



सत्यमेव जयते

File No.: IA-J-11015/15/2019-IA-II(M)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division



Dated 15/01/2024



To,
Shri R P Gupta
INTEGRATED LAKHANPUR-BELPAHAR-LILARI OCP
Office of the General Manager Lakhanpur Area, MCL PO Bandhabahal Colony Jharsuguda Odisha ,
Bandhabahal, JHARSUGUDA, ODISHA, Lakhanpur, 768211
integratedbl2019@gmail.com

Subject: Expansion and amalgamation of three mines Lakhanpur, Belpahar and Lilari Open Cast mine with increase in production capacity from 32.5 MTPA to 40 MTPA within mine lease area of 4399.246 ha by M/s Mahanadi Coalfields Limited located in IB Valley Coalfield, Tehsil Lakhanpur District Jharsuguda (Odisha) – For Environmental Clearance - reg.

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/OR/CMIN/444254/2023 dated 01/11/2023 for grant of prior Environmental Clearance (EC) to the project under the provision of the EIA Notification 2006-and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC23A0101OR5332947N
(ii) File No.	IA-J-11015/15/2019-IA-II(M)
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vi) Sector	Coal Mining
(vii) Name of Project	Integrated Lakhanpur Belpahar Lilari Project
(ix) Location of Project (District, State)	JHARSUGUDA, ODISHA
(x) Issuing Authority	MoEF&CC
(xii) Applicability of General Conditions	No

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 and amalgamation of three mines Lakhanpur, Belpahar and Lilari Open Cast mine with increase in production capacity from 32.5 MTPA to 40 MTPA within mine lease area of 4399.246 ha by M/s Mahanadi Coalfields Limited located in IB Valley Coalfield, Tehsil Lakhanpur District

Jharsuguda (Odisha).

The project/activity is covered under category 'A' of item1(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 3rd EAC Meeting during 16-17 November 2023 through Video Conferencing/Hybrid. 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: -

1. The project area is covered under Survey of India Topo Sheet No 64O/13 & 64O/14 (RF 1:50,000) and is bounded by the geographical coordinates ranging from Latitude 21°42'25.89"N to 21°47'24.82"N and Longitudes 83°49'38.9"E to 83°49'53"E.
2. Coal linkage of the project: Power Plants and basket linkage.
3. Joint venture cartel has been formed: Not Applicable
4. 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. However, the project falls in the Severely Polluted Area as per the latest CEPI scores published by NGT in its report on 14.11.2019.
5. Employment generation: 4249 nos. of direct employment will be generated.
6. The project is reported to be beneficial in terms of: Improvement in Physical Infrastructure; Improvement in Social Infrastructure; Increase in employment potential; Contribution to the Exchequer (both State and Central Govt.); Post mining enhancement of Green Cover. & Improvement of Electrical Power Generation & availability of electricity for 24x7 in rural areas. Overall economic growth of the country.
7. The proposal is for grant of integrated EC of 40 MTPA in ML area of 4399.246 Ha as per the EIA notification 2006 and its further amendments issued from time to time.
8. Previously EC granted by MoEF&CC to the individual projects named Lakhanpur, Belpahar, Lilari and Ib valley coal washery vide letters-J-11015/391/2012-IA-II (M) for Lakhanpur OCP (22.5 Mty) dated 18.09.2023; J-1015/189/2008-IA-II (M) for Belpahar OCP (9 Mty) 22.01.2015, 15.01.2021 & 06.02.2023.; J-11015/27/89-IA for Lilari OCP (0.8 Mty) dtd 30.07.1990.J-11015/2015/IA-II(M) for Ib valley coal washery dated 30.03.2017.
9. Total mining lease area as per block allotment is 4399. 246 Ha. Mining Plan & Mine closure plan was approved by MCL Board in its 205th Board meeting held on 23rd October 2018 while published through minutes on 31.10.2018.
10. The land usage pattern of the project is as follows:

Pre mining land use (Area in Ha)

