

Ref. No: AMNS/ Sagasahi/1645/2023-24

Dated 28.11.2023

The Director (S),
Integrated Regional Office (IRO),
Ministry of Environment, Forest & Climate Change,
A-31, Chandrasekharpur, Bhubaneswar

Sub: Half-yearly Environmental Clearance Compliance Report of Ghoraburhani - Sagasahi Iron Ore Mining Project of ArcelorMittal Nippon Steel India Limited for production of 7,162,538 TPA iron ore (ROM), 18750 TPA Topsoil and 2,868,896 TPA 08/SB/IB (Total excavation: 1,00,50,184 TPA) along with Crushing & Screening Plant and Beneficiation Plant with capacity of 6.7 Million TPA (1250 TPH) Capacity over ML area of 139.165 Ha. for the period **April 2023 to September 2023.**

Ref: MoEF&CC Environment Clearance letter No. J-11015/192/2016-IA.II (M) dated 28.05.2020.

Dear Sir,

This is in reference to the above subject, we would like to be inform you that, the mines has started its operation from 9th September 2021. In this regard we are submitting the six monthly Environmental Clearance compliance report in soft copy by email - roez.bsr-mef@nic.in and the same will be uploaded in our company website i.e. www.amns.in with comprehensive data analysis reports (supporting photographs and monitoring reports) for the period **April 2023 to September 2023** in respect of Ghoraburhani - Sagasahi Iron Ore Mining Project of ArcelorMittal Nippon Steel India Limited.

This is for your kind information, please.

Thanking you,

Yours truly,

For and on behalf of **ArcelorMittal Nippon Steel India Limited**

Authorized Signatory

L.D Babu

Mines Manager

Ghoraburhani-Sagasahi Iron Ore Mines

Encl.: As above

Copy to:

1. The Regional Director, Central Pollution Control Board, Kasba New Market, Sector E, East Kolkata Twp, East Kolkata, West Bengal – 700107
2. The Chairman, State Pollution Control Board, Orissa, A/118, Nilakantha Nagar, Unit – VIII, Bhubaneswar – 751012, Email - paribesh1@ospcboard.org
3. The Regional Officer, SPCB, Collage Road, Baniapata, Keonjhar- 758001 (Odisha)

Half Yearly Compliance Report of the Conditions as per Environment Clearance granted vide letter No.J-11015/192/2016-IA.II(M), Dated 28th May 2020 in respect of Ghoraburhani - Sagasahi Iron Ore Mining Project for production of 7,162,538 TPA iron ore (ROM), 18,750 TPA Topsoil and 2,868,896 TPA OB/SB/IB (Total excavation: 1,00,50,184 TPA) along with Crushing & Screening Plant and Beneficiation Plant with capacity of 6.7 Million TPA (1250 TPH) Capacity over ML area of 139.165 Ha. of ArcelorMittal Nippon Steel India Limited located at village- Ghoraburhani, Sagasahi and Kalmang, Tehsil- Koira, Dist- Sundargarh, Odisha.

Project status:

SL No.	Plant Details	Implementation Status
1	Iron Ore Production of 7,162,538 TPA iron ore (ROM), 18,750 TPA Topsoil and 2868896 TPA OB/SB/IB (total excavation: 1,00,50,184 TPA)	In Operation
2	Crushing & Screening Plant	In Operation
3	Beneficiation Plant with capacity 6.7 MTPA (1250 TPA)	Now under construction

Period: April 2023 to September 2023

SL No.	Conditions	Compliance Status
1	This EC for production of 7,162,538 TPA iron ore (ROM), 18750 TPA Top soil and 2,868,896 TPA OB/SB/IB (Total excavation: 1, 00,50,184 TPA) along with Crushing & Screening Plant and Beneficiation Plant with capacity of 6.7Million TPA (1250TPH) Capacity in the mine lease area of 139.165 ha shall be operational after submission of an undertaking through affidavit to MoEF &CC within 15 days of receipt of the EC letter, for compliance of all the conditions prescribed herein.	The Project Proponent has submitted an undertaking through affidavit to MoEF & CC for compliance of all the conditions stipulated in the environment clearance letter.
2	Till the construction of beneficiation plant in the mine lease area, the transportation of ore from mine to Dabuna Beneficiation plant by road is allowed only for 3 years. No more road transportation is allowed after 3 years without permission of the Ministry. From 4th year onwards, the ore should be transported only through proposed slurry pipeline or as per the guidelines of CSIR-NEER's recommendation. PP shall inform Ministry for any deviation in the proposed mode of transport of minerals in case the timeline is not complied with.	Mining activities of Ghoraburhani-Sagasahi Iron Ore Mines of M/s. ArcelorMittal Nippon Steel India Limited commenced from 9 th September 2021 copy of letter of mine opening intimated to DMS & IBM. Therefore, the permitted 3 years for road transportation shall end on 8 th September 2024. The beneficiation plant is under construction since August 2022 and the same shall commence by July 2024. Simultaneously design and ROW for pipeline from Sagasahi Mines to Dubuna Plant has started. Due to cross country issue, statutory permissions have taken time & stage-II Forest Clearance for slurry pipeline is expected by September 2023. There may be delay in getting statutory permission and various ROW issue found during execution process. We will inform Ministry for any deviation in the proposed mode of transport of minerals in case the timeline is not complied with.
3	Accessing the forest land for activities shall be applicable after getting Stage-II	The project has obtained Stage –II of Forest Clearance vides letter No 8-55/2018/FC dt. 15.12.2020 over

	FC approval. No mining activity shall be carried out without obtaining Stage-II of Forest Clearance for the forest land involved in the project.	120.838 Ha of forest land involved in the project towards mining activity.
4.	Installation of crusher and screening plant with proposed capacity only will be allowed. No further installation of crusher and screening plants are allowed without permission of the Ministry.	The Project Proponent is abiding by the said condition and air pollution control device like dry fog system is installed for dust suppression purpose. No further installation of crusher and screening plants shall be installed without the permission of the Ministry.
5	PP shall construct the tailing pond as committed and make regular maintenance for the same.	Project proponent will construct the tailing pond as committed during the 4th year of mining operation (in 2024) and construction of beneficiation plant as proposed. The applicable regular maintenance for the same will be followed as per the prescribed guidelines of consent to operate.
6	PP shall make the rainwater harvesting system as committed before the EAC.	Project proponent has constructed one no. of rainwater harvesting pond of capacity 3500 cubic meter. within the Mining Lease area. Roof top rainwater harvesting is under process at office area.
7.	PP shall construct garland drains with protective bunds around excavated area, to avoid entrance of surface run off into pit and mixing with ground water. Furthermore, PP shall make garland drains/storm water drains along with siltation/settling tanks at regular interval around the active mine pits through proper plan which follow the natural slope of surface run off and/or to avoid its mixing with groundwater.	There is no such ground water accumulation in the mine operational area. The project has developed 1400 meters of garland drains at appropriate locations to channelize the storm water and to reduce the generation of surface run-off. The garland drains are connected to series of check dams, settling ponds to effectively settle the sediments.
8	PP shall make check dams to prevent sedimentation/siltation of natural water courses.	The project has constructed check dams & check weirs in different locations to prevent the sedimentation or siltation of natural water course. The PP has planned to construct number of check dams in south pit area as per approved mining plan.
9	PP shall make progressive green belt and plantation like bench plantation and also make plantation mineral storage, topsoil stack, road, magazine and other places as committed.	Project Proponent has planted 14,555 nos. of saplings. And 1,600 nos. of trees have been transplanted in existing safety zone area. During the period April to September 2023, 3585 nos. of sapling have been planted in safety zone areas towards the development of progressive green belt.
10	PP shall comply all action plans made for public hearing concerns and make regular maintenance and record the progressive activity outcomes.	We are compiling with all the action plans made for public hearing concerns followed by its regular maintenance along with the record of progressive activity outcomes.
11	The EC is subject to outcome of W .P.(C) No. 9247/2018 before Hon'ble High Court of Odisha.	We are abiding by the verdict of W.P.(C) No. 9247/2018 before Hon'ble High Court of Odisha.

B. Recommendation of CSIR-NEERI Report on “Carrying Capacity Study for Environmentally Sustainable Iron and Manganese ore Mining Activity in Keonjhar, Sundargarh and Mayurbhanj districts of Odisha State: The committee has also deliberate the various specific recommendations of carrying capacity study report conducted by CSIR-NEERI w.r.t. mining proposal of iron ore and/or manganese in the state of Odisha. There are recommendation which needs to be implemented by the State Govt. of the carrying capacity study report, the Committee has also recommended the following specific conditions viz.

