### SIX MONTHLY EC COMPLIANCE REPORT: Oct, 2022 to Mar, 2023



## SURJAGARH IRON ORE MINES LLOYDS METALS & ENERGY LTD.



LLOYDS METALS & ENERGY LTD.

SURJAGARH IRON ORE MINES

SURJAGARH, ETAPALI, GADCHIROLI, MAHAARASHTRA

http://www.lloyds.in/

# NAME OF THE PROJECT: SURJAGARH IRON ORE MINES LLOYDS METALS & ENERGY LTD.

#### **CLEARANCE LETTER NO. & DATE:**

1. EC Identification no. EC23A001MH116618

2. MoEF&CC File no. J-11015/348/2005.IA(M) dt. 24/02/2023

## MINES PRODUCTION CAPACITY: 10.0 MTPA (ROM)

PERIOD OF COMPLIANCE REPORT:
Oct, 2022 to Mar, 2023

#### **Compliance Status**

Compliance Status of conditions imposed in the granted Environment Clearance of Surjagarh Iron Ore Mines of Lloyds Metals & Energy Ltd. for mining of iron ore with production capacity of iron ore: 10.0 MTPA (ROM), waste: 1.769 MTPA (Total Excavation: 11.769 MTPA) along with Crushing & Screening Plant in the mine lease area of 348.09 Ha located near village Surjagarh, Tehsil Etapali, Dist. Gadchiroli, Maharashtra.

#### Surjagarh Iron Ore Mines of Lloyds Metals & Energy Ltd. Iron ore production capacity - 10 MTPA

	ore production capacity - 10 MTPA				
SI.	Special Conditions		Compliance Status		
No.					
i. ii.	This Environmental Clearance valid upto 9 years as the life of th 9 years.  EAC recommended for an amou	e mine is	We will abide by the condition and submit the revised proposal of the resources for further extension of mines life based on the approved mining plan.  The project has planned to implement the		
11.	26.64/- Cr towards Remediation Natural and Community R Augmentation plan to be spent span of three years. The d Remediation plan, Natural Augmentation plan and Co Resource Augmentation plan	plan and Resource within a letails of resource ommunity	Remediation plan and Natural and Community Resource Augmentation plan in phased manner as per timeline. In line to the same, activities are aligned with for implementation in due course of time.		
	SI. Description Est	imated			
	No. Cos	st (Rs. ores)			
	1 Remediation Plan 6.5	3			
	2 Natural Resource 1.5 Augmentation Plan				
	3 Community 15. Resource Augmentation Plan	58			
iii.	Community Resource Augmentatis Rs. 26.64/- Cr. Therefore, Proponent shall be required to bank guarantee of an amount 26.64/- Cr towards Remediation Natural and Community Augmentation plan with the SPC the grant of EC.	ation plan Project submit a t of Rs. plan and Resource B prior to	Bank guarantee of Rs. 26.64 Crores towards Remediation Plan and natural & Community Resource Augmentation plan submitted at The Regional Officer, MPCB, Regional Office, 1st Floor, Udyog Bhavan, Chandrapur - 442401 vide BG no. 0713623BG0000066 dated 31.01.2023.		
iv.	Remediation plan shall be comp	leted in 3	We will abide by the condition.		
	years whereas bank guarantee	shall be			

	for 5 years. The bank guarantee will be released after successful implementation of the remediation plan and Natural and Community Resource Augmentation Plan, and after the recommendation by regional office of the Ministry, Expert Appraisal Committee and approval of the Regulatory Authority.	
V.	The Project Proponent shall be required to remit the amount of Rs 5.48 Cr as per penalty provisions of SOP dated 07.07.2021 into the fund maintained by the concerned State Pollution Control Board. EC shall be issued on submission of proof regarding the same.	The project has paid the amount of Rs. 5,48,00,000/- in the shape of DD in favour of the Regional Officer, Maharashtra Pollution Control Board, Chandrapur bearing DD no. 262195 dt. 31.01.2023.
vi.	The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2 August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.	Project is in complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2 August 2017.
vii.	State Government concerned shall ensure that mining operation shall not commence till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon'ble Supreme Court dated the 2 <sup>nd</sup> August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.	There is no such demand from the State Govt. w.r.t. this project since there is no such violation exists.
viii.	The Project Proponent should install the continuous ambient air quality monitoring stations (CAAQMS) as per the scientific study and in consultation with CPCB/SPCB. The real time data so generated should be displayed digitally at entry and exit gate of mine lease area for public display and shall be linked to server of CPCB/SPCB	The project has already installed 1 no. CAAQMS as per the scientific study & in consultation with MPCB, Maharashtra and real time data is being displayed digitally at the entry/ exist gate of the mines lease area for public domain and planned to link with SPCB/CPCB Server.  Photos of same enclosed.
ix.	The Project Proponent needs to monitor the air quality, noise level and ground vibration during drilling and blasting at the edge of the mine, near the village, crusher	The project is carrying out the air, water, noise level, blasting activity specified locations as per MOEF&CC and MPCB guidelines. The data so

