

No. J-11015/151/2014-IA-II(M)
Government of India
Ministry of Environment, Forest & Climate Change
(Impact Assessment Division)

Indira Paryavaran Bhavan,
Jor Bagh Road, New Delhi-110 003

Dated: 13th March, 2020

To,

The General Manager (Environment),
M/s Western Coalfields Ltd.,
Coal Estate, 9th Floor, Civil Lines,
Nagpur - 1 (Maharashtra)
Email: gmenvironment.wcl@nic.in; wclenv@yahoo.in

Sub: Expansion of Bhatadi Opencast Coal Mine from 0.975 MTPA to 1.465 MTPA (Peak) of M/s Western Coalfields Limited in mine lease area of 847.37 ha, located in Village Bhatadi, District Chandrapur (Maharashtra) – Environment Clearance(EC) - reg.

Sir,

This has reference to your online proposal no. IA/MH/CMIN/72758/2018 dated 1st March, 2018 on the above-mentioned subject.

2. The Ministry of Environment, Forest and Climate Change has considered the proposal is for Environmental Clearance for Expansion of Bhatadi Opencast Coal Mine from 0.975 MTPA to 1.465 MTPA (Peak) of M/s Western Coalfields Limited in mine lease area of 847.37 ha, located in Village Bhatadi, District Chandrapur (Maharashtra).
3. The proposal was considered by the EAC in its 52nd meeting held on 24th January, 2020. The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-
 - (i) The project is located in Bhatadi village, in Wardha Valley Coalfields in Chandrapur district. The nearest rail head is Tadali which is about 8 to 9 km away from the mine and Chandrapur Station about 15 km away from the mine. Both the stations are on the main line of Central Railway.
 - (ii) The project area falls in Survey of India Topo Sheet No.55 P/08 with geographical coordinates ranging from 20° 02' 27" - 20° 04' 25" E and longitudes 79° 15' 18" -79° 17' 35" N.

- (iii) Coal linkage of the Bhatadi OC mainly lies with Thermal Power Plants of MAHAGENCO. In addition to this coal from the mine will be provided to other miscellaneous consumers.
- (iv) No joint venture cartel has been formed to operate the mine. Bhatadi OC Expansion Mine Project has been proposed to be operated solely by the M/s WCL.
- (v) Project does not fall in the Critically Polluted Area (CPA), where the MoEFCC vide its OM dated 13th January, 2010 has imposed moratorium on grant of Environment Clearance.
- (vi) Direct employment to about 474 personnel, it will provide further employments to land losers. Administrative approval for 409 of employment in WCL has been accorded and out of 409, 339 nos. has already been provided employment.
- (vii) The project is reported to be beneficial to bridge the gap between demand and supply of non-coking coal for the power houses and other bulk consumers of western region as well as southern part of the country.
- (viii) The last EC for Bhatadi OC coal mine from 0.65 to 0.975 MTPA in a total lease area of 847.37 ha with no forest land, was accorded vide letter dated 19th March, 2015.
- (ix) Erai River flow in the area of Bhatadi OC Expansion. The proposal for Erai river diversion has been submitted to CDO, Nasik and further action will be taken as per the design of CDO, Nashik & subsequent approval of the State Irrigation Department.
- (x) The existing Bhatadi Expansion OC mine has been divided into two quarries namely, quarry-I and quarry-II. Presently quarry-I is being worked whereas area of quarry-II is virgin. The geo-mining parameters of the project are as under: -

S.N	Particulars	Quarry-I	Quarry-II	Total
1	Area of the Quarry			
a)	On floor (ha)	50.870	33.875	84.745
b)	On surface (ha)	88.92	72.60	161.52
2	Depth (m)			
a)	Initial	33	53	
b)	Final	150	150	-
3	Average gradient of Seam	1 in 6	1 in 6	
4	Average thickness of seam (m)	17	17	
5	Average strike length (m)	800	700	
6	Width on surface (m) (Dip Rise)	700	850	
7	Width on floor (m) (Dip Rise)	500	600	-
8	GCV (k Cal/ kg) (Overall)	4504 (G10)		
9	Balance Mineable reserves (Mt) as on 1/4/2017	3.54	9.27	12.81

2011

10	Total OB including Access Trench (Mm ³) as on 1/ 4/2017	19.78	51.07	70.85
11	Average Stripping ratio in m ³ /t. as on 1/ 4/2017	5.59	5.51	5.53

(xi) Last 5 years production is as given below (*All figures in Million Tonnes per Annum*)

