



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

To,

The CGM

Maharashtra State Power Generation Company Limited CIN-  
U40100MH2005SGC153648

4th floor A-Wing HDIL Tower, Bandra East, Mumbai,, Mumbai  
City, Maharashtra-400051

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

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/CG/CMIN/52019/2016 dated 01 Aug 2020. The particulars of the environmental clearance granted to the project are as below.

- |  |  |
|--|--|
| 1. EC Identification No.                   | <b>EC22A042CG183991</b>  |
| 2. File No.                                | J-11015/72/2016-IA.II(M)   |
| 3. Project Type                            | New  |
| 4. Category                                | A  |
| 5. Project/Activity including Schedule No. | 1(a) Mining of minerals  |
| 6. Name of Project                         | Gare Palma Sector -II Coal mine (Block)  |
| 7. Name of Company/Organization            | Maharashtra State Power Generation Company Limited CIN-<br>U40100MH2005SGC153648 |
| 8. Location of Project                     | Chhattisgarh   |
| 9. TOR Date                                | 08 Aug 2016  |

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

Date: 11/07/2022

(e-signed)  
Lalit Bokolia  
Scientist F  
IA - (Coal Mining sector)

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

*This is a computer generated cover page.*



**No. J-11015/72/2016-IA.II(M) Pt.**  
Government of India  
Ministry of Environment, Forest and Climate Change  
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**Dated: 11<sup>th</sup> July, 2022**

**To**

The Chief Engineer (coal),  
Maharashtra State Power Generation Co. Ltd. (Mahagenco)  
Plot No. G-9, 'Prakashgad', 3rd Floor,  
Bandra (E), Mumbai-400051 (Maharashtra)  
[email-cecoal@mahagenco.in](mailto:email-cecoal@mahagenco.in)

**Sub: Gare Palma Sector II Coal Mine Project of Open Cast 22.0 MTPA + Under Ground-1.6 MTPA capacity in mine lease area of 2583.48 ha of M/s Maharashtra State Power Generation Company Ltd (MSPGCL) located in village-Tihli Rampur, Kunjemura, Gare, Saraitola, Murogaon, Radopali, Pata, Chitwahi, Dholnara, Jhinka Bahal, Dolesara, Bhalumura, Sarasmal and Libra, Tehsil-Gharghoda, District- Raigarh, (Chhattisgarh) - For Environmental Clearance - reg.**

Sir,

This has reference to your online proposal no. IA/CG/CMIN/52019/2016 dated 1<sup>st</sup> August, 2020, submitted to this Ministry for grant of Environmental Clearance (EC) in terms of the provisions of the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986 for Gare Palma Sector -II Coal mine Project of 23.60 MTPA (OC-22.0 MTPA+UG-1.6 MTPA) of M/s Maharashtra State Power Generation Company Limited (MSPGCL) in an area of 2583.48 ha in District Raigarh (Chhattisgarh).

2. The project/activity is covered under category 'A' of item 1(a) 'Mining of Minerals' the Schedule to the EIA Notification, 2006

3. The proposal was considered by the sectoral Expert Appraisal Committee (EAC) in its 51<sup>st</sup> EAC meeting held on 5<sup>th</sup> December, 2019, 2<sup>nd</sup> meeting of sectoral EAC (Coal Mining) held on 28-29 September, 2020. 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 area is covered under Survey of India Topo Sheet NoF44L7 F44L8 F44L11 F44L12 and is bounded by the geographical coordinates ranging from latitude 22°06'24.215" N to 22°10'49.891" N and longitudes 83°26'15.433" E to 83°31'12.632" E.
- (ii) Coal linkage of the project is proposed for captive use for various thermal power plants of Mahagenco namely Chandrapur Thermal Power Station Unit 8 & Unit 9 (1000 MW), Koradi



Thermal Power Station Unit 8, Unit 9 and Unit 10 (1980 MW), Parli Thermal Power Station Unit 8 (250 MW).

