



J-11015/62/2019-IA.II(M)
Government of India
Ministry of Environment, Forest and Climate Change
Impact Assessment Division

Indira Paryavaran Bhavan,
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Jor Bagh Road, New Delhi-110 003

Dated: 22nd March, 2021

To

M/s Jayaswal Neco Industries Limited,
Siltara Growth Centre,
Bilaspur Road, Siltara,
Raipur, Chhattisgarh-493111.

Subject: Enhancement of Iron ore mining capacity from 0.05 MTPA to 2.95 MTPA with 1.0 MTPA Beneficiation plant at the mining lease area (35.74 Ha out of 192.25 Ha) of M/s Jayaswal Neco Industries Limited located at village – Chhotedongar, Tehsil and District–Narayanpur, Chhattisgarh-Environmental Clearance (EC) regarding.

Ref: [Proposal no: IA/CG/MIN/181523/2019; File No. J-110105/62/2019-IA. II(M)]

Sir,

This has reference to online proposal no. IA/CG/MIN/181523/2019 for grant of Environmental Clearance for Enhancement of Iron ore mining capacity from 0.05 MTPA to 2.95 MTPA with 1.0 MTPA Beneficiation plant in the mining lease area of 192.25 Ha located at village – Chhotedongar, Tehsil and District – Narayanpur, Chhattisgarh. The mine lease area falls under the Survey of India Toposheet No 65 E/7 and bounded by latitude 19°25'40.356"N - 19°27'09.423"N and longitude 81°15'37.175"E - 81°17'34.507"E.

2. As per EIA Notification dated 14th September, 2006 as amended from time to time, the project falls under Category A or Activity 1(a) as the mining lease area is greater than 100 ha.

3. The Project Proponent applied for Terms of Reference (TOR) vide Proposal No: IA/CG/MIN/108636/2019 dated 20.06.2019 and submitted the requisite information and documents. The proposal was considered in the EAC meeting held during 27-28 August, 2019 wherein the Committee recommended for issue of Terms of Reference and the Ministry accorded TOR to M/s Jayaswal Neco Industries Limited on 20.03.2020. PP also submitted that the Environment Clearance was granted by the Ministry vide Letter No. J-11015/152/2005-IA.II (M) dated 05.02.2007 under EIA Notification, 2006 to M/s Jayaswal Neco Limited for iron ore mining with production capacity of 50000 tonnes per annum (0.05

EC- M/s Jayaswal Neco Industries Limited-Chhattisgarh

Page 1 of 15

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MTPA). PP mentioned that the company name has been changed from M/s Jayaswal Neco Limited to M/s Jayaswal Neco Industries Limited on 05.11.2007. Thereafter, PP applied for Transfer of EC for name change vide Proposal No. IA/CG/MIN/121273/2019 dated 18.10.2019 and accorded Transfer of EC vide F. No. J11015/62/2019-IA.II (M) dated 09.10.2020 in the name of M/s Jayaswal Neco Industries Limited.

4. The Project Proponent applied vide proposal no. IA/CG/MIN/181523/2019 for grant of EC and submitted the Form 2 and EIA Report after conducting the Public Hearing. As the complete details was not provided an EDS was raised on 11.11.2020 for submission of requisite information. PP uploaded the information in the PARIVESH vide Lr JNIL/MoEF/CD/2020/452 dated 12.11.2020 and the proposal was placed in the 24th EAC meeting held during 09-11th December, 2020 and the Committee after detailed deliberations deferred the proposal for the want of the requisite information. PP submitted the requisite information vide Lr. JNIL/ENV/ Chhotedongar/2020/170 dated 19.12.2020 and the proposal was again considered in the 26th EAC meeting held during 11-13th January, 2021, wherein the Committee recommended the proposal.