	and at other sensitive receptors and such collected data shall be submitted quarterly to the Ministry's Integrated Regional Office	collected is being submitted to the IRO, MoEF&CC regular intervals.
X.	The Project Proponent shall effectively utilize the low grade Iron ore.	The low grade ore is effectively utilized having proper blending with high grade ores and marketed accordingly.
xi.	The Project Proponent has submitted the "Site Specific Wildlife Management Plan" to State Forest Department vide letter dated 23.12.2022. The instant EC shall be functional upon the proof of submission of funds for updated/ approved above said plan and its initiation/ commencement by Forest Department to IRO/ Ministry. Till the time "Site Specific Wildlife Management Plan" is approved, funds are deposited with State Govt. and plan is initiated/commenced, the project proponent shall restrict its production upto 3.0 MTPA.	The project has submitted the Site Specific Wildlife Conservation Plan and the same got approved by the PCCF (Wildlife), Nagpur dt. 15.02.2023. Based on the demand by the Forest Dept., the project has paid the amount of Rs. 683.50 lakhs is already paid by the PP in favour of Deputy Conservator of Forest, Bhamragarh Forest Division, Allapali vide payment UTR no. KKBKR22023022407932990 dt. 24.02.2023.
xii.	The Project Proponent should follow-up the status of implementation on Wildlife Management and Safety Plan from the Forest Officials and the same shall be submitted to the Ministry's Integrated Regional Office in the six monthly compliance report.	The Site Specific Wildlife Management Plan got approved by the PCCF (Wildlife), Nagpur dt. 15.02.2023 and payment of Rs. 683.50 lakhs is paid by the PP in favour of Deputy Conservator of Forest, Bhamragarh Forest Division, Allapali vide payment UTR no. KKBKR22023022407932990 dt. 24.02.2023. The project will submit the implementation status on six monthly basis to the IRO, MoEF&CC.
xiii.	The Project Proponent needs to install the cameras all around the mine lease area to identify and to ensure the movement of animals	The project has installed cameras at the strategic locations all around the mines lease area to identify and to ensure the movement of animals. Photos of same enclosed.
xiv.	The Project Proponent needs to establish the parks like butterfly park, biodiversity park etc., in the already identified land as committed by the Project Proponent before the EAC.	The project has surveyed and completed the biological assessment for the butterfly and biodiversity park in the Etapali vicinity in association with State Forest Dept. After approval from the Forest Dept., the development work will be initiated for which our Wildlife Experts are working with them.
XV.	The Project Proponent needs to implement the recommendations of the Slope stability study carried out by CSIR-Central Institute of Mining and Fuel Research, Dhanabad. The implementation status of the same shall	The project is implementing the recommendations of Slope Stability Study carried by CSIR-CIMFR, Dhandbad and the implementation status of same is being submitted to IRO, MOEF&CC on six monthly basis.

