

Speed Post

No. J-11015/135/2015-IA.II (M)
Government of India
Ministry of Environment, Forest and Climate Change
Impact Assessment Division

Indira Paryavaran Bhavan,
Aliganj, Jor Bag Road,
New Delhi-110 003

Dated: 6th April, 2018

To,

M/s Emami Cement Limited

Village – Risda, Suhela Road, Balodabazar
District-Balodabazar- Bhatapara,
Chhattisgarh – 493 332
Email: dilipkumar.sharma@emamicement.com

Sub.: Enhancement of production from 3.17 Million TPA to 5.50 Million TPA(ROM) in respect of Limestone mines of M/s Emami Cement Limited in M.L. Area of 395.05 Ha located at Villages –Kukurdih & Risda, Tehsil - Balodabazar, District–Balodabazar–Bhatapara, Chhattisgarh- Environmental Clearance regarding.

Sir,

This has reference to above mentioned Environmental Clearance proposal of M/s Emami Cement Limited for enhancement of production capacity of limestone from 3.17 Million TPA to 5.50 Million TPA (ROM) in MLA of 395.05 Ha. The mine is located at Villages – Kukurdih & Risda, Tehsil - Balodabazar, District – Balodabazar – Bhatapara, Chhattisgarh. The mining lease area falls between 21°38'0.072"N to 21°39'48.105"N latitudes and 82°06'12.855"E to 82°07'30.230"E longitudes and on the Survey of India topo-sheet No. 64 K/2. The PP also presented the KML file during the presentation to indicate the location of mine lease on Google Earth/ DSS.

2. The proposal of ToR was considered by the EAC in its meeting held on May 15, 2015 wherein the Committee recommended for grant of ToR. The Ministry has issued ToR, vide letter even no. dated June 09, 2015. PP has submitted the EIA/EMP Report for appraisal of the Project before EAC. The proposal of EC was earlier considered in EAC meeting held during August 29-30, 2017 wherein the Committee deferred the proposal and sought requisite information. In this context, the PP vide letter dated 28.09.2017 and 30.10.2017 has submitted the information and accordingly the proposal was re-considered by the EAC in its meeting held during November 27-28, 2017 wherein the Committee deferred the proposal and sought report/comments from MoEFCC R.O. Nagpur. In this context, the Regional Officer, MoEFCC, Nagpur has visited the mine on 05.02.2018 and submitted the status of compliance of EC conditions, vide R.O. MoEFCC, Nagpur letter dated 10.02.2018. Accordingly the

proposal was re-considered in EAC meeting held during 26th – 27th February, 2018 wherein the Committee recommended the proposal for grant of Environmental Clearance for Enhancement of Limestone mine with production capacity from 3.17 Million TPA to 5.50 Million TPA (ROM) subject to examination of proposal under Hon'ble Supreme Court judgment dated 02.08.2017. In this context, the matter was examined and noted that the earlier EC was issued by the Ministry for production capacity of 3.17 Million TPA of limestone along with 2.5 Million TPA Cement production capacity and 40 MW of Captive Power Plant vide letter no.J-11015/372/2007-IA.II(I) dated 31.10.2011. The production started in the year 2016 and authenticated year wise production details have been furnished by Collector Office (Mineral), Balodabazar, Chhattisgarh, vide letter No-844/Khali2/Kh.P./2017 dated 01.09.2017. PP has not enhanced the production capacity after grant of EC.

3. Project Proponent reported that Mining lease over an area of 395.05 Ha was granted in favor of M/s Emami Cement Ltd. by Department of Mineral Resources, Govt. of Chhattisgarh on 08.09.2009. Later, Mining lease period was extended till date 6.9.2059 as per MMDR Amendment Act, 2015 for which lease deed was executed on 11.01.2017. The mining operations were commenced in 2016 and instant proposal for expansion in limestone production capacity is also sought for the same. The total lease area is 395.05 Ha comprising of non-forest private land (359.649 ha) and Govt. land (35.401 ha). The Mining Plan with mine closure plan was approved by IBM vide letter no. Raipur/Chup/MP- 988/Nagpur/2015/38–Raipur dated 05.08.2016.

4. The earlier EC was issued for production capacity of 3.17 Million TPA of limestone along with 2.5 Million TPA Cement production capacity and 40 MW of Captive Power Plant vide letter no.J-11015/372/2007-IA.II(I) dated 31.10.2011. The production started in the year 2016 and authenticated year wise production details have been furnished vide letter No-844/Khali2/Kh.P./2017 dated 01.09.2017 issued from Collector Office (Mineral), Balodabazar, Chhattisgarh.

