



**No. J-11015/387/2015-IA.II (M)**

Government of India  
Ministry of Environment, Forest & Climate Change  
Impact Assessment Division

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Dated: 3<sup>rd</sup> February, 2020

To,

**M/s Western Coalfields Ltd.,**  
Coal Estate, 9<sup>th</sup> Floor, Civil Lines,  
**Nagpur** – 1, Maharashtra

**Email:** [gmenvironment.wcl@nic.in](mailto:gmenvironment.wcl@nic.in); [wclenv@yahoo.in](mailto:wclenv@yahoo.in)

**Sub: Adasa Underground to Opencast Coal Mine with expansion in production capacity from 0.50 MTPA to 1.50 MTPA (Normative) & 1.85 MTPA (Peak) and increase in land area from 221 ha to 594.41 ha M/s Western Coalfields Limited located in village Adasa District Nagpur, Maharashtra – Environmental Clearance regarding.**

Sir,

This has reference to your online proposal no. IA/MH/CMIN/108663/2019 dated 19<sup>th</sup> September, 2019 on the above-mentioned subject.

2. The Ministry of Environment, Forest and Climate Change has considered the proposal for grant of Environmental Clearance for Adasa Underground to Opencast Coal Mine with expansion in production capacity from 0.50 MTPA to 1.50 MTPA (Normative) & 1.85 MTPA (Peak) and increase in land area from 221 ha to 594.41 ha M/s Western Coalfields Limited located in village Adasa District Nagpur (Maharashtra).

3. The proposal was considered by the EAC in its 49<sup>th</sup> meeting held on 22<sup>nd</sup> October, 2019 and 51<sup>st</sup> meeting held on 5<sup>th</sup> December, 2019. The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

- (i) The existing Adasa UG has been granted environmental clearance vide J-11015/341/2008-IA.II(M) Dated – 15<sup>th</sup> July, 2009 for Production capacity of 0.50 MTPA within ML area of 221.0 ha.
- (ii) The mine was proposed for conversion from Underground to Opencast with increasing in Capacity from 0.50 MTPA to 1.50 (Normative) & 1.85 MTPA (Peak) & increase in land area from 221.00 Ha to 594.41 ha.
- (iii) The proposal for obtaining ToR for conversion of Adasa UG to OC involving expansion from 0.50 to 1.50 (Normative) & 1.85 MTY (Peak) & increase in land area from 221.00 Ha to 596.27 ha was discussed in 51<sup>st</sup> EAC (Thermal & Coal Mining) meeting held on 05.02.2016 for grant of ToR. Terms of



References (TORs) was granted vide MoEF&CC letter no J-11015/387/2015.IA-II(M) Dated 29.02.2016.

- (iv) Extension in ToR validity was recommended in 45<sup>th</sup> EAC meeting held on 19-06-2019 and extension in TOR validity till 29.02.2020 was issued vide MoEF&CC letter no J-11015/387/2015.IA-II(M) dated 19.06.2019.
- (v) The project area is covered under Survey of India Topo Sheet No 55 K/15 and is bounded by the geographical coordinates ranging from N 21° 19' 29" to N 21° 21' 4" and longitudes E78° 56' 28" to E78° 58' 46".
- (vi) Coal linkage of the project was for Thermal power plants of MAHAGENCO & Miscellaneous consumers. There is no Joint venture involved.
- (vii) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13<sup>th</sup> January, 2010 has imposed moratorium on grant of environment clearance.
- (viii) Employment generation: Required Manpower for the project is 155 Nos as direct employment.
- (ix) The project is reported to be beneficial as it is an opencast mining method, the extraction of reserves increases which lead to coal conservation. This project will thus bridge the gap (to the extent of the peak production capacity of the project) between demand & supply of non - coking coal for power plants & other bulk consumer.
- (x) Total mining lease area is increased from 221.00 Ha to 594.41 Ha. The Mine Plan along with Mine closure Plan for Conversion of Adasa UG to OC was approved by the WCL Board vide its letter ref no WCL/BD/SECTT/BM-306/2018/731 dated 24.11.2018.
- (xi) The land usage pattern of the project is as follows:

Details of changes in land use as per Present sanctioned ToR is provided below:

Pre-mining land use details

Sl. No.	Particulars	Existing Land (ha)	Additional land (ha)	Total Land (ha)
1)	Tenancy land	3.83	530.66	534.49
2)	Government land	8.83	21.09	29.92
3)	Forest land	0.00	0.00	0.00
4)	Land for Kotodi & Erangaon village rehabilitation (Outside mine leasehold)	0.00	30.00	30.00
	<b>Total</b>	<b>12.66</b>	<b>581.75</b>	<b>594.41</b>

Post-mining land use details

S.	Land use	Land use (ha)
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No.	during mining	Plantation	Water Body	Public use	Undisturbed	Total
1	External OB Dump	85.00	0.00	0.00	0.00	85.00
2	Top Soil Dump	0.00	0.00	0.00	0.00	0.00
3	Excavation	148.03	139.55	0.00	0.00	287.58
4	Roads	1.00	0.00	2.00	0.00	3.00
5	Built up area	1.00	0.00	11.00	0.00	12.00
6	Undisturbed Area	120.00	0.00	0.00	32.83	152.83
7	Embankment	6.00	0.00	0.00	18.00	24.00
8	Land for Village Rehabilitation	0.00	0.00	30.00	0.00	30.00
<b>Total</b>		<b>361.03</b>	<b>139.55</b>	<b>43.00</b>	<b>50.83</b>	<b>594.41</b>

- (xii) Total geological reserve reported in the mine lease area is 29.46 MT. Extractable reserves are 22.48 MT. Percent of extraction is 90%.
- (xiii) The Number of seams to be worked on are 5 (Five). Thickness of Seams to be worked on are given below

S.No	Seam	Thickness (m)	
		Min	Max
1	V	1.60	5.25
2	IV (T)	0.15	2.16
3	IV (T) A	0.16	3.06
4	IV (M)	1.13	7.42
5	IV (B)	0.15	2.49

- (xiv) Grade of Coal GCV – 5020 Kcal/kg, G8, stripping ratio 1: 6.64 m<sup>3</sup>/t/ (overall average).
- (xv) Mining operations will undertaken by opencast method with shovel dumper Combination which is most suitable to work the developed pillars by underground mining. It is proposed in approved Project Report to work the mine in two quarries to maximize internal dumping. First of all, Quarry-I will be operated and its OB will be dumped in rise side no-coal bearing area. After completion of Quarry- I, Quarry-II will be worked and its OB will be backfilled in the decoaled void of Quarry-I
- (xvi) Life of mine: 18 years (including 1 year of land acquisition period).
- (xvii) The project will have one number of internal dump in an area of 148.03 ha (reclaimed with plantation) with Maximum height of 30 m above ground level and quantity of 116.19 Mm<sup>3</sup> of OB. One external OB dump is envisaged in an area of 85.0 ha and a height of 90 m above ground level and quantity of 29.54 Mm<sup>3</sup> of OB.
- (xviii) Total quarry area is 287.58 ha. Backfilled quarry area of 148.03 ha shall be reclaimed with plantation. Final mine void will be created in an area of



139.55 ha with a maximum depth of 114 m. Final mine void will be converted into water body.