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	be submitted to the Ministry's Integrated Regional Office (IRO) along with the six monthly compliance report.	
xvi.	The Project Proponent shall adhere to the recommendations of the Ground vibration study carried out by CSIR- Central Institute of Mining and Fuel Research, Dhanabad. The implementation status of the same shall be submitted to the Ministry's Integrated Regional Office (IRO) along with the six monthly compliance report.	The project is implementing the recommendations Ground vibration study carried by CSIR-CIMFR, Dhandbad and the implementation status of same is being submitted to IRO, MOEF&CC on six monthly basis.
xvii.	The Project Proponent needs to install the permanent water sprinklers along the haul road and the approach road. 10 nos. of fog canon/mist sprayer of at least 40 m throw shall be installed at various locations in the mine lease area. Effective dust suppression system shall be adopted at the transportation site and in the other parts of the mining lease to arrest the fugitive dust emission.	The project has installed 3100 M length of fixed sprinkling system all along the mines haul and approach roads. Photo enclosed.  Number of fog mist cannons are placed at various locations for effective dust suppression purposes. Photo enclosed.
xviii.	The air pollution control equipment's like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, and other areas prone to air pollution. PP shall take necessary measures to avoid generation of fugitive dust emissions. The dense planation shall be carried out in the vicinity of the crusher. The Stack emission monitoring of the Crusher shall be carried out at periodic intervals.	The project has installed dry fog system and hoods in mineral handling plants. The project has also established necessary measures to avoid generation of fugitive dusts emissions by engaging mobile water sprinkling tankers and mist cannons. The stack emission monitoring will be carried at regular intervals.  Photo enclosed.
xix.	Vacuum cleaner for cleaning of dust from permanent haul road within the lease area and workshop for vehicle washing facility shall be provided.	The project has already engaged road vacuum clean machine for dust control measures. The project has also established vehicle washing facility for the workshop.  Photo enclosed.
XX.	The Project Proponent needs to install the proposed rooftop rainwater harvesting structure and additional rainwater harvesting structures within 6 months from the date of issue of this EC.	The project is under implementation for rain water harvesting structures in mines premises and planned for rooftop rain water harvesting structures within 6 months, for which survey and design work is completed by the PP.
xxi.	The budget of Rs. 58.71 Crores to address the concerns raised by the public including in the public hearing to be completed within 3 years from the date of	The project has planned to complete the public hearing concerns in phased manner within 3 years. However, the project has initiated the works like drinking water facility, skill

	start of mining operations. PP shall	development center, Garment unit, electricity etc.
	comply with all action plans made for public hearing concerns and make regular maintenance and record the progressive activity outcomes.	Photo enclosed.
xxii.	The Project Proponent should adopt the proper mitigation measures as proposed under EMP with budgetary provision of Rs. 4.425 Crores. The adoption of mitigation measures and monitoring of the same as proposed in the EMP shall be done under the supervision of the qualified environmental personnel. The implementation status of the same shall be submitted to the Ministry's Integrated Regional Office.	The project has appointed qualified environment persons for implementation of proper environmental safeguard measures like Air, Water, Soil, Noise and Waste management. The monitoring of the same is also carried as per EMP. The implementation status of same is also submitted to IRO, MoEF&CC on regular basis. Environment Cell structure is enclosed as annexure-5, Envt. Expenses as Annexure-6.
xxiii.	The Project Proponent should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground). A dedicated team to oversee environment management shall be setup at site which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis instead of engaging environment monitoring laboratories/consultants. Any noncompliance or infringement should be reported to the concerned authority.	Presently, the project is carrying the environmental monitoring by engaging NABL and MoEF&CC accredited laboratories for Air, Water, Soil, Noise etc.  The project has planned to establish in-house environment laboratory for monitoring and measurement of same. The project has already set up an environment management cell having environment engineers, chemists, staffs etc. for monitoring of the environmental parameters.
xxiv.	The Project Proponent needs to complete the entire peripheral plantation under green belt, safety barrier plantation and gap plantation within three years from the start of mining operations. The project Proponent should plant quality sapling of appropriate height of native and fruit bearing species. In case of tall transplants (seedlings) the seedlings should have proper trained root stock with root biomass commensurate with seedling height to ensure good growth after out planting. Plantation shall be undertaken in consultation with the State Forest Department. The Project Proponent shall make the actual count on the saplings	The project is carrying the plantation as per approved mining plan and gap filling plantation in safety zone areas, during reporting FY 2022-23, the project has planted 750 no. of saplings in safety zone areas. It also ensured that, healthy saplings are planted of native species. The project has also developed a captive Nursery within the ML area having capacity of 5000 nos. The project is also monitoring the survival of the plants and records are maintained. The project is also ensuring the survival of more than 95% with proper care like watering, manuring, weeding etc. The plantation status of the same is being submitted to IRO, MOEF&CC on regular basis.

