

No. J-11015/227/2007-IA-II(M)pt.  
Government of India  
Ministry of Environment, Forest & Climate Change  
IA-II (Coal Mining) Division

Indira Paryavaran Bhawan,  
Jorbagh Road, N Delhi-3

Dated 21<sup>st</sup> February, 2017

To,

The General Manager (Mining)/Project Officer,  
M/s Central Coalfields Limited,  
Darbhanga House,  
District Ranchi -834 029 (Jharkhand)  
Email: [envccl@yahoo.com](mailto:envccl@yahoo.com)

**Sub: Expansion of Rohini Opencast Coal Mine Project from 2.30 MTPA to 3.30 MTPA of M/s Central Coalfields Limited in an area of 255.68 ha located in District Ranchi (Jharkhand)-Environmental Clearance - reg.**

Sir,

This is with reference to your application No.HOD/Environment/2016/396 dated 08.11.2016 along with the online proposal No. IA/JH/CMIN/10652/2009 dated 08.11.2016 and subsequent letters dated 10.11.2016, 02.12.2016, 27.12.2016 & 21.01.2017 on the subject matter.

2. The Ministry of Environment, Forest and Climate Change has considered the application. It is noted that the proposal is for grant of environmental clearance to the expansion project of **Rohini Opencast Coal Mine from 2.30 MTPA to 3.30 MTPA of M/s Central Coalfields Limited in an area of 255.68 ha located in District Ranchi (Jharkhand).**

3. The proposal was considered by the Expert Appraisal Committee (EAC) in the Ministry for Thermal & Coal Mining Projects in its 1<sup>st</sup> meeting held on 27<sup>th</sup> December, 2016. The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

- (i) The project was earlier accorded EC vide letter No.J-11015/227/2007-IA.II(M) dated 5<sup>th</sup> October, 2009 for 2.00 MTPA (Normative)/2.30 (Peak) capacity in a total area of 258.17 ha.
- (ii) The project area is now reduced from 258.17 ha to 255.68 ha.
- (iii) Latitude and Longitude of the project site are 23° 40' 31" to 23° 42' 30"N and 84° 58' 38" to 84° 59' 54"E respectively.
- (iv) Joint Venture: No joint Venture.
- (v) Coal Linkage: Power and other miscellaneous consumers.
- (vi) Employment generated / to be generated: 40 land losers provided employment.
- (vii) Benefits of the project: Development of Rohini OCP has resulted in following benefits:
  - Improvements in Physical Infrastructure
  - Improvements in Social Infrastructure
  - Increase in Employment Potential
  - Contribution to the Exchequer
  - Meet energy requirement
  - Post-mining Enhancement of Green Cover

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(viii) The land usage of the project will be as follows:

Pre-Mining:

Particulars	Total land for Rohini exp. Project (ha)		
	Forest	Non- Forest	Total
Quarry	138.33	65.72	204.05
Haul Road	1.63	0.50	2.13
Embankment	6.53	14.24	20.77
Nala Diversion	0.30	0.50	0.80
Safety Zone	0.00	27.93	27.93
Gross Total	146.79	108.89	255.68

Post- Mining:

SN	Description	Land-use (ha)				
		Plantation	Water Body	Public / CCL use	Landscaped Quarry Batter	Total
1	Excavation	0.00	10.51	0.00	0.00	10.51
2	Backfilled Area	156.47	0.00	0.00	0.00	156.47
3	Quarry batter	0.00	0.00	0.00	37.07	37.07
4	Builtup area	2.00	0.00	1.00	0.00	3.00
5	Green belt	5.00	0.00	0.00	0.00	5.00
6	Embankment	20.77	0.00	0.00	0.00	20.77
7	Road	3.00	0.00	0.00	0.00	3.00
8	Undisturbed area/ river	0.00	18.55	1.31	0.00	19.86
Total		187.24	29.06	2.31	37.07	255.68

- (ix) Total geological reserve is 93.718 MT. The mineable reserve 16.71 MT, extractable reserve is 14.41 MT, and thus the per cent of extraction would be 100%.
- (x) The coal grade is G-11. The stripping ratio is 2.03 Cum/tonne. The average Gradient is 1<sup>0</sup> to 2<sup>0</sup>. There will be 3 seams with thickness ranging

Sl. No.	Particulars	Unit	Value
I	COAL		
A	Seam Thickness		
1	Middle Dakra	M	8-13
2	Top Lower Dakra	M	1-3
3	Upper Dakra	M	1-2