5. The Project Proponent has reported that fully mechanized mining is carried out by open-cast method adopting a system of benches. Hydraulic excavators are deployed for progressing benches & for handling ore/ waste material. Dumpers will be deployed for hauling ore to the crushing plant or mineral stock and waste material to dump yard. Limestone produced will be sized in the crushing/ screening plant which is located within the mining lease. The limestone after crushing shall be transported by closed conveyor system to the cement plant. PP further informed that at conceptual stage, a total of 12.12 million tonne of top soil and 21.60 million tonne of solid waste will be generated. The present top soil and solid waste generation is 0.987 million tonne and 0.543 million tonne respectively. The waste generated at present and till the end of plan period will be dumped in earmarked area. In subsequent Schemes of mining, backfilling of the waste shall be planned in mined out pits. Stage wise dumping is proposed in the lease area and at conceptual stage, some waste will be backfilled in the mined out pits and remaining waste will be dumped in the dump area. Plantation will be done on the dump area and backfilled area. Limestone crusher of capacity 1200 TPH with double rotor heavy-duty impactor is already installed in the

non-mineralized barren zone i.e. southern part of south block for crushing of limestone. Coordinates of the crusher location are, Latitude 21°38'4.52"N and Longitude 82°06'44.24"E.

6. Project Proponent reported that there is no National Park, Wildlife Sanctuary, Biosphere Reserve, Wildlife corridors, Tiger/Elephant Reserves within 10 km radius of the mine site. There are 3 Reserved Forests falling within 10 km radius of the mine site. A letter was issued by DFO with no. MACHI/ RA/ 3766 dated 15.09.2009 indicating no forest land and protected area. The authenticated list has been obtained from the office of DFO, Balodabazar vide letter no. Tech. Officer/Mineral/ 503 dated 23.03.2016 and no Schedule-I species have been found in the core as well as buffer zone.

7. Project Proponent has reported that total water requirement after proposed enhancement will be 240 KLD. The water requirement for dust suppression is 125 KLD, green belt development & plantation is 100 KLD, domestic use, drinking & office toilets 5 KLD and mine workshop 10 KLD. The water requirement for drinking purpose will be fulfilled from the ground water which will be taken from plant after water treatment. NOC for withdrawal of ground water from Plant was obtained from Central Ground Water Authority vide letter no. 21-4(22)/NCCR/CGWA/2008-402 dated 24.03.2014.

8. The primary baseline data for site specific micro meteorology data, ambient air quality, water quality, noise level, soil and flora & fauna has been collected during Post monsoon Season i.e. from October – December, 2015. The monitoring results of ambient air, surface water, soil, ambient noise and ground water have been reported and no major divergence was observed with respect to concentration values of various parameters between collected samples. The soil quality was observed to be alkaline in nature. The general ground water level is 253 AMSL and water table level 6 m to 17 m below ground level (Pre monsoon season) and 4 m to 9 m below ground level (Post monsoon season). As per the mining details, mining operations will encounter water table and permission for intersecting the ground water table has been obtained from Central Ground Water Authority vide letter no. 21- 4(22)/NCCR/CGWA/2008-402 dated 24.03.2014. PP has reported that there are 2 seasonal nallahs within the lease area for which a safety zone of 50 meters has been left on either side of the nallah as a statutory barrier. The nallah will not be disturbed at any stage of mining. It was further noted by the Committee through KML file that an earthen bund of Kukurdih dam is near to the mine lease boundary and PP has reportedly left a safety barrier zone along the Kukurdih dam. However, the Committee noted that PP is required to submit a clarification from State Mining Department about the impact of mining operations on the Kukurdih dam as the project is operating since 2011. In this context the Office of Director of Geology and Mining, Naya Raipur, Chhattisgarh has clarified vide its letter no. 7320/Mine02/No.A63/2015 dated 27.10.2017 that it shall be the responsibility of lessee to comply the conditions of legal permission issued by Mine Concession Rule, 1916, Contract Conditions, MCDR, 1916, DGMS guidelines and related rules & guidelines of other institutions which address the issue of mining and

blasting operations on the Kukurdih dam and its infrastructure including ground water table. It has elsewhere mentioned in the letter that this dam is made up of soil and comes under the category of Micro Irrigation Project. As per the Mining Plan approved by Indian Bureau of Mines, mining is approved after leaving about 350 meters (Buffer Zone) of protected area which is more than the stipulated distance of 50 meters.

