



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

To,

The owner
ARUMUGAM CHILAMBARASAN
Lakhanpur OCP
Lakhanpur
District -Jharsuguda
Orissa-768217
Mahanadi Coalfields Limited,,Jharsuguda,Orissa-768217

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/OR/CMIN/408586/2022 dated 29 Dec 2022. The particulars of the environmental clearance granted to the project are as below.

1. EC Identification No.	EC23A001OR187973
2. File No.	J-11015/391/2012- IA.II(M)
3. Project Type	Expansion
4. Category	A
5. Project/Activity including Schedule No.	1(a) Mining of minerals
6. Name of Project	Lakhanpur Opencast Expansion Project
7. Name of Company/Organization	ARUMUGAM CHILAMBARASAN
8. Location of Project	Orissa
9. TOR Date	N/A

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

Date: 18/09/2023

(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.

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File No. J-11015/391/2012- IA. II (M)
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

Indira Paryavaran Bhawan,
Jorbagh Road, N Delhi – 3
Email: lk.bokolia@nic.in; Tel: 011-20819417

Dated: 18th September, 2023

To,

The Chief General Manager (CP&P)
M/s Mahanadi Coalfields Limited
PO – Jagruti Vihar, Burla,
Sambalpur-768 020 (Odisha)
E-mail: lkpocpexpansion1@gmail.com

Sub: Expansion of Lakhanpur opencast (Phase -II) coal mining project for increase in production capacity from 21 MTPA to 22.5 MTPA (increase of 10% w.r.t 15 MTPA) in the Mining lease area of 2452 Ha by M/s Mahanadi Coalfields Ltd, located in village Khairakuni, Tingismal, Ubuda, Khuntamahul, Kalarajori, Khaliapalli, Soladia, Lakhanpur, Kudaloi, Kusaraloi, and Banjhipali, Tehsil Lakhanpur, District Jharsuguda (Odisha) – For Environmental Clearance dated 30.05.2022 issued under OM vide no. F. No. [A3-22/10/2022-IA.III dated 07.05.2022- [Availed total 50% relaxation of OM under clause 7 (ii) of EIA notification]-reg.

Sr,

This has reference to your online proposal No. IA/OR/CMIN/408586/2022 dated 29th December, 2023 for grant of Environmental Clearance to the above project.

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 project Expansion of Lakhanpur opencast (Phase -II) coal mining project for increase in production capacity from 21 MTPA to 22.5 MTPA (increase of 10% w.r.t 15 MTPA) in the Mining lease area of 2452 Ha by M/s Mahanadi Coalfields Ltd, located in village Khairakuni, Tingismal, Ubuda, Khuntamahul, Kalarajori, Khaliapalli, Soladia, Lakhanpur, Kudaloi, Kusaraloi, and Banjhipali, Tehsil Lakhanpur, District Jaarsuguda (Odisha), under OM vide no. F. No. [A3-22/10/2022-IA.III dated 07.05.2022.

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 39th EAC meeting held on 12-13 January 2023 and 47th meeting held during 21 - 22 July, 2023 through Video Conferencing. The details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meetings, are given as under:



- (i) The following Environmental Clearance were granted at different time series to Lakhanpur opencast (Phase -II) coal mining project in the MLA of 2452 Ha:
- EC for the production capacity of 15 MTPA vide letter no. J-11015/638/2007-IA.II (M) dated 02.07.2008.
 - EC for the production capacity from 15 to 18.75 MTPA vide letter no. J-11015/391/2012-IA.II (M) dated 21.05.2014 with exemption of Public Hearing.
 - EC for the production capacity from 18.75 to 21 MTPA vide letter no. J-11015/391/2012-IA.II (M) dated 28.02.2018 with exemption of Public Hearing.
 - EC for the production capacity from 21 MTPA to 22.05 MTPA (10% increase w.r.t. 15 MTPA) under OM dated 07.05.2022 (availing total 50% relaxation with exemption of public hearing under clause 7 (ii) of EIA notification, 2006) vide letter no. J-11015/391/2012-IA.II (M) dated 30.05.2022 with exemption of Public Hearing.
- (ii) Forest Clearance for 233.43 ha had been obtained vide dated 08.10.1990.
- (iii) Mining Plan & Mine Closure Plan has been approved by MCL Board for 22.5 MTPA vide dated 22.06.2022.
- (iv) The PP has submitted that Life of the mine 06 Years.
- (v) The PP has submitted the certified compliance report for the production capacity from 18.75 to 21 MTPA (for 40% expansion) vide letter dated 23.05.2022.
- (vi) The PP has submitted the EIA-EMP report based on baseline data collected for the period of March, 2021 to May, 2021.
- (vii) The project area is covered under Survey of India Topo-Sheet No.63- O/13 and is bounded by the geographical coordinates ranging from to 21°42' 15" to 21° 47' 10" North and longitudes 83° 48' 11" to 83° 52' 38" East
- (viii) Coal linkage of the project: To various Power Plants (OPGC, THPC, KTPS, NTRPS, TSPL, SSTP, REGL, KSK MPCL, NTPC SPCL, TTPS, REL, HEL, BSTPS, AFML, VTPL etc.)
- (ix) Joint venture cartel has been formed: Not Applicable
- (x) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.
- (xi) Employment generation: The project is reported to be beneficial in terms of Contribution to the Exchequer (both State and Central Govt.), Improvement of Electrical Power Generation and availability of electricity in rural areas. Overall economic growth of the country.
- (xii) Total mining lease area as per block allotment is 2240ha. The Mining plan for 22.5 MTPA (including Progressive Mine closure plan) has been approved by MCL Board on 22.06.2022.
- (xiii) The land usage pattern of the project is as follows:

Pre-Mining Land Use

Area in Ha

S. No.	Land Use	Within ML Area	Outside ML Area	Total
1	Agricultural Land	1182.97	-	1182.97
2	Forest Land	233.43	0.00	233.43
3	Wasteland	780.98	Nil	780.96
4	Grazing Land			

5	Surface Water Bodies	0.00	Nil	40.0
6	Others (Specify)Settlements	42.62	152	
7	Residential Colony	Nil	60	59.630
	Total Project Area	2240.00	212	2452.00

Post Mining land use

Area in Ha

Sl. No	Land use Category	Land use in Ha				Total
		Left out void/water body	Afforested arboriculture / grass carpeting	Land to be converted for agricultural (Conceptual)	Undisturbed / Built up area	
1	Quarry Excavation area	38.68	650.32	464.84	160.16	1314.00
2	Blasting danger	--	245.84	--	492.16	738.00
3	OB dump	OB area of 38.40 falls in safety zone				--
4	Infrastructure	--	42.66	--	145.34	188.00
	Total lease area	38.68	938.82	464.84	797.66	2240.00
	Residential colony	--	12.00	--	48.00	60.00
2	Rehabilitation site	--	30.40	--	121.60	152.00
	TOTAL	403.53	981.22	464.84	967.26	2452.00

- (xiv) Total geological reserve reported in the mine lease area is MT with 117.73 MT mineable reserves. Percent of extraction is 100%.
- (xv) Lajkura seam with thickness ranging from 20.88m – 33.53 m will be worked. Grade of Coal is G-14, Stripping ratio is 1: 2.42 while gradient is 3.7-5 degrees.
- (xvi) Method of mining operations envisages by Opencast Mining Method Coal winning by Surface Miner, OB removed by & Shovel-Dumper combination.
- (xvii) Life of the mine: 05 Years (as on 01.04.2023)
- (xviii) The project has Two external OB dumps in an area of 38.40 ha with 15m height and 1.94 Mm³ of OB and one internal OB in an area of 1115.16 ha with 749.81 Mm³ of OB is envisaged in the project.
- (xix) Total quarry area is 1314 ha out of which backfilling will be done in 1115.16 ha (up to ground level) ha while an area of 38.68 ha of backfilled area will remain as final mine void with a depth of 165 m. Backfilled quarry area of 1115.16 ha shall be reclaimed with plantation/grass/agriculture. Final mine void will be converted into a water body. This mine will be integrated with other nearby adjacent mines namely Belpahar OCP and Lilari OCP, for which mining plan & mine closure plan has been approved & ToR granted by MoEF&CC. Final closure will be done as per the Mine Closure Plan of Integrated Lakhanpur-Belpahar-Lilari OCP.