	planted and its survival rate and in case of failure of achievement of 95% survival	
	rate, action plan for achieving the target survival rate shall be submitted to the Ministry's Integrated Regional Office.	
xxv.	The Project Proponent needs to submit the action taken report on plantation, damage recovery, Natural Resource Augmentation Plan (NRAP), Community Resource Augmentation Plan (CRAP) annually to the Ministry's Integrated Regional Office which should be monitorable and verifiable. The period of addressing these issues is restricted to a period of 3 years.	The Project is abiding by the said condition and will submit the action taken report on plantation, damage recovery, Natural Resource Augmentation Plan (NRAP), Community Resource Augmentation Plan (CRAP) annually to the Ministry's Integrated Regional Office.
xxvi.	As committed by the Project Proponent, multi-specialty hospital shall be established.	The project is working on it for which land identified in the vicinity, further development status of same will be submitted accordingly.
xxvii.	The Project Proponent shall provide the solar pumps to the local farmers.	The project has already worked out the requirements and its in process for providing the solar pumps to local farmers.
xviii.	The Project Proponent shall explore the possibility of using electric/CNG/Solar based equipment's and machineries to reduce the diesel consumption	The project has already engaged 1 no. of electric dumper vehicle in mining operations and planned to establish more numbers. And the roof top based solar power plant work is under process for camp and office premises.
xxix.	Approval/permission of the CGWA/SGWA shall be obtained before drawing ground water for the project activities, if applicable. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.	The project has obtained the GW NOC from CGWA for drawing of the ground water vide approval no. CGWA/NOC/ MIN/ ORIG/ 2022/ 14843 dt. 21.03.2022.
xxx.	The Project Proponent shall also organize employment-based apprenticeship/ internship training program every year with appropriate stipend for the youth and other programs to enhance the skill of the local people. The data should be maintained for the training imparted to the persons and the outcome of the training, for the assessment of the training program should be analyzed periodically and improved accordingly.	The project has planned to organize employment based apprenticeship / internship training programs every year with provision of stipend for the unemployed youths and programs for enhancing the skills of the local people. However, the project has established a Skill Development Center with Industrial Security Academy, where local youths are trained and skilled to become Industrial Security guards and employed. Apart from that, local girls are also trained for operating LMV & HMV vehicles through simulation training and in-house driving skills. Presently, they are operating LMV vehicles in mines.

xxxi.	The Project Proponent needs to obtain	The project has already obtained the permission
	the permission for withdrawal of Surface	for withdrawal of the surface water from Dept. of
	water from the Department of Water	Water Resources for 1200 KLD quantity of
	Resources, Government of Maharashtra	surface water from River Bandiya.
	before start of mining operations of this	
	instant EC.	
xxxii.	The Project Proponent should periodically	The Project is periodically monitoring and
	monitor and maintain the health records of	maintaining the health records of the mine
	the mine workers digitally prior to mining	workers digitally. Regular surveillance is also
	operations, at the time of operation of	carried through regular occupational health
	mine and post mining operations. Regular	check-up as per DGMS guidelines.
	surveillance shall be	We have also organized number of Mega Medical
	carried through regular occupational	camp for the benefit of the local people and also
	health check-up every year for mine	the monitoring the health impacts due to mining
	workers. PP shall also organize medical	activity.
	camp for the benefit of the local people	
	and also the monitor the health impacts	
	due to mining activity.	
xxiii.	The mining lease holder shall, after	We will abide by the said condition and undertake
	ceasing mining operations, under take re-	the re-grassing of the mined out areas as per
	grassing the mining area and any other	approved mining plan.
	area which may have been disturbed due	
	to their mining activities and restore the	
	land to condition which is fit for growth of	
	fodder, flora and fauna etc. The	
	implementation report of the above said	
	condition shall be submitted to the	
	Ministry's Integrated Regional Office	
xxiv.	The Project proponent shall take	We are abiding by the said condition and the
	necessary other clearances/permissions	project has obtained the all the clearances from
	under various Acts and Rules if any, from	the respective authorities.
	the respective authorities / department.	

#### **B. Standard Conditions**

#### I. Statutory Compliance

SI.	Condition	Action plan / Compliance Status
No.		
1.	This environmental clearance (EC) is subject to orders / judgement of Hon'ble Supreme Court of India, Hon'ble NGT and any other court of Law, Common Cause conditions as may be applicable.	We are abiding the said condition.
2.	The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble	We are abiding the said condition.