9. The Committee took note of the Compliance Report of MoEFCC R.O. Nagpur dated 17.08.2017 and noted that many of the conditions are mentioned as partially complied by the PP even after grant of EC vide letter no.J-11015/372/2007-IA.II(M) dated 31.10.2011. Observations were made with respect to Enterprise Social Commitment, status of green development, status of construction of catch drains, status of measures taken for control of pollution etc. which were noted by the Committee. In this context the PP informed that it has submitted the updated status of compliance to MoEFCC R.O. Nagpur vide letter dated 08.09.2017 which was forwarded to MoEFCC vide letter dated 29.09.2017. Accordingly, the Regional Office, MoEFCC, Nagpur has visited the mine again and submitted its report dated 10.02.2018 and mentioned the following compliances viz. (i) Construction of drains along the haul roads has been done and soil bunds along the haul road have been planted with trees. (ii) Details of monitoring reports on the ground water level and quality have been made available. 6 piezometers have been installed by ECL for the same. (iii) Inter-burden and other waste is stacked at designated sites, the bench formation is still under progress. (iv) Details regarding modification of the Mining Plan was made available during inspection. (v) Plantation has been undertaken along the haul roads and over the bunds created along the lease boundary. Nearly 3000 trees were planted during the last monsoon period. (vi) An expense of Rs. 55.30 crores has been incurred towards ESC in the field of health, education, sanitation and infrastructure development and detailed year wise action plan was made available. (vii) Corporate Environment Policy was made available along with the organizational chart. (viii) An amount of Rs. 3.30 crores has been incurred by ECL on eco development activities during last five years & current financial year and during the next 10 years, ECL has made budgetary provisions of Rs. 13.40 crores to undertake eco- development activities in the area. (ix) Environmental Cell with fully equipped laboratory has been setup by ECL. Organizational Chart was made available during inspection. (x) Details regarding Capital and recurring expenditure incurred on the environmental safeguards were made available during inspection. ECL has incurred an amount of Rs. 64.95 crores as capital cost in compliance conditions. Further, an amount of Rs. 7.23 crores has been incurred by ECL as recurring cost on the environment protection measures. (xi) With regards to the soil conservation measures, measures like construction of garland drains around the top soil bund, toe wall around the OB dumps, check dams etc. have been undertaken by ECL. Comprehensive Soil Conservation Plan is being prepared for the entire lease area and the same will be implemented in due course.

10. Total Project cost is Rs. 45 Crore. PP has earmarked Rs. 12.398 Crore towards environmental protection measures as a capital cost and Rs. 51.4 Lakhs was earmarked as annual recurring cost. The plan for greenbelt development and

afforestation/ plantation have been revised such that for 1st five years after expansion the budget shall be kept as ₹15.45 lakhs per annum, from 6th -10th year budget shall be kept as ₹59.225 lakhs, 11th -20th year budget shall be kept as ₹84.975 lakhs, 21st -30th year budget shall be kept as ₹136.99 lakhs, 31st -40th year budget shall be kept as ₹120.1495 lakhs and from 41st - End of mine life budget shall be kept as ₹299.73 lakhs.

11. Public hearing for the project was conducted on 01.04.2017 at New Constructed Govt. Boys Pre Sec. School at village – Risda, District- Balodabazar (CG) under the chairmanship of Upper Collector, Balodabazar – Bhatapara and in presence of Regional Officer, Chhattisgarh Environment Conservation Board. During the public hearing, the major issues raised by the local people were related to noise pollution by mining operations and cement plants, fall in groundwater table of the area due to mining, suspected illegal blasting, one employment per family for the youth, open storage of clinker and coal by PP, impact of mining on Kukurdih dam, opening of hospital in the area, adverse impact of mining on agriculture, non-payment of govt. rate to engaged laborers, installation of bio-gas plant for rural villages, alleged excess production by cement plant, non-payment of compensation till date and other local development related issues. PP submitted that an action plan is formulated to address and implement various issues related to health, sanitation, education, water supply and demands raised by local villagers. However, the Committee noted that the action plan is for the integrated complex of Cement plant, Mines and Captive Power plant with budgetary allocation of Rs.45.76 Crores for a time span of 10 years i.e. from 2016- 2026. PP reported that there is no court case/ litigation pending against the project.