S. No	Particulars	Within ML Area (ha)	Outside Lease Area (ha)	Total Area (ha)
1	Agricultural land (tenancy)	1651.551	69.037	1720.588
2	Forest land	958.695	37.693	996.388
3	Wasteland (Non- Forest)	1621.228	50.413	1671.641
4	Grazing land	87.906	12.526	100.432
5	Surface water bodies	14.515	0.00	14.515
6	Settlements	65.351	173.962	239.313
	Total	4399.246	343.631	4742.877

During-mining land use details (Area in Ha)

S. No.	Particulars	Within ML Area (ha)	Outside ML Area (ha)	Total Area (ha)
1.	Excavation area	3565.484	0	3565.484

1.	Safety Zone 7.5 m	24.095	0	24.095
1.	External OB dump	22.650	0	22.650
1.	Temp. topsoil storage	41.994	0	41.994
1.	Temp. Washery reject storage	124.002	0	124.002
1.	Infrastructure	495.018	0	495.018
1.	300/500 m blasting zone and others	126.003	0	126.003
	In Mining Lease (ML)	4399.246	0	4399.246
h)	Outside blasting Zone, now outside ML	0.00	169.669	169.669
i)	Residential Colony / Rehabilitation Site	0.00	173.962	173.962
	Outside ML	0.00	343.631	343.631
	Total Project Area	4399.246	343.631	4742.877

Post Mining

S. No.	Category	Plantation	Unfilled void	Quarry Bottom & Slope	Undisturbed / Built up area	Total
1	Quarry excavation	3105.033	23.871	436.58	0	3565.484
2	OB dumps (external)	22.65	0	0	0	22.65
3	Infrastructure	495.018	0	0	0	495.018
4	Blasting danger zone/Green belt	150.098	0	0	0	150.098
5	Other areas incl. temporary soil dump & rejects storage	165.996	0	0	0	165.996
6	Mine Lease Area (A)	3938.795	23.871	436.58	0.00	4399.246

- Total geological reserve was 1720.256 MT. The mineable reserve is 1262.86 MT as per approved Mining Plan & Mine closure plan, extractable reserve is 1262.86 MT with per cent of extraction as 100%.
- 11 seams with maximum thickness 36.92 m. The coal grade is G11. The stripping ratio is 3.43 cum/tonne. The average gradient is 40 to 60.
- The method of mining would be Opencast by Shovel - Dumper/ Ripper-dozer in OB/ parting; Surface miner, pay loader & tipper in coal. Coal production will be done by using 2200/3800 mm drum dia surface miners, 35T multi-wheel trucks are proposed with 6.4 cum Front end loaders. 50 T dumpers will be replaced by 60 T dumpers. 100 T dumpers are proposed for OB excavation with excavators having 9.5 cum and 12 cum buckets. 244 T dumpers are proposed with 34 cum excavator.
- The life of mine is 41 Years as per approved MP&MCP by MCL Board.
- There is one external OB dump with Quantity of 2.93Mcum in an area of 22.65 Ha while one internal dump with quantity 4294.29 M.cum in an area of 3541.613 Ha.
- Total quarry area is 3565.484 ha out of which backfilling will be done in 3541.613 Ha. While unfilled mine void will be created in an area of 23.871Ha with a maximum depth of 30m. Backfilled quarry area of 3105.033 Ha shall be reclaimed with plantation/grass. Apart from this 436.58 Ha will remain as quarry bottom and slope which will be grass carpeted.
- The entire coal production of 40.0Mty will be by Surface Miner.

Coal Transportation: The coal will be dispatched through rail and road mode.

- Out of the total 40.0 MTPA of coal, 10.0 MTPA of coal will be transported by pipe conveyors to the washery from receiving hoppers towards north. After washing, washed coal will be transported by conveyors to silo for final dispatch by rail.
- For 20.0 Mty ROM coal, receiving hoppers are proposed near southern entry of Central Quarry, which are also near to South Quarry exit. Coal will be transported by conveyors through over-ground bunker to two silos (20 Mty) for rapid loading on rail.
- And 3.5 Mty coal will be dispatched to OPGC by rail from sidings and balance 6.5 Mty will be dispatched locally to nearby customers.