- (xix) Transportation of coal in pits by dumpers, from surface to Railway sidings by tippers. The coal will be transported to Thermal power plants of MAHAGENCO and to Miscellaneous Consumers. Crushed coal of mine will be transported by trucks to B G Siding, Saoner at a distance of nearly 4.0 kms from the mine. The entire road will be black topped and coal will be transported by tarpaulin covered vehicles only.
- (xx) Reclamation Plan/afforestation plan is for 361.03 ha. It includes 85.0 ha of external OB dump, 148.03 ha of internal dump, 120.0 ha on undisturbed land and 8 ha along roads & infrastructure. Plantation has been carried out over an area of 1.0 ha with 2500 saplings.
- (xxi) No forest land has been reported to be involved in the project.
- (xxii) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.
- (xxiii) The ground water level has been reported to be varying between 8.20 to 14.55 m during pre-monsoon and between 7.00 to 14.35 m during post-monsoon (core zone). Total water requirement for the project is 390 KLD.
- (xxiv) Application for Ground Water Clearance has been made to CGWA vide Application Number: 21-4/2254/MH/MIN/2019 on 17.07.19.
- (xxv) Public hearing for the project of 1.50 (Normative) & 1.85 MTPA (Peak) capacity in an area of 596.27 ha was conducted on 06.02.2019 at project site of Adasa UG to OC mine, Saoner Tahsil, District -Nagpur. The minutes of Public Hearing has been received from Maharashtra Pollution Control Board vide letter MPCB/NSRO-1/940/2019 dated 17.05.2019, under the chairmanship of Additional District Magistrate Shri Ravindra Khajanji, Nagpur. Minutes of the meeting are enclosed in annexures of Form#2 on parivesh portal.
- (xxvi) Consent to Operate: The mine is a proposed mine and being considered for grant of EC for the first time. After receipt of EC Consent to Establish and then subsequently Consent to Operate will be secured from MPCB.
- (xxvii) A Seasonal Nallah flows through the core zone is proposed to be diverted along the mine boundary. Chandrabagha Nadi, another seasonal stream, flows along the south-eastern boundary of the project.
- (xxviii) Baseline for Ambient Air Quality has been generated from Oct'2016 to Dec'2016 for proposed conversion of Adasa UG to OC Mine. The results were found to be within prescribed limits.
- (xxix) No court cases, violation cases are pending against the project of the PP pertaining to environment.
- (xxx) Adasa UG to OC is new mine which will be opened after obtaining EC and other necessary/statutory clearances. However the production of erstwhile Adasa UG is closed since 19<sup>th</sup> April, 2019.



- (xxxi) Two villages namely Kotodi and Erangaon falling within the core zone are required to be rehabilitated and resettled. Both villages is falling over the proposed quarry area. Positive impacts on socio-economic environment are expected due to creation of direct and indirect employment opportunities and development of infrastructure such as roads, schools, hospitals etc. The project involved 797 project affected families from Kotodi and Erangaon Village. Both village has been proposed to rehabilitated. R&R cost is Rs. 94.33 Crores. the total number of houses in this village is 299 with a total population of 554. There are 175 houses with a total population of 465 in Erangaon Vilage.
- (xxxii) Total capital cost of the project is Rs. 333.4393 Crores (including WDV of Rs 17.4304 crores). Capital cost on Environment management plan is 22.09 crore. Revenue cost on EMP will be 6 Rs/tonne. The financial provision for closure of Project Report for Adasa UG to OC mine works out to Rs. 8027.63 lakhs.
- (xxxiii) Green belt of adequate width should be raised by planting native species around the mine lease area on both sides of haul road, near material handling plant, on external overburden dumps and backfilled quarry along undisturbed area. About 50.0 ha of plantation will be carried out in undisturbed area as green belt. Total 361.03 ha out of total 564.41 Ha (64%) area will be planted till the end of mine life.
- (xxxiv) Land Requirement:- As per the earlier approved Project Report of March, 2015, the total land requirement was estimated to be 596.27 ha. The ToR has been obtained on the basis of approved Project Report of March, 2015 for ML area of 596.27 ha. However, the total requirement of land for proposed Adasa UG to OC mine has been worked out to be 594.41 ha as per revised project report.
- (xxxv) Ministry's Regional Office, Nagpur vide its letter dated 22<sup>nd</sup> November, 2016 has submitted site inspection report/certified compliance report of EC dated 15<sup>th</sup> July, 2009 and found various partially complied/not complied EC conditions. Action taken report was submitted by PP.

4. The Expert Appraisal Committee in its meeting held on 5<sup>th</sup> December, 2019 has recommended the proposal for grant of Environmental Clearance. Based on the recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords approval for **grant of Environmental Clearance to M/s Western Coalfields Limited for Adasa Underground to Opencast Coal Mine with expansion in production capacity from 0.50 MTPA to 1.50 MTPA (Normative) & 1.85 MTPA (Peak) and increase in land area from 221 ha to 594.41 ha, located in village Adasa District Nagpur, Maharashtra**, under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto, subject to the compliance of the following terms and conditions and environmental safeguards mentioned below:

- (i) The project proponent shall obtain Consent to establish from the State Pollution Control Boards for the proposed peak capacity of 1.5 MTPA (Normative) / 1.85 MTPA (Peak) prior to commencement of the increased



production.