Year	Coal Production	EC capacity
2019-20 (Upto 31.10.2019)	0.970	0.975
2018-19	0.975	0.975
2017-18	0.639	0.975
2016-17	0.875	0.975
2015-16	0.71	0.975
2014-15	0.71	0.975

The land usage pattern of the project is as follows:

Pre-mining land use details

Sl. No.	Particulars	Tenancy Land	Govt. Land	Forest Land	Total
1	Land Already acquired by existing Bhatadi Expansion OC Mine (ha)	785.69	52.25	0.00	837.94
	Land for Bhatadi Village Rehabilitation to be Acquired (ha)	9.43	0.0	0.0	9.43
	Total	795.12	52.25	0.0	847.37

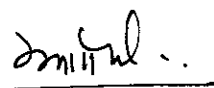
Post Mining land use details

S.N.	Land use during mining	Land use (ha)				
		Plantation	Water Body	Public use	Undisturbed	Total
1	Backfilled Area	50.00	38.92	0.00	0.00	88.92
2	Excavated Area	0.00	72.4	0.00	0.00	72.40
3	Embankment Area	13.00	0.00	0.00	0.00	13.00
4	External OB dump	142.10	0.00	0.00	0.00	142.10
5	Colony, Infrastructure etc.	6.00	0.00	21.60	0.00	27.60
6	Miscellaneous (Blasting zone, river diversion, power line diversion & rationalization)	50.00	0.00	0.00	435.47	485.47
7	Road	3.00	0.00	5.45	0.00	8.45
Total (A)		264.10	111.32	27.05	435.47	837.94
Land for Bhatadi Village		0.0	0.0	9.43	0.0	9.43

Amindul

Rehabilitation to be Acquired (B)					
Grand total (A + B)	264.10	111.32	36.48	435.47	847.37

- (xii) Total geological reserve reported in the mine lease area is 45.714 MT with 23.566 MT mineable reserve, out of which 12.81 MT of reserve is extractable reserve with extraction intensity of 95 %.
- (xiii) Mining Plan including the Mine Closure Plan for further expansion of the mine for increasing the production capacity from 0.975 MTPA to 1.465 MTPA within the existing land area and without any capital investment has been approved by the WCL Board in its 293rd meeting held on 31/10/2017 vide WCL/BD/SECTT/BM-293/2017/936 dated 10/11/2017.
- (xiv) The method of mining would continue to be opencast with Shovel-Dumper combination
- (xv) There is two external OB dump with Quantity of 69.708 Mm³ in an area of 142.10 ha with height of 60 m and 1 internal dump with Quantity of 53.75 Mm³ in an area of 88.92 ha. Out of this 88.92 ha, 50 ha would be biologically reclaimed and 38.92 ha would be partially backfilled and converted into water body.
- (xvi) The final mine void would be in 111.32 ha with depth of 150 m.
- (xvii) Total quarry area is 161.32ha. Out of total quarry area of 161.32ha, 88.92 ha would be backfilled and reclaimed. Out of which 50 ha area shall be reclaimed with plantation. A void of 111.32 ha with depth 150 m which is proposed to be converted into a water body.
- (xviii) The balance life of mine is 8 Years as on 01.04.2019
- (xix) Transportation: Coal transportation in pit by dumpers, surface to siding by dumpers and loading at siding by pay loaders. Pipe conveyor system for coal transportation is in advance stage of commissioning.
- (xx) The details of R&R activities, carried out for the existing project is as follows: -
- Land acquired under CBA Act, 1957 in the year 1990 is 287.57 ha which includes 278.96 ha tenancy land and 8.61 ha Govt land. Employment provided against this land is 113 no. as per norm.
 - Land acquired under LA act 1897 in the year 2007 is 82.15 ha which includes 78.49 ha Tenancy land and 3.66 ha Govt. land. Employment provided against this land till date is 30 nos.
 - Land acquired under section 9(1) CBA Act, 1957 at 13.9.2011 is 467.21 ha which included 0.30 ha diverted plot area, 426.73 ha. Tenancy land 39.98 ha, Govt. land and 0.20 ha forest land. Administrative approval to 409 cases employment/monetary



compensation has been approved by competent authority. Till date 284 cases of employment and 07 No. cases of M.C. is given and remaining cases of initiated employment/Monetary compensation is in process.

(xxi) Total capital cost of the project is Rs.304.5162 Crores as per PR and no additional capital is required for the present proposal. Cost of Production is Rs.1300.98 per tonne, CSR cost will be Rs. 2 per tonne, R&R Cost will be Rs.79.79 Crore and the capital Environmental Management cost will be Rs. 0.9709 crores.