1. Reclamation Plan in an area of 3973.585Ha, comprising of 3105.033 Ha of internal dump, 22.65Ha of external OB dump, 150.098 Ha of Blasting danger zone/green belt and other areas for an area of 695.804 Ha incl. Infrastructure and outside lease area.
2. The total forest area involved in the project is 996.388 Ha, out of which stage II FC for 541.622 ha has already been granted by MoEF&CC and 37.693 Ha falls outside the mine lease area for which forest diversion is not required and will be kept intact.

S. No.	Diversion Particulars	Area in Ha	Date
1	Stage II Forest clearance for Lakhanpur OCP	233.43	08-10-1990
2	Stage II Forest clearance for Belpahar OCP	103.52	02-06-2000
3	Stage II Forest clearance for Belpahar OCP	19.70	15-09-2014
4	Stage II Forest clearance for MGR by OPGC	10.453	19-01-2015
5	Stage II Forest clearance for MGR by OPGC	12.319	10-01-2020
6	Stage II Forest clearance for Lilari OCP	162.20	14-08-1990
	Total	541.622	

- The Proposal for forest diversion of 417.073Ha and change of land use of 171.774 Ha has been applied on 16.03.2019 and the proposal was considered in FAC meeting held on 13.06.2022 and 17.10.2022 and FAC has directed for site visit and other queries were compiled and the proposal was considered in FAC meeting held on 23.02.2023. The FAC meeting held on 21.08.2023 FAC has sought queries for further Consideration of proposal in FAC meeting.
1. No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.
 2. Wildlife Conservation plan: A Site-Specific Wildlife Conservation Plan was prepared and submitted to Principal Chief Conservator of Forest, Wildlife (PCCF) and the proposal was discussed on 09.03.2023 and subsequently queries were raised. The queries were compiled and revised report submitted to PCCF (Wildlife) on 02.11.2023.
 3. Total estimated water requirement is 12.89 MLD. The level of ground water ranges from 5.40 to 7.02 mbgl (pre-monsoon) and 2.24 to 4.83 mbgl (post-monsoon).
 4. NOC from the Central Ground Water Authority for the individual projects Lakhanpur and Belpahar projects (Lilari is a closed mine, hence no water is abstracted from this mine) have been obtained obtained vide letter CGWA/NOC/MIN/ORIG/2020/9248 dated 09.12.2020. for Lakhanpur OCP while for Belpahar OCP vide letter CGWA/NOC/MIN/ORIG/2020/9025 dated 26.11.2020. Application for renewal of the applications are under process at CGWA.
 5. The public hearing for Integrated Lakhanpur Belpahar Lilari Project of coal production capacity 40.00 MTPA of M/s Mahanadi Coalfields Limited' was conducted at Kandsar Primary M.E school on 06.12.2021, at 11.00 AM. Additional District Magistrate supervised and presided over the Public Hearing Process. The issues raised during Public Hearing were regarding Employment, Peripheral Development, R&R and Dust generation.
 6. Commitment made by the Project Proponent to address the Public Hearing concerns in lieu of Corporate Environment

Responsibility (CER) has been submitted.

