



**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(Impact Assessment Division)**

To,

The General Manager-ICC  
Hindustan Copper Limited  
M/s Hindustan Copper Limited, Indian Copper Complex,  
Moubhandar, Ghatsila, East Singhbhum, Jharkhand-832103

**Subject:** Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/JH/MIN/26614/2012 dated 05 May 2016. The particulars of the environmental clearance granted to the project are as below.

1. EC Identification No.	<b>EC22A001JH124978</b>
2. File No.	J-11015/80/2012-IA-II(M)
3. Project Type	New
4. Category	A
5. Project/Activity including Schedule No.	1(a) Mining of minerals
6. Name of Project	Surda Copper Mine
7. Name of Company/Organization	Hindustan Copper Limited
8. Location of Project	Jharkhand
9. TOR Date	23 Jan 2015

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 30/05/2022

(e-signed)  
Pankaj Verma  
Scientist E  
IA - (Non-Coal Mining sector)

*Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.*

*This is a computer generated cover page.*

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**F.No. J-11015/80/2012-IA. II (M)**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**Impact Assessment Division**  
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Indira Paryavaran Bhavan  
Vayu Wing, 3<sup>rd</sup> Floor, Aliganj,  
Jor Bagh Road, New Delhi-110 003

Dated: 30<sup>th</sup> May, 2022

To

M/s Hindustan Copper Limited  
(Shri Sanjay Kumar Singh-Unit Head/ICC)  
Indian Copper Complex  
P.O Moubhandar-832103  
Dist-East Singhbhum, Jharkhand

**Subject: Surda Copper Mine for production of 0.9 million TPA (ROM) by M/s Hindustan Copper Ltd., located at village (s) - Surda, Sohada, Pathargora, Benashole villages and Forest Block No. 1098, Tehsil - Ghatsila, District - East Singhbhum, Jharkhand (MLA:323.16 ha) – Environmental Clearance- reg.**

Sir,

This has reference to proposal no. IA/JH/MIN/145023/2020 of M/s Hindustan Copper Limited is for production of 0.9 Million Tonne per annum (MTPA) of Copper Ore from – Surda Mine- (located at Survey Nos.100,101,102, 160 &1098, at Villages Surda, Sohada, Benasole, Pathargora, Forest Block, Tehsil Mosaboni, District East Singhbhum, State Jharkhand. The mining lease is located on Survey of India Topo-sheet no. 73 J/6 bounded between latitudes 22° 32"42" N and 22° 34"19" N and longitudes 86° 25"41" E and 86° 26"42" E.

2. The said project/activity is covered under Category 'A' [Sl.no. 1(a) of Schedule: "List of project or activities requiring prior environmental clearance"] of MoEF&CC.

3. The project proponent submitted that the initially the proposal of TOR was considered by the Expert Appraisal Committee in its meeting held during 20-22 June, 2012 to determine Terms of Reference (TOR) for undertaking detailed EIA study. The Committee observed that this is a case of violation of the Environment (Protection) Act, 1986 as the mine continues to operate after it fell due for renewal without requisite prior environment clearance. Accordingly, the Ministry initiated the actions on violation as per OM dated 12.12.2012 and issued letter to Project Proponent dated 08.05.2013, 02.09.2013 and 07.04.2014 for taking actions on violation. The Hon'ble High Court of Jharkhand, in its WP (C) no. 2364 of 2014, dated 28.11.2014, in the matter of Hindustan Copper Limited VsUol & Ors., has quashed the order dated 07.04.2014 and directed to prescribe the Terms of Reference for capacity expansion and renewal of the mining lease of Surda Copper mine. The Ministry has examined the issues and the TOR was issued vide letter no J11015/80/2012-IA.II(M) dated 23rd January, 2015. Further Proponent submitted the EIA/EMP report online to the Ministry for seeking environmental clearance after conducting public hearing. The proposal was appraised in the EAC held during June 22-23, 2016 and July 21-22, 2016. Based on the information submitted, discussion held, the Committee recommended the proposal for

