

No. J-11015/331/2010-IA.II (M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
CGO Complex, Lodhi Road,
New Delhi-110003

To,

Dated: 16th September, 2013

The General Manager (Mines),
M/s Chhattisgarh Mineral Development Corp. Ltd.,
Sona Khan Bhawan, Ring Road,
Gram- Puraina, Post Ravigram,
Chhattisgarh - 492006.

Sub. Sondiha OC-cum-UG Coalmine Project (1 MTPA peak in an ML area of 810 ha) of M/s Chhattisgarh Mineral Development Corp. Ltd., located in Dist. Sarguja, Chhattisgarh – Environment Clearance –reg.

This is with reference to letter no.896/Coal/2010-11 dated 08.10.2010 along with the application for Terms of Reference (TOR) and this Ministry's letter dated 23.12.2010 granting TOR. Reference is also invited to the letter No. S.No/.1554/CMD/2011-12 dated 28.03.2012 and subsequent letters no. dated 01.02.2013; 06.03.2013; 14.05.2013; 12.06.2013; 09.07.2013 for environmental clearance on the above-mentioned subject.

2. The Ministry of Environment & Forests has considered the application. The proposal was considered in the 47th Expert Appraisal Committee held on 23rd -24th April, 2012; 73rd Expert Appraisal Committee held on 6th -7th May, 2013 and 75th Expert Appraisal Committee held on 03rd -04th June, 2013 which recommended the project for the Environmental Clearance. It is noted that the proposal is for grant of Environmental Clearance for Sondiha OC-cum-UG Coalmine Project (1 MTPA peak in an ML area of 810 ha) of M/s Chhattisgarh Mineral Development Corp. Ltd., located in Dist. Sarguja, Chhattisgarh. The proponent informed that:

- i. It is a new OC-cum UG mine with a peak production of 1 MTPA in an ML area of 810 ha. Of the total ML area, 197.257 ha is forestland. 130.223 ha consist of Chote-Bade Jhadke jungle, 37.382 ha is Govt. land and 300.434 ha is private land (Adivasi (Tribal) land) and 144.710 ha is private land (non-tribal).
- ii. TOR was granted by the MoEF vide letter no J-11015/331/2010-IA.II(M) dated 23rd December, 2010
- iii. The land usage of the project will be as follows:

Pre mining:

Type	Area in ha
Agriculture land	299.24
Forest Land	327.48
Waste Land	145.9
Road	12.87
Surface water Bodies	17.34
Others	7.17
Total	810.00

Post Mining:

Purpose	Government		Private		Total
	Forest	Others	Agri.	Others	
	ha	ha	ha	ha	ha
Area to be excavated	213.29	6.34	100.25	49.13	369.01
Storage for top soil			4.6	0.4	5
Overburden / Dumps	4.5	7.07	78.62	29.81	120
Infrastructure (Workshop, Administrative Building, office and road etc)	-	-	5.49	2.01	7.50
Roads	0.08	0.20	2.49	1.23	4.00
Railways	--	--	--	--	--
Green Belt /statuary barrier	1.33	0.11	7.71	-	9.15
Tailings pond (surface reservoir)	1.82	-	0.18	-	2
Township area	0.488	0.88	4.64	2.31	8.32
Other			2.27	1.23	3.50
Area untouched (includes underground area)	105.97	22.78	92.99	59.78	281.52
Total	327.48	37.38	299.24	145.90	810.00