12. 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 Emami Cement Limited for enhancement of production capacity of Limestone from 3.17 Million TPA to 5.50 Million TPA (ROM) in M.L. Area of 395.05 Ha, located at Villages –Kukurdihi & Risda, Tehsil - Balodabazar, District–Balodabazar–Bhatapara, Chhattisgarh** subject to compliance of the followings terms and conditions and environmental safeguards mentioned below:

A. Specific conditions

- 1) Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of Chhattisgarh and any other Court of Law, if any, as may be applicable to this project.
- 2) This Environmental Clearance is subject to obtaining requisite NBWL Clearance from the Standing Committee of National Board for Wildlife, if any, applicable for this Mining project.

- 3) No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.
- 4) The project proponent shall obtain Consent to Operate from the State Pollution Control Board, Chhattisgarh and effectively implement all the conditions stipulated therein.
- 5) No mining activities will take place until the permission of the State Government as per Law for diversion of land use change as applicable is obtained.
- 6) The Proponent should install online Ambient Air Quality Monitoring System and there should be system for display of digital AAQ data within 03 months at least at three locations as per wind direction. Online provisions of pH and turbidity meters at discharge points of STP and ETP and also at water storage ponds in the mining area may be made. Project Proponent should display the result digitally in front of the main Gate of the mine site.
- 7) Project Proponent reported that there are 2 seasonal nallahs within the lease area for which a safety zone of 50 meters has been left on either side of the nallah as a statutory barrier. The nallah will not be disturbed at any stage of mining. It was further noted by the Committee through KML file that an earthen bund of Kukurdih dam is near to the mine lease boundary and PP has reportedly left a safety barrier zone along the Kukurdih dam.
- 8) Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. The Recommendations of National Institute for ensuring good occupational environment for mine workers shall be implemented; The prevention measure for burns, malaria and provision of anti-snake venom including all other paramedical safeguards may be ensured before initiating the mining activities.
- 9) The mining operations will encounter water table and permission for intersecting the ground water table has been obtained from Central Ground Water Authority. In this context, Project Proponent shall comply the following conditions viz. (a) The Regular monitoring of ground water table to be carried out by establishing a network of existing wells and constructing new piezometers. The Reports shall be submitted at interval of six months to the Regional Office of the Ministry and Chhattisgarh State Pollution Control Board. (b) The water balance/ water auditing shall be carried out and measures for reducing the consumption of water shall be taken up and reported to the Regional Office of the Ministry and Chhattisgarh State Pollution Control Board.

(c) The Regular monitoring of water quality upstream and downstream of water bodies shall be carried out and record of monitoring data should be maintained and submitted to the at interval of six months to the Regional Office of the Ministry and State Pollution Control Board. (d) The Plantation/Green belt at the periphery of the water body, particularly on eastern and western boundaries, shall be maintained in the mined out area in order to reduce the loss of surface water.

- 10) Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers. The material transfer points should invariably be provided with Bag filters and or dry fogging system. Belt-conveyors should be fully covered to avoid air borne dust; Use of effective sprinkler system to suppress fugitive dust on haul roads and other transport roads shall be ensured.
- 11) Implementation of Action Plan on the issues raised during the Public Hearing shall be ensured. The Project Proponent shall complete all the tasks as per the Action Plan submitted with budgetary provisions during the Public Hearing.

B. Standard conditions

- 1). A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forest and Climate Change 5 years in advance of final mine closure for approval.
- 2). No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment, Forest and Climate Change.
- 3). No change in the calendar plan including excavation, quantum of mineral and waste should be made.
- 4). Mining shall be carried out as per the provisions outlined in mining plan approved by Indian Bureau of Mines (IBM)/State Mines and Geology Department as well as by abiding to the guidelines of Directorate General Mines Safety(DGMS).
- 5). The lands which are not owned by Proponent, mining will be carried out only after obtaining the consents from all the concerned land owners as per the provisions of the Mineral Concession Rules, 1960 and MMDR Act,1957.
- 6). Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment, Forest and Climate Change its Regional Office.