environmental clearance subject to forest clearance of Surda copper mine. PP vide letter no HCL/DIR(M)/EIA-EMP/SRD/MoEf/10/2019 dated 03.10.2019 submitted on PARIVESH portal on 28.10.2019, the matter has been examined in the Ministry and noted that PP has submitted the past production details from 1992-93 till 2018-19 based on the production details submitted by the PP it was observed that PP has been carried out the Mining operations without Prior EC Under the EIA notification 1994/2006 and exceeded the base year(i.e.1993-94) production to deal such cases Ministry issued the vide notification no 804(E) dated 14.03.2017. Thus the proposal was forwarded to the EAC (V) sector as a lateral entry proposal with the approval of the competent authority since the proposal was under the consideration in the Ministry at the time of notification issued by the Ministry. PP vide letter no.HCL/Ho/EIA/EMP/SRD/ MoEFCC/ 2020 dated 04.02.2020 submitted the FORM-I. The proposal was considered in the EAC (Violation) in its meeting held during 3<sup>rd</sup>-4<sup>th</sup> February, 2020. The Committee based on the discussion held and document submitted by the PP recommended the proposal for Surda Copper Mine 0.9 million TPA (ROM) by M/s. Hindustan Copper Ltd., located at village (s) - Surda, Sohada, Pathargora, Benashole villages and Forest Block No. 1098, Tehsil - Ghatsila, District - East Singhbhum, Jharkhand (MLA: 388.68 ha) for issuing the Term of Reference (ToR) on 21.02.2020 under the provisions of Ministry's notification 804(E) dated 14.03.2017 along with the specific Term of Reference for undertaking EIA and preparation of Environmental Management Plan (EMP).

4. The proposal was considered for Environmental Clearance in EAC meeting held on 22<sup>nd</sup> -23<sup>rd</sup> April 2020, 4<sup>th</sup> June,2020 and 6<sup>th</sup> -7<sup>th</sup> August,2020.

5. Project proponent submitted that baseline environmental data generated by Env. Engg. Laboratory of M/s MECON for the period 06-02-2020 to 06-03-2020. Total Mining Lease Area of the project is 388.68 Ha having 149.03 ha of Forest land in it. Out of 149.03 Ha of FL, 83.51 Ha has been diverted whereas 65.52 Ha is yet to be diverted. PP apprised EAC that any u/g mining or any activities related to u/g mining shall not be carried out in the forest land within mining lease for which FC to be acquired. EAC noted that PP has submitted the land use plan of 323.16 ha (excluding the forest land for which FC to be obtained). EAC also noted that credible action against the PP u/s 19 of E(P) act 1986 has not been initiated. EAC also made an observation that instant project is for the first time EC and therefore should not be considered as an expansion project as far as EC is concerned. Accordingly, title of the project may be modified. PP apprised EAC that credible action has been initiated and complaint case has been filed by the State PCB, Jharkhand.

6. EAC deliberated the layout plan clearly demarcating the forest land (149.03 ha) already diverted (83.51 ha) and yet to divert (65.52 ha), Revised damage cost, Revised Post Mining Land Use Plan and Water Quality Entering the Stream from Mining &also ground water quality around the mine etc. Regarding Forest Clearance which is co-terminus with Mining lease, PP apprised EAC that Forest Department vide letter no. 1507 dated 15.06.2020, directed to submit document of lease extension for extension of FC as per extended period of Surda Mining Lease. HCL will be submitting the prescribed documents to the State Forest Department for Extension of FC.

7. Project Proponent submitted that the Surda is part of Mosaboni Mining lease and the mine lease was granted over an area of 6923ha for the period of 20 years i.e. from 16.06.1939 to 15.06.1984 in favour of M/s Hindustan Copper limited. The mine lease was 1<sup>st</sup> renewed from 16.06.1984 to 15.06.2004. Further PP submitted that the mine lease area of 2430ha was surrendered on 5.08.1994 to the state Government. The 2<sup>nd</sup> renewal was granted from 16.06.2004 to 15.06.2014 over an area of 388.68ha

and 4104.32 ha was surrendered vide gazette notification dated 22.06.2004. PP submitted that for the 3<sup>rd</sup> renewal was applied and obtained the Form-D on 18.03.2013 over the area of 388.68ha. Further PP submitted that the lease was extended for the period of 5 years w.e.f 15.07.2017 till 31.03.2020 vide letter no 517(M) dated 18.03.2015 and the lease deed was executed for 5 years. Now PP submitted that the mine lease renewal application was submitted to the State government as per the provisions of Mineral (Mining by Government Company) Rule 2015.

