



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

To,

The GENERAL MANAGER
NORTHERN COALFIELDS LTD
OFFICE OF THE GENERAL MANAGER, BINA EXTN PROJECT P.O.
BINA PROJECT DISTT SONBHADRA (U.P.) PIN
231220,,Sonbhadra,Uttar Pradesh-231220

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/UP/CMIN/212862/2021 dated 17 Sep 2021. The particulars of the environmental clearance granted to the project are as below.

- | | |
|--|---------------------------|
| 1. EC Identification No. | EC22A042UP173833 |
| 2. File No. | J-11015/49/2011-IA II (M) |
| 3. Project Type | Expansion7 |
| 4. Category | A |
| 5. Project/Activity including Schedule No. | 1(a) Mining of minerals |
| 6. Name of Project | Bina Extn Project |
| 7. Name of Company/Organization | NORTHERN COALFIELDS LTD |
| 8. Location of Project | Uttar Pradesh |
| 9. TOR Date | N/A |

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

Date: 29/07/2022

(e-signed)
Lalit Bokolia
Scientist F
IA - (Coal Mining sector)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.

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No. J-11015/49/2011-IA. II (M)
Government of India
Ministry of Environment, Forest & Climate Change
(Impact Assessment Division)

Indira Paryavaran Bhawan,
Jorbagh Road, N Delhi – 110003
Email: lk.bokolia@nic.in
Tel: 01120819417

Dated: 29th July, 2022

To

The General Manager
Bina Extension Project
M/s Northern Coalfields Ltd,
Post Bina Project, District Sonbhadra- 231220 (UP)
Email: cgmbin.nlc@coalindia.in

Sub: Expansion of Bina Extn Project of Opencast mine from 9.0 MTPA to 10.5 MTPA (increase of 1.5 MTPA) in 1798 ha area of M/s Northern Coalfields Ltd located at Churidah village, Tehsil & district Singrauli (Madhya Pradesh) and Jamshila village, Dudhi tehsil & district Sonbhadra (Uttar Pradesh) - For Environmental Clearance

Sir,

This refers to your Online Proposal No. IA/UP/CMIN/212862/2021 dated 17th September, 2021 for grant of Environmental Clearance to the above project

2. The Ministry of Environment, Forest and Climate Change has considered the application. It is noted that the proposal is for grant of Environmental Clearance to the project for Expansion of Bina Extn Project of Opencast mine from 9.0 MTPA to 10.5 MTPA (increase of 1.5 MTPA) in 1798 ha area of M/s Northern Coalfields Ltd located at Churidah village, Tehsil & district Singrauli (Madhya Pradesh) and Jamshila village, Dudhi tehsil & district Sonbhadra (Uttar Pradesh).

The project/activity is covered under category 'A' of item 1(a) 'Mining of Minerals' the Schedule to the EIA Notification, 2006

3. The proposal was considered by the Expert Appraisal Committee (EAC) in the Ministry for Thermal & Coal Mining Sector in its meeting held during 13-14 October, 2021. 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 area is covered under Survey of India Topo Sheet No63-L /12 and L/16 is bounded by Latitude 24^o 07' 56.24" to 24^o 10' 28.10" North and Longitude 82^o 43' 16.72" to 82^o 46' 57.49" East.
- (ii) Bina (Extn.) OCP is linked to Anpara TPS & Obra TPS of M/s UPRVUNL, Renusagar TPS of M/s Hindalco Industries Ltd, etc. It also serves as a basket Linkage mine to meet the

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overall demand of NCL.

- (iii) Joint venture cartel has not been formed.
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13th January, 2010 has imposed moratorium on grant of environment clearance.
- (v) The total existing manpower as on 01.04.2021 is 1174.
- (vi) The project is reported to be beneficial in terms of (i) Environmental: Post mining enhancement of green cover; (ii) Economic: Increase in employment potential and contribution to the exchequer of the adjoining area; (iii) Social: Improvement in social infrastructure of the adjoining area.
- (vii) Earlier, the environment clearance to the project was obtained under EIA Notification, 2006 vide Ministry's letter No. J-11015/49/2011-IA. II (M) dated 06.08.2014 for 7.5 MTPA. Also, the project has EC for 9.0 MTPA vide letter no. J-11015/49/2011-IA. II (M) dated 12.02.2021 under clause 7(ii) as per the MoEF&CC OM no. J-11015/224/2015-IA. II dated 15.09.2017.
- (viii) Total mining lease area as per block allotment is 1798.00 Ha. Extension Project Report incorporating Mining Plan (Including Progressive Mine Closure Plan) has been approved by the NCL Board in 231st meeting on 31 Aug. 2018.
- (ix) The land use detail during pre and post mining operations will be as under:

Pre mining

| S. No. | LAND USE | Within ML Area (Ha) | Outside ML area (Ha) | Total (Ha) |
|--------------|------------------------------------|---------------------|----------------------|-------------|
| 1 | Agricultural land(Tenancy Land) | 513 | Nil | 513 |
| 2 | Forest Land | 1087.825 | Nil | 1087.825 |
| 3 | Wasteland | 0 | Nil | 0 |
| 4 | Grazing land | 0 | Nil | 0 |
| 5 | Surface water bodies | 0 | Nil | 0 |
| 6 | Settlements | 0 | Nil | 0 |
| 7 | Others(Specify) Government land | 197.175 | | 197.175 |
| Total | | 1798 | Nil | 1798 |

Post mining

| S. No. | Land use during Mining | Land Use (ha) | | | | | |
|--------|---------------------------------------|---|------------|------------|-----------|------------------|--------|
| | | Plantation | Water Body | Public Use | Void Area | Undisturbed Land | TOTAL |
| 1 | External OB dump | 50.40 | 0 | 0 | 0 | 0 | 50.40 |
| 2 | Top soil dump | Top soil will be completely used in reclamation of dumps. | | | | | |
| 3 | Excavation area (backfilled and void) | 663.00 | 0 | 0 | 151.00 | 0 | 814.00 |
| 4 | Roads (Including | 0 | 0 | 20.00 | 0 | 0 | 20.00 |

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| | | | | | | | |
|--------------|---|----------------|----------|--------------------|---------------|---------------|---------------------|
| | Railways) | | | | | | |
| 4 | Build-up area | 163.00 | 0 | 267.00 | 0 | 0 | 430.00 |
| 5 | Green Belt | 187.63 | 0 | 0 | 0 | 0 | 187.63 |
| 6 | Undisturbed Area (Safety Zone & Others) | 0 | 0 | 0 | 0 | 295.9 7 | 295.97 |
| Total | | 1064.03 | 0 | 287.0 0 | 151.00 | 295.97 | 1798.0 0 |

- (x) Total geological reserve reported in the mine lease area 131.24 MT with 123.94MT mineable reserve with percent of extraction is 94.44%. The balance mineable coal left in Bina (Extn.) OCP as on 01.04.2021 is 27.777 MT.
- (xi) Three number of namely Purewa Top (4-8m), Purewa Bottom (9-13m), Turra (13-22m); seams. Grade of coal is G-10 (Average Grade), stripping ratio 5.04m³/t, while gradient is 2 to 4degree.
- (xii) Method of mining operations envisages by ‘combined mining system deploying dragline, shovel dumper combination and Surface Miner’ method.
- (xiii) The mining plan for Bina Extension OCP has been prepared for a rated capacity of 10.50 MTPA. The balance life of the mine at proposed target rate of production would be 3 years from 01.04.2021.
- (xiv) The project has 7 no. external OB dumps in an area of 50.4 Ha with 60 m height and 8 Mm³ of OB. 2 no. of internal OB in an area of 663 ha with 625.04 Mm³ of OB is envisaged in the project.
- (xv) Total quarry area is 814.00 ha out of which backfilling will be done in 663 ha while final mine void will be created in an area of 151 ha. Backfilled quarry area of 663 ha shall be reclaimed with plantation. Final mine void will be converted into a water body.
- (xvi) Transportation of coal has been proposed by dumpers in mine pit head, from surface to SILO by Closed Conveyor Belt System and from SILO through automatic RLS (Rapid Loading System).
- (xvii) Reclamation Plan in an area of 1064.03 ha, comprising of 50.40 ha of external dump, 663.00 ha of internal dump, 187.63 ha of green belt and 163.00 ha is proposed in and around built up area.
- (xviii) The project involves 1087.825 ha of forest land, which includes 378.935 ha in the State of MP and 708.890 ha in UP. Stage-II forest clearance for total forest area of 400.545 ha (378.935 ha in MP and 21.610 ha in UP) has been obtained under the Forest (Conservation) Act, 1980 for diversion for non-forestry purposes. The remaining forest land of 687.280 ha was already acquired before the inception of the Forest (Conservation) Act, 1980.
- (xix) Please mention any National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project- No
- (xx) Wildlife management plan has been submitted to – NA.