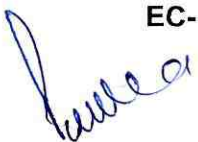
5. The Project Proponent submitted that the Government of Chhattisgarh vide Letter No-3-52/98/12/2, Bhopal dated 21.05.1998 issued Letter Of Intent for grant of mine lease of iron ore over 192.25ha, located at village – Chhotedongar, Tehsil and District – Narayanpur, Chhattisgarh for a period of 30 years. The State Government of Chhattisgarh granted mining lease over 192.25Ha vide Letter No. F-3-52/98/12/2 dated 05.05.2005. PP submitted that the mining lease agreement was executed on 21.06.2005 for a period of 30 years with effect from 21.06.2005 to 20.06.2035. Since the Mining Lease is a captive lease for the Integrated Steel Plant of JNIL, as per the provisions of the Mines & Minerals (Development & Regulation) Amendment Act, 2015, the period of lease was extended to 50 years from the date of execution of the Lease deed. Accordingly, the District Collector issued letter vide Lr No. Khanij/ Khanipatta-01/05/2016/1512, Narayanpur dated 27.06.2016 and the Mining Officer vide Letter No. 1966/Khanij/KhaLip1/ML8/96/2016, Jagdalpur dated 09.08.2016 for execution of the Supplementary Lease Agreement. The Supplementary Lease Agreement was executed on 08.08.2017 in the name of M/s Jayaswal Neco Industries Limited extending the mining lease over Chhotedongar Iron Ore Deposit up to 20.06.2055.

6. The Project Proponent submitted that the Review of Mining Plan along with Progressive Mine Closure Plan was approved by Indian Bureau of Mines (IBM) vide letter Narayan/Iron Ore/MP-1220/2018-Raipur/573 dated 17.12.2019 for the period of 2020-21 to 2024-25 in the name of M/s Jayaswal Neco Industries Limited.

7. The Project Proponent submitted that the mining will be carried out by mechanized opencast method which involves drilling, blasting, crushing and screening, washing, loading, and transportation with the combination of with the combination of excavator, rock breaker, wagon drill of 100 mm diameter for blast hole drilling, air compressor, ripper dozer, hyva dumper, pay loader, truck mounted water sprinkler, weigh bridge, storage system of fuel oil with dispensing unit, crushing & screening units, beneficiation plant, hired trucks for transporting mineral, ambulance, DG sets, water pump etc.

8. The Project Proponent submitted that the Geological mineral reserves are estimated as 87.046 Million Tonnes and the Mineable reserve are 77.521 Million Tonnes. Considering ROM production @ 2.95 MTPA the anticipated life of whole of the mine will be about 27 Years. PP reported that daily 54 holes will be drilled for blasting, the requirement of explosives is 1051 kg/day (1946 kg x 54) and the NONEL (non electric delay detonators) shall be used for blasting. It is estimated that about 64,000 Cum waste shall be generated during the proposal Period. This waste shall be in the form of Overburden, Side Burden or Intra-burden. The earmarked Waste Dump Site is located towards south-east of working pit within diverted land of 27.65 Ha. Thus, at the end of Conceptual Period in the said mining block there will be a quarry of 17.58 Ha from 862m to 808m i.e. 54m depth comprising of 9 Numbers of benches each of 6m height and 9m width. Overall slope of the quarry will be maintained at 35°. The excavated ROM will be transported to the Crushing and Screening unit with a capacity of 1000 TPH located inside the lease area for sizing and screening. The lump to fines ratio at precrushing stage is expected to be about 1:0.30. The graded lumps and fines with requisite Fe content shall be directly discharged to the Integrated Steel Plant. Some part of the ROM shall be sent to Beneficiation Plant from where two products viz. Concentrates and Tailings would be available. As the Tailings would also be having about 20% to 22% Fe content, it is proposed to sell this waste to cement plant / brick manufacturing unit / tiles manufacturing unit or will be blended with graded ore and sold. The mined Iron Ore Lumps and beneficiated Iron Ore Fines suitable for use in the ISP shall be loaded into the trucks and shall be sent to the designated Weighbridge for weighing and for onward dispatch to the Integrated Steel Plant of the Company located at a distance of about 260 Kms from the Mine in Siltara Growth Centre near Raipur. The proposed road for the transport of iron from the mine face to end user passes through forest land and specific permission for the transport of iron ore from the forest land has been obtained.