- iv. The total geological reserve is 50.423 MT. The mineable reserve is 37.633 MT, extractable reserve is 32.743MT. The percent of extraction would be 94.99 % by O/C; 60.00% by U/G. The coal grades are A to F (Dominant Grade E & F) having stripping ratio of 1:13.79. Average Gradient is 1 in 14 (S- N). There will be total seven seams. The thickness of seams for O/C is 0.5 m and U/G is 1.5 m. Maximum thickness of seams: 6.00m.
- v. Moran River (2.5 km in NE), River in Ranhat RF (5.5 km in S) and Andhar Nadi (4.9 in NW) are flowing away from the ML area away between 2.5 to 5.5 Km distance. Other Water bodies such as Andharwa nala, Kharhara nala; Sukhnaiya nala; Jabar nala; Sarbahar nala; Jhoj nala are also flowing away between 4- 7 km distance.
- vi. The total water requirement is 1103 m³/d (645 m³/day mine water is for dust suppression, plantation, workshop and 485 cum/day is for drinking water/potable water from bore well).
- vii. Mining of coal by opencast mining method is proposed to start from 1st year of operation. The extraction of coal by underground mining method will start from 16th year onwards alongwith extraction of coal by opencast mining method. Therefore, from 16th year onwards extraction of coal will be by combination opencast and underground mining method.
- viii. There is one external OB Dump covering an area of 120 Ha. The height for dumps would be 60 m. The total quantity of 50.96 mm³. The year of back filling would start from 3 years. There is internal OB Dumps covering an area of 203.56 Ha. The total quantity of 327.22 mm³. The final mine voids will have an area of 164.45 ha. and depth 40 m bgl.
- ix. The seasonal data for ambient air quality has been documented for one season (March 2010 to May 2010) and results at all stations are within prescribed limits.
- x. Life of the mine is 36 years for the OC-cum-UG mining; UG mining will commence production from 16th year of operation.
- xi. The density of Geological Reserve of Tatapani-Ramakola Coalfield is 6.22 Mt/Sq.km as compared to 6.98 Mt/Sq.km of SECL. Hence, there is no significant variation in Coal Reserve in this Coalfield.
- xii. Ministry of Coal has allotted the coal block to CMDC to supply coal to small industries situated in the state of Chhattisgarh.
- xiii. The vegetation map 64 M/2 issued by the Chhattisgarh Forest Department clearly shows that the boundary of Tamor Pingla is not within the radius of 10 kilometer from the mining lease boundary. The issues of tiger and other Schedule-I flora and fauna related to the protected

- area (i.e. Tamor pingla and Samarsot wild life sanctuaries), both these protected areas are away from the radius of 10 kilometer from the project site. As per authenticated vegetation map the forest area within the mining lease area is isolated small patches of forest and not connected to any continuous patch of forest. Therefore, the wild animals will avoid taking refuge in this area. DFO, North Surguja, vide its letter no. 2936 dated 13.5.2013, has certified, inter alia, that there are no national parks, wildlife sanctuary, biosphere reserves and any place of historical importance is neither located nor proposed within the 10 km buffer zone.
- xiv. The proponent has affirmed that during the preparation of the “Flora & Fauna, Wildlife Conservation and Management Plan for Sondiha Coal Block”, the domain experts have taken into account instances of the elephant movements in the buffer zone (10 km). The ML area is in the vicinity of elephant route. This project would mitigate the elephant menace and it will improve the habitat of the area. A sum of Rs. 5.475 crores will be spent in the implementation of the project report named by “Flora & Fauna, Wildlife Conservation and Management Plan for Sondiha Coal Block”, which has got approval of PCCF (Wild life) vide letter no. W. L./ 06, Dated 04/01/2013. The implementation of the approved conservation and management plan will have the activities which include: Erection of watch tower; Guard team with equipments like VHF equipments for communication and vehicles for smooth movement for guarding local inhabitants from wild animals; Wild life conservation measures like firefighting, provision of improved availability of fodder, water through creation of hideout water holes, plantation of shade trees, flower & fruit trees; Measures for habitat improvement, conservation and research resurrection like plantation, assisted natural regeneration, water harvesting and soil and water conservation; other activities like cattle immunization, promotion of ecotourism and eco-development also proposed; Provision for one time corpus fund for compensation for damages from wildlife also incorporated in budget; Provision of fund for Bio-diversity Board Chhattisgarh to study and documentation of bio diversity in the area and preparation of People Biodiversity Register. These activities will certainly induce the elephant to move through a path having better habitat condition. This will lead to minimum interference with local inhabitants with minimized incidence of man animal conflicts. The proponent has affirmed that a wild life management plan has been approved by the PCCF (Wild Life) of the State Forest Department, vide its letter no. 06 dated 04.01.2013.
 - xv. The PCCF (Wild Life) has also further certified that the report presented by the DFO, Surguja North indicating that there is no National Park, Wildlife Sanctuary and any place of historical importance within 10km of ML Area is true and agreeable to PCCF (Wild Life).
 - xvi. As per condition stipulated in ToR, “Wild Life Conservation and Management Plan for Sondiha Coal Block” harnessing all related information within core zone & buffer zone (10 km radius of the project) has been prepared by subject matter expert along with a budget for conservation of flora and fauna on long term basis.
 - xvii. The proponent has affirmed, with regard to the elephant corridor within the 10 km from the project site, that the list of 88 elephant corridors mentioned in the report “Right of Passage: Elephant Corridors of India” which has primarily identified 88 elephant corridors in India and does not include any such corridor in the project area. However, the proponent has prepared the management plan for reduction of HEC and thereby conservation of Elephants. There are instances of the elephant movements. The ML area is in the vicinity of elephant route. This project would mitigate the elephant menace and will improve the habitat of the area. A sum of Rs. 5.475 crores has been earmarked for the implementation of the project report named by “Flora & Fauna, Wildlife Conservation and Management Plan for Sondiha Coal Block”, which has got approval of PCCF (Wild life). The proponent has affirmed that a wild life management plan has been approved by the PCCF (Wild Life) of the State Forest Department; vide its letter no. 06 dated 04.01.2013. The proponent shall submit necessary certificate/document from the PCCF (Wild Life), Chhattisgarh for record.
 - xviii. The proponent has affirmed that the proposed project is outside the radius of 10 km of the Wild Life sanctuary/ eco-sensitive zone from the boundary of Tamor-Pingla Wild Life sanctuary. DFO, North Surguja, vide its letter no. 2936 dated 13.5.2013, has certified, inter alia, that there are no national parks, wildlife sanctuary, biosphere reserves and any place of historical importance is neither located nor proposed within the 10 km buffer zone. The PCCF