- (ii) PP shall start the mining operation only after necessary statutory clearances/approvals from the State Govt. of Maharashtra and other Departments with regard to Wildlife (if any).
- (iii) Transportation of coal from Coal Handling Plant shall be through covered trucks.
- (iv) To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.
- (v) Mitigating measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at loading and unloading points, etc. 2-3 tier of native tree with broad leaves of plantation shall be carried out all along the road transportation route.
- (vi) The company shall obtain approval of CGWA for use of groundwater for mining operations at its enhanced capacity of 1.5 MTPA (Normative) / 1.85 MTPA (Peak).
- (vii) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (viii) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.
- (ix) To ensure health and welfare of nearby villages, regular medical camps shall be organized at least once in six months.
- (x) Permission for diversion of road and power line from authorised statutory body
- (xi) Thick green belt of adequate width at the final boundary in the down wind direction of the project site shall be developed to mitigate/check the dust pollution. No shrubs/bushes shall be planted and only trees of native species shall be planted.
- (xii) Efforts shall be made for utilizing alternate sources of surface water, abandoned mines or else whatsoever and thus minimizing the dependability on a single source.
- (xiii) The activities and fund provisions for CER shall be made as per the guidelines issued by the ministry regarding CER on 1<sup>st</sup> May, 2018.



- (xiv) Compliance of all the non-compliances and partially complied conditions by Regional Office of MoEFCC, Nagpur for the project of EC dated 15th July, 2009. The PP shall take all the mitigation measures and the Action taken report shall be submitted to the Regional Office of the MoEFCC.
- (xv) Project Proponent shall obtain blasting permission from DGMS for conducting mining operation near villages and also explore deployment of rock breakers of suitable capacity in the project to avoid blasting very near to villages. There shall be no damages caused to habitation/structures due to blasting activity.
- (xvi) Permission of road diversion Patansaongi-Adasa Village Road from authorized statutory body.
- (xvii) Dumping of OB for construction of embankment against Chandrabhaga river should not pollute the river. Regular monitoring water quality of river shall be conducted.
- (xviii) Distance of mine boundary from Chandrabhaga Nadi and distance of OB dump(embankment) from Chandrabhaga Nadi shall not be less than 150 m. The PP shall take all the mitigation measures to protect the water bodies and the compliance report shall be submit the Regional Office of the MoEFCC.
- (xix) The Project Proponent shall complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors. State Government shall ensure that the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department in strict compliance of judgment of Hon'ble Supreme Court dated the 2<sup>nd</sup> August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- (xx) Project Proponent shall obtain the necessary prior permission from the Central Ground Water Authority (CGWA) in case of intersecting the Ground water table. The intersecting ground water table can only be commence after conducting detailed hydrogeological study and necessary permission from the CGWA. The Report on six monthly basis on changes in Ground water level and quality shall be submitted to the Regional Office of the Ministry, CGWA and State Pollution Control Board.
- (xxi) Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. The Recommendations of National Institute for ensuring good occupational environment for mine workers shall be implemented; The prevention measure for burns, malaria and provision of antisnake venom including all other paramedical safeguards may be ensured before initiating



the mining activities.

- (xxii) Project Proponent shall follow the mitigation measures provided in Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".
- (xxiii) The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villagers is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.
- (xxiv) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.
- (xxv) "CAAQMS shall be provided with analyzer of CO"
- (xxvi) Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8<sup>th</sup> 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 Ministry's Regional Office for site inspection/verification.

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

**(a) Statutory compliance**

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



- (ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- (iii) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area).
- (iv) The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.
- (v) The project proponent shall obtain the necessary permission from the Central Ground Water Authority.
- (vi) Solid/hazardous waste generated in the mines needs to be addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.

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

- (i) Continuous ambient air quality monitoring stations as prescribed in the statute be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.
- (ii) The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25<sup>th</sup> September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.
- (iii) Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM<sub>10</sub>/PM<sub>2.5</sub>) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.
- (iv) The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any



village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.