7. Consent to operate (CTO) will be obtained from the State Pollution Control Board after obtaining Environment Clearance from MoEF&CC for this project.
8. Yes, Lilari and Pulijore streams are passing through the mine lease and are proposed to be diverted as per the approved MP&MCP in the 29th year of operation.
9. The baseline study generation for this project has been conducted for this project from Mar-May 2021 (pre-monsoon season). All the values are well within the prescribed limits. Regular monitoring of ambient air quality will be carried out on fortnightly basis for this project. The documented report is being and will be submitted to Regional Office, MoEF&CC, and Bhubaneswar and to MoEF&CC along with half yearly EC compliance report.
10. No court cases are pending in the court for Lakhanpur OCP while for Belpahar OCP, a case has been registered under Section 15 & 16 of Environment Protection Act, 1986 at Sub-Divisional Judicial Magistrate, Jharsuguda vide ref. no. 2(C) CC NO-170 of 2013 and it is waiting for trial.
11. The project does not involve violation of the EIA Notification, 2006 and amendment issued there under.
12. The project involves 1796 project affected families of the PAPs is being done as per Orissa Rehabilitation and Resettlement Policy 2006.
13. Total capital cost of the project is Rs. 2434.75 Crores. CSR Cost - 2% of the average net profit of the company for the three immediately preceding financial years or Rs. 2.00 per tonne of coal production of the previous year whichever is higher. R&R Cost Rs. 479.91 Crores. Environmental Management Cost – Rs. 515.21 Crores.
14. Certified compliance report has been obtained from Ministry's RO-Bhubaneswar for the Lakhanpur, Belpahar & Lilari project separately on:

Project	Letter No.	Dated
Lakhanpur OCP	101-1029/23/EPE	20.10.2023
Belpahar OCM	101-975/23/EPE	08.08.2023
Lilari OCP	101-22/EPE	31.07.2023
Ib valley coal washery	101-974/23/EPE	19.10.2023

4. The Expert Appraisal Committee in its 3rd EAC Meeting held on 16 - 17 November 2023 through Video Conferencing/Hybrid. 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 **Expansion and amalgamation of three mines Lakhanpur, Belpahar and Lilari Open Cast mine with increase in production capacity from 32.5 MTPA to 40 MTPA within mine lease area of 4399.246 ha by M/s Mahanadi Coalfields Limited located in IB Valley Coalfield, Tehsil Lakhanpur District Jharsuguda (Odisha)** 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 for Environmental safeguards :

5. This issue with an approval of the Competent Authority.

Copy To

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Additional Principal Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, A-31, Chandershekharpur, Bhubaneswar- 751023 (Odisha).
3. The Secretary, Department of Environment & Forests, Government of Orissa, Secretariat, Bhubaneswar (Odisha).
4. The Chairman, Central Ground Water Authority, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi

110001

5. The Chairman, Odisha State Pollution Control Board, Parivesh Bhawan, A/118, Nilkanthanagar, Unit VIII, Bhubaneswar - 751012 (Odisha).
6. District Collector, **Jharsuguda** , Government of **Odisha**.
7. Monitoring File /Record File 8. PARIVESH Portal

Annexure 1

Specific EC Conditions for (Mining Of Minerals)

1. Specific Condition

S. No	EC Conditions
1.1	PP needs to submit the approval of Stage-I forest clearance for the forest area of 417.073 ha along with the status of change in land use for 171.774 ha prior to the grant of Environment Clearance
1.2	PP shall obtain CTE/CTO from State Pollution Control Board for 40.0 MTPA production capacity for open cast operation
1.3	In addition to the existing facility for 10MTPA mechanized transportation system, PP shall install dedicated in-pit belt conveyor for 15 MTPA with silo loading system till railway siding for transportation of 100% of extracted coal through rail within six months of grant of EC. No road transportation shall be allowed by State Government. Accordingly, SPCB should grant the consent to operate
1.4	PP shall submit the conservation plan for Lilari Nallah flowing through the ML area to IRO. No diversion of Lilari Stream/Nallah shall be conducted
1.5	PP needs to avoid further external dumping over existing OB of Lakhanpur OCP and Belpahar OCP and their re-handling too shall be avoided. Mine shall be modified accordingly
1.6	PP shall establish insitu lab facility within three months for regular monitoring of Air, water, solid wastes & soil and submit their test report to IRO
1.7	PP shall deploy the truck size of upto 40 tonnes (payload) for transportation of coal by road. Transportation of coal shall be done in covered trucks only till implementation of mechanized system
1.8	PP shall use the existing mine water for the purpose of watering the Mine area, roads and green belt development
1.9	PP shall start backfilling the existing pit in place of increasing the height of OB dump or creation of extra spaces for another dump area
1.10	PP shall implement routine de-siltation process of pond/drains in order to recharge the ground water
1.11	PP shall submit the details of CO2 equivalent to be generated during the mining operation and CO2