- (Wild Life) has also certified that the report presented by the DFO, Surguja North indicating that there is no National Park, Wildlife Sanctuary and any place of historical importance within 10km of ML Area is true. The proponent shall submit necessary document/certificate from the PCCF (Wild Life), Chhattisgarh for record.
- xix. A budget provision of Rs. 5.470 Cr. for conservation measures has already been approved by the Principal Chief Conservator of Forest (Wildlife), Government of Chhattisgarh.
 - xx. The proponent has denied that significant forest area of 197.257 ha. is of density of 0.4 and it is an important elephant corridor which is evident from the facts that the Forest Land for which Stage-I Clearance has been granted is of the density ranging from 0.2 to 0.4, which is based on the authenticated records submitted by the State Forest Department while processing of the Stage-I approval. Also, under compensatory afforestation (CA), diverted forest land will be compensated by equal amount of land for CA along with plan for plantation during the lifetime of the mine. This will create a much better forest cover. The Elephant Task Force which published its report on August 31, 2010 named “Gajah –Securing the Future for Elephants in India” primarily recommended that the 88 elephant corridors that have been identified in the Report “Right of Passage: elephant corridors of India” (Menon et al, 2005) should be notified as state elephant corridors by respective State Government and declared as ecological sensitive area.
 - xxi. The PP affirmed that it is imperative that the list of 88 elephant corridors mentioned in the said report does not include any such corridor in the ML area.. However, the experts in preparation of the Wildlife Management Plan have taken into account the presence of elephants/ HEC instances in the core and buffer zone for the last 10 years and accordingly prepared the management plan for reduction of HEC and thereby conservation of Elephants. This plan has been approved by the State Forest Department.
 - xxii. The question of dependencies of the wild animals and tribal communities for drinking water has also been studied by experts as part of EIA/EMP as directed by the EAC in the TOR titled “Report on Study of area drainage, hydrology & Hydrogeology – Sondiha Coal Block” The expert has concluded peak flow of Moran River at the north of the mine, that no adverse impact will be on the river flow due to mining of Sondiha Coal Block. In the EIA/ EMP, the anticipated sources of water pollutions have been carefully identified. The PP mentioned that that as there will not be any discharge of effluent from the facility and colony area since recirculation and reuse of treated waste water will be followed.
 - xxiii. The quality of seepage water shall be stringently and continuously monitored prior to discharge and treatment given, if required, therefore negligible impact is envisaged on the surface as well ground water quality. The report on “Report On Study of area drainage, hydrology & Hydrogeology – Sondiha Coal Block” which encompasses the issues with water has been approved by CGWB based on the study the mitigative measures suggest to abate water pollution have been incorporated in the EIA/EMP. Water with low pH value is also not accepted as there will be no leaching of heavy metals from the coal mine lease area due to the fact the characteristics water is not acidic. Rs. 60 lacs has been committed for creation of water hole/ water bodies and maintenance of 8 nos of water source for wild animals exclusively in the approved Flora & Fauna Plan. Extensive provision for drinking water for population in the core and buffer zone has been made in the budgetary allocation every year under approved R & R Plan. Till date 14 nos of boreholes have been drilled amounting to approximately Rs.20 Lakhs in the core zone and quality of water is potable which has been appreciated by the local people.
 - xxiv. It is a fact that most of the population in the project area belong to Schedule Tribes and their main source of livelihood is agriculture and non-timber forest products like Tendu leaves etc.
 - xxv. The PP has accepted that due to the opening of coal mining project, there will be noise, air and sound pollution in the area. CMDC has taken adequate care to protect the livelihood of the project affected population and to reduce the noise, air and sound pollution.
 - xxvi. R&R involves about 760 PAF.
 - xxvii. **Total capital cost of the project** is Rs. 575 Crores. The cost of production would be Rs. 1070/Tone. The CSR cost is Rs. 25/- per tonne of coal production. R&R Cost Rs. 30 crore. Environmental Management Cost (Capital Rs 10.20 Crores; Recurring cost-1.28