9. The Project Proponent submitted that the hydro geological study concludes that there is no intersection of ground water during mining down to the depth of 75 m bgl. The maximum RL of mine bottom will be 808 m AMSL whereas water table will be below 600 m AMSL. The depth of water level in pre-monsoon is in the range of 5.30 to 9.60m bgl and in post monsoon period is in the range of 0.70 to 4.36m bgl. The average annual fluctuation in the area is 5.03m. PP submitted that the out of 330 KL/Day water requirement, 325 KL/Day water shall be sourced from Madin River and perennial Nalla locally named Kadam Nalla located at 3 Km away from the mining Lease area. It is proposed to deploy 4 numbers of water tankers each having 10 KL capacity for carrying water from River / Nalla to Mine Site for using it for various purposes. The 5 KL/ Day domestic water requirement shall be sourced from the Bore Well proposed to be sunk near foot hill region of the mine site. Potable water will be pumped through bore well and shall be supplied to the mine site through separate water tanker. PP submitted the NOC for ground water abstraction for 5.0 m³ /day obtained from CGWA vide CGWA/ NOC/ MIN/ ORIG/ 2020/7734 which is valid from 18.03.2020 and valid up to 17.03.2022. PP also informed that the application for use of surface water from Madin River / Kadam Nalla of 330m³ /day submitted to WRD, Chhattisgarh. PP submitted that the process waste-water generated from the plant will be treated in thickeners and will be re-circulated. Excess water from the processed ore will be recovered through Dewatering screens and that from tailings will be removed through pressure filter technique and the water thus collected will be re-circulated in the process.



Thus, there will be only a net process water loss of about 231 m³ /day in the form of moisture in finished product and tailings.

10. The Project Proponent submitted that the total area proposed under plantation shall be 21 Ha which will bring about 11% of the Project Area. Considering rate of 2000 trees per hectare, the Project involves plantation of 42,000 trees in 27 years of the Mine Life. Species proposed for greenbelt development are Azadirachta indica (Neem), Acacia nilotica (Babool), Punica granatum (Anar), Terminalia arjuna (Arjuna), Ziziphus mauritiana (Ber), Mangifera indica (Aam), Musa acuminata (Banana), Dalbergia sissoo (Shesham) Ficus religiosa (Pipal), Ocimum sanctum (Tulsi), Syzygiumcumini (Jamun), Tamarindus indica (Imli) etc. having survival rate of more than 90%. PP submitted that the budget earmarked for the green belt including plantation shall be Rs 50 lakhs.

11. The Project Proponent submitted that the total land in the mining lease area (192.25 ha) is forest land for which the Government of Chhattisgarh (Forest Department) had recommended the total 192.25 hectare mining lease area for grant of Stage 1 Approval vide letter No F5/69/98/10/3 dated 07.12.1998. MoEF& FC granted in-principle approval for diversion of forest over an area of 91 Ha, the MoEF&CC has accorded Final Approval (Stage – II) over an area of 35.74 Ha (27.65 Ha for mining and other purposes over Ore Body - I and 8.09 Ha for Approach Road & Infrastructure) in 1st phase vide Letter No. 8-31/99-FC dated 18-01-2007. Out of 35.74 Ha, the Forest Department granted permission to enter upon 5 Ha land vide Letter No. Ma Chi/593 dated 05-02-2016. Stage II (Final Clearance) for the balance 55.26 Ha Forest area is in process and for 101.25 Ha, Stage I (In principal Approval) is also initiated. However, NPV for the total 192.25 Ha had been deposited in the Adhoc-CAMPA fund. The Project Proponent has deposited NPV of Rs. 16,94,70,330/- (Rupees Sixteen Crore Ninety Four Lakh Seventy Thousand Three Hundred and Thirty Rupees Only) for 192.25 ha. Besides this, payment for compensatory afforestation for 91 Ha and safety zone of 8.0 Ha of Rs. 1,69,81,118/- and Rs. 6,62,175/- respectively has been deposited to the competent authority. After the payment of NPV by Company, the State Government has initiated and forwarded the detailed status of the proposal to the MOEF for necessary action on balance land 101.25 hac. MOEF has asked the State Government to submit required latest status regarding 101.25 ha balance land and compliance of stage 2 of balance land of 56 Ha. PP also submitted that the mining lease area is located in the Chhotedongar Reserved Forest and is surrounded by forest land in all directions and there is no National Park, Wildlife Sanctuary, Biosphere Reserve and Migratory Corridor of Wild animals up to 15 km from the mining lease area.

