No. J-11015/85/2010-IA.II(M)
Government of India
Ministry of Environment, Forest and Climate Change
Impact Assessment Division

Indira ParyavaranBhawan,
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Email: lk.bokolia@nic.in Tel: 01124695363

Dated: 10\textsuperscript{th} May, 2021

To
The General Manager (W B P & Environment)
M/s South Eastern Coalfields Ltd,
W B P & Environment Department, Seepat Road,
\textbf{Bilaspur} - 495006 (Chhattisgarh) Email: gmenvtsecl@gmail.com

Sub: Gevra Opencast coal mine from 45 MTPA to 49 MTPA of M/s South Eastern Coalfields Limited in mine lease area of 4184.486 ha in Villages Gevra, Mangaon, District Korba (Chhattisgarh) – Environment Clearance under clause 7(ii) (under Ministry OM dated 15\textsuperscript{th} September, 2017) of EIA Notification, 2006 – reg.

Sir,

This has reference to your online proposal no. IA/CG/MIN/179634/2020 dated 26\textsuperscript{th} February, 2021, submitted to this Ministry for grant of Environmental Clearance (EC) in terms of the provisions of the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986, regarding expansion of Gevra Opencast coal mine from 45 MTPA to 49 MTPA by M/s South Eastern Coalfields Limited in mine lease area of 4184.486 ha in Villages Gevra, Mangaon, District Korba (Chhattisgarh).

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

2. The Ministry of Environment, Forest and Climate Change has considered the proposal for expansion in EC under clause 7(ii) (under Ministry OM dated 15\textsuperscript{th} September, 2017) of EIA Notification, 2006. The proposal is for Gevra Opencast coal mine from 45 MTPA to 49 MTPA of M/s South Eastern Coalfields Limited in mine lease area of 4184.486 ha in Villages Gevra, Mangaon, District Korba (Chhattisgarh).

3. Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:

(i) The project area is covered under Survey of India Topo Sheet No. 64 J /11, Scale- 1:50000 and is bounded by the geographical coordinates ranging from 22°18'00" to 22°21'42" N and 82°32'00" to 82°39' 30" E.

(ii) Coal linkage of the project is proposed for NTPC and Various thermal power plants.
(iii) Joint venture cartel has been formed: No

(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) Employment generation, employment to 4391 persons will be provided from the project.

(vi) The project is reported to be beneficial in terms of: Project will considerably improve the socio-econmic status of the adjoining areas. This will result in benefits such as improvements in physical infrastructure; improvements in social infrastructure, increase in employment potential, contribution to the exchequer, meet energy requirement and post-mining enhancement of green cover.

(vii) Earlier, the Environmental Clearance of Gevra opencast was accorded
a) Vide MoEF&CC letter no. J-11015/484/2007-IA.II (M) dated 03.06.2009 for expansion from 25 MTPA to 35 MTPA and in leasehold area of 4184.486 Ha, under the provisions of the EIA Notification, 2006 with public hearing. Public hearing was held on 22.08.2008.


c) The project was further accorded amendment in the EC vide letter no. J-11015/85/2010-IA.II (M) dated 06.02.2015 for incremental difference in the production capacity from 40 MTPA to 41 MTPA in accordance to OM J-11015/30/2004-IA.II (M) dated 2.9.2014.


e) On the basic of OM no. J-11015/224/2015-IA.II (M) dated 15.09.2107; a fresh application was submitted by PP for expansion of Gevra opencast coalmine project from 41 MTPA to 49 MTPA without public hearing in mining lease area of 4184.486 ha vide his letter no. SECL/BSP/Envt/Gevra OC_49/17/6772 dated 20.10.2017.


g) Further an application has been made by PP for amendment in EC capacity from 45 MTPA to 49 MTPA in respect of Gevra opencast coal mine in mining lease area of 4184.486 ha on 29.03.2019.

h) To verify the status of compliance of EC conditions for Gevra opencast expansion project 45 MTPA, the Regional Office of MoEF&CC, Nagpur has carried out the site inspection on 25th December, 2019. The compliance and monitoring reports forwarded to this Ministry vide their letter No. 3-28/2014(Env)pt /6080 dated 14th January, 2020.


i) The proposal was considered in EAC in its 53rd EAC meeting held on 20.02.2020. EAC recommended continuance of EC for 45 MTPA. EC for continuance of 45MTPA was issued by the MoEF&CC vide No: J-11015/85/2010-I(A-II)(M) on 04.06.2020 for a period of 30 years or life of Mine whichever is earlier.


(viii) Mining plan for 49 MTPA was approved by SECL Board in its 262nd meeting held on 10th/11th October 2017. Mine closure plan is an integral part of mining plan.