- (xx) Transportation of coal is being carried out in mine pit to surface by tippers, from surface to siding by tippers and dumpers and at sidings by payloader/railway rakes. The transportation of coal will be augmented by upcoming conveyors and Silo (10 Mty). Pipe conveyor of 2.4 km (2000 TPH) 10.0 Mty already constructed, and it is under trial run stage. Washery is 99% completed and expected to be commissioned by 31.08.2023. Silo is under construction and will be commissioned by Jan 2024 and as a temporary arrangement washed coal will be dispatched through nearby railway siding. However, in future for Integrated Lakhanpur-Belpahar-Lilari OCP (40MTY), Washery and silo capacity will be upgraded to 20 Mty to meet the coal dispatch (through rail) target.
- (xxi) Reclamation Plan in an area of 981.22 ha, comprising of 38.40 ha of external dump (including topsoil dump), 650.32 ha of internal dump and 245.84 ha of green belt. In addition to this, an area of 85.06 ha, included in the roads/infrastructure and undisturbed area, has also been proposed for green belt development.
- (xxii) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported within 10 km boundary of the project.
- (xxiii) The ground water level has been reported to be varying between 5.23 to 7.02 mbgl and post monsoon water level varies from 1.52 to 4.83 mbgl. Total water requirement for the project is 6.25 MLD.
- (xxiv) Application for renewal of NOC from the Central Ground Water Authority has been submitted 21-4/2081/OR/MIN/2018 earlier NOC obtained vide CGWA/NOC/MIN/ORIG/2020/9248, dtd.09.12.2020. CGWA clearance for the Lakhanpur Opencast Project was valid up to 08.12.2022.
- (xxv) Public Hearing was held on 27.07.2007 for the total mine lease area of 2485 Ha. The issues raised in the PH includes Air pollution due to coal transportation roads; to ensure minimum pollution about water, air and noise pollution; employment for the affected areas; compensation for the persons in proximity of the mines; maintenance of the tree plantation etc.
- (xxvi) Consent to Operate for the existing capacity 22.5Mty has been obtained vide 1874/IND-1-CON-1220 Dt.09.02.2023 valid till 31.03.2024 from the State PCB.
- (xxvii) Lilari Nallah and Pulijore nallah is flowing through the project mine lease area. There is no diversion proposed in this project.
- (xxviii) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report issue submitted to Regional Office, MoEF&CC, and Bhubaneswar and also to MoEF&CC along with half yearly EC compliance report. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations which can be attributed to the specific local conditions during the day of sampling.
- (xxix) The project involves 1243 project affected families. R&R of the PAPs will be done as per Orissa Rehabilitation and Resettlement Policy 2006.
- (xxx) Total cost of the project is Rs. 436.79 Crs. Cost of production is Rs.502per tonne, CSR cost is Rs.2per tonne or 2% of the average net profit of the Company of the three immediately preceding financial years whichever is higher, R&R cost is Rs.48.09Crs. Environment Management Cost is Rs 45 Crores.

4. In the instant project, earlier Environmental Clearance for expansion of Lakhanpur Opencast coal mining project was granted in advance under OM vide no. F. No. [A3-22/10/2022-

IA.III dated 07.05.2022- [Availed total 50% relaxation of OM under clause 7 (ii) of EIA notification] in view of shortage of coal. The EC was granted subject to certain condition such as submission of EIA-EMP report within six months for appraisal of EAC along with other statutory requirement mentioned therein.

5. The Expert Appraisal Committee in its 47thEAC meeting held during 21 - 22 July, 2023 through Video Conferencing has recommended the project for grant of Environment Clearance (EC). Based on recommendations of the EAC, Ministry of Environment, Forest and Climate Change hereby accords approval for Environment Clearance(EC) to Capacity Enhancement of **Expansion of Lakhanpur opencast (Phase -II) coal mining project for increase in production capacity from 21 MTPA to 22.5 MTPA (increase of 10% w.r.t 15 MTPA) in the Mining lease area of 2452 Ha by M/s Mahanadi Coalfields Ltd, located in village Khairakuni, Tingismal, Ubuda, Khuntamahul, Kalarajori, Khaliapalli, Soladia, Lakhanpur, Kudaloi, Kusaraloi, and Banjhipali, Tehsil Lakhanpur, District Jaarsuguda (Odisha)under OM vide no. F. No. [A3-22/10/2022-IA.III dated 07.05.2022- [Availed total 50% relaxation of OM under clause 7 (ii) of EIA notification]**,under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions in addition to the standard environmental conditions notified by the Ministry as under :-

- i. PP shall complete the installation mechanized system for 10 MTPA before 31st August 2023 & for 15 MTPA (additional) SILO loading system shall be installed on or before January 2024.
- ii. No mine water shall be discharged into Lilari stream. PP shall treat mine water through ETP. The treated water shall be utilized for purpose of plantation, workshop etc.
- iii. PP shall monitor the functionality of ETP and regular monitoring of effluent on six monthly basis and the progressive reports shall be submitted to the IRO, MoEF&CC.
- iv. PP shall complete the land acquisition, rehabilitation & settlement programme for the people displaced in the past.
- v. PP shall implement the necessary control measures to control the fugitive dust emission. The coal dusts should not be deposited on the water of village wells and ponds.
- vi. PP shall start reclamation of the mine with combination of top soil and Fly ash with the development of grazing facility and other activities to be considered from the progressive mine closure plan.
- vii. PP shall immediately submit the status of the closure of the mine as per the approved progressive mine closure plan.
- viii. PP shall engage the electric vehicle or small vehicles for internal roads within mine using green fuel. No vehicle shall be used based fossil fuel.
- ix. PP shall fulfil the water requirement for agricultural purpose by creating artificial ponds and shall fulfil the drinking water requirement after treatment through dedicated well or alternate sources for villagers.
- x. PP shall transport the 4.0 MTPA of coal through dedicated road without passing through village or any sensitive areas. Mine authorities shall repair and maintain roads on six monthly basis to avoid any spillage of coal on the roads. No village road shall be used as well as no road transport route shall be adopted, which is passing through any sensitive location such as schools, hospitals etc.