- (xi) Total estimated water requirement is 451 m<sup>3</sup>/day. The level of ground water ranges from 4.45 m to 6.00 m BGL.
- (xii) The method of mining would be open cast with shovel-dumper combination.
- (xiii) There is no external OB dump and one internal dump with Quantity of 35.76 Mbcm in an area of 156.47ha.
- (xiv) The final mine void would be in 47.57 ha mine void (after backfilling), 10.51 Ha will be converted into water body with depth about 65 m BGL and the Total quarry area is 204.05 Ha. Backfilled quarry area of 156.47 Ha shall be reclaimed with plantation. A void of 47.57 ha with depth 65 m which is proposed to be converted into a water body.
- (xv) The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- (xvi) The life of mine is 7 Years.
- (xvii) Coal transportation in pit by Dumpers from in pit to pit head coal handling plant, Surface to Siding by rail to Pre-weigh Bin and loading at siding by pay loader.
- (xviii) There is no R & R involved. There are 34 project affected families.
- (xvix) Total capital cost of the project is Rs.105.67 Crores. According to New CSR policy, the fund for the CSR should be allocated based on 2% of the average net profit of the Company for the three immediate preceding financial years or Rs. 5.00 per tonne of coal production of previous year whichever is higher. R&R Cost: Nil. Environmental Management Cost: Rs. 1587.77 Lakhs.
- (xx) Damodar river flows along northern boundary of the project and the quarry is at a safe distance of more than 100 m from the river. An embankment has already been developed between quarry and the river.
- (xxi) Mine Plan for the proposed expansion of Rohini OCP in an area of 255.68 ha has been accorded approval by the M/s CCL Board on 25<sup>th</sup> August 2016. Mine closure plan is a part of the Mine plan approved by M/s CCL Board.
- (xxii) There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xxiii) Total forest area involved (in ha) for mining: 146.79 Ha.

Area (in ha)	Stage-1 FC issued vide letter no. & date
71.98	8-60/94-FC dt. 23.02.1995
74.81	8-60/1994-FC dt.-24.01.2013

- (xxiv) Total afforestation plan shall be implemented covering an area of 156.47 ha at the end of mining. Green Belt over an area of 5 ha. Density of tree plantation 2500 trees/ ha of plants.
- (xxv) There are no court cases/violation pending with the project proponent.
- (xxvi) Public Hearing was held on 23.12.2008. The issues raised during the PH include free LPG for the villagers, coal transportation by covered trucks; medical facility and education to villagers; water harvesting measures; control measures for air pollution and vibration due to blasting; employment; electricity; compensation for land outstees.
- (xxvii) Certified EC Compliance Report: The Regional Office of MoEF&CC at Ranchi has carried out the site inspection on 20<sup>th</sup> May, 2016 to verify the status of compliance of EC conditions granted for expansion of Rohini OCP from 0.8 MTPA to 2.30 MTPA with increase in ML area from 167.04 ha to 258.17 ha of M/s Central Coalfields Limited in District Ranchi (Jharkhand). The project proponent presented the action taken on each of the observations made by Regional Office during the site visit.

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4. The EAC, after detailed deliberations on the proposal in the 1<sup>st</sup> meeting on 27<sup>th</sup> December, 2016, decided for exempting the proposal from the requirement of fresh TOR and fresh Public Hearing, and recommended the proposal for grant of Environmental clearance. The Ministry of Environment, Forest and Climate Change hereby accords Environmental Clearance to the expansion project of **Rohini Opencast Coal Mine from 2.30 MTPA to 3.30 MTPA of M/s Central Coalfields Limited in an area of 255.68 ha located in District Ranchi (Jharkhand)** under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions and environmental safeguards mentioned below:

**A. Specific Conditions:**

- (i) The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.
- (ii) The validity of the EC is for the life of the Mine or as specified in the EIA Notification, 2006, whichever is earlier.
- (iii) The project proponent shall obtain Consent to Operate from the State Pollution Control Board for the existing production capacity of 2.30 MTPA and also the Consent to Establish for the proposed capacity of 3.30 MTPA prior to enhancing the production capacity.
- (iv) Transportation of coal should be carried out by covered trucks. Mitigative measures to be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers.
- (v) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (vi) Controlled blasting techniques should be adopted to control ground vibration and fly rocks.
- (vii) A progressive afforestation plan shall be implemented covering an area of **161.47 Ha** at the end of mining, which includes reclaimed External OB dump area (**nil Ha**), Internal OB dump area (**156.47 Ha**) and Green belt (**5 Ha**) and in township located outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around **2500** plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and a 3-tier avenue plantation along the main approach roads to the mine.
- (viii) An estimated total **35.76 Mm<sup>3</sup>** of OB will be generated during the entire life of the mine. there will be no external dump. **35.76 Mm<sup>3</sup>** of will be **one** internal OB dump in covering an area of **156.47 ha**. The maximum height of internal OB dump will not exceed **20 m** above GL. The maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self- sustaining and compliance status shall be submitted to MOEFCC and its Regional Office on yearly basis.
- (ix) Of the total quarry area of **204.05 ha**, the backfilled quarry area of **156.47 ha** shall be reclaimed with plantation and there will be no void left at the end of the mining operations. The land after mining shall be restored for agriculture purpose.

**B. General conditions**

(a) Mining

- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment, Forest and Climate Change.
- (ii) No change in the calendar plan including excavation, quantum of coal and waste should be made.



(iii) Mining shall be carried out as per the provisions outlined in approved mining plan as well as by abiding to the relevant laws related to coal mining and the circulars issued by Directorate General Mines Safety (DGMS).

(iv) A progressive Mine Closure Plan duly approved by the Ministry of Coal should strictly be complied with. A compliance report in this regard shall be submitted to Regional Office/ MOEF&CC every six month from the date of commencement of mining operations.

(b) Land Reclamation

(i) 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.

(ii) 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 adopted to that micro climate.

(iii) Final mine void depth should not be more than 40 m. The void area should be converted into water body. The remaining area should be back filled up to the ground level and covered with about a meter thick top soil. The land after mining should be restored for agriculture use.

(iv) 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 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 in line with the approved Mine Closure Plan. 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.

(v) 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.

(c) Emissions, Effluents, and Waste Disposal

(i) Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM<sub>10</sub> and PM<sub>2.5</sub> 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.

(ii) Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months.

(iii) Data on ambient air quality (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its concerned Regional Office and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from

independent laboratories recognised under the EPA rules, 1986 shall be furnished as part of compliance report.

(iv) Transportation of the coal 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 coal 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. Furthermore, transportation of coal by road should be carried out by covered trucks only. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads.

(v) 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.

(vi) 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. Use of effective sprinkler system to suppress fugitive dust on haul roads and other transport roads shall be ensured. Drills shall be wet operated.

(vii) The Project Proponent should not alter the major channels around the site. Appropriate embankment should be provided along the side of the river/nallah flowing near or adjacent to the mine. The embankment constructed along the river/nallah boundary should be of suitable dimensions and critical patches should be strengthened by stone pitching on the river front side and stabilised with plantation so as to withstand the peak water flow and prevent mine inundation.

(viii) 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.

(ix) The Project Proponent has to take care of gullies formed on slopes. Dump mass should be consolidated with proper filling/leveling with the help of dozer/compactors.

(x) Sufficient number of Gullies to be provided for better management of water. Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, coal heaps 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. Dimension of the retaining wall to be constructed at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.

(xi) Industrial waste water (CHP, 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 19<sup>th</sup> May, 1993 and 31<sup>st</sup> December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents. Sewage treatment plant of adequate capacity shall be installed in the existing colony and offices.



(d) Noise & Vibration Control

- (i) Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.
- (ii) Controlled blasting techniques should be practiced with use of delay detonators to mitigate ground vibrations and fly rocks.
- (iii) 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.
- (iv) Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of Coal Handling Plants and HEMM, etc. should be provided with ear plugs / muffs.

(e) Occupational Health & Safety

- (i) 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 prevention measure for burns, malaria and provision of anti-snake venom including all other paramedical safeguards may be ensured before initiating the mining activities.
- (ii) Besides carrying out regular periodic health check-up of their workers, 20% of the workers identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, through an specialised agency /institution within the District/State and the results reported to this Ministry and to DGMS.
- (iii) 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. Supervisory staff shall be held responsible for ensuring compulsory wearing of dust mask.
- (iv) 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.
- (v) In case of outsourcing of work through MDO, the project proponent shall ensure the strict compliance enforcement of the above conditions.

(f) Biodiversity

- (i) 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.

(g) Implementation of Action Plan as Per Public Hearing & CSR Activities

- (i) 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. Land oustees should be compensated as per the norms laid out R&R Policy of the Company or the National R&R Policy or R&R Policy of the State Government, whichever is higher.