12. The Project Proponent submitted that there is no presence of Schedule-I species and submitted the letter from the Forest Department dated 19.12.2019 for authenticated list of flora and fauna, distance from protected area and involvement of forest land.

13. The Project Proponent submitted that the baseline data for ambient air quality (PM₁₀, PM_{2.5}, SO₂ & NO₂), water quality, noise level, soil and flora & fauna was generated for the period during March-May 2019 (13 weeks) & October - November 2019 (6 weeks) as per the CPCB norms. PP submitted that the air quality monitoring has been carried out at 6 locations. The air quality concentrations of PM_{2.5} and PM₁₀ for all the 6 AAQM stations were found between 17.3 to 34.6 µg/m³ and 31.9 to 59.6 µg/m³ respectively. The

concentrations of NO_x and SO₂ were found to be in range of 7.1 to 23.3 µg/m³ and 7.1 to 14.5 µg/m³ respectively. AAQ parameters in the study area have been found well within prescribed norms. The noise Levels in the ChhoteDongar Iron Ore Mine lease buffer zone was observed in the range of 36.6 to 54.9 dB (A). PP further submitted that ground water samples were collected from 6 locations and surface water from 4 locations within study area. PP submitted that the overall quality of water samples indicated that the water quality of all the sources is satisfactory of the area are not polluted except the surface water samples which showed bacteriological contamination possibly from surface run-off. PP also submitted that total of 7 samples were collected from 7 different locations representing waste land, agriculture land and forest land at 3 different depths viz. 0-30, 30-60 and 60-90 cm below the surface. The forest land soil is found to have sufficient nutrients. The agricultural land soils are also found suitable for cultivation of climatic crops and have good fertility. PP submitted that post project concentration of various air pollutants is well within the prescribed standards.

14. The Project Proponent reported that Public Hearing for the project was conducted on 09.10.2020 by Chhattisgarh Environment Conservation Board. The advertisement for public hearing was published in "Patrika" dated 06.09.2020 and "Business Standard Newspaper" dated 07.09.2020. Considering the prevailing of COVID19 situation, the District Collector had ensured in the advertisement itself that all the protocol specified by the Central/State Government shall be strictly adhered to during the conduct of the said Public Hearing. The Public hearing was conducted under the chairmanship of District Collector, Narayanpur at Post Matric Boys Hostel, Village Chhotedongar, Tahsil and District Narayanpur. The Public Hearing was attended by around 200 persons out of which 183 persons have signed on the register while 76 persons (which include local males, females, unemployed youths, social workers and eminent elders) expressed their view during the course of Public Hearing. The issues raised during public hearing were also deliberated during the meeting are mainly on Employment, Health, Education, Drinking Water, Roads, Renovation of Temple, mobile network. PP submitted that to utilize the funds allocated under CER for complying with the issues raised during public hearing for the project.