SL No.	Conditions	Compliance Status
1)	Project Proponent and Department of Steel & Mines, Govt. of Odisha shall ensure the implementation of recommendations of carrying capacity study report conducted by CSIR-NEERI w.r.t. mining proposal of Iron Ore and/or manganese in the State of Odisha.	We are implementing the recommendations of carrying capacity study report conducted by CSIR-NEERI.
2)	Department of Steel & Mines, Govt. of Odisha should prepare 5 years regional plan for annual iron ore requirement from the state, which in turn shall be met from different mines/zones (e.g. Joda, Koira.) in the state. Accordingly, sustainable annual production (SAP) for each zone/mine may be followed adopting necessary environmental protection measures.	Department of Steel & Mines, Govt. of Odisha will do the needful.
3)	Project Proponent shall construct the cement concrete road from mine entrance and exit to the main road with proper drainage system and green belt development along the roads and also construction of road with minimum 300 m inside the mine. This should be done within one year for existing mines and new mine should have since beginning. The Department of Steel & Mines, Govt. of Odisha should ensure the compliance and should not issue the Mining Permits, if mine lease holder has not constructed proper cement concrete road as suggested. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.	A cement concrete road is running through the Mining Lease which has divided Mining into Pit 1 and Pit 2 This road connects to both Pit 1 and Pit 2 through a 9 m wide cement concrete Road, which serves as two-way movement of vehicle. The approx. length of this connecting pucca road is 300 m inside the mines. Besides drainage channel will be made on either side of concrete road and green belt plantation will be developed and maintained.
4)	The Committee observed that as per there commendations of NEERI report the PP needs to do regular vacuum cleaning of all mineral carrying roads aiming at "zero dust re-suspension" within 3 months. This Environmental Clearance for the expansion projects shall be operated only after the compliance of the above-mentioned specific condition.	Vacuum cleaners are planned for cleaning of all mineral carrying roads inside Mining Lease area including road passing centrally through the mining lease area and also for the proposed cement concrete road. And the target date of deployment of vacuum cleaner is 31 st December 2023. Estimated budget has been earmarked for procurement of Vacuum cleaner for the mine as well as their Opex for first 5 years.
5)	Project Proponent shall monitor the environmental quality parameters as per EC and CTE/CTO conditions, and implementation of suggested measures for control of road dust	The environmental quality parameters are being monitored as per the EC and CTE/CTO conditions. We have taken required measures for control of road dust and air pollution by engaging number of

	and air pollution. Odisha State Pollution Control Board has to ensure the compliance of CTE / CTO. Regional office of the MoEF & CC, Bhubaneswar shall monitor the compliance of the EC conditions. Regional office of the Indian Bureau of Mines (IBM) shall monitor the compliance of mining plan and progressive mine closure plan. Any violation by mine lease holder may invite actions per the provisions of applicable Acts.	water tankers for sprinkling purposes. Additionally, a wheel washing system is constructed at the exit gate for controlling generation of fugitive dust.
6)	Project Proponent shall ensure the compliance of Suggested Ore Transport Mode (SOTM) with association of the State Government of Odisha. All existing mines should ensure adoption of SOTM within next 5 years. New mines or mines seeking expansion should incorporate provision of SOTM in the beginning itself, and should have system in place within next 5 years.	Project proponent shall follow the suggested Ore Transport Mode (SOTM) in association with Government of Odisha within the stipulated time frame.
7)	The State Govt. of Odisha shall ensure dust free roads in mining areas wherever the road transportation of mineral is involved. The road shoulders shall be paved with fence besides compliance with IRC guidelines. All the roads should have proper drainage system and apart from paving of entire carriage width the remaining right of way should have native plantation (dust capturing species). Further regular maintenance should also be ensured by the Govt. of Odisha. Progress on development of dust free roads, implementation of SOTM, increased use of existing rail network ,development of additional railway network/conveyor belt/ pipe lines etc. shall be submitted periodically to Regional office of the MoEF &CC.	Department of Steel & Mines, Govt. of Odisha will do the needful. In addition, the project is carrying out regular water sprinkling on ore transporting road. Potholes are repaired on regular basis.
8)	Project Proponent shall develop the parking plazas for trucks with proper basic amenities/ facilities inside the mine. This should be done within one year for existing mines and new mines should have since beginning. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.	We have developed a Parking Plaza adjacent to mine access road of the mining lease area. Basic amenities like drinking water facilities, rest shelter & Toilet facilities have been planned & will be constructed by 30 th March 2024.
9)	Department of Steel & Mines shall ensure the construction of NH 215 as minimum 4 lane road with proper drainage system and plantation and subsequent regular maintenance of the road as per IRC guidelines. Construction of other mineral carrying roads with proper width and drainage system along with road side plantation to be carried out. This shall be completed within 2 Years.	The road widening work along with 4 lane road is now complete.

10)	Regular vacuum cleaning of all mineral carrying roads aiming at "Zero Dust Re-suspension" shall be adopted by PWD/NHAI/ Mine Lease Holders within a time Period of 3 months for existing roads. This Environmental Clearance for the expansion project shall be operated only after the compliance of the above mentioned specific condition.	Vacuum cleaners are planned for cleaning of all mineral carrying roads inside ML area including road passing centrally through the mining Lease and also for the proposed cement concrete road. And the target date of deployment of vacuum cleaner is 31 st December 2023. An estimated budget has been ear marked for procurement of Vacuum cleaner for the mine as well as its operation cost for first 5 years.
11)	In case the total requirement of iron ore exceeds the suggested limit for that year, permission for annual production by an individual mine may be decided depending on approved EC capacity (for total actual dispatch)and actual production rate of individual mine during last year or any other criteria set by the State Govt., i.e. Dept. of Steel & Mines. Department of Steel and Mines in consultation with Indian Bureau of Mines-RO should prepare in advance mine-wise annual production scenario so that demand for iron ore can be anticipated, and actual production/dispatch does not exceed the suggested annual production.	Department of Steel & Mines, Govt. of Odisha will do the needful.
12)	R&D studies towards utilization of low-grade iron ore should be conducted through research/academic institutes like IMMT, Bhubaneswar, NML, Jamshedpur, and concerned metallurgical departments in IITs, NITs etc., targeting full utilization of low-grade iron ore(Fe content up to 45% by 2020 and up to 40% by 2025). In fact, lifecycle assessment of whole process including environmental considerations should be done for techno-economic and environment viability. R&D studies on utilization of mine waste water having high concentration of Fe content for different commercial applications in industries such as cosmetics, pharmaceutical, paint industry should also be explored. Responsibility: IBM, Dept. of Steel & Mines, Individual Mine Lease Holders.	A Preliminary bench scale study has already been done through IMMT using the available Core Samples. Based on that, the Iron ore beneficiation plant is proposed which will come into operation from 4th year from the date of mines opening.
13)	The mining activity in Joda-Koira sector is expected to continue for another 100 years, therefore, it will be desirable to develop proper rail network in the region. Rail transport shall not only be pollution free mode but also will be much economical option for iron ore transport. The rail network and/or conveyor belt system up to public railway siding needs to be created. The total length of the conveyor belt system/ rail network to be developed from mines to nearest railway sidings by 11 mines in Jada region is estimated to be about 64 km. Similarly, in Koira region, total length of rail network/ conveyor	Department of Steel & Mines, Govt. of Odisha will do the necessary arrangement for Railway network.