- (xxi) The ground water level has been reported for the period May'18 to May'21, the water levels during Pre-Monsoon varies from 0.85 m.bgl (2021) – 21.50 m.bgl (2019), Monsoon varies from 0.25 m.bgl (2019) to 17.70 m.bgl (2018), Post-Monsoon it varies from 0.55 m.bgl (2020) – 18.70 m.bgl (2018). The total water requirement of project is 5754 m³/day.
- (xxii) Application no 21-4/1129/MP/MIN/2021 for obtaining the approval of the Central Ground Water Authority for ground water clearance for Bina OCP (for 9.0 MTPA), has been submitted on 11.05.2021. At present, the application is under process at CGWA, New Delhi.
- (xxiii) Public hearing for the project of 7.5 MTPA production capacity was conducted on 18.09.2012 (M.P. side) at Churki village (MP) and on 24.09.2012 (U.P. side) at Workers Recreation Centre, Bina Project, NCL. Major issues raised in the public hearing include R&R, community development work, forestation of fruit bearing trees, etc., Appropriate action to address the issues raised in the Public Hearing have already been taken and attached as Annexure-VI of Addendum EIA/EMP Report.
- (xxiv) Consent to Operate for 9.0 MTPA capacity obtained vide consent no.-AW-54249 dated 22-09-2021 (valid up to 31.03.2022) and vide Consent no. 122600(air) & 122618(water) dated 06.03.2021 (valid up to 31.12.2022) from UPPCB.
- (xxv) No River/ nalla is flowing near boundary of lease.
- (xxvi) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to MPPCB, UPPCB, CPCB and also to MoEF&CC along with half yearly EC compliance report. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations which can be attributed to the specific local conditions during the day of sampling.
- (xxvii) There was a Case filed by UPPCB against Bina OCP as Case No 1798/2014 in CJM Court Sonebhadra dated 6.6.2014. Complaint filed under section 15/16 of EPA 1986.
- (xxviii) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under. The production from the Bina Extn was started from the year 2006-2007. However, in 2012-13, there was excess production of 0.5 MTPA for which case has filed by UPPCB as case no. 1798/2014 in CJM Court Sonebhadra.
- (xxix) About 38 families had been affected due to opening of Bina Extn. OCP. All 38 affected families have already been rehabilitated. There is no further proposal for rehabilitation for enhanced production capacity of 10.50 MTPA. R&R of the PAPs has been done as per R&R Policy 2012 of Coal India Limited.
- (xxx) Total cost of the project is Rs. 535.96 Crore. Cost of production is Rs. 989.99 /- per tonne, CSR cost is as per CIL CSR policy w.e.f. 08.04.2021, the fund for the CSR should be allocated based on 2% of the average net profit of the company for the three immediate preceding financial years or Rs.2/-per ton of coal production of previous year. Environment Management Cost is Rs. 1965.59 lakhs.
- (xxxi) Consent to Operate for the existing capacity was obtained consent no.-AW-53122 dated 25-02-2021 from MPPCB and vide consent no. 122600 (air) and 122618 (Water) dated 06.03.2021 from the UPPCB. (valid up to December 2022).

4. The sectoral Expert Appraisal Committee after detailed deliberations and in exercise of the provisions contained in para 7(ii) of the EIA Notification, 2006 and consideration of the parameters mentioned in the Ministry's OM dated 15th September, 2017, exempted the project from public hearing, and recommended for grant of environmental clearance to the **Expansion of Bina Extn Project of Opencast mine from 9.0 MTPA to 10.5 MTPA (increase of 1.5 MTPA) in 1798 ha area of M/s Northern Coalfields Ltd located at Churidah village, Tehsil & District Singrauli (Madhya Pradesh) and Jamshila village, Dudhi Tehsil & District Sonbhadra (Uttar Pradesh)**, under the provisions of the EIA Notification, 2006, subject to clarification regarding applicability of the Forest (Conservation) Act, 1980 under the provisions of Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions for environmental safeguards as stated below:-

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

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

The Action taken report on above be submitted within 6 months to IRO, MoEF&CC. Further following conditions as recommended by EAC, be implemented whichever stringent in a time bound manner.