	Supreme Court dated the 2 August 2017 in Writ Petition (Civil) No. 114 of 2014 in	
	the matter of Common Cause versus	
3.	Union of India and Ors.  State Government concerned shall	We are abiding the said condition.
	ensure that mining operation shall not	3
	commence till the entire compensation	
	levied, if any, for illegal mining paid by the Project Proponent through their	
	respective Department of Mining &	
	Geology in strict compliance of judgment	
	of Hon'ble Supreme Court dated the 2ndAugust 2017 in Writ Petition (Civil) No.	
	114 of 2014 in the matter of Common	
4	Cause versus Union of India and Ors.	MAC and a biding booth and distance
4.	The PP shall follow the mitigation measures provided in MoEF&CC's OM	We are abiding by the said condition.
	no. Z-11013/57/2014-IA.II 9M) dt.	
	29.10.2014, titled "impact of mining	
	activities on habitations – issues related to the mining projects wherein habitation &	
	villages are the part of the mine lease	
	areas or habitation and villages are	
5.	surrounded by the mine lease area"  A copy of clearance letter will be marked	Its complied with submission of letters to local
	to concerned Panchayat/local NGO, if	Panchayat /NGOs etc.
	any, from whom suggestion/	
	representation has been received while processing the proposal.	
6.	State Pollution Control Board should	Its being complied by MPCB.
	display a copy of the clearance letter at	
	the Regional office, District Industry Centre and Collector's office/ Tehsildar's	
	Office for 30 days.	
7.	The project authorities should advertise	Its being complied and advertisement is
	at least in two local newspapers widely circulated, one of which shall be in the	carried in two local newspapers widely circulated daily i.e. "The Lokmat" (largest
	vernacular language of the locality	circulated Marathi daily) and "The Times of
	concerned, within 7 days of the issue of	India" English daily newspaper on dt.
	the clearance letter informing that the project has been accorded environmental	04.03.2023. The details of same is also submitted to IRO, MoEF&CC, Nagpur vide our
	clearance and a copy of the clearance	letter dt. 04.03.2023.
	letter is available with the State Pollution	
	Control Board and also at web site of the Ministry of Environment, Forest and	
	Climate Change at ( <u>www.parivesh.nic.in</u> ).	
	A copy of the same should be forwarded	

	to the Regional Office for compliance and	
	record.	
8	The PP shall inform the MoEF&CC for any	We are abiding by the said condition.
	change in ownership of the mining lease.	
	In case there is any change in ownership	
	or mining lease is transferred, the PP	
	needs to apply for transfer of EC as per	
	provisions pf the para 11 of EIA	
	Notification, 2006 as amended from time	
	to time.	

#### ii. Air quality monitoring and preservation

The Project Proponent shall install a minimum of 3 online AAQ station with 1 in upwind and 2 in downwind direction based on long term climatological data about wind direction such that an angle of 120 deg. is made between 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, 18.11.2009 covering the aspects of transportation and use of heavy machineries in the impact zone. 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 within 3 months in front of the main gate of the mine site.

We are abiding the said condition and presently 1 CAAQM station is already established covering all the aspects as specified. 2 more CAAQM station will also be installed in upwind & downwind directions such that an angle of 120 deg is maintained. The ambient air quality is also 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 is also digitally displayed in front of the main gate of the mine site.

O. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM10 and PM2.5 such as haul road, loading and unloading point and transfer points. The fugitive dust emissions from all the sources shall be controlled regularly 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

The project has installed 3100 m length of fixed sprinkling system on the mines haul roads, engaged 6 x 15 KL capacity mobile water tanker sprinklers for dust suppression purposes of the other part of the mines lease area.

All the crusher and screen plants are equipped with dry fog system and hoods over the conveyor belts. All the monitoring test results confirms very well within the norms.

Photo enclosed.

system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEF&CC/ CPCB.

#### III. Water quality monitoring and preservation

11. In case, immediate mining scheme envisages intersection of ground water table, then EC shall become operational after receiving formal clearance from CGWA. In case mining operation involves intersection of ground water table at a large stage, then PP shall ensure that prior approval from CGWA & MOEF&CC is in place before such mining operations. The permission for intersection of GW table shall be essentially be based on detailed hydro-geological study of the area.

There is no intersection of the ground water table as the ultimate mining working is at 460 RL and ground water table exists at 260 RL.