	<p>system for 8 mines (under SOTM 1 &2) is estimated to be around 95 km. Further, it is suggested to develop a rail network connecting Banspani (Joda region) and Roxy railway sidings in Koira region. Responsibility: Dept. of Steel & Mines, Govt. of Odisha and Concerned Mines along with Indian Railways. Time Period: Maximum 7 years (by 2025). The Department of Steel & Mines, Govt. of Odisha should follow-up with the concerned Departments and railways so that proposed proper rail network is in place by 2025.</p>	
14)	<p>State Govt. of Odisha shall make all efforts to ensure exhausting all the iron & manganese ore resources in the existing working mines and from disturbed mining leases/zones in Joda and Koira region. The criteria suggested shall be applicable while suggesting appropriate lease area and sustainable mining rate. Responsibility: Dept. of Steel & Mines, Govt. of Odisha.</p>	<p>Department of Steel & Mines, Govt. of Odisha will do the needful.</p>
15)	<p>Mining Operations/Process Related: Project Proponent shall implement the following mitigation measures: (i) Appropriate mining process and machinery (viz. right capacity, fuel efficient) should be selected to carry out various mining operations that generate minimal dust/air pollution, noise, wastewater and solid waste. e.g. drills should either be operated with dust extractors or equipped with water injection system. (ii) After commencement of mining operation, a study should be conducted to assess and quantify emission load generation (in terms of air pollution, noise, waste water and solid waste) from each of the mining activity (including transportation) on annual basis. Efforts should be made to further eliminate/minimize generation of air pollution/dust, noise, wastewater, solid waste generation in successive years through use of better technology. This shall be ensured by the respective mine lease holders. (iii) Various machineries/equipment selected (viz. dumpers, excavators, crushers, screen plants etc.) and transport means should have optimum fuel/power consumption, and their fuel/power consumption should be recorded on monthly basis. Further, inspection and maintenance of all the machineries/ equipment/ transport vehicles should be followed as per manufacturer's instructions/ recommended time schedule and record should be maintained by the respective mine lease holders. (iv) Digital processing of the entire lease area using remote sensing technique</p>	<p>i) Appropriate Mining Process and machineries have been deployed adhering to approved mining plan. The drilling machine deployed is equipped with water injector system to minimize the generation of dust from source itself. ii) The Project Proponent plan to deploy a NABET Accredited organization to conduct a study to assess and quantify emission load generation (in terms of air pollution, noise, wastewater and solid waste) from each of the mining activity (including transportation) on annual basis and accordingly efforts will be made to further eliminate/ minimize generation of air pollution/dust, noise, wastewater, solid waste generation in successive years through use of better technology. iii) Fuel / power consumption, inspection and maintenance schedules of all machineries are being recorded on monthly basis. iv) Digital processing of the entire lease area using remote sensing technique (satellite Imagery) will be done once in 3 years for monitoring the land use pattern and the mining activity and also the area excavated in Pits will be demarcated based on the remote sensing analysis and the same will be carried out by ORSAC or any agency of national repute for which expenses will be borne by us.</p>

	<p>should be carried out regularly once in 3 years for monitoring land use pattern and mining activity taken place. Further, the extent of pit area excavated should also be demarcated based on remote sensing analysis. This should be done by ORSAC (Odisha Space Applications Centre, Bhubaneswar) or an agency of national repute or if done by private agency, the report shall be vetted / authenticated by ORSAC, Bhubaneswar. Expenses towards the same shall be borne by the respective mine lease holders. Responsibility: Individual Mine Lease Holders.</p>	
16)	<p>Air Environment Related: Project Proponent shall implement the following mitigation measures: (i) Fugitive dust emissions from all the sources should be controlled regularly on daily basis. Water spraying arrangement on haul roads, loading and unloading and at other transfer points should be provided and properly maintained. Further, it will be desirable to use water fogging system to minimize water consumption. It should be ensured that the ambient air quality parameters conform to the norms prescribed by the CPCB in this regard. (ii)The core zone of mining activity should be monitored on daily basis. Minimum four ambient air quality monitoring stations should be established in the core zone for SPM, PM 10, PM 2.5, SO 2, Nox and CO monitoring. Location of air quality monitoring stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board(based on Emission Load Assessment Study).The number of monitoring locations maybe more for larger capacity mines and working in larger area. Out of four stations, one should be online monitoring station in the mines having more than 3 MTPA EC Capacity.(iii)Monitoring in buffer zone should be carried out by SPCB or through NABET accredited agency. In addition, air quality parameters (SPM, PM10, PM2.5, SO2, NO and CO)shall be regularly monitored at locations of nearest human habitation including schools and other public amenities located nearest to source of the dust generation as applicable.(iv)Emissions from vehicles as well as heavy machinery should be kept under control and regularly monitored. Measures should be taken for regular maintenance of vehicles used in mining operations and in transportation of</p>	<p>i) Regular water sprinkling is being carried out by engaging water tankers on haul roads and in critical areas prone to air pollution and having high levels of particulate matters such as crushing & screening plants, loading and unloading and transfer points for dust suppression. A wheel washing system is also constructed at the exit gate.</p> <p>ii) Ambient air monitoring system is installed inside Mining Lease area for monitoring PM10, PM2.5, Sox and Nox in the core zone on daily basis as per the stipulation. 3 numbers of ambient air quality monitoring stations have been established in the core zone for SPM, PM10, PM2.5, SO2, Nox and CO monitoring. The monitoring report reveals that the above parameters are well within the norm as per NAAQs notification made by CPCB.</p> <p>iii) the monitoring of AAQ is being carried out on regular basis in the buffer zone of the ML area through a NABET accredited agency.</p> <p>(iv) We are regularly monitoring the emission of the vehicles including HEMMs to ascertain emission limits. Further regular maintenance of vehicles used in mining operations and in transportation of mineral is being carried out.</p> <p>(v) The vehicles will be covered with tarpaulin and will not be overloaded during transportation of minerals.</p> <p>Air quality monitoring at one location along the transport route within the mine (periodically, near truck entry and exit gate) is being carried out within the mine (periodically, near truck entry and exit gate).</p>

	<p>mineral.(v)The vehicles shall be covered with a tarpaulin and should not be overloaded. Further, possibility of closed container trucks should be explored for direct to destination movement of iron ore. Air quality monitoring at one location should also be carried out along the transport route within the mine (periodically, near truck entry and exit gate), Responsibility: Individual Mine Lease Holders and SPCB.</p>	
17)	<p>Noise and Vibration Related: Project Proponent shall implement the following mitigation measures : (i)Blasting operation should be carried out only during day time. Controlled blasting such as Nonel should be practiced. The mitigation measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented. (ii)Appropriate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs/muffs. (iii) Noise levels should be monitored regularly (on weekly basis) near the major sources of noise generation within the core zone. Further, date, time and distance of measurement should also be indicated with the noise levels in the report. The data should be used to map the noise generation from different activities and efforts should be made to maintain the noise levels with the acceptable limits of CPCB (CPCB, 2000) (iv) Similarly, vibration at various sensitive locations should be monitored at least once in month, and mapped for any significant changes due to successive mining operations. Responsibility: Individual Mine Lease Holders.</p>	<p>ii) Blasting operation is being carried out only during daytime, Controlled blasting by using NONEL-Technology is in practice under strict supervision to minimize generation of dust and fly rocks & the study is conducted by NIRM, Bangalore, based on the recommendation, the blasting is being carried. Measurement & Monitoring of vibration level is being done as per the NIRM, suggestion. ii) Appropriate measures taken to control the noise level by providing aquatic enclosures to DG sets, Enclosures to Cone and Jaw Crusher & development of Green belt around the Mine Safety Zone etc. iii) Noise level is being monitored by Noise Level Meter, the result reveals that the parameter is well within the prescribed norms.</p>
18)	<p>Water/Wastewater Related: Project Proponent shall implement the following mitigation measures: (i) In general, the mining operations should be restricted to above ground water table and it should not intersect groundwater table. However, if enough resources are estimated below the ground water table, the same may be explored after conducting detailed geological studies by GSI and hydro- geological studies by CGWA or NIH or institute of national repute, and ensuring that no damage to the land stability/ water aquifer system shall happen. The details/ outcome of such study may be reflected /incorporated in the EIA/EMP report of the mine appropriately. (ii)Natural watercourse and/or water resources should not be obstructed due to any mining operations. Regular monitoring of the flow rate of the springs and perennial nalla should be carried out</p>	<p>i) Based on the exploratory evidences and hydrological study conducted the lowest working level is 520 mRL whereas the ground water table starts at 503 mRL. Therefore, mining operation will not intersect the ground water table. ii) No perennial nalla / stream passes through the Mining Lease area. iii) Regular monthly monitoring of ground water level and its quality is being carried out within the mine lease area. The Project has installed a piezometer with telemetry system in observation well. iv) Rain water harvesting measures is planned for implementation. v) The project has planned to implement roof top rain water harvesting structures in camp and office premises.</p>

and records should be maintained. Further, regular monitoring of water quality of nalla and river passing thorough the mine lease area (upstream and downstream locations) should be carried out on monthly basis. (iii) Regular monitoring of groundwater level and its quality should be carried out with in the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out on monthly basis. (iv) In order to optimize water requirement, suitable conservation measures to augment ground water resources in the area should be undertaken in consultation with Central Ground Water Board(CGWA).(v)Suitable rainwater harvesting measures on long-term basis should be planned and implemented in consultation with CGWA, to recharge the ground water source. Further, CGWA can prepare a comprehensive plan for the whole region. (vi) Appropriate mitigation measures (viz. ETP, STP, garland drains, retaining walls, collection of run off etc.) Should be taken to prevent pollution of nearby river/other water bodies. Water quality monitoring study should be conducted by State Pollution Control Board to ensure quality of surface and ground water sources on regular basis. The study can be conducted through NABL/ NABET approved water testing laboratory. However, the report should be vetted by SPCB. (vii)Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated in ETP so as to conform to the discharge standards applicable.(viii)Oil and grease trap should be installed before discharge of workshop effluents. Further, sewage treatment plant should be installed for the employees/colony, wherever applicable.(ix)Mine lease holder should ensure that no silt originating due to mining activity is transported in the surface water course or any other water body. Appropriate measures for prevention and control of soil erosion and management of silt should be undertaken. Quantity of silt/soil generated should be measured on regular basis for its better utilization.(x)Erosion from dumps site should be protected by providing ge-textile matting or other suitable material, and thick plantation of native trees and shrubs should be carried out at the dump slopes. Further dumps should be protected by retaining walls.(xi)Trenches/garland drain should be constructed at the foot of dumps to arrest silt

vi)The project has planned to implement ETP with oil & grease trap pit with re-circulation system for reuse in the workshop areas.

