reduction of unwanted idling of dumpers and all other HEMM and LMV. • Smoothening of ramp / haul road gradient and reducing haul distance. • Regular & periodic maintenance of all equipment. • For Engine power having 600 ≤ hp < 750, EPA Tier 3 nonroad diesel engine emission standards are being followed. For more than 750 hp, Tier 2 emission norms are followed. • BS VI or latest emission standard utility vehicles are being used. • To explore use of diesel additives such as THERMOL-D which improves combustion efficiency of diesel engines and reduces specific diesel consumption is being explored.
16	PP needs to install renewable energy system and reduce dependency on grid.	Implementation of Renewable Energy Solutions: • Roof-top Solar Panels: Installed to harness renewable solar energy at different locations (capacity 482 KWp). • Street Lighting Powered by Solar Energy: 9 KWp capacity powering 25 solar street lights with 25 W LED lights at Kirandul township. Solar Blinkers: • 24 units installed across mining areas (20 W rating). Energy Regeneration from Downhill Conveyor • FY 2023-24: ✓ Deposit-14NMZ D/H: 14,38,123 KWh • FY 2024-25 (till Oct):

		✓ Deposit-14NMZ D/H: 5,91,428 KWh Geotagged photographs showing solar panels, power blinkers etc are enclosed along with ADS reply-16.

xxi. Details of the Environmental Management Plan (EMP) and Environmental Management Plan (EMP) cost:

Sl. No	Particulars	Capital Cost	Recurring cost/annum
		Rs. Lakhs	Rs. Lakhs
1.0	AIR ENVIRONMENT		
	Additional 1 Nos of 28 KL Water sprinklers	148	15
	Additional 1 No of 50 KL Water sprinklers	55	5
	Dry fog system (mist canon)	18.835	2
	DSS for new crushing plants and downhill conveyors	150	30
	Sub Total	371.84	52
2.0	NOISE ENVIRONMENT		
	Enclosure for new crushing plants and downhill conveyors (Structural work+ Sheeting)	3365	5
	Personal Protection Equipment for Workers	45.5	0
	Sub Total	3410.5	5
3.0	WATER ENVIRONMENT		
	Construction of New Check Dams including repair and maintenance and desilting of all Check Dams	71.58	25
	De silting of Kadampal Tailing Dam. (Work is under progress and it will be completed by 2025-26)	0	672.5
	STP for township (Dep -14 NMZ) (commissioned).	706.05	70
	Sub Total	777.63	767.5
4.0	WASTE DUMP MANAGEMENT		
	Toe Walls	149.6	15
	Garland Drains	3.5	0.5
	Geotextile matting	390	75
	Sub Total	543.10	90.50
5.0	AFFORESTATION PLAN		
	Gap Plantation (5 Years) on need basis	44	2
	Afforestation on mined-out area & Reclamation (At conceptual stage)	10604.42	106.04
	Earlier Approved Wild Life Conservation Plan at cost of Rs.2943 Lakhs. Additional allocation for	780.65	-

	Wild life conservation plan as per WLP Amendment Act 2022.		
	Sub Total	11429.07	108.04
6.0	OCCUPATIONAL HEALTH	-	100
7.0	ENVIRONMENTAL MONITORING		
	Additional CAAQ (4 nos) @ Rs 80 Lakhs Each	160	18
	Post project monitoring studies	17.5	13.5
	Monitoring as per DGMS norms	0	6.25
	Aerial image – Remote Sensing/Drone Survey	0	1
	Land use / Land cover studies (Once in 3 years)	0	2.5
	Sub Total	177.5	41.25
Grand Total		16709.64	1164.29

xxii. Details of project cost and employment:

Particulars	(Rs. In Lakhs)
Total cost of EMP (Capital Cost of EMP + capital cost of Public hearing)	Capital Cost of EMP: Rs. 16709.64 Lakhs, Capital cost of public hearing Commitments: Rs.670 Lakhs
Project Cost	Rs. 79983 Lakhs
Employment (No.s)	493 persons

3. Observation and Recommendation of the Committee:

The EAC deliberated the Environmental Clearance proposal for Expansion of Bailadila Iron Ore Deposit-14 NMZ for enhancement in production capacity of Iron Ore from 5.5 to 8.50 MTPA with 1.9 MTPA of waste excavation (total excavation from 6.3 to 10.4 MTPA) along with construction of one number of new Crushing Plant of 3,000 TPH & Downhill Conveyors in the ML area of 506.742 Ha by M/s NMDC located at Kirandul complex, South Bastar Dantewada District, Chhattisgarh. The instant proposal was appraised along with expansion proposal of Bailadila Iron Ore Deposit-14 since both mines are adjacent to each other and are operated by M/s NMDC Ltd.