- (iii) Joint venture cartel has been formed –Not applicable.
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13<sup>th</sup> January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generation, direct employment to 3400 persons will be provided from the project.
- (vi) The project is reported to be beneficial in terms of-Coal from this project will be used in power generation in Maharashtra, which will help in reducing gap in demand and production of electricity in the State, based on the requirement of the people of the project area, the development activities will be taken up. The basic requirement of the community will be strengthened by extending health care, educational facilities, providing drinking water to the villages affected, building/strengthening of existing roads in the area etc.
- (vii) ToR for the proposal was granted by the Ministry on 8th August, 2016. Extension of validity of ToR was granted on 5th August, 2019 for a period of one year.
- (viii) Total mining lease area as per block allotment is 2583.48 ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved by the Ministry of Coal on 12.08. 2016.
- (ix) The land usage pattern of the project is as follows:

**Pre-mining land use details (Area in Ha)**

S. No.	LANDUSE	Within M L Area(ha)	Outside M L Area(ha)	TOTAL
1.	Agricultural land	2077.618	NIL	2077.618
2.	Forest land	214.869	NIL	214.869
3.	Wasteland	NIL	NIL	NIL
4.	Grazing land	NIL	NIL	NIL
5.	Surface water bodies	56.167	NIL	56.167
6.	Settlements	90.328	NIL	90.328
7.	Others (non- agriculture & Govt. land)	144.505	NIL	144.505
	<b>Total</b>	<b>2583.487</b>	<b>NIL</b>	<b>2583.487</b>

**Post Mining Post Opencast Mining land use (upto 32<sup>nd</sup> year)**

Sl No.	Description	Bund	Void	Public Use	Company Use	Undisturbed	Plantation/ Agriculture Green Belt	Total incl.
1	Backfill (Excavation)	-	-	-	-	-	2440.55	2440.55
2	Void/ water body	-	-	-	-	-	-	0.00



Sl No.	Description	Bund	Void	Public Use	Company Use	Undisturbed	Plantation/ Agriculture Green Belt	incl. Total
3	Surface Dump	-	-	-	-	-	-	0.00
4	Bund	5.2	-	-	-	-	-	5.20
5	Green Belt	-	-	-	-	-	36.07	36.07
6	TS Dump	-	-	-	-	-	-	0.00
7	Settling pond	-	5	-	-	-	-	5.00
8	Road diversion	-	-	30.3	-	-	-	30.30
9	Facilities retained	-	-	-	-	50.94	-	50.94
10	Under Kelo river	-	-	-	-	15.42	-	15.42
11	Undisturbed (others)	-	-	-	-	-	-	0.00
	<b>Total</b>	<b>5.2</b>	<b>5</b>	<b>30.3</b>	<b>-</b>	<b>66.36</b>	<b>2476.62</b>	<b>2583.48</b>

\*All values in ha

- (x) Total geological reserve reported in the mine lease area is 1059.29 MT with 781.78 MT mineable reserve. Out of total mineable reserve of 781.78 MT, 655.15 MT are available for extraction. Percent of extraction is 83.8%.
- (xi) I Bottom seam to X Bottom seams (in 18 Horizons) with thickness ranging from 0.5m - 8.39 m are workable. Grade of coal is G1 - G16 (Both OC and UG), stripping ratio 4.99 Cum/t, while gradient is 1 in 20.
- (xii) Method of mining operations envisages by there are two mining methods viz. Opencast (OC) and Underground (UG) method.
- (xiii) Life of mine is total 77 years (Life of OC mine - 29 years and UG mine - 66 years starting from 12<sup>th</sup> year onwards).
- (xiv) The project has one external OB dumps in an area of 450 ha with 90 m height and 221.17Mm<sup>3</sup> of OB. External OB Dumps shall be re-handled and backfilled in 29<sup>th</sup> to 32<sup>nd</sup> year. The OB from the current mining operations shall be backfilled from 6<sup>th</sup> year onwards. Two internal OB in an area of 2440.55 ha with 2761.12 Mm<sup>3</sup> of OB is envisaged in the project.
- (xv) Total quarry area is 2440.55ha out of which backfilling will be done in 2440.55 ha while final mine void will be created in an area of 0 ha with a depth of 0 m. Backfilled quarry area



of 2440.55 ha shall be reclaimed with plantation. Final mine void will be converted-No final void, only 5 ha of settling pond will be converted in to water body.