12. PP shall regularly monitor and maintain records wrt Ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezometer installations during the mining operation in consultation with CGWA / SGWD. The report on changes in ground water level and quality shall be submitted on 6-monthly basis to the RO of Ministry, CGWA and SGWD / SPCB.

We are abiding by the said condition and already installed one number piezometer within the ML area. If any changes in GW level and quality we will inform the authority accordingly.

Photo enclosed.

13. The shall undertake regular monitoring of natural water resources / springs and perennial nalalhs existing / flowing in and around the mines lease including U/S and D/S. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and or alteration be made to water bodies during mining operations without justification and prior approval of MoEF&CC. the monitoring of water courses / bodies existing in lease area shall be carried out four times in a year viz. Pre -monsoon (April-May), Monsoon (August), Post monsoon (November) and

We are abiding the said condition and carrying out the monitoring water bodies as per the guidelines. There is no obstruction of water bodies within the ML area. The project is also carrying flow rate and quality analysis on regular basis as per specified schedule. The reports of same is also submitted to the authorities on six monthly basis.

	Winter (January); and the record of monitored data may be sent regularly to Ministry of Environment and Forests and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, SPCB and CPCB clearly showing the trend analysis on six monthly basis.	
14.	Quality of polluted water generated from mining operations which include COD in mines run off, acid mine drainage and metal contamination in run off shall be monitored along with 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-201112/1/2006-IA.II9M) dated 27.05.2009 issued by MoEF&CC may also be referred in this regard.	The quality test of water generated from mines is being carried on regular basis having number of parameters. The monitored data is being displayed on electronically and displayed at mines entry gate for public domain as well as in the company website i.e. <a href="https://www.lloyds.in">www.lloyds.in</a> Photo enclosed.
15.	PP shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground resources in the area in consultation with the Regional Director, Central Ground Water Board / SGWD. A report on amount of water recharged needs to be submitted to RO, MoEF&CC annually.	The project has already implemented rain water harvesting structures in mines premises having number of Check dams and settling ponds at the strategic location of the project area. Photo enclosed.
16.	Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the standards prescribed from time to time. The standards shall be prescribed through CTO issued by the concerned SPCB. The workshop effluent shall be treated after its initial passage through Oil and grease trap.	The project has established oil & grease trap having oil skimmer for treatment of workshop effluents at the Maintenance Workshop Area. Photo enclosed.
17.	The water balance / water audit shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of MoEF&CC and SPCB / Committee.	We will abide by the said condition and the water balance / water audit will be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of MoEF&CC and SPCB / Committee.

#### IV. Noise and vibration monitoring & prevention

18.	distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.	The project is monitoring the peak particle velocity as per DGMS guidelines periodically. There is no presence of any village within 1.75 Kms from the lease boundary. The results are very well within the norms.
19.	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPE's must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.	There is no presence of any village within 1.75 Kms from lease boundary. No lighting system is facing towards the villages, so there is no disturbance of the biological clock of the villagers. The mine is also carrying the controlled blasting, so there is no impact of dust and noise on the villagers.
20.	The PP 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 labourers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers / personals / labourers 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.
V.	Mining Plan	
21.	Plan, inter alia including total excavation, mining technology, lease area, scope of working.	The PP is adhering according to approved Mining Plan, inter alia including total excavation, mining technology, lease area, scope of working.
22.	The land use of the mines 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 excavations-a-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved	The project is working as per the approved mining plan. There is no such back filling proposal in the scheme of mines until 2027.

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.

#### VI. Land reclamation

23. The over burden, waste and topsoil generated during the mining operations shall be stacked at ear marked OB dump sites only and it should not be kept active for a long period of time. The physical parameters of the OB / waste dump / top soil dump like height, width and angle of slope shall be governed as per the approved mining plan and the guidelines / circulars issued by DGMS. The top soil shall be used for land reclamation and planation.

The over burden is stacked at the ear marked areas within the mines lease area. The top soil generated is utilized for plantation purposes. The OB / waste dump / top soil dump like height, width and angle of slope are maintained as per the approved mining plan and the guidelines / circulars issued by DGMS. The dump slopes are also covered with Coir mat and grass seed applications. The toe of dump is provided with gabion box type retaining walls. Photo enclosed.

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 climatic parameter and help in adaptation of plant species to the microclimate. The Gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/compactors thereby ensuring proper filling/ leveling of dump mass. In critical area, use of geo textiles/geomembranes/clay liners/Bentonite shall be undertaken foe stabilization of the dump.