The Project Proponent and the Consultant presented the KML and explained the key site features of the ML area and the Study area. PP stated that there are no National Park/Wildlife Sanctuary/ Biosphere Reserve/ESZ within Study area. PP stated that Kirandul railway station is located at a distance of 0.61 km in E direction from the ML area, and Kadampal tailing dam is located adjacent to the ML area. Additionally, the Koyar River flows in a northeast to southwest direction, while the Malanger River is located 2.5 km to the South South East, and the Madadi River lies 2.73 km to the East. PP also presented the proposed installation of the 3,000 TPH crusher within the ML area, along with the Downhill Conveyor system.

The Project Proponent stated that the entire Mining Lease (ML) area comprises forest land, for which Forest Clearance (FC) Stage-II was granted via letter dated

18.06.1999. The validity of the FC Stage-II clearance, aligned with the ML period, and extends until 06.12.2035.

EAC noted the submission of PP and therafter deliberated the ADS points raised vide minutes of the 35th EAC NCM meeting held during 28-29 October 2024. With regard to removal of slime from the Kadampal tailing dam, PP submitted an action plan and also mentioned that during 1994-2024 around 70,09,200m3 of slime has been desilted. PP also submitted that screening plant at Kirandul are operational in dry mode since November 2010 and no fresh slme has either been generated or discharged into Kadampal Tailing Dam since November 2010. PP submitted that as of now only 23 Lakh m3 of slime only is available in the Kadampal Tailing dam and PP has already issued work orders for removal of balance quantity of slime from Kadampal Tailing dam. PP also committed that balance quantity of slime shall be removed by May 2029. PP also submitted a detailed report on the desilting of the tailing dam and management of silt. EAC noted the submission of PP and advised it to expedite the process and complete it by December 2027.

As requested by the EAC, PP provided the geotagged photograph of the existing garland drains, retaining walls, and siltation ponds within the ML area and stated that the existing length of the retaining wall is 60 m. PP also submitted the status of grassing and plantations on the overburen dumps, it also submitted the details of plantation as well as felling of trees. PP submitted that it has planted more than 5 lakh trees in 277.135 ha area.

Regarding the proposed downhill conveyor belt system, PP submitted that they have prepared a Detailed Project Report (DPR) for the proposed capacity Expansion of Deposit-14 NMZ from the existing 5.5 MTPA to 8.50 MTPA ROM Iron Ore and 0.8 MTPA to 1.9 MTPA waste excavation (total excavation from 6.3 to 10.4 MTPA) along with construction of one number of new Crushing Plant of 3,000 TPH & Downhill Conveyors inside Mining Lease. The construction of new crushing plant and down hill conveyor system will be executed on total turnkey basis and it will be complete within 36 months from the award of work.

PP further mentioned that a NABL accredited lab has already been established at Kirandul Iron Ore project for sample analysis. The lab is equipped with water testing equipment and utilised for analysis of some of the water quality parameters such as “pH, Appearance, Suspended Solids, Dissolved Solids, Total Solids, Dissolved Oxygen, Chlorides, Total Hardness”. Heavy metals can also be analysed by using ICP.

EAC noted the submission of PP and enquired about mitigation measures which are to be implemented during road transportation. PP submitted that major iron ore transportation is through Railway wagon except smaller quantity by road. Iron Ore carrying trucks are covered with tarpaulins to prevent spillage and emission of dust. The speed limit of the trucks transporting iron ore is less than 20 KMPH in Kirandul. Water is regularly sprinkled on haulage roads from loading plant to Truck Owners Association office / outskirt of Kirandul town to reduce dust emission. Dust suppression

through wheel wetting is occasionally practiced to prevent the airborne dust. PP also submitted that they will install fixed type water sprinkling system in the identified areas which will remain undisturbed for a longer duration with mine development activities as an additional measure for dust suppression. Additionally, sensor based water spray system will be made at the dumper platform for water spraying (dry Fog) during unloading of ROM ore by dumpers into primary crusher/apron feeder. Beside above PP also submitted a detailed action plan for dust suppression.

Based on the aforesaid discussion, the EAC **recommended** the proposal for Environmental Clearance in the 38th EAC (Non-Coal Mining) meeting held on 27th December, 2024 for expansion of Bailadila Iron Ore Deposit 14 NMZ for enhancement in production capacity of Iron Ore from 5.5 to 8.50 MTPA with 1.9 MTPA of waste excavation (total excavation from 6.3 to 10.4 MTPA) along with construction of one number of new Crushing Plant of 3,000 TPH & Downhill Conveyors in the ML area of 506.742Ha by M/s NMDC Ltd located at Kirandul complex, South Bastar Dantewada District, Chhattisgarh subject to certain specific conditions in addition to the existing standard condition applicable for non-coal mining projects.

Signature Not Verified

Digitally Signed by : Rajeev Ranjan
Member Secretary, MoEFCC (EC)

Date: 17/02/2025