- (xvi) Transportation of coal has been proposed by dumpers in mine pit head, from surface to siding by dumpers and at sidings by appropriate loading system.
- (xvii) Reclamation Plan in an area of 2476.62ha, comprising of 0 ha of external dump, 2440.55 ha of internal dump and 36.07 ha of green belt. In addition to this, an area of 0 ha, included in the safety zone/rationalization area, has also been proposed for green belt development.
- (xviii) 214.869 ha of forest land has been reported to be involved in the project. Ministry (FC Division) vide its letter dated 02.06.2022 has granted forest Stage-I Clearance for non-forestry use of 214.869 ha of forest land in favour of M/s Maharashtra State Power Generation Company Limited
- (xix) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.
- (xx) Wildlife conservation plan submitted to DFO on 14.11.2019. DFO recommended the WCP to CCF on 24.01.2020. CCF recommended the WCP to PCCF on 20.02.2020 The budget of Rs 488.50 Lakhs for conservation of wild life is provided during the period of 5 years (2020-21 to 2025-26).
- (xxi) The ground water level has been reported to be varying between 4.67 to 12.34 m during pre-monsoon. Total water requirement for the project is 2785 KLD. Hydrology study and embankment design was carried out by Min Mec Consultancy Pvt Ltd., New Delhi. Kelo river will not be diverted due to the prevailing topography, shape of the block and presence of other coal blocks all around. Flow in Kelo river, reduction is 0.8%, low impact is envisaged on downstream water balance.
- (xxii) Application for obtaining the approval of the Central Ground Water Authority for 2785 KLD has been submitted on 05<sup>th</sup> December 2017. NOC for ground water abstraction obtained from CGWA, New Delhi Vide Lr no. CGWA/NOC/MIN/ORIG/2020/7943 dated 03.07.2020. The sanctioned water quantity is 1454 m3/day
- (xxiii) Public hearing for the project of 23.60 MTPA capacity in an area of 2583.48 ha was conducted on 27th September, 2019 at Village-Dolesara, District-Raigarh, Chhattisgarh. Major issues raised in the public hearing include health, education, employment, compensation to land losers, drinking water etc. Appropriate action to address the issues raised in the Public Hearing have already been taken/proposed in EIA/EMP.
- (xxiv) Kelo River/nalla is flowing north to south through the south eastern part of the boundary of lease. Kelo will remain untouched and hence no river/nalla diversion involved.
- (xxv) One court case filed vide writ petition no. 92 of 2019 by Mr. Chinmay Mohapatra is pending in Hon'ble High Court of Bilaspur.
- (xxvi) The project involves 2245 project affected families. R&R of the PAPs will be done as per LARR 2013.
- (xxvii) Total cost of the project is Rs 764200 lakhs. Cost of production is Rs.930 per tonne., CSR cost is 2% of the average net profit of the company made during three immediately preceding financial years shall be spent on CSR activities, R&R cost is Rs. 2435 crores. Environment Management Cost is Rs. 1484.53 crores has been allocated under EMP budget



in which 1027.66 crores for Progressive Closure and 456.87 Crores for Final Closure of Mine.

4. The proposal was considered by the sectoral Expert Appraisal Committee (EAC) in its 2<sup>nd</sup> meeting of sectoral EAC (Coal Mining) held on 28-29 September, 2020 and recommended for grant of Environment Clearance. Based on recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords approval of Environment Clearance to Gare Palma Sector II Coal Mine Project of Open Cast 22.0 MTPA + Under Ground-1.6 MTPA capacity in mine lease area of 2583.48 ha of M/s Maharashtra State Power Generation Company Ltd (MSPGCL) located in village-Tihli Rampur, Kunjemura, Gare, Saraitola, Murogaon, Radopali, Pata, Chitwahi, Dholnara, JhinkaBahal, Dolesara, Bhalumura, Sarasmal and Libra, Tehsil-Gharghoda, District- Raigarh, (Chhattisgarh), under the provisions of Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions for environmental safeguards as stated below:-