Apart from these project has commissioned 80 KI capacity STP within camp premises with re-use facility and to prevent pollution of nearby river/other water bodies.

vii) Provisions are made for collection & treatment of Industrial Waste water (Work shop & Waste water from the mine).

Viii) The project implements ETP with oil & grease Separation Pit with recirculation system for reuse.

ix) In the entire lease area wherever possibilities of soil erosion, flow of sediments etc. is anticipated the project will provide retaining wall, garland drain & check weir/check dams. De-siltation shall be carried out on regular basis.

x) 40,000 M² Geo textile matting provided over the dump slops to minimize erosion from the site. 1300 mtr retaining wall followed by garland drain provided at the toe of Waste Dump.

xi) The project has constructed retaining wall and garland drains around the toe of the OB dumps and the wash off being channelized to the nearby settling pits as per the approved mining plan.

xii) The wastewater stored in Mine pit if any shall be utilized for the sprinkling on haul roads and green belt development.

xiii) There is no waste water discharged from the mine. We are planning to optimize water consumption by adopting suitable technique in consultation with competent authorities.

	<p>from being carried to water bodies. Adequate number of check dams should be constructed across seasonal/perennial nallas (if any) flowing through the mine lease area sand silt be arrested. De-silting at regular intervals should be carried out and quantity should be recorded for its better utilization, after proper soil quality analysis. (xii) Theater so collected in the reservoir within the mine should be utilized for the sprinkling on hauls roads; green belt development etc. (xiii) There should be zero waste water discharge from the mine. Based on actual water withdrawal and consumption/ utilization in different activities, water balance diagram should be prepared on monthly basis, and efforts should be made to optimize consumption of water per ton of ore production in successive years. Responsibility: Individual Mine Lease Holders, SPCB and CGWB.</p>	
19)	<p>Land/Soil/Over burden Related: Project Proponent shall implement the following mitigation measures: (i) The top soil should temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long (not more than 3 years or as per provisions mentioned in the mine plan/scheme). The top soil should be used for land reclamation and plantation appropriately. (ii) Fodder plots should be developed in the non-mineralized area in lieu of use of grazing land, if any. (iii) Over burden/ low grade ore should be stacked at earmarked dump site(s) only and should not be kept active for long period. The dump height should be decided on case to case basis, depending on the size of mine and quantity of waste material generated. However, slope stability study should be conducted for larger heights as per IBM approved mine plan and DGMS guidelines. The OB dump should be scientifically vegetated with suitable native species to prevent erosion and surface runoff. In critical areas, use of geotextiles should be undertaken for stabilization of the dump. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Proper records should be maintained regarding species, their growth, area coverage etc. (iv) Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine operation, soil, OB and mineral dumps. The water so collected can be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly de-silted, particularly after monsoon and should be</p>	<p>i) No top soil generated in reporting period. 534.6 cub. Meter of previously generated top soils has been utilized for the purpose of green belt development. ii) Its being followed. iii) OB/ Sub- grade Ore is being stacked in earmarked Dump yard as per the approved Mining Plan. Appropriate measures like garland drain retaining wall is constructed to take care of any erosion and for its stabilization. v) Catch Drains and settling tanks constructed at the dump site. v) Back filling of the area will be done as per the approved mining Plan. vi) There will be minimum generation of Hazardous Wastes except in field machinery maintenance workshops, which will be separately handled with all precautionary measures as per guideline provided under “Hazardous waste Management Rule 2016”.</p>

	<p>maintained properly. Appropriate documents should be maintained. Garland drain of appropriate size, gradient and length should be constructed for mine pit, soil. OB and mineral dumps and sump capacity should be designed with appropriate safety margin based on long term rainfall data. Sump capacity should be provided for adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and de-silted at regular intervals.(v)Backfilling should be done as per approved mining plan/scheme. There should be no OB dumps outside the mine lease area. The backfilled areas should be afforested, aiming to restore the normal ground level. Monitoring and management of rehabilitated areas should continue till the vegetation is established and becomes self-generating. (vi) Hazardous waste such as, waste oil, lubricants, resin, and coaltar etc. should be disposed of as per provisions of Hazardous Waste Management Rules, 2016, as amended from time to time. Responsibility: Individual Mine Lease Holders.</p>	
20)	<p>Ecology/Biodiversity (Flora-Fauna) Related: Project Proponent shall implement the following mitigation measures: (i)All precautionary measures should be taken during mining operation for conservation and protection of endangered fauna namely elephant, sloth bear etc. spotted in the study area. Action plan for conservation of flora and fauna should be prepared and implemented in consultation with the State Forest and Wildlife Department within the mine lease area, whereas outside the mine lease area, the same should be maintained by State Forest Department.(ii)Afforestation is to be done by using local and mixed species saplings within and outside the mining lease area. The reclamation and afforestation is to be done in such a manner like exploring the growth of fruit bearing trees which will attract the fauna and thus maintaining the biodiversity of the area. As afforestation done so far is very less, forest department needs to identify adequate land and do afforestation by involving local people in a time bound manner. (iii) Green belt development carried out by mines should be monitored regularly in every season and parameters like area under vegetation/plantation, type of plantation, type of tree species /grass species/scrubs etc., distance between the plants and survival rate</p>	<p>i) Site specific wildlife conservation plan got approved by PCCF Wildlife and chief wildlife Warden, Bhubaneswar with an estimated cost of Rs1257Lakh of which Rs. 348.770 lakh has been earmarked for implementation of plan within the mine lease area and Rs. 908.240 Lakhs has been earmarked for implementation of plan within the buffer zone (ZOI). No such species has been reported in the core zone as per Wild life Management study conducted over the area . ii. A detailed Site Specific Wildlife Conservation Plan has been prepared for Flora and Fauna. iii. Afforestation is being done by using local and mixed species saplings within and outside the mining lease area. iv. Green belt has been proposed & carried all along the safety zone around the Mining Lease, along the central village road. v. Green belt has been developed with 14,555 No's of native species. For the period April to September 2023 plantation of 3585 no's done within the safety zone area. vi. Financial outlay for Compensatory afforestation as approved in De-reservation Proposal is Rs 2.31 Cr Further, proposed budget for Wild life management plan is Rs 12.57 Cr. Out of this an amount of Rs 100 Lakhs has been allocated for conservation of Schedule - I Species.</p>