(ix) The land usage pattern of the project is as follows:

### Pre-mining Land Usage:

<table>
<thead>
<tr>
<th>SN.</th>
<th>Land use</th>
<th>Within ML area (ha.)</th>
<th>Outside ML area (ha.)</th>
<th>Total (ha.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Agricultural land</td>
<td>1273.426</td>
<td>1247.145</td>
<td>2520.571</td>
</tr>
<tr>
<td>2</td>
<td>Forest land</td>
<td>441.410</td>
<td>575.002</td>
<td>1016.412</td>
</tr>
<tr>
<td>3</td>
<td>Waste Land</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>4</td>
<td>Grazing Land</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>5</td>
<td>Surface Water Bodies</td>
<td>7.000</td>
<td>0.000</td>
<td>7.000</td>
</tr>
<tr>
<td>6</td>
<td>Settlements</td>
<td>0.000</td>
<td>69.280</td>
<td>69.280</td>
</tr>
<tr>
<td>7</td>
<td>Others (Specify) Govt. Land (Including Waste Land &amp; Grazing Land)</td>
<td>315.414</td>
<td>255.809</td>
<td>571.223</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2037.250</td>
<td>2147.236</td>
<td>4184.486</td>
</tr>
</tbody>
</table>

### Post Mining Land Usage

<table>
<thead>
<tr>
<th>S. NO</th>
<th>Land Use</th>
<th>Plantation</th>
<th>Water Body</th>
<th>Public Use</th>
<th>Undisturbed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>External OB dump</td>
<td>480</td>
<td></td>
<td></td>
<td></td>
<td>480</td>
</tr>
<tr>
<td>2</td>
<td>Internal OB Dumps</td>
<td>1378</td>
<td></td>
<td></td>
<td></td>
<td>1378</td>
</tr>
<tr>
<td>3</td>
<td>Top Soil Storage (05ha included in internal OB dump)</td>
<td>0</td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Excavated area /void for Water Body</td>
<td></td>
<td>659.25</td>
<td></td>
<td></td>
<td>659.25</td>
</tr>
<tr>
<td>5</td>
<td>Roads</td>
<td></td>
<td></td>
<td>06</td>
<td></td>
<td>06</td>
</tr>
<tr>
<td>6</td>
<td>Green Belt</td>
<td></td>
<td></td>
<td></td>
<td>5.67</td>
<td>5.67</td>
</tr>
<tr>
<td>7</td>
<td>Safety Zone/Undisturbed Area</td>
<td></td>
<td>418.174</td>
<td></td>
<td></td>
<td>418.174</td>
</tr>
<tr>
<td>8</td>
<td>Diversion /below River / Nala /Canal, if any</td>
<td>0</td>
<td></td>
<td>0</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>9</td>
<td>Built-up area</td>
<td></td>
<td></td>
<td></td>
<td>1103.112</td>
<td>1103.112</td>
</tr>
</tbody>
</table>

(\*)
<table>
<thead>
<tr>
<th>Area (in ha)</th>
<th>Stage-1 /Final FC issued vide letter no. and date</th>
<th>Validity period of FC</th>
</tr>
</thead>
<tbody>
<tr>
<td>100.898</td>
<td>vide MoEF Clearance F no.8-33/2005-FC dated 05.05.2008</td>
<td>Co-terminus with the mining lease or 20 years</td>
</tr>
<tr>
<td>46.198</td>
<td>vide MoEF Clearance F no.8-81/2006-FC dated 20-04-2015</td>
<td>Co-terminus with the mining lease</td>
</tr>
<tr>
<td>192.046</td>
<td>vide MoEF Clearance F no.8-77/2006 – FC, dated 20-04-2015</td>
<td>Co-terminus with the mining lease</td>
</tr>
<tr>
<td>564.885</td>
<td>vide MoEF Clearance F no.8-79/2006 – FC, dated 20-04-2015</td>
<td>Co-terminus with the mining lease</td>
</tr>
<tr>
<td>112.385</td>
<td>vide MoEF&amp;CC Clearance F.No. 8-49/2017-FC dated 27.09.2017.</td>
<td>Co-terminus with the mining lease</td>
</tr>
<tr>
<td>1016.412</td>
<td>Total forest land for which Stage-1 Forestry Clearance obtained</td>
<td></td>
</tr>
</tbody>
</table>

(x) Total geological reserve reported in the mine lease area is 1940.98 MT (as on 01.04.2014) with 1337.68 MT (as on 01.04.2014) mineable reserve. Total Mineable reserve within 4184.486 Ha (as on 01.04.2020) is 400.246 MT. Out of total mineable reserve of 400.246 MT within 4184.486 Ha, 400.246 MT are available for extraction. Percent of extraction is 100%.