- Crores/annum)
- xxviii. **Approvals:** Ground water clearance from CGWB dated 15th Dec, 2011. Mine plan approval obtained on 6th July, 2011. The Board's approval was on 26.03.2011
 - xxix. The proponent had submitted the report of the study carried out by the IIT (BHU), Varanasi and informed that underground mining is not technically feasible and practical in the proposed opencast area and therefore, the topmost seam cannot be left undisturbed.
 - xxx. Based on the social-cost-benefit analysis, total underground mining is not technically feasible. The project is sustainable with a combination opencast & underground mining.
 - xxxi. The Tribal Development plan has been prepared as part of R & R plan which was submitted for Environmental Clearance vide letter no/1554/CMDC/2011-12 dated 28.03.2012. The Tribal Welfare Plan has been revisited in line with the different Guidelines issued by Govt. of India, World Bank (WB), Asian Development Bank (ADB) etc. for addressing issues related to Tribal Population affected by a project and informal discussion with experts on tribal issues.
 - xxxii. **CSR issues:** The capital budget for CSR has been raised from Rs. 50 lakhs to Rs 2.50 crores.
 - xxxiii. **Transportation:** Transportation of coal would be by tippers and OB by dumpers. The coal would be transported from the mine by road to the nearest railway siding situated 100 km away at Bistrampur. As regard to the use of Bhatgaon railway siding with the permission of SECL, the coal produced from Sondiha coal block will be sold at pithead to small and nearby consumers. Therefore, the transportation of coal will be carried out by consumers by themselves from pithead to their site of consumption.
 - xxxiv. **Wildlife issues:** There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
 - xxxv. **Forestry issues:** 388.138 ha of forest area involved for mining. Total forest land for which Stage-1 FC is available; vide letter no. 8-50/2012-FC dated 4th March 2013 for 388.138 ha (257.915 ha of Protected Forest Land and 130.223 ha of Revenue forest).
 - xxxvi. Total Afforestation plan shall be implemented at the end of mining where reclaimed external OB dump of 120 ha and internal OB Dump 203.56 ha. Green Belt will be over an area of 9.15 ha and the density of tree plantation would be 2500 trees/ ha of plants.
 - xxxvii. **Legal issues:** No legal issue is pending.
 - xxxviii. **Public hearing:** The public hearing was held on 20.12.2011.

3. The proposal was considered in the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) in its 47th meeting held on 23rd-24th April 2012; 73rd meeting held on 6th - 7th May, 2013 and recommended in its 75th meeting held on 3rd - 4th June, 2013 for granting Environmental Clearance. The Ministry of Environment & Forests has examined the application in accordance with the EIA Notification 2006 and under the provisions thereof, hereby accords environmental clearance for the above-mentioned **Sondiha OC-cum-UG Coalmine Project (1 MTPA peak in an ML area of 810 ha) of M/s Chhattisgarh Mineral Development Corp. Ltd., located in Dist. Sarguja, Chhattisgarh** under the provisions of the Environmental Impact Assessment Notification, 2006 and amendments thereto and Circulars issued thereon and subject to the compliance of the following specific conditions, in addition to the general conditions:

A Specific Conditions:

- i. Environmental clearance to the proposal is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the Standing Committee of National Board for Wildlife, as applicable.
- ii. The maximum production from the mines shall not exceed beyond that for which environmental clearance has been granted.