15. The Project Proponent submitted that the capital CSR Budget has been worked out as per the expressed felt needs of villagers during Rapid Rural Appraisal. The proposed total capital budget is to the extent Rs. 30.85 Lakhs (Rupees Thirty Lakhs & Eighty five Thousand Only) and will be spent in core and buffer villages of study area during the first five years. About Rs. 23.90(Rupees twenty three lakhs ninety thousand only) would be spent as recurring expenditure for CSR activities respectively in the first five years. In addition to the CSR, JNIL proposes to undertake a number of activities as one time measure under the Corporate Environment Responsibility Initiative during the operation of Chhotedongar Iron Ore Mining Project. A budgetary provision of Rs. 85.58 Lakhs is proposed to be made for implementing the CER Activities. In line with the MoEF&CC OM dated 30th September 2020 and 20th October 2020.

16. The Project Proponent has submitted that the entire 192.25 Ha leasehold area of the Chhotedongar Deposit is forest land, the question of R & R does not arise in this Project. However, though the Action Plan against R & R is not required, a specific action plan towards the Project Affected Persons (PAPs) shall be required. It is proposed to provide

Skill development training to enhance the employability and self-employment for the local villagers, Services and Support of Social Organizations will be sought for assessment of felt needs of PAP's, Preference to procurement of support material or services, Involvement in plantation and allied activities, Support for non-farm activities for desiring persons, Medical checkups and appropriate support for medical facilities.

17. The Project Proponent submitted that the Capital Budget for Environmental Protection Measure is estimated to be Rs. 570.00 Lakhs and the Recurring Budget is estimated to be Rs. 65.00 Lakhs. The capital cost includes the following i) Rs 165.0 Lakhs for Air Pollution Control, ii) Rs 170 Lakhs for Water Pollution Control, iii) Rs 6.0 Lakhs for Noise & Vibration control, iv). Rs 55.0 Lakhs for Pollution monitoring, v). Rs 50.0 Lakhs for Conservation of Natural Resources vi). Rs 50.0 Lakhs for Greenbelt Development, vii). Rs 34 Lakhs for Occupational health and viii). Rs. 40.0 Lakhs for Miscellaneous purposes.

18. The Project Proponent submitted that for the safety of workers engaged at the dust generation points like drills, loading & unloading points, crushing etc., dust masks will be provided to prevent inhalation of RSPM/dust thereby reducing the risk of lung diseases and other respiratory disorders. Regular health monitoring of workers and nearby villagers in the impacted area, will be carried out by JNIL. In addition, the company will also carry out regular occupational health assessment of employees as per government regulations. All the employees in the mine and beneficiation plant will be subjected to pre-employment & periodic medical examination to assess the occupational health impacts. The tests will be conducted as per Form O as given in Mines Rules 1955. PP also submitted that periodical medical examination (Once in 3 years for >45 years age, once in 5 years once in 5 years <45 years age) & PPE for 30% of workers & Health insurance and training for all employees. PP reported that the total budget earmarked for occupational health is Rs 35.63 Lakhs (Capital) and Rs 22.05 Lakhs for (Recurring).

19. The Project Proponent submitted that the certified monitoring report for compliance of previous environmental clearance conditions from Regional Office of MoEF&CC vide F.No. : EC-3- 12/2007(ENV)/5937 dated 29.11.2019. PP also submitted the Consent to Establish (CTE) issued by Chhattisgarh Environment Conservation Board, Raipur vide Letter No. 3409 dated 12.06.2007. Consent to Operate (CTO) issued by the Regional Office (RO), Chhattisgarh Environment Conservation Board, Jagdalpur vide Letter No. 1841/RO/TS/CECB/ 2018 dated 07.03.2018 for 3 years from 01.04.2018 to 31.03.2021.