- (i) The project proponent shall obtain Consent to Establish/Operate from the State Pollution Control Boards for the proposed peak capacity of 23.60 MTPA (OC-22.0 MTPA+UG-1.6 MTPA) prior to commencement.
- (ii) As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shivpal Bhagat & Ors vs UIO, PP to comply with all the recommendation of Carrying Capacity Study being conducted by reputed institute by CPCB & SPCB.
- (iii) As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shivpal Bhagat & Ors vs UIO, Coal transportation is permitted for only one year through road from date of commissioning and subsequently, transport must be done by rail or closed conveyor belt only.
- (iv) As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shivpal Bhagat & Ors vs UIO, proper and free health care facilities with multispecialty treatment system shall be provided in coal mine buffer area.
- (v) As per NGT order dated 15.02. 2022 in Original Application No. 104/2018 in the matter of Shivpal Bhagat & Ors vs UIO, PP shall have to comply that when coal is sold to TPP, there is the agreement to sell that at least 25% Fly Ash of the coal sold, should be accepted by the coal company (seller) from TPP(Purchaser) failing which coal company shall be liable for civil action and other legal measures.
- (vi) Third party monitoring (by NEERI/CIMFR/IIT/NITs) for air quality shall be carried out at identified locations, both ambient and the process area, to arrive at impact of the proposed expansion.
- (vii) Top soil should be stored separately at marked area and necessary vegetation shall be maintained to avoid any entrainment of dust.
- (viii) All the recommendation of carrying capacity study shall be completed within stringent timeframe.
- (ix) PP shall construct embankment leaving 100 mtrs away from HFL of kelo river and the same shall be taken prior approval from DGMS
- (x) As proposed fresh water requirement will be 1785 KLD, which shall be met from Kelo river



initially and later by groundwater. The total industrial water demand (peak) in operation phase shall be met by utilizing treated mine discharge water. If require, necessary arrangement shall be made to reuse treated water from STP & ETP to nearby TPP or coal washery /or future coal washery by entering suitable agreement. No wastewater (treated or untreated) shall be discharged into the river or any other water body

- (xi) All the villages coming under the zone of influence as in hydrology study shall be provided with suitable water supply alongwith sanitation facility.
- (xii) All the recommendation in Social Impact Assessment study shall be complied within stringent timeframe. Timeline should be submitted to District Collector for necessary action points.
- (xiii) Commitment made during public consultation process shall be adhere to. As proposed, Rs. 45.35 Crore is earmarked for CER activities, which shall be accomplished within period of 5 years.
- (xiv) Water quality and Bioassay test of kelo shall be monitored quarterly and submitted to State Pollution Control Board. No water shall be discharged in river.
- (xv) Quarterly monitoring of quality of water from bore hole used for drinking purpose shall be conducted and report thereof shall be submitted to SPCB.
- (xvi) Progressive backfilling of mine and progressive reclamation of OB dump shall be done.
- (xvii) To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.
- (xviii) Mitigating measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient fixed type water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at loading and unloading points, etc.
- (xix) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (xx) Permission from State Water Department for diversion of two nalas, one in the west side (Nala A) and one on the East side (Karnara nala) of Kelo river shall be taken before any diversion work. Impact of diversion in terms of availability of water in river shall be studied before diversion and submitted to State Water Department.
- (xxi) PP shall take permission of State Public Works Department before the proposed for diversion Roads from Bajamura to Ghargoda (approx. 11.6 km) and Milupara to Tamnar (app 3 km).
- (xxii) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.
- (xxiii) PP shall submit Mine Closure Plan as per MoC latest 2019 guidelines to this Ministry within one year.
- (xxiv) Mining shall be carried out only by surface miners for the project and silo loading till railway siding through in-pit conveyor should be installed to avoid road transportation in 5 years.



- (xxv) Efforts shall be made for utilizing alternate sources of surface water, abandoned mines or else whatsoever and thus minimizing the dependability on a single source.
- (xxvi) Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles
- (xxvii) PP shall conduct the stability study of OB dump by reputed agencies and necessary approval of DGMS.
- (xxviii) As proposed, total plantation shall be done in 2256.60ha area of land till closure of mine. Project proponent to plant 150,000 nos. of native trees with broad leaves along the transportation route in three years to prevent the effect of air pollution. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Officer.
- (xxix) Project Proponent shall obtain blasting permission from DGMS for conducting mining operation near villages and also explore deployment of rock breakers of suitable capacity in the project to avoid blasting very near to villages. There shall be no damages caused to habitation/structures due to blasting activity.
- (xxx) The Project Proponent shall 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. State Government shall ensure that the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department in strict compliance of judgment of Hon'ble Supreme Court dated the 2<sup>nd</sup> August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- (xxxi) Project Proponent shall obtain the necessary prior permission from the Central Ground Water Authority (CGWA) in case of intersecting the Ground water table.
- (xxxii) 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.
- (xxxiii) 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".
- (xxxiv) 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.



(xxxv) 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 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.

(xxxvi) Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEFCC.