- iii. The proponent shall abide by all the recommendations and commitments made in the EIA/EMP report.
- iv. Keeping in view the sensitivity of the area, greater thrust should be given to local people for employment after necessary training and retraining.
- v. No diversion of the nala/river of the periphery of the ML area is permitted. Transportation will be by mechanically covered trucks from the mine to the consumers within two years from the date of operation of mine.
- vi. The Committee, based on the Proponent's submission and Forest Clearance dated 4.3.2013 recommended the project for granting Environmental Clearance.
- vii. As per the agreement of the proponent increase the budget provision of capital cost-Tribal Welfare Plan to Rs. 3.00 crores on the basis of WPI March, 2013 shall be increased.
- viii. The proponent shall submit necessary certificate/document from the PCCF (Wild Life), Chhattisgarh with regard to wild life management plan and that no national parks, wildlife sanctuary, biosphere reserves and any place of historical importance is neither located nor proposed within the 10 km buffer zone for record of the MoEF.
- ix. No external OB dump will be left after mine operation and shall be backfilled in the mine void.
- x. The proponent shall take necessary action on the issues raised during public hearing.
- xi. Topsoil generated in the balance life of mine should be stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used for reclamation and development of green belt.
- xii. OB generated in the balance life of the mine should be stacked at earmarked one external OB dumpsite within ML area. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of reclaimed dumpsite should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional office located at Bhubaneswar on yearly basis. The area of OB dump should be reduced. The grass turfing should be done on OB dumps.
- xiii. There is one external OB Dump covering an area of 120 Ha. The height for dumps would be 60 m. The total quantity of 50.96 mm³. The year of back filling would start from 3 years. There is internal OB Dumps covering an area of 203.56 Ha. The total quantity of 327.22 mm³. The mine void should be in 164.45 ha area with 40 mt depth.
- xiv. Adequate numbers sprinklers should be provided on both the sides of road to minimize dust pollution.
- xv. R&R involves about 760 PAF with a cost of Rs. 30 crore.
- xvi. Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilised for watering the mine area, roads, green belt development, etc. The drains should be regularly desilted and maintained properly. Garland drains (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall 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.
- xvii. Dimension of the retaining wall 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.
- xviii. Water sprinkling system (mist spray type) shall be provided to check fugitive emission from conveyor system, haulage roads and transfer points.
- xix. Fixed sprinkler shall be installed at pit-top truck loading hoppers in all the mines for dust control during coal loading. Adequate numbers sprinklers should be provided on both the sides of road to minimize dust pollution.
- xx. Drills should be wet operated only.
- xxi. An Action Plan for mine closure with details of area, depth, voids and the details of abandoned mines should be submitted to the Ministry.

- xxii. Controlled blasting should be practiced with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.
- xxiii. Transportation shall be by covered trucks of higher capacity (25-tonne) and loading shall be by pay loaders. Mechanized loading should be introduced in due course of time at the Railway siding. Mechanically covered truck should be provided for transportation of coal
- xxiv. Area brought under afforestation from the mines shall be by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.
- xxv. Extensive plantation should be done near agriculture area to avoid coal dust pollution which may affect the productivity of crop.
- xxvi. Mine discharge water shall be treated to meet the prescribed standards before discharge into natural water course / agriculture. The quality of water discharged shall be monitored at the outer point and proper records maintained thereof and uploaded regularly on the company website.
- xxvii. No groundwater shall be used for the mining activities. Additional water required, if any, shall be met from mine water or by recycling/reuse of the water from the existing activities and from rainwater harvesting measures. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry to dewatering of mine.
- xxviii. Regular monitoring of groundwater level and quality of the study area shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality including Arsenic and Fluoride during the month of May. Data thus collected shall be submitted to the Ministry of Environment & Forest and to the Central Pollution Control Board/SPCB quarterly within one month of monitoring. Rainwater harvesting measures shall be undertaken in case monitoring of water table indicates a declining trend.
- xxix. Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads, and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures shall be taken to avoid loss of life and material. Cracks shall be effectively plugged with ballast and clayey soil/suitable material.
- xxx. Sufficient coal pillars shall be left unextracted around the air shaft (within the subsidence influence area) to protect from any damage from subsidence, if any.
- xxxi. High root density tree species shall be selected and planted over areas likely to be affected by subsidence.
- xxxii. Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains.
- xxxiii. Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.
- xxxiv. No depillaring operation shall be carried out below the township/colony.
- xxxv. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil.
- xxxvi. Extensive plantation should be done near agriculture area to avoid coal dust pollution which may affect the productivity of crop.
- xxxvii. ETP shall also be provided for workshop, and CHP, if any. Effluents shall be treated to conform to prescribed standards in case discharge in to any water course outside the lease. The quality of water discharged shall be monitored at the outer point and proper records maintained thereof and uploaded regularly on the company website.