20. PP submitted the affidavit dated 16.07.2019 as per Ministry's O.M No 3- 50/2017 -IA. II(M) dated 30.05.2018 and mentioned that the company will comply 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. The affidavit also mentioned the environmental clearance will not be operational till such time that the company complies with all 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 as applicable. PP also submitted the authenticated production details vide letter dated 28.03.2018 for the year of 2015-16 and 2016-17 which was found within the EC capacity. Furthermore, PP submitted that the zero production for the year of 2017- 18, 2017-18 and 2019-20 (Up to May 2019)

vide letter dated 22.06.2019 due to the Naxalite problem and other law and order issues. PP also submitted an undertaking vide letter dated 29.10.2020 that information and data incorporated in the report for obtaining Environment Clearance are true and factual to the best of our knowledge and belief and we take the ownership of the information and data given in the report. Consultant, Srushti Seva Private Limited also submitted an undertaking vide letter dated 30.10.2020 that the data submitted is factually correct and we own the contents of information and data. Baseline environmental monitoring and analysis of air, water, noise, soil and meteorology have been carried out by M/s Nilawar Laboratories, Nagpur (NABL accredited).

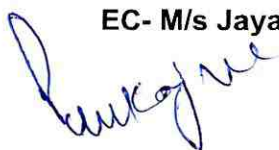
21. The Project Proponent submitted that the total Project Cost of the Project been estimated at Rs. 8558.78 Lakhs and 225 people (165 people for mining & 60 people for Beneficiation plant) will get employment in the mines.

22. The proposal was considered in the 26th EAC meeting held during 11-13th January, 2021 and corrigendum minutes dated 3-5 February, 2021. After detailed deliberations made by the Project Proponent and the Consultant, the committee noted that the presently PP is having Stage-II Forest Clearance for 35.74 Ha only; therefore the committee recommended the proposal for grant of environmental clearance for enhancement of Iron Ore mining capacity from 0.05 MTPA to 2.95 MTPA with 1.0 MTPA Beneficiation plant on 35.74 Ha diverted forest land out of the total mining lease area of 192.25 Ha of M/s Jayaswal Neco Industries Limited located at village – Chhotedongar, Tehsil and District – Narayanpur, Chhattisgarh State subject to the specific conditions in addition to the standard EC conditions applicable for non-coal mining projects.

23. 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 hereby accords the Environmental Clearance under the provisions thereof to the above mentioned proposal of M/s Jayaswal Neco Industries Limited for grant of Environmental Clearance for enhancement of Iron Ore mining capacity from 0.05 MTPA to 2.95 MTPA with 1.0 MTPA Beneficiation plant on 35.74 Ha diverted forest land out of the total mining lease area of 192.25 Ha of M/s Jayaswal Neco Industries Limited located at village – Chhotedongar, Tehsil and District – Narayanpur, Chhattisgarh State subject to the following specific conditions in addition to the standard EC conditions applicable for non-coal mining projects.

A. SPECIFIC CONDITIONS

- i. Project proponent shall not use the filter cake either for road making or pit filling till the suitability test is carried out. Till then cake should be stored in a safe place without causing any environmental Impacts.
- ii. Tailings converted into cake by using pressure filter needs to be tested for its suitability either for making the road or to store in tailing dumps from environmental point of view such as dust generation etc. by the PP from the reputed agency like CRRI.



- iii. Project Proponent as given in the EMP must monitor noise, ground vibration and air quality all around the lease boundary of 35.74 Ha during blasting and to ensure that the impacts do not reach the nearby forest area.
- iv. As the Public Hearing has been carried out for the entire 192.25 Ha, PP after taking Stage-II Forest Clearance for remaining area i.e. 55.26 Ha and Stage-I Forest Clearance for balance 101.25 Ha; may again approach the Ministry for undertaking mining in the remaining area with the proper mining plan.
- v. All the public concerns as expressed and mentioned in the EIA report be implemented and addressed by the project proponent within a year from the start of mining operations.
- vi. Project Proponent should undertake the peripheral plantation as shown in the surface plan for 35.74 Ha within a period of 6 months with the seedlings of 6-8 ft height having at least 90% survival rate.
- vii. The Project Proponent submitted that the recycled water will be 1913 KLD. It should be ensured that the EMP including tertiary treatment as mentioned in the EIA report shall be implemented and spillage of water outside the ML shall not be permitted.
- viii. Project Proponent shall obtain permission for withdrawal of ground water as well as using surface water from River/Nallah from the concerned authority before starting the mining operation.
- ix. The Project Proponent shall include the budget for the betterment of schools nearby and also to facilitate the online education system by providing Wi-Fi connectivity and desktops/tablets.