	<p>should be recorded. (iv) Green belt is an important sink of air pollutants including noise. Development of green cover in mining area will not only help reducing air and noise pollution but also will improve the ecological conditions and prevent soil erosion to a greater extent. Further, selection of tree species for green belt should constitute dust removal/dust capturing plants since plants can act as efficient biological filters removing significant amounts of particulate pollution. Thus, the identified native trees in the mine area may be encouraged for plantation. Tree species having small leaf area, dens hair on leaf surface (rough surface), deep channels on leaves should be included for plantation. (v) Vetiver plantation on inactive dumps may be encouraged as the grass species has high strength of anchoring besides medicinal value.(vi)Details of compensatory afforestation done should be recorded and documented by respective forest divisions, and State Forest Department should present mine-wise annual status, along with expenditure details. Responsibility: Individual Mine Lease Holders and State Forest & Wildlife Department.</p>	
21)	<p>Socio-Economic Related: Project Proponent shall implement the following mitigation measures: (i) Public interaction should be done on regular basis and social welfare activities should be done to meet the requirements of the local communities. Further, basic amenities and infrastructure facilities like education, medical, roads, safe drinking water, sanitation, employment, skill development, training institute etc. should be developed to alleviate the quality of life of the people of the region.(ii)Land outtees and land losers/affected people, if any, should be compensated and rehabilitated as per the national/state policy on Resettlement and Rehabilitation. (iii)The socio-economic development in the region should be focused and aligned with the guidelines/initiatives of Govt. of India/ NITI Aayog around prosperity,equality,justice,cleanliness,transparency,employment,respect to women, hope etc. This can be achieved by providing adequate and quality facilities for education, medical and developing skills in the people of the region. District administration in association with mine lease holders should plan for "Samagra Vikas"of these blocks well as other blocks of the district. While planning for different schemes in the region, the activities should be</p>	<p>i) A Village Development Committee is formed to solve the local problems and acts as a platform for regular consultation. This committee also plans, reviews and monitors the development initiatives.</p> <p>A comprehensive social welfare activity has been chalked out based on Socio Economic Need Assessment study of the project affected villages as detailed in EIA Report.</p> <p>ii) The State Government has appointed recognized consultant for undertaking Social Impact Assessment as per Odisha Right to Fair Compensation and Transparency in Land Acquisition and Rehabilitation and Resettlement Rules 2015. The consultant has completed and submitted the study report.</p> <p>iii) in line with the guidelines given in the above rules, project proponent has worked out compensation package of Rs 354.05 Lakhs as per ORRP 2006/ ORFCTLARR2016 provisions. There is no displacement in the project. There are 8 plots of 4 land owners having 26 extended families affected.</p> <p>Employment -- Although none of the families are eligible for employment as per the Act, but company provided one person from each land losing family, job based on their skill and qualification. Also provision for Skill Development training of training is made.</p>

	<p>prioritized as per Pradhan Mantri Khanij Kshetra Kalyan Yojna (PMKKKY), notified by Ministry of Mines, Govt. of India, vide letter no. 16/7/2017-M. VI(Part), dated September 16, 2015. Responsibility: District Administration and Individual Mine Lease Holders.</p>	<p>However, Project proponent will abide by the compensation package as worked out and finalized by District Authority.</p> <p>The programs are carried out aligned with Government initiatives and prioritized with PMKKKY with DMFT, Sundargarh.</p>
22)	<p>Road Transport Related: Project Proponent shall implement the following mitigation measures : (i) All the mine lease holders should follow the suggested ore transport mode (SOTM), based on its EC capacity within next 5 years. (ii) The mine lease holders should ensure construction of cement road of appropriate width from and to the entry and exit gate of the mine. Further, maintenance of all the roads should be carried out as per the requirement to ensure dust free road transport. (iii) Transportation of ore should be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore/dust takes place. Further, air quality in terms of dust, PM 10 should be monitored near the roads towards entry & exit gate on regular basis, and be maintained within the acceptable limits. Responsibility: Individual Mine Lease Holders and Dept. Of Steel Mines.</p>	<p>i) Project proponent will follow the suggested ore transport mode (SOTM). ii) Cement concrete road of 9 m width inside the lease area to both Pit 1 and Pit 2 which is planned to serve as two way movement of vehicle. iii) Transportation of ore during road transportation is being done by covering the trucks with tarpaulin. AAQ monitoring including PM10 is being monitored regularly near the exit & entry gate on regular basis.</p>
23)	<p>Occupational Health Related: Project Proponent shall implement the following mitigation measures: (i) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects periodically. (ii) Occupational health surveillance program for all the employees/workers (including casual workers) should be undertaken periodically (on annual basis) to observe any changes due to exposure to dust, and corrective measures should be taken immediately, if needed. (iii) Occupational health and safety measures related awareness programs including identification of work related health hazard, training on malaria eradication, HIV and health effects on exposure to mineral dust etc., should be carried out for all the workers on regular basis. A fulltime qualified doctor should be gaged for the purpose. Periodic monitoring (on 6 monthly basis) for exposure to respirable minerals dust on the workers should be conducted, and record should be maintained including health record of all the workers. Review of impact of various health measures undertaken (at an interval of 3 years or less) should be conducted followed by follow-up of actions, wherever</p>	<p>i) Personal Protective Equipment's (PPE) is being provided to the workers & staffs along with adequate training on regular basis to educate and make them conscious. ii) Occupational health surveillance is being carried out on annual basis. The occupational health surveillance shows that there no occurrence of any kind of occupational health disease. iii) 56 Employee undergone IME and PME medical examinations. A dispensary with full time qualified doctor has been engaged for the purpose and maintaining the health records of the worker.</p>

	required. Occupational health Centre should be established near mine site itself. Responsibility: Individual Mine Lease Holders and District Administration (District Medical Officer).	
C. Standard conditions I. Statutory compliances		
SL No.	Conditions	Compliance Status
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.	We will abide by the said condition.
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 & Others before commencing the mining operations.	We are abiding by the said condition.
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 the irrespective 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.	Not applicable as its auctioned mines and executed in 2021.
4)	This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF & CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project.	Not applicable to the project.
5)	This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the Project.	The project has obtained Forest clearance vide letter No.10F (CONS)-26/2018/17489/F-E under the provision of Forest Conservation Act, 1980.
6)	Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein .The mining activity shall not commence prior to obtaining Consent to Establish/Consent to Operate from the concerned State Pollution Control Board/Committee	Project Proponent (PP) has obtained Consent to establish & consent to operate for extraction of 7.16 Million TPA iron ore (ROM) production from the OSPCB, Bhubaneswar, Odisha which also includes installation of 1x1350 TPH stationary crushing & Screening plant and 2 x 500 TPH mobile crushing & Screening Plants, vide Consent Order No. 2955 and vide Letter No. 5144/IND-I-CON-6154 dated 30.03.2022. All the conditions stipulated in the consent to establish & Consent to operate are being implemented.

7)	The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.	The project proponent will adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development Regulation), Act 2015 and rules & regulations made there under.
8)	The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.	The project proponent has confined its operation within the surface right granted area only.
9)	The Project Proponent shall follow the mitigation measures provided in MoEF&CC'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 where in Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".	Not applicable, if any it will be followed as per the guidelines.
10)	The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.	The Project Proponent has obtained NOC for withdrawal of 95 Cum/day quantity of ground water from CGWA for the project vide letter No. CGWA/NOC/MIN/ ORIG/2022/14796 dated 14.03.2022.
11)	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.	It has been complied with intimating the letters to local Gram Panchayat, Municipality, DDM Office, Zilla Paris had, Divisional Forest Officer etc.
12)	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.	It's being complied by SPCB.
13)	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.cparivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEF &CC Regional Office for compliance and record.	Project proponent has advertised in the two local newspapers, i.e. The Prameya Daily (vernacular language) and The Sunday Express – English New Paper within stipulated time period. A copy of the same got submitted to the Regional Office of this Ministry located at Bhubaneswar vide letter No. AMNS/MIN/SAG/01/2019, dated: 10.06.2020.
14)	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 than mining	We will abide by the said condition.

	operation shall only be carried out after transfer of EC as per provisions of the part 11 of EIA Notification 2006 as amended from time to time.	
II. Air quality monitoring and preservation		
SL No.	Conditions	Compliance Status
15)	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 down wind 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.	Presently the monitoring of AAQ is being carried out in the core (03 stations) as well as buffer zone (04 stations) of the ML area on regular basis. The monitoring report reveals that the parameters like PM10, PM2.5, CO, SO2 and NOx are within the norm as per NAAQs notification made by the CPCB. The Project Proponent has installed two online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 1 (one) in down wind direction based on long term climatological data about wind direction to monitor critical parameters with RT-DAS connectivity to SPCB Server, another CAAQM Stations is procured and will be established in down wind direction by 30 th October 2023.
16)	Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metaled road construction etc.)shall be carried out in areas prone to air pollution where in 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 equipment's/ 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 sure that air pollution level conform to the standards prescribed by the MoEF & CC & Central Pollution Control Board.	Regular water sprinkling is being carried out by engaging 02 nos. of mobile water tankers (01 nos. 16 KL, 01 no. 08 KL) at haul road, loading/unloading point and transfer points & around the crusher and screening plants and other strategic dust generating areas including the mines haul and mineral dispatch roads. Apart from that auto fixed water sprinkling arrangement of 800m provided for mineral dispatch roads. Further, dry fogging system is provided at crusher and screen plants for control of fugitive dust emission. Additionally, Wheel washing system is constructed at the mines exit gate.
17)	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	As per the hydrological study conducted the lowest working level is 520 mRL whereas the ground water table starts at 503 mRL. Therefore, mining operation will not intersect the ground water table. The Project Proponent has obtained NOC for withdrawal of 95 Cum/day quantity of ground