- 7). Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. The Recommendations of National Institute for ensuring good occupational environment for mine workers shall be implemented; The prevention measure for burns, malaria and provision of anti- snake venom including all other paramedical safeguards may be ensured before initiating the mining activities.
- 8). The critical parameters as per the Notification 2009 such as PM₁₀, PM_{2.5}, NO_x, and Sox etc. in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The circular No. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
- 9). The Proponent shall install online Ambient Air Quality Monitoring System and there should be system for display of digital AAQ data within 03 months at least at three locations as per wind direction. Online provisions of pH and turbidity meters at discharge points of STP and ETP and also at water storage ponds in the mining area may be made. Project Proponent should display the result digitally in front of the main Gate of the mine site.
- 10). Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM₁₀ and PM_{2.5} such as haul road, loading and unloading point and transfer points. Fugitive dust emissions from all the sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard. Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board.
- 11). Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The project proponent shall ensure that no natural water course and/or water resources

shall be obstructed due to any mining operations. The monitoring shall be carried out four times in a year pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected 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.

- 12). Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre- mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table.
- 13). Regular monitoring of water quality upstream and downstream of water bodies shall be carried out and record of monitoring data should be maintained and submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.
- 14). 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 'PUC' certificate for all the vehicles from authorized pollution testing centres.
- 15). Transportation of the minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The project proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.
- 16). 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 light/night hours.

- 17). Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers. Crusher and material transfer points should invariably be provided with Bag filters and or dry fogging system. Belt-conveyors should be fully covered to avoid air borne dust.
- 18). Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers. The material transfer points should invariably be provided with Bag filters and or dry fogging system. In case of Belt-conveyors facilities the system should be fully covered to avoid air borne dust; Use of effective sprinkler system to suppress fugitive dust on haul roads and other transport roads shall be ensured.
- 19). Sufficient number of Gullies to be provided for better management of water. Regular Monitoring of pH shall be included in the monitoring plan and report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.
- 20). There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.
- 21). The Project Proponent has to take care of gullies formed on slopes. Dump mass should be consolidated with proper filling/levelling with the help of dozer/compactors.
- 22). The reclamation at waste dump sites shall be ecologically sustainable. Scientific reclamation shall be followed. The local species may be encouraged and species are so chosen that the slope, bottom of the dumps and top of the dumps are able to sustain these species. The aspect of the dump is also a factor which regulates some climatic parameters and allows only species adapted to that microclimate.
- 23). The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only and it

should not be kept active for a long period of time. The maximum height of the dumps shall not exceed 8m and width 20 m and overall slope of the dumps shall be maintained to 450. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled and afforested. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.

- 24). Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly. The drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps to prevent run off of water and flow of sediments directly into the river and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.
- 25). Plantation shall be raised in a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. by planting the native species in consultation with the local DFO/Agriculture Department and as per CPCB Guidelines. The density of the trees should be around 2500 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.
- 26). Project Proponent shall follow the mitigation measures provided in 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".
- 27). The Project Proponent shall make necessary alternative arrangements, where required, in consultation with the State Government to provide alternate areas for livestock grazing, if any. In this context, Project Proponent should implement the directions of the Hon'ble Supreme Court with regard to

acquiring grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded against felling and plantation of such trees should be promoted.

- 28). The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.
- 29). As per the Company Act, the CSR cost should be 2 % of average net profit of last three years. Hence CSR expenses should be as per the Company Act/Rule for the Socio Economic Development of the neighbourhood Habitats which could be planned and executed by the Project Proponent more systematically based on the 'Need based door to door survey' by established Social Institutes/Workers. The report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.
- 30). Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- 31). Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs.
- 32). Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.
- 33). Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
- 34). A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report

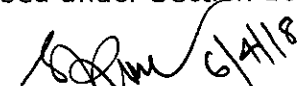
directly to the Head of the Organization.

- 35). The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office.
 - 36). 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.
 - 37). The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment, Forest and Climate Change, its Regional Office, Central Pollution Control Board and State Pollution Control Board.
 - 38). The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.
 - 39). A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.
 - 40). State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tehsildar's Office for 30 days.
 - 41). The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment, Forest and Climate Change at www.environmentclearance.nic.in and a copy of the same should be forwarded to the Regional Office.
14. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
15. 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 attract action under the provisions of the Environment (Protection) Act, 1986.

16. 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 of Chhattisgarh and any other Court of Law relating to the subject matter.

17. 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.


(Surendra Kumar)
Advisor

Copy to:

- 1). **The Secretary**, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi-110 001.
- 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-cumoffice 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 - 440001.
- 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 Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- 10). **The Chief Wildlife Warden**, Govt. of Chattisgarh, Aranya Bhavan, Jail Road, Fafadih Chowk, Raipur - 492001.
- 11). **The District Collector**, District **Balodabazar-Bhatapara**, Chhattisgarh.
- 12). **Guard File**
- 13). **MoEF&CC website.**


(Surendra Kumar)
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