(xxii) NOC for withdrawal of groundwater from CGWA has been applied vide letter No. WCL/ENV/HQ/20-J & 17-U/263 dated 13.06.2016. NOC for abstraction of ground water for Bhatadi OC have been recommended by CGWB on 11.10.2019. Formal issuance of NOC letter awaited.

(xxiii) Public Hearing conducted on 13.09.2019 at WCL Durgapur Auditorium, Durgapur, Ta. Dist. Chandrapur, Maharashtra State.

(xxiv) Following issues has been raised during the Public Hearing held for Bhatadi OC Expansion Project for increase in Coal production capacity from 0.975 MTPA to 1.465 MTPA within existing EC area of 847.37 Ha. Detailed pointwise compliance report has been submitted to MPCB

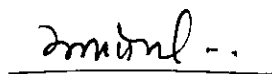
- a. Rehabilitation of Bhatadi and Payali Village.
- b. Balance land acquisition
- c. Coal Quality
- d. Land Compensation
- e. Provision of Employment in lieu of Land acquisition.
- f. Pollution Control Measures to be adopted.
- g. Plantation
- h. CSR works
- i. Installation of RO Plant for Drinking Water

(xxv) Total afforestation plan shall be implemented covering an area of 255.64 ha at the post-mining. Density of tree plantation is 2500 trees/ ha of plants.

(xxvi) There is no court cases/violation pending with the project proponent

(xxvii) The existing Bhatadi OC has opened Escrow Account against the existing provisions and till 2018-19, Rs.33.2519 Crores have been deposited in the said Escrow Account

(xxviii) Availability of ground water has been reported to be varying between 3.3 m – 13.28 m during pre-monsoon season and between 0.10 m to 13.15 m during post-monsoon season. Total water requirement for the project has been reported to be 222 KLD



(xxix) One composite seam with thickness ranging between 15.78 – 20.83 meters has been reported to be workable. Grade of coal is G-10, stripping ratio 1:5.53, while gradient is 1 in 6.

(xxx) Method of mining envisages opencast with shovel-dumper combination

(xxxi) Afforestation plan over a total area of 264.10 ha has been proposed to be implemented by the end of mining operations with density of 2500 plants per ha. It is further mentioned that implementation of the Progressive Mine Closure Plan is being taken up by the PP as per the approved Plan and there is no deviation from the approved Plan

(xxxii) The PP has reported no court cases, violation cases are pending.

(xxxiii) The Regional Office (WCZ), Nagpur conducted site inspection of the area to assess the status of compliance of conditions, stipulated in the environment clearance dated 19th March, 2015. The Regional Office, vide letter no. 3-16/2015/3202 dated 5th February, 2018 submitted inspection report along with its observations.

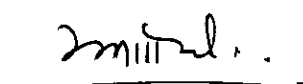
(xxxiv) As per approved Mining Plan, the lease area is 837.94 ha. However, additional area of 20.2 ha, including 0.20 ha of forest land, is also required outside the lease area for the settlement of Bhatadi village. However, the present proposal has been limited to the existing lease area of 837.94 ha as per existing EC

(xxxv) No forest land has been reported to be involved in the project. However, an area of 0.20 ha of forest land is involved in the project which, along with 20 ha of additional land, has been proposed to be acquired for the resettlement and rehabilitation of Bhatadi village.

(xxxvi) The project involves 820 project affected families.

(xxxvii) Transportation of coal in mine pit head has been proposed by dumpers, surface to sidings by tippers at siding by Pay loader. The PP has also mentioned that construction of piped conveyor is in advance stage.

4. The Expert Appraisal Committee in its meeting held on 24th January, 2020 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 Environment Clearance(EC)** to the project for **expansion of Bhatadi Opencast Coal Mine from 0.975 MTPA to 1.465 MTPA (Peak) of M/s Western Coalfields Limited in mine lease area of 847.37 ha, located in Village Bhatadi, District Chandrapur (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:

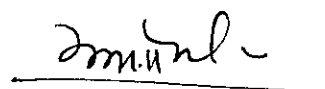


- (i) Distance from the mine and OB Dump shall be 150 m away from river.
- (ii) All additional mitigation measures proposed shall be implemented in 1 year of issue of this letter.
- (iii) Project proponent to plant 100,000 nos. of native trees with broad leaves along the periphery of the mine to prevent the effect of air pollution in 3 years of the issue of this letter. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Officer
- (iv) Validity of EC is life of the mine or 30 years whichever is earlier as per EIA Notification, 2006
- (v) The project proponent shall obtain Consent to establish from the State Pollution Control Boards for the proposed peak capacity of 1.465 MTPA prior to commencement of the increased production.
- (vi) Transportation of coal from Coal Handling Plant shall be through covered trucks.
- (vii) To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.
- (viii) 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.
- (ix) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (x) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.
- (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.
- (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 company shall obtain approval of CGWA for use of groundwater for mining operations at its enhanced capacity of 1.465 MTPA.
- (xiv) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.