B. Standards 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".

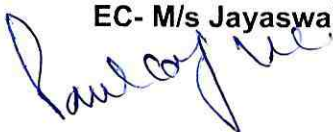
- (5) A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.
- (6) State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District 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). 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

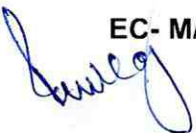
- (11) In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that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



- (12) Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
- (13) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease including upstream and downstream. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.
- (14) Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No.J- 20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.
- (15) Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEFCC annually.
- (16) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.
- (17) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/ Committee.

IV. Noise and vibration monitoring and prevention

- (18) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
- (19) The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations.



Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.


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

V. Mining plan

- (21) The Project Proponent shall adhere to approved mining plan, inter alia, including, total excavation (quantum of mineral, waste, over burden, inter burden and top soil etc.); mining technology; lease area; scope of working (method of mining, overburden & dump management, O.B& dump mining, mineral transportation mode, ultimate depth of mining, concurrent reclamation and reclamation at mine closure; land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life; etc.).
- (22) The shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.

VI. Land reclamation

- (23) The Overburden (O.B.), waste and topsoil generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB / waste dumps / topsoil dump like height, width and angle of slope shall be governed as per the approved Mining Plan and the guidelines/circulars issued by D.G.M.S. The topsoil shall be used for land reclamation and plantation.
- (24) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.
- (25) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.
- (26) Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into



adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.

VII. Transportation

- (27) No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers. [If applicable in case of road transport].
- (28) The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

VIII. Green Belt

- (29) The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.
- (30) The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.
- (31) The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall

be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/protected against felling and plantation of such trees should be promoted.

IX. Public hearing and human health issues

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

X. Corporate Environment Responsibility (CER)

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

XI. Miscellaneous

- (34) The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.
- (35) The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- (36) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.
- (37) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, 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

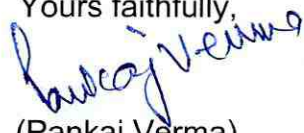
other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

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

24. 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.

25. 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.

26. This issues with the approval of Competent Authority.

Yours faithfully,

(Pankaj Verma)
Scientist 'E'

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Tel./Fax- 011- 24695264

Copy to:

- 1). **The Secretary**, Ministry of Mines, Government of India Shastri Bhawan, New Delhi.
- 2). **The Secretary**, Department of Environment, Government of Chhattisgarh.
- 3). **The Secretary**, Department of Mines and Geology, Government of Chhattisgarh, Chhattisgarh.
- 4). **The Chairman**, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
- 5). **The Chairman**, Chhattisgarh Environment Conservation Board, Nanak Niwas, Civil Lines, Raipur, Chhattisgarh.
- 6). **The Additional Principal Chief Conservator of Forests (C)**, Ministry of Environment, Forest and Climate Change, Regional Office (WCZ), Ground floor, East wing, New Secretariat Building, Civil Lines, Nagpur – 440 001.
- 7). **The Controller General**, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
- 8). **The Member Secretary**, Chhattisgarh State Pollution Control Board, Commercial complex, Chhattisgarh Housing Board colony, Kabir nagar, Raipur, Chhattisgarh.
- 9). **The Member Secretary**, Central Ground Water Board, 18/11, Jam Nagar House, Man Singh Road, New Delhi – 110 011.
- 10). **The Chief Wildlife Warden**, Govt., of Chhattisgarh, Aranya Bhavan, Jail Road,

Fafadih Chowk, Raipur – 492 001.

- 11). **The District Collector**, Narayanpur District, Govt. of Chhattisgarh.
- 12). **Guard File.**
- 13). **PARIVESH portal.**

Pankaj Verma
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