8. Total mine lease area is of 388.68ha out of which 149.030 ha is forest land, 111.048 ha is agricultural land, 118.696ha is Barren land, 3.504ha is surface bodies; and Settlements is 3.165ha. PP reported that the Stage-II Forest diversion permission has been accorded by Ministry of Environment and Forest vide letter no. 8-64/93-FC dated 15.05.1998 for Mosaboni, Surda, Dhoboni and Pathargora mining lease area over of 189.74ha (47.49ha is for surface mining already broken up and 142.25ha for underground mining) of Forest Land in favour of M/s Hindustan Copper Limited. Mining Plan along with Mine Closure Plan was approved by the IBM, vide No. 314 (3)/2012-MCCM (CZ)/ MP- 36/181, dated 18.02.2015, under rule 24 A of MCR, 1960 and rule 23(B) of MCDR 1988. As per the Approved mine plan the mining will be carried out by mechanised underground method by Horizontal Cut & Fill, Room & Pillar and Post Pillar Methods with with drilling and blasting. PP submitted that mining Plan for further period of 5 years from 1.04.2020 has been provisionally approved by IBM letter No. RAN/ ESB/Cu/MP-36/2019-20 dated 02.04.2020. PP submitted that total geological reserve is 28.57 Million Tonne, Extractable reserve is 20 Million Tonnes, Percent (%) of extraction is 70%. PP submitted that life of mine will be 30 years. PP submitted that one external waste rock dump created during early 1950s, Area of each dump shall be 5.49 ha, Height of each dump shall be ~5 m, Quantity (in MCM) of OB in each dump shall be 0.14 MCM, No. of OB dumps reclaimed is one.

9. Project Proponent reported that there is no National Parks, Wildlife Sanctuaries, Tiger Reserves located within 10 km radius of the mining lease boundary. One Schedule-I species namely Python molurus was reported within the study area. It was informed by the project proponent that conservation plan for Schedule I species has been prepared for the adjacent Rakha Mining Lease which will be implemented in case of Surda Mine Lease also. The said Conservation Plan for the adjacent Rakha mining lease is under approval.

10. The Public Hearing was conducted on 15<sup>th</sup>December, 2015 under the chairmanship of Shri B. K. Munda, Additional District Magistrate, East Singhbhum, District, Jharkhand. The representative of Regional Office from Jharkhand State Pollution Control Board was also present. The Committee discussed the issues raised during public hearing. There is no court case/ litigation pending against the project. The total project cost is estimated to be 203 Crores. The capital cost of the project towards implementation of EMP is estimated to be Rs. 157.00 Lakhs and recurring cost to be Rs. 104.0 Lakhs per year.

11. The project proponent submitted the past production details vide letter no.2995 dated 18.09.2019 from 1992-93 to 2017-18 and PP letter nil dated nil, as per production details it resembles PP had been carried out the mining operations from 1992-93 to2017-18 and 2018-19 without Prior EC under the EIA notification 1994/2006. Thus the instant proposal is deemed fit in to the violation of E (P) Act, 1986 as the mine was in operation without obtaining Environmental Clearance. Project Proponent has submitted the affidavit no IN-DL19351350784015S dated 04 February, 2020 in compliance of the Ministry's OM no. 3-50/2017-IA.III (Pt.), dated 30th May

2018 w.r.t. judgment of Hon'ble Supreme Court dated 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.

12. The project proponent reported that the total water requirement will be 1300m<sup>3</sup>/Day out of which 160m<sup>3</sup>/day will be required for drinking purpose. PP also reported that 1530m<sup>3</sup>/day water demand will be met by recycling effluents generated at the mine for the industrial usage. PP submitted that existing Ground water level in (M): 12 – 16 m below ground level. PP also submitted that permission for drawl of ground water received from Central Ground Water Authority vide letter no. 21-4(155)/MER/CGWA/2013-1095 dated 13 July, 2015. Withdrawal of surface water submitted to Secretary, Water Resources Department, Govt. of Jharkhand vide letter no. HCL/ICC/GM(M)/SRD/13 dated 18.05.2016.