- xxxviii. A detailed plan for CSR with specific budgetary allocation (capital and revenue) for various skill development and alternate livelihood programmes and schemes shall be implemented and the impacts activities under CSR monitored based on in a scientific methodology. An amount of Rs. 5 per tonne of coal produced with escalation factor shall be utilised for CSR activities for the adjoining villages for the balance life of the project apart from one time capital expenditure. The details of CSR undertaken along with budgetary provisions for the village wise various activities and expenditure thereon shall be uploaded on company website every year. CSR Audit should be carried conducted annually.
- xxxix. A special Corpus Fund either at company level or in CIL/MOC be provided for reclamation of abandoned and degraded areas.
- xl. For monitoring land use pattern and for post mining land use, a time series of landuse maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MoEF and its Regional office. The post-mining land use shall be that out of the total 810 ha area, which of excavated will be 369.01 ha; Storage for top soil will be 5 ha; Overburden/Dumps will be 120; Infrastructure (Workshop, Administrative Building, office and road etc) will be 7.50 ha; Roads will be 4 ha; Green Belt /statuary barrier will be 9.15 ha; Tailings pond (surface reservoir) will be 2 ha; Township area will be 8.32 ha; Other will be 3.50; Area untouched (includes underground area) will be 281.52 ha
- xli. A Final Mine Closure Plan along with a plan for Habitat Restoration and with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests for approval five years in advance of final mine closure for approval. The species selected for Habitat Restoration for post-mining and shall include a specific plan for development of agro forestry using a mix native species found in the study area.
- xl.ii. A special Corpus Fund either at company level or in CIL/MOC be provided for reclamation of abandoned and degraded areas.
- xl.iii. The possibility of sand stone, wherever is present in the OB as per lithology report, be explored and be provided to locals free of cost
- xl.iv. Corporate Environment Responsibility:
 - a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.
 - d) To have proper checks and balances, the company shall 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.

B. General Conditions:

- (i) No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forests.
- (ii) No change in the calendar plan of production for quantum of mineral coal shall be made.
- (iii) Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM₁₀, PM_{2.5}, SO₂ and NO_x 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.
- (iv) Data on ambient air quality (PM₁₀, PM_{2.5}, SO₂ and NO_x) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its Regional Office at Bhubaneswar 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.
 - (v) 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.
 - (vi) Industrial wastewater (workshop and wastewater from the mine) shall 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 before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.
 - (vii) Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.
 - (viii) Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analysed through a laboratory recognised under EPA Rules, 1986.
 - (ix) Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.
 - (x) Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof.
 - (xi) A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.
 - (xii) The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhubaneswar.
 - (xiii) The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days 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 may also be seen at the website of the ministry of Environment & Forests at <http://envfor.nic.in>.
 - (xiv) A copy of the environmental clearance letter shall be marked to concern Panchayat/Zila Parishad, Municipal Corporation or Urban local body and local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on company's website.
 - (xv) A copy of the environmental clearance 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's Office for 30 days.
 - (xvi) The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance 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 PM₁₀, PM_{2.5}, SO₂ and NO_x (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.

- (xvii) The project proponent shall submit six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Office s of CPCB and the SPCB. Compliance of the EC conditions be monitored by the MoEF and other concerned agencies.
 - (xviii) The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.
 - (xix) The Environmental statement for each financial year ending 31 March in Form –V is mandated to be submitted by the project proponent 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 by E-mail.
4. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report so also during their presentation to the EAC.
 5. The proponent is required to 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.
 6. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986.
 7. 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. The proponent 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.

(Dr. Manoranjan Hota)
Director

Copy to:

1. Secretary, Ministry of Coal, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Chhattisgarh, Secretariat, Raipur.
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, E-2/240 Arera Colony, Bhopal 462016.
4. Chairman, Chhattisgarh State Environment Conservation Board, 1-Tilak Nagar, Shiv Mandir Chowk, Main Road, Avanti Vihar, RAIPUR-Chhattisgarh- 492001.
5. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi -110032.
6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
7. District Collector, Raigarh, Government of Chhattisgarh, New Delhi.
8. Monitoring File 9. Guard File 10. Record File. 11. Notice Board

(Dr. Manoranjan Hota)
Director