The slope of dumps are properly terraced and stabilized with coir mat and grass seed applications. The dumps are consolidated with the help of dozer/compactors thereby ensuring proper filling/ leveling of dump mass. In critical area, geo textiles/ geo-membranes are used for stabilization of the dumps. Photo enclosed.

25. Catch drain, settling tanks and siltation ponds of appropriated size shall be constructed around the mine working, minerals yards and top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/River/Ponds etc) The collected water should be utilized for watering the mine, area, roads, green belt development, Plantation etc, The drains/

In the entire area, where ever possibility of wash off, flow of sediments etc. is anticipated retaining wall, garland drain and check dam have been. The Retaining wall followed by garland drains, Check dams, Sedimentation pit, silting pit structures got implemented and being de-silted after each monsoon based on the annual average rain fall data. Beside this no's of water check dam cum reservoir has been constructed. Numbers of catch drains

sedimentation sumps etc, shall be desilted regularly, particularly after monsoon season, and maintained properly.

and sedimentation pits have been constructed around the mines working area in order to avoid the silt entry into first and second order streams as well as nearby water bodies. Time to time de-silting activity is being followed. Photo enclosed.

Check dams of appropriated 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 year data) and maximum discharge in the mine and its adjoin area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/sit materials. The sedimentation pits/sumps shall be constructed at the corner of the garland drain.

In the entire area, where ever possibility of wash off, flow of sediments etc. is anticipated retaining wall, garland drain and check dam have been. The Retaining wall followed by garland drains, Check dams, Sedimentation pit, silting pit structures got implemented and being de-silted after each monsoon based on the annual average rain fall data. Beside this no's of water check dam cum reservoir has been constructed. Numbers of catch drains and sedimentation pits have been constructed around the mines working area in order to avoid the silt entry into first and second order streams as well as nearby water bodies. Time to time de-silting activity is being followed. Photo enclosed.

#### VI. Transportation

27.

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

The project is abiding by the said condition.

The project strengthening the roads i.e. from Hedri to Etapali and further upto Allapali.

Its ensured to maintain the good condition by periodical maintenance.

	should obtain Pollution Under Control (PUC) certificate for all the vehicles from	
	authorized pollution testing centers. [If	
	applicable in case of road transport.	
28.	The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipment's like bag filters, vacuum suction hoods, dry logging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be	The project has installed 3100 m length of fixed sprinkling system on the mines haul roads, engaged 6 x 15 KL capacity mobile water tanker sprinklers for dust suppression purposes of the other part of the mines lease area.  All the crusher and screen plants are equipped with dry fog system and hoods over the conveyor belts. All the monitoring test results confirms very well within the norms.
	fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.	
29.	The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.	The Project Proponent is carrying the gap filling plantation in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. During FY 2022-23, 750 nos. of plant saplings planted as gap filling.
30.	The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to	The project is working as per the approved mining plan. There is no such back filling proposal in the scheme of mines until 2027.

		the local people. The CPCB guidelines in	
		this respect shall also be adhered. The	
		density of the trees should be around	
		2500 saplings per Hectare. Adequate	
		budgetary provision shall be made for	
		protection and care of trees.	
	31.	The Project Proponent shall make	The total mines lease area is Forest land,
		necessary alternative arrangements for	there is no occurrence of the any grazing land
		livestock feed by developing grazing land	within the ML area.
		with a view to compensate those areas	
		which are coming within the mine lease.	
		The development of such grazing land	
		shall be done in consultation with the	
		State Government. In this regard, Project	
		Proponent should essentially implement	
		the directions of the Hon'ble Supreme	
		Court with regard to acquisition of grazing	
		land. The sparse trees on such grazing	
		ground, which provide mid-day shelter	
		from the scorching sun, should be	
		scrupulously guarded/ protected against	
		felling and plantation of such trees should	
		be promoted.	
IX	. Pub	lic Hearing and human health issues	
	32.	Project Proponent shall make provision	The PP has made the provision for the
	<b>0</b>	for the housing for workers/labors or shall	housing for workers/labors outside the lease
		construct labor camps within/outside	area with necessary basic infrastructure/
		(company owned land) with necessary	facilities like fuel for cooking, mobile toilets,
		basic infrastructure/ facilities like fuel for	mobile STP, safe drinking water, medical
		cooking, mobile toilets, mobile STP, safe	health care, créche for kids etc.
		drinking water, medical health care,	
		créche for kids etc. The housing may be	
		provided in the form of temporary	
		structures which can be removed after the	
		completion of the project related	
		infrastructure. The domestic waste water	
		should be treated with STP in order to	
		avoid contamination of underground	
		water.	
Α		Corporate Environment Responsibility (	CER)
	33.	The Project Proponent shall submit the	A time bound action plan will be submitted for
	-	time- bound action plan to the concerned	the activities committed during public
1			