- (i) PP shall comply all the conditions stipulated by Ministry's EC vide its letter no. J-11015/29/2004-IA-II(M) dated 2nd August, 2006, No. J-11015/49/2011-IA. II (M) dated 6th August, 2014 and 12th February, 2021 and complete the non-compliance within 3 months as highlighted in Certified Compliance Report by Ministry IRO vide its letter dated 12th July, 2021. Action taken report in this regard to be submitted to IRO within 3 months.
- (ii) PP shall obtain No Objection Certificate from Central Ground Water Authority and submit it Ministry's Regional Office. No CTO shall be granted by SPCB till NOC from CGWA is obtained.
- (iii) PP to implement the Action Plan as framed by SPCB/CPCB for specific project that falls under Singraulli as critically polluted area and implement in time bound manner.
- (iv) Mining shall be carried out only by surface miners for the project (as proposed) and silo loading till railway siding through in-pit conveyor should be installed to avoid road. No road transportation shall be conducted.
- (v) PP to install 1 more continuous ambient air quality monitoring stations at suitable locations preferably village side and with consultation of SPCB. The real time data so generated shall be uploaded on company website. In addition, data should also be displayed digitally at entry and exit gate of mine lease area for public display.
- (vi) PP shall install fixed fog cannon (mist spayer) all along the haul road till CHP, Railway siding and OB Dump area and accordingly sufficient number of fog cannons (not less than 10 nos.) with 40 mts jet length shall be installed within 6 months. It should be ensured that air pollution level confirm to the standards prescribed by the MOEFCC/CPCB
- (vii) PP should Install Wind breaker/shield arrangement along the railway siding for reducing the dust propagation in upwind direction.
- (viii) PP shall plant 200 ha of Sal trees(only) and 200 ha of fruit bearing trees and create a nursery of 10 ha (within 2 years) to distribute the species freely in the region for redevelopment of Sal forest in the region.
- (ix) Project proponent to plant 150,000 trees with three Tier Green belt developments (of 50 mtrs width) along the periphery of the mine habitation/villages (Kohroul Village at 1.3 km distance, Kakri STP at distant of 1.5 km, Karwari and Audi Village) within 2 years. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Officer. Third party monitoring by reputed instituted for air quality (including heavy metal analysis) shall be carried out at identified locations, both ambient and the process area, to arrive at impact of the proposed expansion at regular interval of 3 years
- (x) PP shall submit Final Mine Closure Plan as per guidelines of MoC within 3 months to Ministry's IRO Lucknow
- (xi) PP shall install sand segregation plant for suitable capacity to extract sand and construction aggregate within 2 years of issue of this letter.
- (xii) PP to develop an ECO park with separate area of 5 ha for medicinal and herbal species within two years.
- (xiii) PP to install solar lights along the road used for transportation of coal to avoid the accidents at night and also seek its maintenance. PP is asked to also identify the rural areas for installation

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of solar light with its maintenance within the study area of 10 km radius buffer zone within one year and submit its report to IRO-Lucknow.

- (xiv) PP also to provide drinking water facilities like installation of RO with proper water supply pipe fittings to nearby rural areas and also to install hand pumps by seeking consent from panchayat of the villages located within the study area of 10 km radius buffer zone within two years of issue of this letter.
- (xv) PP to also develop pucca roads by seeking consent from the panchayat with widening of roads especially roads inter linking the villages within the study area of 10 km radius buffer zone.
- (xvi) PP to take proper care of health of R& R villages and a 24X 7 helpline call facility should be provided to such area and also to nearby villages for assisting any medical aid and ambulance facility.
- (xvii) Top soil should be stored separately at marked area and necessary vegetation shall be maintained to avoid any entrainment of dust
- (xviii) Progressive backfilling of mine and progressive reclamation of OB dump shall be done
- (xix) Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles
- (xx) 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.
- (xxi) PP shall carry out monthly water monitoring quality of River bodies located within 5 Km radius and conduct Bio-assay test half yearly and further monitoring Ground water level.
- (xxii) PP should conduct epidemiology study to (analysis of the distribution, patterns and determinants of health and disease conditions in defined populations).
- (xxiii) All approach roads to mine and all other roads which are in regular use should be black topped. The maintenance of road shall be done by PP in collaboration with state government
- (xxiv) Compensation of the land acquired for the project shall be settled within one year as per R&R Policy.
- (xxv) PP shall construct new multi-speciality (100 beds) hospital in the 10 km of the project area within 2 years for local people after issue of this letter.
- (xxvi) PP shall pay to farmers of agricultural land if there is any loss due to pollution found by concerned District Commissioner as per extent rules or norms.
- (xxvii) 2 nos of new Water Harvesting Pond with adequate area and depth shall be development within 5 km of project area.
- (xxviii) 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 anti-snake venom including all other paramedical safeguards may be ensured before initiating the mining activities.