S. No	EC Conditions
	equivalent for transportation to be separately mention
1.12	As proposed dedicated concrete Road of 12 mt width, away from the villages and sensitive location like school and hospitals shall be constructed to transport the coal prior to the start of the mining operation. Further 10 mts width of tree plantation shall be conducted to mitigate the vehicular and dust emission on both side of road along with the atleast 3m width of the midroad tree plantation
1.13	PP shall implement activities-wise proposed budget of Rs. 47.54 Cr. (as EMP cost) & Rs. 20.17 Cr. (as Public Hearing Budget) in time bound manner as per Table in above para of MoM 3.13.3 (x) & (xi) respectively. The details of annual expenditure shall be part of report submitted to IRO, MoEF&CC. PP needs to include the audited figures against the expenditure and activities to be monitored by through dedicated online monitoring mechanism. The maintenance of all activities shall be covered through recurring cost of Public Hearing, which will be part of CSR budget.
1.14	PP shall create a “Public Grievance Redressal and Monitoring System” for resolving any issues related to the pollution of mines and complaint has to resolve as soon as possible not beyond 30 days. In this regard, adequate awareness to be spread among the public to address their grievance to company with simple and easy manner and for which company needs to devise the mechanism. The same shall be reported to IRO within 3 months. A logbook to be maintained by PP on “Public Grievance Redressal and Monitoring System
1.15	PP shall monitor regularly water levels in open dug wells located in village and by establishing Piezometer to ascertain the impact of mining over ground water table and to plan mitigative measures to recharge the area.
1.16	PP shall maintain 50 mts width of embankment all along the diverted stream/nallah and conduct dense plantation with fruit bearing native species by itself.
1.17	Main haul road in the mine shall be provided with permanent water sprinklers, and other roads shall be regularly wetted with water tankers fitted with sprinklers. Also PP shall install Mist Cannon Dust Suppression Systems (80-100 mtrs.) at Coal Stock Yard to suppress the dust particles.
1.18	Garland drains (2mX3m) of adequate size shall be provided at the toe of the benches to arrest discharge and runoff with silt and sediments surging into areas adjoining the periphery of Overburden dump, which will be regularly cleaned before the onset of monsoon every year. Proper profiling of working benches of pits and dumps shall be done to channelize water in garland drains & sumps
1.19	5 water harvesting pond of adequate capacity shall be created separately to recharging the ground water and usage of project affected families.
1.20	Check dams shall be constructed at required locations within drains to arrest eroded materials and settling ponds shall be constructed to treat mine discharge water inside the mine block
1.21	PP shall deploy atleast 20% of overall fleet of dumpers/trucks as electrical or CNG/LNG based dumpers/trucks for transportation of coal/OB etc and deploy e-vehicles for workers/staff in/out of the mine within 2-3 years of grant of EC. Waste
1.22	PP shall implement the outcome of the socio-economic study as per the EIA-EMP report