**4.1** The grant of environmental clearance is further subject to compliance of the Standard EC conditions as under:

**(a) Statutory compliance**

(i) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.

(ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

(iii) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of Schedule-I species in the study area).

(iv) The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.

(v) The project proponent shall obtain the necessary permission from the Central Ground Water Authority.

(vi) Solid/hazardous waste generated in the mines needs to be addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.

**(b) Air quality monitoring and preservation**

(i) Continuous ambient air quality monitoring stations as prescribed in the statute be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>. 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. Online ambient air quality monitoring stations may also be



installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.

(ii) The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25<sup>th</sup> September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.

(iii) Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM<sub>10</sub>/PM<sub>2.5</sub>) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.

(iv) The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.

(v) Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.

(vi) Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.

(vii) Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environmental friendly sustainable technology should be implemented for mitigating such parameters.

**(c) Water quality monitoring and preservation**

(i) The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25<sup>th</sup> September, 2000 and as amended from time to time by the Central Pollution Control Board.

(ii) The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-IA.11 (M) dated 27<sup>th</sup> May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.



- (iii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.
- (iv) Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
- (v) Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.
- (vi) Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.
- (vii) Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming to the specific requirement (standards).
- (viii) Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Adequate ETP /STP needs to be provided.
- (ix) The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
- (x) The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.





(xi) The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

**(d) Noise and Vibration monitoring and prevention**

(i) Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.

(ii) Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.

(iii) The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

**(e) Mining Plan**

(i) Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.

(ii) Mining shall be carried out as per the approved mining plan (including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).

(iii) No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.

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

**(f) Land reclamation**

(i) Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change(MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).

(ii) The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27<sup>th</sup> August, 2009 and subsequent amendments.



(iii) The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/"post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.

(iv) Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.

(v) Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.

(vi) The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

**(g) Green Belt**

(i) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.

(ii) Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads.

**(h) Public hearing and Human health issues**

(i) Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & it's RO on six-monthly basis.

(ii) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health



check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.

(iii) Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.

(iv) Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.

(v) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29<sup>th</sup> 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'.

**(i) Corporate Environment Responsibility**

(i) The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders.

(ii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

(iii) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

(iv) Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

**(j) Miscellaneous**

(i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.



- (ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- (iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- (iv) The project proponent shall monitor the criteria pollutants level namely; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- (v) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- (vi) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29<sup>th</sup> 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'.
- (vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- (viii) The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- (ix) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- (x) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- (xi) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.
- (xii) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- (xiii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- (xiv) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.



(xv) 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.

(xvi) The above conditions shall 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, Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 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.

5. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during presentation to the EAC. All the commitments made on the issues raised during public hearing shall also be implemented in letter and spirit.

6. The 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. The Ministry or any other competent authority may stipulate any further condition for environmental protection.


7. 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.

8. The coal company/project proponent shall be liable to pay the compensation against the illegal mining, if any, and as raised by the respective State Governments at any point of time, in terms of the orders dated 2<sup>nd</sup> August, 2017 of Hon'ble Supreme Court in WP (Civil) No.114/2014 in the matter of 'Common Cause Vs Union of India & others.

9. The concerned State Government shall ensure no mining operations to commence till the entire compensation for illegal mining, if any, is paid by the project proponent through their respective Department of Mining & Geology, in strict compliance of the judgment of Hon'ble Supreme Court.

10. This environmental clearance shall not be operational till such time the project proponent complies with the above said judgment of Hon'ble Supreme Court, as applicable, and other statutory requirements.

This issues with the approval of the competent Authority


  
(Lalit Bokolia)  
Director

**Copy to:**

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Secretary, Department of Environment & Forests, Government of Chattisgarh, Secretariat Raipur



3. Deputy Director General of Forests (C), Ministry of Env., Forest and Climate Change, Integrated Regional Office, Aranya Bhawan, North Block, Sector-19 Naya Raipur, Atal Nagar, Chhattisgarh – 492002
4. Chairman, Central Ground Water Authority, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001
5. Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
6. The Chairman, Chhattisgarh State Environment Conservation Borad, - -Tilak Nagar, Shiv Mandir Chowk, main Road, Avanti Vihar, Raipur Chhattisgarh 492001
7. The District Collector, Raigarh, Government of Chattisgarh
8. Monitoring File /Record File
9. PARIVESH Portal

  
(Lalit Bokolia)  
Director