- (xxix) Persons of nearby villages shall be given training on livelihood and skill development to make them employable with its proper records.
- (xxx) 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
- (xxxi) 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 MoEFCC.

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

(a) Statutory compliance

- (i) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- (ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- (iii) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of Schedule-I species in the study area).
- (iv) The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.

- (v) The project proponent shall obtain the necessary permission from the Central Ground Water Authority.
- (vi) Solid/hazardous waste generated in the mines needs to be addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.
- (b) Air quality monitoring and preservation**
- (i) Continuous ambient air quality monitoring stations as prescribed in the statute be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM₁₀, PM_{2.5}, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.
- (ii) The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.
- (iii) Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM₁₀/PM_{2.5}) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.
- (iv) The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.
- (v) Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.
- (vi) Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.

(vii) Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environmental friendly sustainable technology should be implemented for mitigating such parameters.

(c) Water quality monitoring and preservation

(i) The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board.

(ii) The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-IA.11 (M) dated 27th May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.

(iii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.

(iv) Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.

(v) Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.

(vi) Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.

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

(d) Noise and Vibration monitoring and prevention

- (i) Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.
- (ii) Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.
- (iii) The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

(e) Mining Plan

- (i) Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.

- (ii) Mining shall be carried out as per the approved Mining Plan (including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).
- (iii) No mining shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.
- (iv) Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.
- (f) Land reclamation**
- (i) Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change(MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).
- (ii) The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.
- (iii) The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the “during mining”/” post mining” land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.
- (iv) Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.
- (v) Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated

areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.

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

(g) Green Belt

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

(h) Public hearing and Human health issues

- (i) Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & it's RO on six-monthly basis.
- (ii) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.
- (iii) Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.
- (iv) Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.
- (v) The project proponent shall follow the mitigation measures provided in this Ministry's OM No. Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

(i) Corporate Environment Responsibility

- (i) 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.
- (ii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- (iii) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- (iv) Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

(j) Miscellaneous

- (i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- (ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- (iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- (iv) The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- (v) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

- (vi) The project proponent shall follow the mitigation measures provided in this Ministry's OM No. Z-11013/5712014-IA. II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.
 - (vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
 - (viii) The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.
 - (ix) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
 - (x) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
 - (xi) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.
 - (xii) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
 - (xiii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
 - (xiv) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
 - (xv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
 - (xvi) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject 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 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 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.


(Lalit Bokolia)
Director

Copy to:

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The APCCF, MOEF&CC, Regional Office(EZ), E-5 Arera Colony, Bhopal - 462 016
3. The Addl. Principal Chief Conservator of Forests (C), Ministry of Env., Forest and Climate Change, Regional Office (CZ), Kendriya Bhawan, 5th Floor, Sector "H" Aliganj, Lucknow - 226020
4. The Secretary, Department of Environment & Forests, Government of Madhya Pradesh, Secretariat, Bhopal
5. The Chairman, Central Ground Water Authority, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001.
6. The Chairman, Madhya Pradesh State Pollution Control Board, Paryavaran Parisar, E-5, Arera Colony, Bhopal - 462 016
7. The Chairman, Uttar Pradesh State Pollution Control Board, Building No TC-12V, Vibhuti Khand, Gomti Nagar, Lucknow-226010
8. The District Collector, Singrauli, Government of Madhya Pradesh

9. The District Collector, Sonbhadra, Government of Uttar Pradesh
10. Monitoring File/Guard File/Record File 11. PARIVESH Portal


(Lalit Bokolia)