(ii) The Board of every company, shall ensure that the company spends, in every financial year, at least two per cent. of the average net profits of the company made during the three immediately preceding financial years, in pursuance of its Corporate Social Responsibility Policy under Section 135 of the Companies Act, 2013, for the Socio Economic Development of the neighborhood Habitats which could be planned in consultation with the Panchayat of the local administration, and executed by the Project Proponent more systematically based on the 'Need based door to door survey' by established Social Institutes/Workers. A report, in consonance with the format prescribed in Annexure of the Companies (Corporate Social Responsibility Policy) Rules, 2014, shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.

(iii) The 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".

(iv) 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.

(h) Corporate Environment Responsibility

(i) The Company should have a well laid down Environment Policy approved by the Board of Directors.

(ii) The Environment Policy should prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.

(iii) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions should be displayed on website of the Company.

(iv) To have proper checks and balances, the Company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large.

(v) 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.

(vi) 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.

(i) Statutory Obligations

(i) Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, NGT and any other Court of Law, if any, as may be applicable to this project.

(ii) This Environmental Clearance is subject to obtaining requisite NBWL Clearance from the Standing Committee of National Board for Wildlife, if any, as applicable for this Mining project.

(iii) The Project Proponent shall obtain Consent to Establish and Consent to Operate from



the concerned State Pollution Control Board prior to commencement of mining operations and effectively implement all the conditions stipulated therein.

(iv) The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) for the project.

(v) Project Proponent shall obtain the necessary prior permission from the Central Ground Water Authority (CGWA) in case of intersecting the Ground water table. The intersecting ground water table can only be commence after conducting detailed hydrogeological study and necessary permission from the CGWA. The Report on six monthly basis on changes in Ground water level and quality shall be submitted to the Regional Office of the Ministry, CGWA and State Pollution Control Board.

(j) Monitoring of Ambient Air & Water Quality and Reporting

(i) 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. The critical parameters as per the Notification such as PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, and SO<sub>x</sub> 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.

(ii) 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.

(iii) 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.

(iv) 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.

(v) 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.

(vi) 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.



(vii) 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.

(viii) The activities pertaining to development of green belt/ horticulture shall be reported to concerned DFO/Collector on six monthly basis from the date of commencement of mining operations.

(k) Miscellaneous

(i) For half yearly monitoring reports, the data should be monitored for the period of April to September and October to March of the financial years and submitted to the concerned authorities within 2 months of the completion of periodicity of monitoring. Similarly, the annual reports for the financial year should reach the office of the concerned authority on or before 1<sup>st</sup> June of following year.

(ii) Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy.

(iii) 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.

(iv) 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.

(v) State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tehsildar Office for 30 days.

(vi) A copy of the EC letter shall be shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Sector and Collector's Office/Tehsildar Office for 30 days.

(vii) The EC letter shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's website.


(viii) 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](http://www.environmentclearance.nic.in) and a copy of the same should be forwarded to the Regional Office.

(ix) The Environmental Statement for each financial year ending 31 March in Form-V is mandated to be submitted by the PP for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the Company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF&CC by e-mail.

5. The PP shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during their presentation to the EAC. The commitment made by the project proponent to the issue raised during Public Hearing shall be implemented by the proponent.


6. The project proponent shall obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

7. The PP shall set up an Environment Audit cell with responsibility and accountability to ensure implementation of all the EC Conditions.
8. 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 EC and attract action under the provisions of Environment (Protection) Act, 1986.
9. 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 and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter. The PP shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.
10. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
11. The new EC supersedes the earlier EC granted vide letter No.J-11015/227/2007-IA.II (M) dated 5<sup>th</sup> October, 2009 for 2.00 MTPA (Normative)/2.30 (Peak) capacity in a total area of 258.17 ha.

  
 21/2/2017  
**(S. K. Srivastava)**  
**Scientist E**

**Copy to:**

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Secretary, Department of Environment & Forests, Government of Jharkhand, Secretariat, Ranchi.
3. The Additional Principal Chief Conservator of Forests, Regional office (ECZ), Ministry of Environment & Forests, Bungalow No. A-2, Shyamali Colony, Ranchi - 834002
4. The Member-Secretary, Jharkhand State Pollution Control Board, TA Building, HEC Complex, PO Dhurwa, Ranchi
5. The Member-Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
6. The Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
7. The District Collector, Ramgarh, Government of Jharkhand
8. Monitoring File 9. Guard File 10. Record File 11. Notice Board

  
 21/2/2017  
**(S. K. Srivastava)**  
**Scientist E**