13. The total capital cost Rs. 5.6478 Crores capex incurred between 1993-94 to 2019 and Rs. 203 Crores will be spent on expansion Total Cost is Rs 211.8519 Crore. The capital cost of the project towards implementation of EMP is estimated to be Rs. 157.00 Lakhs and recurring cost to be Rs. 104.0 Lakhs per year. PP submitted that budget earmarked for CSR activity for 2019 – 20 – Rs. 1.9773 Crores. The project will be generating the employment of 1600 persons.

14. EAC in its meeting held on 04.06.2020 deliberated on the information as presented and submitted by the PP. EAC observed that PP has submitted the letter dated 05.08.2020 from Secretary, Mines, Department of Mines and Geology, Govt. of Jharkhand regarding extension of mining lease validity. EAC further noted PP has submitted the total budgetary provision of Rs 4.8425 Crores for Remediation Plan, Natural and Community Resource Augmentation Plan. EAC deliberated on the damage cost assessed by the PP. EAC also deliberated on the activities proposed under the plans and advised PP that proposed activities should not be confined within mining lease area instead should be planned in the surrounding. EAC further advised PP to revise the cost of rain water harvesting structures under NRA and development of roads under CRA. EAC, therefore, in view of the aforesaid suggestion, advised PP to revise the damage cost and activities as suggested and to be presented before the EAC by tomorrow i.e on 07.08.2020.

15. PP in view of the above suggestions of the EAC (Violation), revised the cost for Remediation Plan, Natural Resource Augmentation Plan and Community Resource Augmentation Plan to Rs 570.71 Lakhs. EAC also noted that Credible Action U/s 15 of the E(P) Act has been initiated and case has been filed in the Court of Chief Judicial Magistrate, Jamshedpur. EAC after detailed deliberation on the information submitted by the PP (EIA/EMP report, PH issues, Form 2, Additional information, Annexures, etc), recommended the proposal of Surda Copper Mine for production of 0.9 million TPA (ROM) located at village (s) - Surda, Sohada, Pathargora, Benashole villages and Forest Block No. 1098, Tehsil - Ghatsila, District - East Singhbhum, Jharkhand (MLA: 323.16 ha) by M/s Hindustan Copper Ltd for grant of Environmental Clearance subject to the compliance of following Specific conditions in addition to all Standard conditions applicable for such projects:

16. The Ministry of Environment, Forest and Climate Change has examined the proposal in accordance with the Environmental Impact Assessment Notification, 2006 and further amendments thereto; and after accepting the recommendation of EAC (Violation) meeting held during August, 6-7, 2020, here by decided to accord the Environmental Clearance (EC) under the provisions thereof to the above mentioned proposal of M/s Hindustan Copper Ltd of Surda Copper Mine for production of 0.9 million TPA (ROM) located at village (s) - Surda, Sohada, Pathargora, Benashole

villages and Forest Block No. 1098, Tehsil - Ghatsila, District - East Singhbhum, Jharkhand (MLA: 323.16 ha) for grant of Environmental Clearance subject to the compliance of following Specific conditions in addition to all Standard conditions applicable for such projects:

#### **A. Specific Conditions**

- I. EAC recommended for an amount of Rs 570.71 Lakhs towards Remediation plan and Natural and Community Resource Augmentation plan to be spent within a span of three years. The details are given below:

#### **Remediation Plan along with Cost:**

Attributes	Activity Proposed	Year 1	Year 2	Year 3	Total in ₹lakhs
Air & Noise Environment	Providing medical equipment / instruments to Community Health Centre, Kendadih and Sub-Divisional, Hospital Ghatshila	5	5	2	12
	Construction of paved roads in Village Sohada.	7	7	4	18
<b>Total Air Environment</b>		<b>12</b>	<b>12</b>	<b>6</b>	<b>30</b>
Water Environment	Construction of check dam on nallas to ensure clarified water for downstream users to be selected in consultation with State administration.	3	3	1.5	7.5
<b>Total Water Environment</b>		<b>3</b>	<b>3</b>	<b>1.5</b>	<b>7.5</b>
Biological Environment	Plantation of locally growing variety of trees which provide fruits and other Non-Timber Forest Produce (NTFP) in consultation with District administration & local panchayats outside the ML area. ~45000 trees will be planted @ ₹ 500 per tree	100	80	45.85	225.85
	Free distribution of 25,000 saplings of locally growing fruit trees procured from State Forest Department @ ₹15 per sapling ( Rate charged by Jharkhand State Forest Dept.)	1.5	1.5	0.75	3.75
<b>Total Biological Environment</b>		<b>101.5</b>	<b>81.5</b>	<b>46.6</b>	<b>229.6</b>
<b>Total Fund For Remediation Measures</b>		<b>116.5</b>	<b>96.5</b>	<b>54.1</b>	<b>267.1</b>

#### **Natural Resource Augmentation Plan with the cost:**

S I. N o.	Activity Proposed	Y e a r 1	Y e a r 2	Yea r3	Total (in ₹ lakh s)
	Solar Drinking water structure (Borewell with Motor fitting) including Soak Pit for Water Recharging in villages Matiya & Boraghat / schools in consultation with local authorities.	3	3	2	8
	Conversion of conventional drinking water structure in to solar Drinking water structures in villages Rakha & Surda	3	3		6
	Rainwater Harvesting structures in nearby villages in consultation with district administration.	1 3	1 0	5	28
	Solar Power system in 2 nos. Community Halls at Kendadihand & Bhaduri villages	1	1	-	2
	Increase in tree density of degraded forests equivalent to ~31500 trees outside ML area at cost of ₹ 500 per tree. Areas to be identified in consultation with concerned local Govt. officials.	6 0	6 0	3 7. 3 2	15 7.3 2
	Plantation of ~8000 trees in Forest Blanks outside ML Area at cost of ₹ 500 per tree in consultation with concerned local Government officials.	1 5	1 5	1 0	40
	<b>Total Fund For Natural Resource Augmentation Plan</b>	<b>9 5</b>	<b>9 2</b>	<b>5 4. 3 2</b>	<b>24 1.3 2</b>

**Community Resource Augmentation Plan with the cost:**

Sl. No.	Activity Proposed	Year	Year 2	Year 3	Total (in ₹ lakhs)
1	Installation of Sanitary Napkin Vending Machines and Incinerators with maintenance for a period of 03 years. The napkins would be provided free of cost.	1	1	1	3
2	Providing Smart class/ digital support/ equipment / text-books for school library for supporting schools in line with the Vidya Bharti Model of the New Education Policy. The schools will be selected in consultation with local elected people's representatives and District Administration.	14	10	10	34
3	Construction of paved roads and conversion of unpaved roads to paved roads in nearby villages in consultation with local elected	10.29	10	5	25.29

people's representatives and District Administration.				
<b>Total fund for Community Resource Augmentation plan</b>	<b>25.29</b>	<b>21</b>	<b>16</b>	<b>62.29</b>

**Summary:**

Sl. No.	Plan	Total(in ₹ lakh)			
		Year-1	Year-2	Year-3	Total
1.	<b>Cost of Remediation Plan</b>	116.5	96.5	54.1	267.1
2.	<b>Natural Resources Augmentation Plan</b>	95	92	54.32	241.32
3.	<b>Community Resources Augmentation Plan</b>	25.29	21	16	62.29
<b>Total Fund</b>		<b>236.79</b>	<b>209.5</b>	<b>124.42</b>	<b>570.71</b>

- II. Remediation plan shall be completed in 3 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.
- III. Fund allocation for Corporate Environment Responsibility (CER) of Rs. 368 lakhs/- to be implemented as per the details submitted to the Ministry and to be spent in three years.
- IV. 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.
- V. 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 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- VI. 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 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- VII. 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.
- VIII. Project proponent shall take necessary other clearances/permissions under various Acts and Rules if any, from the respective authorities / department.
- IX. 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 their mining activities and restore the land to condition which is fit for growth of fodder, flora and fauna etc.