- (xv) A third party assessment of EC compliance shall be undertaken once in three years through agency like ICFRI /NEERI/IIT or any other expert agency identified by the Ministry.
- (xvi) Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles
- (xvii) The activities and fund provisions for CER shall be made as per the guidelines issued by the ministry regarding CER on 1st May, 2018.
- (xviii) 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.
- (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 2nd 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 villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.
- (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) 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 Ministry.
- (xxvi) CTE/CTO for the project shall be obtained from the SPCB as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974, and the SPCB shall follow the mechanism/protocol issued by the Ministry vide letter no. Q-16017/38/2018-CPA dated 24th October, 2019 while issuing the CTE/CTO for the project, for improvement of environmental quality in the area.
- (xxvii) The green belt of at least 5-10 m width shall be developed in more than 40% of the total project area, mainly along the periphery of mine boundary, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.
- (xxviii) In addition, the project proponent shall develop greenbelt outside the plant premises such as avenue plantation, plantation in vacant areas, social forestry etc.
- (xxix) Monitoring of compliance of EC conditions may be submitted with third party audit every year.



(xxx) The percentage the CER may be at least 2 times the amount given in the OM dated 1st May, 2018 recommended by the EAC and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.

(xxxii) Effective fugitive emission control measures should be imposed in the process, transportation, packing etc.

(xxxiii) Transportation of materials by rail/ conveyor belt, wherever feasible.

(xxxiv) A detailed water harvesting plan may be submitted by the project proponent

(xxxv) In case, domestic waste water generation is more than 10 KLD, the industry may install STP.

(xxxvi) Monitoring of compliance of EC conditions may be submitted with third party audit every year

(xxxvii) PP shall comply all the conditions of earlier EC dated 19th March, 2015 in 3 years from the issue of this letter and submit a copy of compliance to Ministry's Regional Office

(xxxviii) All the recommendation of comprehensive study being conducted by NEERI shall be implemented by project proponent within certain timeline and necessary timeline shall be submitted to Ministry's Regional Office


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.

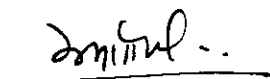
(b) Air quality monitoring and preservation

- (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 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.

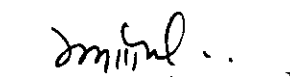
- (ii) Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.
- (iii) The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen 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 MoEFCC, 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

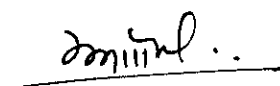
- (i) Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & it's RO on six-monthly basis.
- (ii) The project proponent shall undertake occupational health survey for initial and periodical 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-11013/5712014-1A.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 project proponent shall comply with the provisions contained in this Ministry's OM vide F.No.22-65/2017-1A.III dated 1st 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.



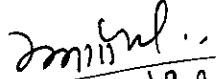
(j) Miscellaneous

- (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; PM₁₀, SO₂, NO_x (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- (v) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- (vi) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.
- (vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- (viii) The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
- (ix) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

- (x) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
 - (xi) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.
 - (xii) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
 - (xiii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
 - (xiv) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
 - (xv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
 - (xvi) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
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 Environment 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

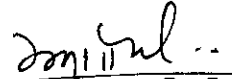
time, in terms of the orders dated 2nd August, 2017 of Hon'ble Supreme Court in WP (Civil) No.114/2014 in the matter of 'Common Cause Vs Union of India & others.

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 Environment 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 19th May March, 2015.


(Manoj Kumar Gangeya)
Director

Copy to:

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Principal Secretary, Department of Environment, Government of Maharashtra, 15th 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)
4. CMD, WCL, Nagpur
5. The Member Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, 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, 3rd & 4th Floors, Sion, Matunga Scheme Road No. 8, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai - 2
8. The District Collector, Chandrapur, Government of Maharashtra
9. Monitoring File 10. Guard File 11. Record File 12. Notice Board


(Manoj Kumar Gangeya)
Director