(xi) 06 nos. seams with thickness ranging from 3.14 m – 57.86 m are workable. Grade of coal is G 10, stripping ratio 1.69 cum/ton, while gradient is 1 in 6 to 1 in 12.

(xii) Method of mining operations envisages by Open cast mining with Surface Miner and Shovel-Dumper combination.

(xiii) Life of mine is 9 years.

(xiv) The project has 7 nos. external OB dumps in an area of 480 ha with 90 m height and 147.60 Mm3 of OB. 8 nos. internal OB in an area of 1378 ha with 1119.40 Mm3 of OB is envisaged in the project.

(xv) Total quarry area is 2037.250 ha out of which backfilling will be done in 1378 ha while final mine void will be created in an area of 659.250 ha with a depth of 40 m. Backfilled quarry area of 1378 ha shall be reclaimed with plantation. Final mine void will be converted to water body.

(xvi) Transportation of coal has been proposed from face to in-pit crusher is by trucks, from in-pit crusher to surface Ground bunker is by conveyor system, from Ground Bunker to Silos is by belt conveyor & finally from Silos to consumers: By Rail & MGR.

(xvii) Reclamation Plan in an area of 2438.672 ha, comprising of 480 ha of external dump, 1378 ha of internal dump and 5.672 ha of green belt. Other areas 575 ha includes excavation areas along ML boundary, along roads and infra, embankment area and in township located outside the lease etc. An area of 418.174 ha as Safety Zone.

(xviii) 1016.412 ha of forest land has been reported to be involved in the project. The status of diversion of forest land for non - forestry purposes is as under:-
(xix) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.

(xx) The ground water level has been reported to be varying between 2.30 m to 11.98 m in post-monsoon and 5.76 to 14.60 m in pre-monsoon season. Total water requirement for the project is 13011 KLD.

(xxii) The ground water clearance was obtained on 22.01.2019 for 11487 m3/day withdrawal of ground water vide NOC no. CGWA/NOC/MIN/ORIG/2018/4474, from Central ground water Authority, Ministry of water Resources Govt. of India. Application for renewal of NOC has been made online (Application no. 21-4/630/CT /MIN /2017 Dt: 02.12.2020). Meanwhile Through the Public Notice: Ministry of Jal Shakti, Department of Water Resources, River Development & Ganga Rejuvenation, Central Ground Water Authority dt: 27.01.2021, it was informed that “all NOCs whose validity is expiring in the Financial Year 2020-2021 shall deemed to be extended till 31.03.2021”.

(xxii) Public hearing for the project of 35 MTPA capacity in an area of 4184.486 ha was conducted on 22.08.2008 in the premises of Tehsild Office, Katghora, District Korba. Major issues raised in the public hearing includes; compensation, Rehabilitation & resettlement, Facilities at R&R sites, pollution control etc. Appropriate action to address the issues raised in the Public Hearing have already been taken/are being taken is enclosed as Annexure A. Public notice for information of the stakeholders about the proposed expansion inviting comments and their redressal has been done on 05.12.2019 through state pollution control board in following newspapers Navabharath, Dainik Bhaskar and Times of India (Delhi). No comments/objections/remarks have been received from public in writings even after 30 days of paper publication regarding expansion of Gevra Open Cast from 45 MTPA to 49 MTPA

(xxiv) Consent to Operate for the existing capacity (45 MTPA) was obtained from the Chhattisgarh Environment Conservation Board, Raipur on
  a. 20.03.2018 and valid for one year; 23.02.2019 and valid till 29.02.2020
  b. 23.01.2020 and valid till 28.02.2021 & 08.02.2021 and valid till 28.02.2022

(xxv) Hasdeo river is the main drainage of the area flowing 08 kms from mine boundary. The study area includes a number of seasonal nallah and tributaries of Hasdeo river like Ahiran, Kholer nallah. Lilagar river also flows through the study area of project.