	<p>table at a later stage, then PP shall ensure that prior approval from CGWA and MoEF & CC 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.</p>	<p>water from CGWA for the project vide letter No. CGWA/NOC/MIN/ORIG/2022/14796 dated 14.03.2022 as well as the Environment clearance for the project vide letter No. F. No. J-11015/192/2016-IA.II(M) dated 28th May 2020.</p>
18)	<p>Regular monitoring of the flow rate of the springs and perennial nalla is flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. 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 Ground water Department/State Pollution Control Board.</p>	<p>No perennial nalla is flowing through the mine lease. Monitoring of the surface water quality is being carried out at 04 locations namely Suna Nadi (Upstream), Suna nadi (Downstream),Karo Nalla and Teherei Nalla. The records are also maintained for this purpose. The surface water quality as well as flow rate is being monitored 4 times in a year i.e. pre-monsoon, monsoon, post monsoon and winter. Monitoring of the ground water quality at 06 locations namely Inside Mining lease area, Sagasahi village, kalmang village, Oraghat village Gandhalpada village and shankapura village. The records are also maintained for this purpose. The ground water quality is being monitored 4 times in a year i.e. pre-monsoon, monsoon, post monsoon and winter. There is no water scarcity in the surrounding area. However, the project is supplying drinking water to the project nearby villages.</p>
19)	<p>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 Ground water Department, State Pollution Control Board.</p>	<p>We are conducting ground water quality and level on regular basis by NABL accredited lab. The monitoring report is being submitted on six-monthly basis to the concerned authorities. Project Proponent has installed Piezometer & Water Flow Meter with Telemetry system.</p>
20)	<p>The Project Proponent shall undertake regular monitoring of natural water course/ water resources/springs and perennial nallas existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carry out regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-a-vis suitability for usage as per CPCB criteria and flow rate. It shall be sure that no obstruction</p>	<p>We are conducting surface water quality monitoring on regular basis by NABL accredited lab. Further, no perennial nalla / stream passes through the Mining Lease area.</p>

	<p>and/or alteration be made to water bodies during mining operations without justification and prior approval of MoEF & CC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.</p>	
21)	<p>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 run off 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.</p>	<p>As such no polluted water is being generated from mine activities. However, the Project proponent has engaged NABL accredited and MoEF certified agency for the analysis of water quality as applicable and parameters as stated in the conditions. The monitored data is being 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.</p>
22)	<p>Project Proponent shall plan, develop and implement rain water harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Ground water Department. A report on amount of water recharged needs to be submitted to Regional Office MoEFCC annually.</p>	<p>In this regard project proponent has engaged and prepared a detail study report in consultation with Regional Director, CGWB, and Bhubaneswar to provide Check weirs, check dams, de-silting cum percolation ponds/pits at the strategic locations of the mines lease area. However, suitable rain water harvesting measures like settling pits, check weir, check dams along with roof top rain Water harvesting Structures for the mines; camp and office area will be implemented in due course of mining pit development.</p>
23)	<p>Industrial waste water (work shop 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 work shop effluent shall be treated after its initial passage through Oil and grease trap.</p>	<p>There will be no industrial wastewater discharge from the mine. ETP (Oil and grease separation unit) has implemented for proper collection and treatment of workshop effluents. The discharge water quality is conducted through NABL accredited and MoEF certified agency.</p>

24)	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 1 Office of the MoEF&CC and State Pollution Control Board/Committee.	Water balance chart has been prepared by the Project proponent and actions will carried out for reducing the consumption.
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IV. Noise and vibration monitoring and prevention

SL No.	Conditions	Compliance Status
25)	The peak particle velocity at 500 m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.	The peak particle velocity at 500 m distance or within the nearest habitation is being monitored periodically as per applicable DGMS guidelines.
26)	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 flood lights/masks away from the villagers and keeping the noise levels well within the prescribed limits for day/night hours.	The noise level is kept within prescribed limit during night as revealed from the monitored data. The illumination is directed away from the nearby village sites so that it will not affect the biological clock of the villagers.
27)	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 industry 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.	Workers engaged in Operations are provided with earplugs/muffs, besides this acoustic enclosure for all machine operating cabins are provided. It is being monitored by Noise Level Meter; the results reveals very well within norms. Apart from that adequate training on safety and Health aspects is being carried out on daily basis among all the employees.
28)	The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal where in year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, overburden, inter burden and topsoil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, OB. & dump mining, mineral transportation mode, ultimate depth of mining etc.)shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse	All mining activities are carried out in accordance with approved mining plan complying the EC conditions.

	environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form of Short Term Permit (STP), Query license or any other name.	
29)	The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.	We are in the initial stage of mining operation. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority.
30)	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-a-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 MoEF & CC and its concerned Regional Office.	The land use of the ML area at various stages of mining scheme as well as at the end of life will be governed as per the approved mining plan. The excavation vis-à-vis back filling in the mine lease area are and corresponding afforestation in the reclaimed area will be carried out in line with approved mine Plan. The compliance status will be submitted to the concerned Authorities within stipulated time frame.

VI. Land reclamation

SL No.	Conditions	Compliance Status
31)	The Overburden (O.B.) 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 dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines /circulars issued by D.G.M.S w.r.t .safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.	There is only one OB/waste dump which is being properly terraced at the earmarked place by maintaining the adequate slope & height as per the approved Mining Plan as per the guidelines /circulars issued by D.G.M.S w.r.t. safety in mining operations and geo textile matting applied on dump slopes to stabilization purpose. Presently no topsoil generated during the reporting period and 534.6 cub. Meter of previously generated top soils has been utilized for plantation purpose.
32)	The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. Safety in mining	There are three OB/waste dumps and they are being properly terraced at the earmarked place by maintaining the adequate slope & height as per the approved Mining Plan as per the guidelines /circulars issued by D.G.M.S w.r.t safety in mining operations and will be scientifically vegetated along the slope to stabilize the same.

	operations shall be strictly adhered to maintain the stability of waste dumps.	
33)	The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.	Project Proponent will reclaim the waste dump sites scientifically as per the approved mining plan by the application of native grass seeds, seedlings and geotextiles, etc. along with the provision of garland drain, retaining wall followed by settling pits.
34)	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 micro climate. 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 there by ensuring proper filling/leveling of dump mass. In critical areas, use of geo textiles/geo-membranes, clay liners/Betonies etc. shall be undertaken for stabilization of the dump.	Presently, one active OB/waste dump is being properly terraced by maintaining the adequate slope & height. 40,000 M ² Geo Textile has been laid down on OB Dump Slops for stabilization of dump. Further, the dumps will be scientifically vegetated with application of native local species along the slope to stabilize.
35)	The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC.	Presently mining is at initial stage and OB/waste dumping is under progress. As per the approved mining plan the dump height shall be maintained. So, no slope stability study is required at this moment.
36)	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.	Project proponent has constructed a Check dam in south pit area on natural depression area 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. However, in north pit active dump area one settling tanks constructed to prevent run off of water and flow of sediments and has been desilted in post monsoon period.
37)	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 there by allowing proper settling of sediments/silt material. The sedimentation pits/sumps shall be constructed at the corners of the garland drains.	Project proponent has constructed Check dam in strategic areas and on the seasonal nalla to prevent storm run-off and sediment flow into adjoining water bodies and planned to construct in south pit as per mining plan. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall. However, one settling pond has been constructed followed by Garland drain near active dump area and another settling cum percolation pond has been constructed for settlement of sediments.
38)	The topsoil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only	534.6 cub. Meter of Topsoil generated has been utilized for green belt development purpose. The

	and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. Safety in mining operations shall be strictly adhered to maintain the stability of dumps. The top soil shall be used for land reclamation and plantation purpose.	physical parameters of the topsoil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS during storing at earmarked site. Adequate precautionary measures shall be taken to preserve the nutrient contents.
VII. Transportation		
SL No.	Conditions	Compliance Status
39)	No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'by pass' 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.	We will abide by the said condition.
40)	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 equipment's 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.	Regular water sprinkling is being carried out by engaging 04 nos. of mobile water tankers (02 nos. 16 KL, 02 nos. 08 KL) at haul road, loading and unloading point and transfer points & around the crusher and screening plants and other strategic dust generating areas including the mines haul and mineral dispatch roads. Apart from that auto fixed water sprinkling arrangement of 800 meters length is provided for mineral dispatch roads. Further, dry fogging along with hoods over conveyor and material transfer points is provided for crusher and screen plants. Additionally, Wheel washing system is constructed at exit gate.