- (v) Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
- (vi) Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.
- (vii) Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environmental friendly sustainable technology should be implemented for mitigating such parameters.

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

- (i) The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25<sup>th</sup> September, 2000 and as amended from time to time by the Central Pollution Control Board.
- (ii) The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No.J-20012/1/2006-IA.11 (M) dated 27<sup>th</sup> May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
- (iii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.
- (iv) Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.
- (v) Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.
- (vi) Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds



so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.

- (vii) Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming to the specific requirement (standards).
- (viii) Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Adequate ETP /STP needs to be provided.
- (ix) The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
- (x) The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.
- (xi) The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

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

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



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

**(e) Mining Plan**

- (i) Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.
- (ii) Mining shall be carried out as per the approved mining plan(including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).
- (iii) No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.
- (iv) Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.

**(f) Land reclamation**

- (i) Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change(MOEFC) from time to time shall be submitted to MOEFCC/Regional Office (RO).
- (ii) The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27<sup>th</sup> August, 2009 and subsequent amendments.
- (iii) The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/"post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.
- (iv) Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&C, CPCB and SPCB.
- (v) Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall



temporarily be stored at earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.

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

**(g) Green Belt**

- (i) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.
- (ii) Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads.

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

- (i) Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & it's RO on six-monthly basis.
- (ii) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.
- (iii) Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
- (iv) Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.



- (v) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29<sup>th</sup> October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

**(i) Corporate Environment Responsibility**

- (i) The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No.22-65/2017-IA.III dated 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.
- (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; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- (v) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- (vi) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29<sup>th</sup> October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.
- (vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- (viii) The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- (ix) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- (x) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- (xi) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.
- (xii) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- (xiii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- (xiv) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- (xv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- (xvi) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986,



Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

5. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during presentation to the EAC. All the commitments made on the issues raised during public hearing shall also be implemented in letter and spirit.
6. The proponent shall obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection. The Ministry or any other competent authority may stipulate any further condition for environmental protection.
7. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
8. The coal company/project proponent shall be liable to pay the compensation against the illegal mining, if any, and as raised by the respective State Governments at any point of time, in terms of the orders dated 2<sup>nd</sup> August, 2017 of Hon'ble Supreme Court in WP (Civil) No.114/2014 in the matter of 'Common Cause Vs Union of India & others.
9. The concerned State Government shall ensure no mining operations to commence till the entire compensation for illegal mining, if any, is paid by the project proponent through their respective Department of Mining & Geology, in strict compliance of the judgment of Hon'ble Supreme Court.
10. This environmental clearance shall not be operational till such time the project proponent complies with the above said judgment of Hon'ble Supreme Court, as applicable, and other statutory requirements.
11. This issues in supersession of the earlier EC granted vide letter dated 15<sup>th</sup> July, 2009.
12. This issues with the approval of the competent authority.

(Dr. R. B. Lal)  
Scientist 'E'/Additional Director

**Copy to:**

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Principal Secretary, Department of Environment, Government of Maharashtra, 15<sup>th</sup> Floor, New Admn. Bldg, Madam Cama Road, Mantralaya, Mumbai - 32 (Maharashtra)
3. The Additional PCCF (Central), Ministry of Environment Forest and Climate Change, Regional Office (Western Central Zone), Ground Floor, East Wing, New Secretariat Building Civil Lines, Nagpur-1 (Maharashtra)

(Dr. R. B. Lal)  
वैज्ञानिक 'ई'/Scientist 'E'  
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय  
Min. of Environment, Forest and Climate Change  
भारत सरकार, नई दिल्ली  
Govt. of India, New Delhi



4. The Member Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
5. The Advisor, Coal India Limited, SCOPE Minar, Core-I, 4<sup>th</sup> Floor, Vikas Marg, Laxmi Nagar, New Delhi
6. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
7. The Member Secretary, Maharashtra State Pollution Control Board, Kalapataru Point, 3<sup>rd</sup> & 4<sup>th</sup> Floors, Sion, Matunga Scheme Road No. 8, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai - 2
8. The District Collector, Nagpur, Government of Maharashtra
9. Guard File/ Record File/ Monitoring File/ Website of MoEF&CC.

  
**(Dr. R. B. Lal)**  
**Scientist 'E'/Additional Director**