S. No	EC Conditions
1.23	Waste generated from the domestic use shall be treated in STP and the treated water will be utilized in plantation & greenbelt development. Wastewater from the HEMM washing/ workshop will be treated in ETP. After treatment, water will be reused in washing of HEMM, dust suppression and greenbelt development.
1.24	PP shall arrange the permanent drinking water facility through RO plant along with dedicated pipeline facility for the near villagers. PP shall fix the intermittent issues related to the pipeline & RO plant. PP shall ensure distribution of water from the artificial reservoir within and outside Mine lease area in consultation with gram panchayat. The water treatment plant to meet the requirement with the start of production
1.25	R&R of villages in the mine lease area directly affected by mining operation shall be completed first and for other villages atleast 10 number of fog cannons shall be deployed for mitigation of dust pollution within six months of this EC.
1.26	PP to plant 100,000 nos. of Sal trees only with geotagging to identify the SAL trees and develop nursery of 10 ha sal trees for free distribution in nearby areas
1.27	PP shall install fixed fog cannon (mist sprayer) and fixed sprinkler all along the haul road/ CHP, and OB dump till Railway siding is completed. The sufficient number of fog cannons (not less than 10 nos.) with 40 mts jet length shall be installed within 6 months. It should be ensured that air pollution level confirm to the standards prescribed by the MOEFCC/CPCB
1.28	PP shall make alternate arrangement of grazing land of atleast 10 ha for usage of project affected families within 10-15 km of project area within 2 years of commencement of mine operation
1.29	PP shall construct new multispecialty (50 beds) hospital in the 10 km of the project area within 5 years for local people out of approved budget outlay of CSR funds. The project affected families shall be given free medical facility. This shall be done in consultation of DM of the district
1.30	PP shall conduct third party audit of compliance of EC condition at an interval six months and its report shall be submitted to IRO, MoEF&CC
1.31	The status of mine closure activities must be included in every six months compliance report submitted to the state pollution control board and IRO.
1.32	PP to install solar lights along the road used for transportation of minerals to avoid the accidents at night and also seek its maintenance. PP is asked to also identify the rural areas for installation of solar light with its maintenance within the study area of 10 km radius buffer zone within one year
1.33	PP to provide bio toilets to the villages located within the study areas within 1 year from the grant of this EC
1.34	PP shall deposit the approved amount as proposed for wildlife conservation plan to the State Forest & Environment Dept. PP shall do regular follow up with for expenditure of Wildlife Conservation Plan and the details expenditure shall be submitted with six monthly EC compliance report to Ministry's IRO. Also, PP shall engage with State Biodiversity Authority and local biodiversity committee under its CSR activity to develop the local market
1.35	PP shall pay to farmers of agricultural land if there is any loss due to pollution found by concerned

S. No	EC Conditions
	District Commissioner as per extent rules or norms
1.36	Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records
1.37	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 MoEF&CC
1.38	All other terms and conditions as prescribed in the Ministry's letter dated 30.07.1990, 21.05.2014, 22.01.2015, 30.03.2017, 15.06.2017, 28.02.2018, 15.01.2021, 07.05.2022 and 06.02.2023 shall be complied by PP
1.39	PP shall conduct feasibility studies for assessment of voids for backfilling of ash and mixing of ash with overburden, taking up backfilling ash and OB mixing activities during operations as well as post closure of mines in line with the Fly Ash Utilization Notification, 2021.