	PP shall take necessary measures to avoid generation of fugitive dust emissions.	
VIII. Green Belt		
SL No.	Conditions	Compliance Status
41)	The Project Proponent shall develop green belt in 7.5 m 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 belts shall be developed within first 5 years starting from wind ward side of the active mining area. The development of green belt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.	The green belt has been developed with native species of 14,555 along the safety zone and other area. In this regard the project has planted 3585 nos. of new plantation within the ML Area boundary (safety zones) during the reporting period April to September 2023 as per the guidelines of concerned agencies.
42)	The Project Proponent shall carry out plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the road sides, 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 provisions shall be made for protection and care of trees.	The mine operation is in initial stage. Project proponent will carry out plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the road sides, in community areas etc. by planting the selected native species useful to the local people adhering the CPCB guidelines in this respect and in consultation with concerned govt. agencies as stated.
43)	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.	We will abide by the said condition.
44)	The Project Proponent shall under take all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken	Site specific Wildlife conservation Plan got approved by PCCF Wild life and chief Wildlife warden, Bhubaneswar. As per the plan no Schedule – I species found in the buffer zone area.

	for conservation of flora and fauna. The Plan shall be approved by Chief Wildlife Warden of the State Govt.	
45)	And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.	Implementation status (annual) on wildlife conservation Plan shall be submitted to the Regional office of the Ministry.

IX. Public hearing and human health issues

SL No.	Conditions	Compliance Status
46)	The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carry out Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-up shall be under taken once in six months and necessary remedial/preventive measures be taken. A status report on the same may be sent to MoEF & CC Regional Office and DGMS on half-yearly basis.	Initial Medical Examination & Periodical Medical Examination of the workers engaged in the project is being undertaken under the authorized doctors periodically for employees who are engaged in the process of mining & are likely exposed to dust to observe any contractions due to exposure to dust. This is being carried as per in compliance to Mines Act 1952 & rules 1956 and amendments there to. During the period of April to September 2023, 56 nos. of employee undergone for IME examinations.
47)	The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the Harte HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anemia, and Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carry out base line HRA for all the category of workers and there after every five years.	The Project Proponent has taken measures for Health Risk Assessment (HRA) for identification of workplace hazards and assesses their potential risks to health and determines appropriate control measures to protect the health and wellbeing of workers and nearby community. The company Will also maintain accurate and systematic records of the HRA and all the tests being carried out.
48)	The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations	The Project Proponent is committed to work towards 'Zero Harm' from their mining activities and will carry out Health Risk Assessment (HRA) for Identification workplace hazards and assesses

	<p>relevant to the exposure (e.g. for Dust X-Ray chest; For Noise Audio metric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) Estimation in Blood; For Inorganic Chromium-Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests would be carried out in a Lab accredited by NASH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one).X-Ray must meet ILO criteria (17x14 inches and of good quality).</p>	<p>their potential risks to health and determines appropriate control measures to protect the health and wellbeing of workers and nearby community. The company will also maintain accurate and systematic records of the HRA and all the tests being carried out.</p>
49)	<p>The Proponent shall maintained a record of performance indicators for workers which includes(a)there should not be as significant decline in their Body Mass Index and it should stay between 18.5-24.9, (b)the Final Chest X-Ray compared with the base line X-Ray should not show any capacities,(c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1), Forced Vital Capacity (FVC), and the ratio)unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f)they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEF&CC's annually along with details of their life's and compensation paid to workers having above indications.</p>	<p>This will be done and records will be maintained.</p>
50)	<p>The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should</p>	<p>Workers engaged in different mining Operations are provided with protective respiratory devices i.e. Nose Mask, Ear Plugs, Ear Muffs etc.. Regular sprinkling is being carried in and around work</p>

	also be provided with adequate training and information on safety and health aspects.	place areas. Apart from that adequate training on safety and Health aspects is being imparted on daily basis among all the employees.
51)	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 healthcare, creche 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 waters should be treated with STP in order to avoid contamination of underground water.	Project Proponent has constructed temporary worker camps outside (rented land) the mine lease area with necessary basic infrastructure/ facilities like toilets, STP, safe drinking water, medical healthcare, etc. The housing is made purely of temporary structures which can be removed after the completion of the project. The domestic waste waters are being treated with STP of 80 KL capacity in order to avoid contamination of underground water.
52)	The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration	The project proponent is committed towards the implementation of activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing and shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration

X. Corporate Environment Responsibility (CER)

SL No.	Conditions	Compliance Status
53)	The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-A. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. Photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF &CC annually along with audited statement.	The activities proposed for CER will be implemented in a time bound manner and Annual report of implementation of the same will be submitted to Regional Office MoEF&CC.
54)	Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEF & CC and its concerned Regional Office.	The Project proponent shall not divert the fund earmarked for environmental protection. The fund earmarked for environmental protection measures shall be utilized for the said purpose only. The Year wise expenditure of such funds will be reported to the MoEF CC and its concerned Regional Office on regular basis.

XI. Miscellaneous		
SL No.	Conditions	Compliance Status
55)	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.	Digital processing of the entire lease area using remote sensing technique will be done regularly in 5 years for monitoring the land use pattern and the same will be carried out by ORSAC or any agency of national repute for which expenses will be born by the project proponent.
56)	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.	We will abide by the said condition.
57)	The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEF CC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.	We are submitting Six monthly E.C compliance on regular basis, and the last six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards compliance was submitted on 29 th May 2023 to the MOEF & CC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.
58)	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.	We have established an Environmental Cell headed by the Head-Technical to look after the implementation of the various pollution control measures and other Environment Management System requirements who is reporting to the Head of the Organization.
59)	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.	The project proponent shall extend full cooperation to the MoEF & CC officer(s) by furnishing the requisite data information/monitoring reports while monitoring the compliance of the stipulated conditions by the concerned regional Officials.
60)	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, under take re-grassing 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.	The project proponent shall abide by the condition.

D. Standard EC conditions for Mineral Beneficiation Plants:		
I. Statutory compliance:		
SL No.	Conditions	Compliance Status
1)	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.	The project has obtained Forest clearance vide letter No. 10 F (CONS)-26/2018/17489/F-E for the forest land involved in the project towards the accessing the forest land for applicable activities as approved.
2)	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	Not applicable to the project.
3)	The project proponent shall prepare 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).	Site specific wildlife conservation plan got approved by PCCF Wildlife and chief wildlife Warden, Bhubaneswar with an estimated cost of Rs. 1257 Lakh of which Rs. 348.770 lakh has been earmarked for implementation of plan within the mine lease area and Rs. 908.240 Lakhs has been earmarked for implementation of plan within the buffer zone (ZOI).No such specie has been reported in the core zone as per Wild life Management study conducted over the area. Rs.100.00 lakhs will be specifically spent towards the Conservation of Schedule-I species.
4)	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.	Project Proponent (PP) has obtained Consent to establish & consent to operate for extraction of 7.16 Million TPA iron ore (ROM) production from the OSPCB, Bhubaneswar, Odisha which also includes installation of 1x1350 TPH stationary crushing & Screening plant and 2x500 TPH mobile crushing & Screening Plants, vide Consent Order No. 2955 and vide Letter No. 5144/IND-I-CON-6154 dated 30.03.2022. However, at the time of installation of Iron Ore BF plant, consent to operate will be obtained for the same.
5)	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.	The Project Proponent has obtained NOC for withdrawal of 95 Cu.m/day quantity of ground water from CGWA for the project vide letter No. CGWA/NOC/MIN/ORIG/2022/14796 dated 14.03.2022 as well as the Environment clearance for the project vide letter No. F. No. J-11015/192/2016-IA.II(M) dated 28th May 2020.
6)	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.	The Project has obtained Hazardous Waste Authorization Vide Authorization No. IND-IV-HW-1418/7610, dated: 11.05.2023 under the Hazardous and other Waste Management Rules, 2016.
II. Air quality monitoring and preservation		
SL No.	Conditions	Compliance Status

7)	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories. Monitor fugitive emissions in the plant premises.	Out of three Continuous Ambient Air Quality monitoring Stations (CAAQMS), two nos. of CAAQMS with data transfer facility to SPCB server has been established in core zone. The locations of these stations are decided in consultation with the Regional Officer State Pollution Control Board, based on metrological data, topographical features and environmentally and ecologically sensitive targets. Till installation of all CAAQMS, manual ambient air quality monitoring is being carried out.
8)	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.	The Project proponent has engaged NABL accredited and MoEF certified lab for the monitor fugitive emissions in the plant premises on regular basis as stated.
9)	The project proponent shall install system to carry out Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM-10 and PM, in reference to PM emission, and SO, and NOx in reference to SO, and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at angle of 120° each), covering up wind and downwind directions.	Out of three Continuous Ambient Air Quality monitoring Stations(CAAQMS), two nos. of CAAQMS with RT-DAS data transfer facility to SPCB server has been established in core zone. The locations of these stations are decided in consultation with the Regional Officer State Pollution Control Board, based on metrological data, topographical features and environmentally and ecologically sensitive targets. Till installation of all CAAQMS, manual ambient air quality monitoring is being carried out.
10)	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.	Not applicable for the project.
11)	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.	Regular water sprinkling is being carried out engaging water sprinkling tankers for the fugitive dust suppression on haul roads. Appropriate air pollution control system (APC) is provided in the form of dry fog system for crusher & screen plants. Permanent fixed sprinkler for the permanent hauling road and truck tyre washing system for the dispatch vehicles, etc. as applicable to all the dust generating points to comply prescribed stack emission and fugitive emission standards.
12)	The project proponent use leak proof trucks/dumpers carrying ore and other raw materials and cover them with tarpaulin.	As per the standard practice the vehicles which will carry the loaded materials shall be fully covered with tarpaulins to prevent the spillage of mineral on transportation road.