- X. Wildlife conservation plan for Schedule I species shall be implemented as approved by the Competent Authority.
- XI. Ecology & Biodiversity Conservation as included in the EIA/EMP should be strictly followed to mitigate the impacts as predicted in the EIA/EMP

## **B. Standard conditions**

### **I. Statutory compliance**

- 1) This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.
- 2) The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.
- 3) The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.
- 4) The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".
- 5) A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.
- 6) State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.
- 7) The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change ([www.parivesh.nic.in](http://www.parivesh.nic.in)). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional Office for compliance and record.
- 8) The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is

transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

## **II. Air quality monitoring and preservation**

9) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.

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

## **III. Water quality monitoring and preservation**

11) In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then project proponent shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.

12) Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.

13) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease including upstream and downstream. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May),

monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

14) Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J- 20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.

15) Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEFCC annually.

16) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.

17) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

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

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

19) The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. project proponents must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.

20) The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The project proponent shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.

## **V. Mining plan**

21) The Project Proponent shall adhere to approved mining plan, inter alia, including, total excavation (quantum of mineral, waste, over burden, inter burden and top soil etc.); mining technology; lease area; scope of working ( method of mining, overburden & dump management, O.B& dump mining, mineral transportation mode, ultimate depth of mining, concurrent reclamation and reclamation at mine closure; land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life; etc.).

22) The shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. Project proponent shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.

## **VI. Land reclamation**

23) The Overburden (O.B.), waste and topsoil generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB / waste dumps / topsoil dump like height, width and angle of slope shall be governed as per the approved Mining Plan and the guidelines/circulars issued by D.G.M.S. The topsoil shall be used for land reclamation and plantation.

24) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.

25) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.

26) Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.

## **VII. Transportation**

27) No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, project proponent 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 project proponent in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers. [If applicable in case of road transport]

28) The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. Project proponent shall take necessary measures to avoid generation of fugitive dust emissions.

#### **VIII. Green Belt**

29) The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

30) The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.

31) The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.

## **IX. Public hearing and human health issues**

32) Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.

## **X. Corporate Environment Responsibility (CER)**

33) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. 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.

## **XI. Miscellaneous**

34) The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.

35) The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

36) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.

37) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEFCC.

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

39) In pursuant to Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020 to comply with the direction made by Hon'ble Supreme Court on 8.01.2020 in W.P. (Civil) No 114/2014 in the matter Common Cause vs Union of India, the mining lease holder shall after ceasing mining operations, undertake 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.

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

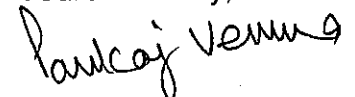
18. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attracts action under the provisions of Environment (Protection) Act, 1986.

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

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

21. This issues with the approval of Competent Authority.

Yours faithfully,



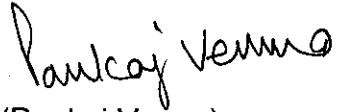
(Pankaj Verma)  
Scientist 'E'

**Copy to:**

1. . The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi
2. . The Secretary, Department of Mines & Geology, Government of Jharkhand, Secretariat, Ranchi
3. . The Secretary, Department of Environment, Government of Jharkhand, Secretariat, Ranchi
4. . The Secretary, Department of Forest, Government of Jharkhand, Secretariat, Ranchi
5. . The Chief Wildlife Warden of the State Govt. of Jharkhand, Ranchi
6. . The Additional Principal Chief Conservator of Forests, Regional Office (ECZ), Bunglow no. A-2, Shyamali Colony, Ranchi, Jharkhand- 834 002.
7. . The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110 032.
8. . The Chairman, Jharkhand State Pollution Control Board, Ranchi, Jharkhand

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9. . The Member Secretary, Central Ground Water Authority, A-2, W3,  
Curzon Road Barracks, K.G. Marg, New Delhi-110 001.
- 10.. The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines,  
Nagpur-440 001.
- 11.. The District Collector, Singhbhum (East), Jharkhand.
- 12.. Guard File
- 13.. MoEF&CC website (PARIVESH Portal)

  
(Pankaj Verma)  
Scientist E