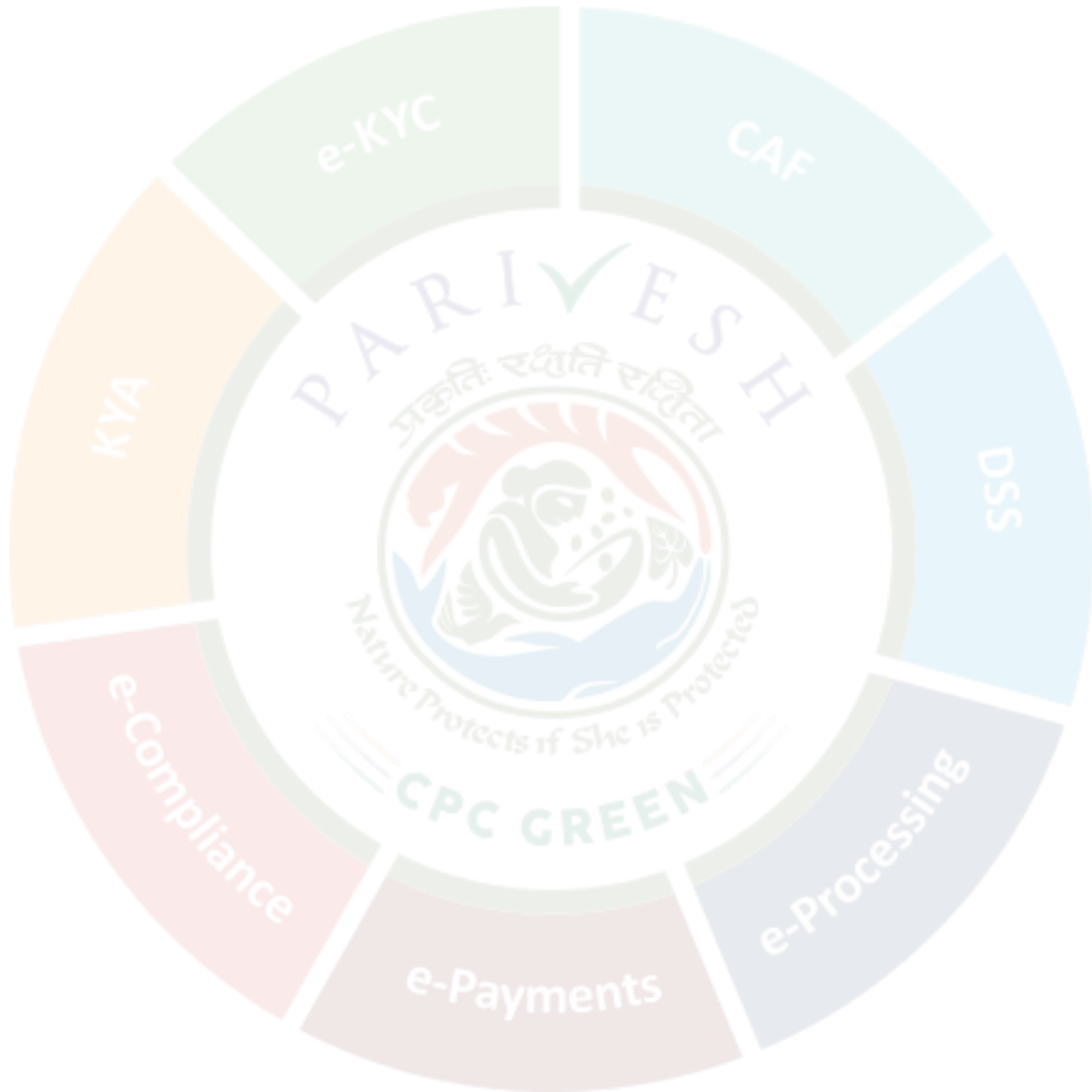
Additional EC Conditions

Additional Specific conditions as the area falls under Severely Polluted Areas (SPAs)

1. Transportation of materials by rail/conveyor belt with silo loading facility shall be implemented for 40 MTPA.
2. Encourage use of cleaner fuels for trucks, If the roads required to be widened upto nearest railway siding, the same be constructed to avoid traffic congestion.
3. Increase green belt cover by 40% of the total land area beyond the permissible requirement of 33%, wherever feasible.
4. Greenbelt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc. shall be implemented.
5. Assessment of carrying capacity of mine & road transportation shall be done as per the State Plan/instructions.
6. Reuse/recycle of treated wastewater shall be implemented as feasible with latest technology. Zero liquid discharge concept may be adopted.
7. PP to install Continuous monitoring station for ambient air quality and also continuous effluent quality in ETP shall be installed. Data so generated shall be linked with respective SPCB and CPCB websites.
8. A detailed water harvesting plan may be prepared by the project proponent for water augmentation and submitted to Regional Office of MoEF&CC.
9. The project proponent shall install STP for generated domestic wastewater and should meet for discharge standard.
10. More stringent norms for management of hazardous waste like oil container, ETP sludge etc shall be adopted. The waste generated should be preferably utilized in co-processing.
11. Monitoring of compliance of EC conditions may be submitted with third party audit every year.

Details of Minerals Products & By-products

Name of the Mineral to be mined	Classification of mineral [Major/Minor]	Production capacity in MTPA	Remarks
Coal	Major	40.0	Through opencast mining method.



Annexure II

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-20012/1/2006-1A.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) 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; 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 matter⁵. 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.

2. 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.

3. 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.

4. 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.

5. 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.