- xi. The project proponent shall install effective dust suppression system at the suitable location in the other parts of the mining lease to arrest the fugitive dust emission.
- xii. The project proponent shall arrange Periodical health check-up camp and in long term PP shall arrange permanent health facility near village area.
- xiii. PP shall complete plantation on OB dump areas along with roadside avenue plantation.
- xiv. PP shall provide free medical facilities for the local villager's along with the ambulance facilities.
- xv. PP shall establish a technical training institute in the area to train the local youth for better employment. A report shall be prepared & submitted upon the status of the training session already conducted in order to provide livelihood and skill development to near-by villagers to make them employable.
- xvi. PP shall complete the dense plantation along mine roads, on OB dumps and non-dump areas with local species particularly of Sal tree/species. PP shall develop 10 ha of Sal nursery in the project area and yearly minimum 10,000 saplings to be distributed among near villagers for afforestation purpose.
- xvii. PP shall make the pucca roads within the mine lease area and same should be maintained time to time.
- xviii. PP needs to submit the compliance of SoP issued by CPCB for dumping of mine void by fly ash.
- xix. PP needs to submit the physical and financial target for the implementation of the action plan for conservation and protection of endangered flora and fauna.
- xx. PP needs to submit the detail report upon the steps already taken or to be taken towards medical health check-ups for Mine workers.
- xxi. The project proponent shall include development of solar parks, eco-friendly-parks, fish farming pond, picnic spot and sports compound in its Mine Closure Report. Further if possible, maximum possible area of quarry shall be brought upto original ground level and handover the land to Project affected Families.
- xxii. Proper garland drain and retaining wall should be made (if required) and same should be revived from time to time.
- xxiii. The PP shall not use the ground water for any type of mine closure activity. PP shall maintain one permanent Piezometer for monitoring of ground water level.
- xxiv. PP to shall complete the tree plantation particularly fruit bearing tree along the village road within six months from date of issue of EC to IRO, MoEF&CC. The plantation shall also be planted along the Mine boundary and Mine pit. A detailed report with GIS images of every six months subsequently be submitted in every six monthly report to justify the adequate tree plantation.
- xxv. PP shall ensure the uniform fee structure in nearby school of MCL for children of MCL employees as well as for other students.
- xxvi. PP shall install 100 m jet spray length in order to arrest the heavy air pollution on the roads and other dust generating points. More number of Fog cannons, Road sweeper and Mobile water sprinklers to be used on road.
- xxvii. 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 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 holder 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 MoEF&CC.

5.1 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 PM₁₀, PM_{2.5}, SO₂ and NO_x. 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 25th 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 PM₁₀/PM_{2.5}) 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 25th 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 27th 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 27th 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 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'.

(i) Corporate Environment Responsibility

(i) Fund allocation for Corporate Environment Responsibility (CER) shall be made as per Ministry's O.M. No. 22-65/2017-IA.III dated 30th September 2020 and based on commitment made during public consultation process for incorporating in EIA-EMP for deliberation of EAC

(ii) The company shall have a well laid down environmental policy duly approved 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.

(iii) 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.

(iv) 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.

(v) 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; PM₁₀, SO₂, NO_x (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 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'.
- (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.

6. 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.

7. 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.

8. 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.

9. 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 2nd August, 2017 of Hon'ble Supreme Court in WP (Civil) No.114/2014 in the matter of 'Common Cause Vs Union of India & others.

10. 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.

11. 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.

12. All the other terms and conditions of earlier EC dated 02.07.2008 (with Public hearing), 21.05.2014, 28.02.2018 and 07.05.2022 shall remain same.

This issues with the approval of the competent Authority


(Lalit Bokolia)
Director

Copy to:

1. The Additional Principal Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, A-31, Chandershekharpur, Bhubaneswar- 751023 (Odisha).

2. The Secretary, Department of Environment & Forests, Government of Orissa, Secretariat, Bhubaneswar (Odisha).
3. The Chairman, Odisha State Pollution Control Board, Parivesh Bhawan, A/118, Nilkanthanagar, Unit VIII, Bhubaneshwar - 751012 (Odisha).
4. The Chairman, Central Ground Water Authority, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001
5. District Collector, Jharsuguda, Government of Odisha.
6. Monitoring File /Record File 7.PARIVESH Portal



(Lalit Bokolia)