13)	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.	Not applicable for the project.
14)	Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.	Not applicable as it is an open cast mining activities.
III. Water quality monitoring and preservation		
SL No.	Conditions	Compliance Status
15)	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.	There is no scope of huge quantity of effluents generation from the mines for which the installation of the same shall be required. Instead, project proponent has constructed ETP (oil & grease trap pit) for the treatment of effluents generated from workshop; etc. The water quality is being analysed through NABL accredited laboratories to conform the prescribed standard before discharge to outside.
16)	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.	The ground water quality is being monitored by the project proponent through the recognized under Environment (Protection) Act, 1986 and NABL accredited Laboratory/agency as prescribed in the condition.
17)	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.	Not applicable for the project.
18)	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.	The project proponent will construct the slime disposal ponds with impervious lining and collection wells for seepage. The water collected from the slime pond shall be treated and recycled as per the approved EIA/EMP plan.
19)	Adhere to ' Zero Liquid Discharge'	The project will ensure to adopt the Zero waste Mining Concept as per the approved mining plan.
20)	Sewage Treatment Plant shall be provided for treatment of domestic waste water to meet the prescribed standards.	Sewage Treatment Plant of 80 KL capacity has already been provided for treatment of domestic waste water at the camp area to meet the prescribed standards. The water quality is being monitored by the project proponent through the recognized under Environment (Protection) Act, 1986 and NABL accredited Laboratory/agency.
21)	Garland drains and collection pits shall be provided for each stock pile to arrest the	Garland drains, retaining wall will be constructed at the bottom of the OB dump followed by the settling

	run-off in the event of heavy rains and to check the water pollution due to surface run off.	pits (collection pits) 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.
22)	The project proponent shall practice rain water harvesting to maximum possible extent.	Project proponent will implement roof top rain water harvesting measures at the office and camp area as per the approved mining plan.
23)	The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.	As ours is a mining operation, still the project proponent will make efforts to minimize water consumption in all walks of the operation.

IV. Noise monitoring and preservation

SL No.	Conditions	Compliance Status
24)	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	Noise level is being monitored by Noise Level Meter as per the prescribed guidelines. The monitoring result shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report on regular basis.
25)	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.	Noise level is being monitored by Noise Level Meter as per the prescribed guidelines. The monitoring report reveals that the result is well within norms.

V. Energy Conservation measures

SL No.	Conditions	Compliance Status
25)	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% of the total power consumption shall be produced through the solar power generation on roof tops of office containers. The same shall be provided for solar light system for office area and mines haul road street lights and will be maintained regularly as prescribed.
26)	Provide LED lights in their offices and residential areas.	LED lights are being utilized in project office and camp area for illumination.

VI. Waste management

SL No.	Conditions	Compliance Status
27)	The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Trans-boundary Movement) Rules, 2016.	There are minimum generations of Hazardous Wastes except in field machinery maintenance workshops, which are separately handled and stored at different yards with all precautionary measures as per guideline provided under "Hazardous waste Management Rule 2016".
28)	Kitchen waste shall be composted or converted to bio gas for further use. (to be decided on case to case basis depending on type and size of plant)	Kitchen waste from camp canteen has been composted or converted to bio gas for further use as prescribed.

VII. Green belt and EMP

SL No.	Conditions	Compliance Status
29)	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB	Green belt has been developed as per the approved mining plan with plantation of native tree species in accordance with CPCB guidelines.

	guidelines. The green belt shall inter alia cover the entire periphery of the plant.	
30)	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.	During the project operations detailed study will be conducted for proper and Standardized methodology to evaluate the emissions of GHG to estimate the extent of damage caused by the project operation and proper actions to mitigate the damage will be ensured.
VIII. Public hearing and human health issues		
SL No.	Conditions	Compliance Status
31)	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	A comprehensive elaborate HIRA (Hazard Identification and Risk Assessment) structure will be created by the company. A detail Hazard Identification and Risk Assessment study will be carried out internally based upon the guideline of OHSAS: 45001
32)	The project proponent shall carry out heat stress analysis for the work men who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.	Not Applicable.
33)	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, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Project Proponent has constructed purely temporary camps outside (rented land) ML area with necessary basic infrastructure/ facilities like toilets, STP, safe drinking water, medical healthcare, etc..
34)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Project proponent is conducting Periodic medical examination, occupational health check ups and maintaining the records as per Factories Act & Odisha Factories Rule.
IX. Corporate Environment Responsibility		
SL No.	Conditions	Compliance Status
35)	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No.22-65/2017-IA.III dated 15 May 2018, as applicable, regarding Corporate Environment Responsibility.	The project proponent will abide by the condition and comply accordingly.
36)	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/ wild life norms/ conditions. The company shall have	To demonstrate its commitment to Environment protection, company is having Environmental Policy. This policy gives more importance for Continual Improvement in Environmental Performance of the Mining activity.

	defined system of reporting infringements/ deviation/violation of the environmental/forest/wildlife norms/conditions and for 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.	
37)	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 report to the head of the organization.	We have established an Environmental Cell headed by the Head-Technical to look after the implementation of the various pollution control measures and other Environment Management System requirements who is reporting to the Head of the Organization.
38)	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.	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company has already been in order. The fund earmarked for environmental protection measures in a separate account is being utilized for the said purpose only
39)	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Project proponent will conduct the environmental audit system as prescribed by implementing the ISO standards at operation level.
40)	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Mineral Beneficiation plants shall be implemented.	Noted. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Mineral Beneficiation plants will be implemented.
X. Miscellaneous		
SL No.	Conditions	Compliance Status
41)	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.	Project proponent has advertised in the two local newspapers, i.e. Prameya Daily (vernacular language) and The Sunday – English Newspaper within stipulated time period. A copy of the same got submitted to the Regional Office of this Ministry located at Bhubaneswar.
42)	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies,	complied.

	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.	
43)	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their web site and update the same on half-yearly basis.	We are submitting our six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards measures and same will be uploaded on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal half yearly basis.
44)	The project proponent shall monitor the criteria pollutants level namely; PM10, SO, 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 web site of the company.	The project proponent will display the information at a convenient location for disclosure to the public and put on the web site of the company.
45)	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.	We are submitting six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEF & CC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board. Subsequently the status is being uploaded on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
46)	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.	The environment statement for the reporting year 2022-23 is submitted to SPCB, Odisha.
47)	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.	The project proponent will 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.
48)	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Noted. The Project proponent will adhere by the condition stipulated by SPCB and the State government.
49)	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.	The Project proponent is committed in implementing the commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee and will abide by the condition.
50)	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).	Noted. The Project proponent will abide by the condition.

51)	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.	Noted. The Project proponent will abide by the condition.
52)	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted. The Project proponent will abide by the condition.
53)	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted. The Project proponent will abide by the condition.
54)	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.	The project proponent shall extend full cooperation to the MoEF & CC officer(s) by furnishing the requisite data information/monitoring reports while monitoring the compliance of the stipulated conditions by the concerned regional Officials.
55)	The above conditions shall be forced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter.	Noted. The Project proponent will abide by the condition.
56)	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.	Noted. The Project proponent will abide by the condition.
57)	Awareness among employees & villagers on Ban of Single Use Plastic-(SUP) as per Office Memorandum from MoEF & CC vide Ref No: F.No IA-22/8/2021-IA-III[150512]	The project has carried out no of Awareness Programme on adverse impact on environment due to single use plastic use among employees & villagers.

Avinash Dae

Leas J.