time- bound action plan to the concerned regional office of the Ministry within 6 months from the date of issuance of

environmental clearance for undertaking the activities committed during public consultation by the project proponent and

A time bound action plan will be submitted for the activities committed during public consultation by the project proponent and as discussed by the EAC.

	as discussed by the EAC, in terms of the	
	provisions of the MoEF&CC Office	
	Memorandum No.22-65/2017-IA. III dated	
	30 September, 2020. The action plan	
	shall be implemented within three years of	
	commencement of the project.	
XI. Misc	cellaneous	
34.	The Project Proponent shall prepare	The digital map of the entire lease area will be
	digital map (land use & land cover) of the	submitted once in 5 years for monitoring of
	entire lease area once in five years	land use pattern t IRO, MoEF&CC, Nagpur.
	purpose of monitoring land use pattern	
	and submit a report to concerned	
	Regional Office of the MoEF&CC	
35.		We are abiding by the said condition.
	the Regional Office regarding date of	3 ,
	financial closures and final approval of the	
	project by the concerned authorities and	
	the date of start of land development work	
36.	The Project Proponent shall submit six	We are abiding by the said condition and
	monthly compliance reports on the status	submitting the six monthly compliance reports
	of the implementation of the stipulated	on the status of the implementation of the
	environmental safeguards to the	stipulated environmental safeguards to the
	MOEFCC &its concerned Regional Office,	MOEFCC & its concerned Regional Office,
	Central Pollution Control Board and State	Central Pollution Control Board and State
	Pollution Control Board.	Pollution Control Board.
37.	A separate 'Environmental Management	A separate 'Environmental Management Cell'
	Cell' with suitable qualified manpower	with suitable qualified manpower set-up under
	should be set-up under the control of a	the control of a Senior Executive.
	Senior Executive. The Senior Executive	The Senior Executive is directly reporting to
	shall directly report to Head of the	Head of the Organization.
	Organization. Adequate number of	
	qualified Environmental Scientists and	
	Mining Engineers shall be appointed and	
	submit a report to RO, MoEF&CC.	
38.	The concerned Regional Office of the	We are abiding by the said condition and
	MoEF&CC shall randomly monitor	ready to extend the full support while visit of
	compliance of the stipulated conditions.	the officials.
	The project authorities should extend full	
	cooperation to the MoEF&CC officer(s) by	
	furnishing the requisite data / information	
	/ monitoring reports.	
39.	In pursuant to Ministry's 0.M No 22-	We are abiding by the said condition.
	34/2018-IA.III dated 16.01.2020 to comply	The same and an arranged and arranged and arranged and arranged arranged and arranged arrange
	with the direction made by Hon'ble	
	Supreme Court on 8.01.2020 in W.P.	
	(Civil) No114/2014 in the matter Common	
	Cause vs Union of India, the mining lease	
	Saass vs Smort of India, the Infilling lease	

	holder shall after ceasing mining operations, undertake 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.	
40.	The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection	We are abiding by the said condition.
41.	Concealing factual data failure to comply with any or submission of false/ fabricated data and of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986	We are abiding by the said condition.

## **PHOTOGRAPHS**

#### **Photographs of Environmental Compliance Management**



**CAAAQ Station for monitoring** 



**Air Quality Monitoring** 



Fixed Sprinkling System for haul road dust suppression







Hydraulic mobile water sprinkling



Mist cannon for dust suppression in mineral storage areas





**CFDS System in Crusher and Screen Plant** 





Road Sweep cum Vacuum clean machine



Truck covered with tarpaulins





Hood over conveyor belts



**Installation of Piezometer** 



Electronic display baord in front gate



Check dam





Check weir in strategic location







Coir mat application on dump slopes





**Road Side Avenue Plantation** 



Awareness Program