(xxvi) Regular monitoring of ambient air quality is being carried out with frequency of twice a week. The documented report is submitted to APCCF, MoEFCC, Regional Office, Nagpur, Member Secretary, Paryayas Bhavan, Raipur and RO CECB, Korba 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 are court cases pending with the project proponent as per the following details:-

<table>
<thead>
<tr>
<th>S.No</th>
<th>Case no.</th>
<th>Court</th>
<th>Case Details</th>
<th>Status as on 03.03.2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1217/2007</td>
<td>Presently the case no. is 886/2015 and the case is at Chief Judicial Magistrate Korba.</td>
<td>Regional Office, Chhattisgarh Environment Conservation Board, Korba Vs CGM Dipka Extension Project Gevra Area SECL for coal production in excess of 10 MTPA consented capacity. The Criminal complaint was filed under Sec.15 &amp;17 of EP Act and the year of violation was 2001-02 to 2004-05</td>
<td>Last 3 Hearing dates given were a) 03/11/20 b) 03/02/21 c) 25/02/21 And got Adjourned due to COVID-19. The next hearing is on 05/03/2021</td>
<td></td>
</tr>
</tbody>
</table>

(xxviii) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under. The coal production from the mine was started from the year 1981-82 onwards. Details of production of coal with sanctioned capacity since the commencement of mining operations has been given in point no. xxxvii.

(xxix) The project involves 3376 project affected families. R&R of the PAPs will be done as per CIL R&R Policy, whereas Compensation are being done as per CG R&R Policy.

(xxx) Total cost of the project is Rs. 11816.40 Crores. Cost of production is Rs. 566.02/- per tonne, CSR cost : According to new CSR policy 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. 2.00 per tonne of coal production of previous year, whichever is higher, R&R cost is Rs. 455.96 crores. Environment Management Cost is Rs. 142.82 crores.

3. 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 Environment Clearance.

4. The proposal was considered by the Expert Appraisal Committee (EAC) in the Ministry for Thermal & Coal Mining Sector in its 10th EAC meeting held on 22nd March, 2021 through video conferencing wherein the Committee recommended the proposal for grant of Environment Clearance to the Expansion of Gevra Open cast coal mine from 45 MTPA to 49 MTPA of M/s South Eastern Coalfields Limited in mine lease area of 4184.486 ha in Villages Gevra, Mangaon, District Korba (Chhattisgarh), under the provision of clause 7(ii) of EIA Notification, 2006 and under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto with all the condition stipulated in previous ECs dated 21st February, 2018 & 4th June, 2020, shall remain the same and subject to additional conditions as mentioned below for environment safeguards

(i) The project proponent shall obtain Consent to Establish/Operate from the State Pollution Control Boards for the proposed capacity of 49 MTPA prior to commencement.

(ii) The compliance of existing/previous EC shall be ensured and non-compliance conditions should be complied fully by October 2021.
(iii) PP shall complete all the mitigation measures for reduction of air pollution proposed during EAC meeting by June 2021.

(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 transportation within one year from date of issue of EC.

(v) Presently 04nos. Silos (1&2, 3&4-Capacity-30MTY) with rapid loading System for transportation of Coal through rail are in operation. As proposed, additional 02 nos. Silos (no. 5& 6 capacity 30MTY) with Rapid Load Out System (Capacity- 20 MTY) will be constructed within one year from date of issue of EC.

(vi) Third party monitoring by reputed instituted for air quality 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.

(vii) Top soil should be stored separately at marked area and necessary vegetation shall be maintained to avoid any entrainment of dust.

(viii) Progressive backfilling of mine and progressive reclamation of OB dump shall be done.

(ix) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.

(x) 10 additional long ranging Fog cannon system and fixed sprinkler 70 nos. (at distance of 20 m), 2 nos mechanized sweeping and mobile sprinkler (3 nos.- 9 KL each) shall be installed by June 2021 to reduce the impact of air pollution on haul road, OB dump, mining areas, CHP and Railway siding.

(xi) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.

(xii) Active OB Dump should not be kept barren/open and should be covered by temporary grass to avoid air born of particles.

(xiii) Project proponent to plant additional 150,000 nos. of native trees with broad leaves along the transportation route in three years to prevent the effect of air pollution. After completion of tree plantation, number of trees shall be duly endorsed from District Forest Officer.

(xiv) 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.

(xv) 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.
(xvi) Continuous air quality monitoring stations (2 nos) should be made operation by September 2021 and the real time data so generated to be uploaded on company website and shared with SPCB. In addition, data should also be displayed digitally at entry and exist gate of mine lease area for public display.

(xvii) Quality of polluted water generated from the operations which include COD and acid mine drainage and metal contamination shall be monitored along with TDS, DO, TSS. The monitored data shall be uploaded on the website of the company as well as displayed at the site in public domain.

(xviii) Thick Greenbelt of adequate 50 mts width at the final boundary or along the transportation route in the down wind direction of the project site shall be developed.

(xix) 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.

(xx) PP shall carry out monthly water monitoring quality of Hasdeo and Ahiran River and conduct Bio-assay test half yearly and further monitoring Ground water level.

(xxi) 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. PP shall 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.

(xxii) PP should conduct epidemiology study to (analysis of the distribution, patterns and determinants of health and disease conditions in defined populations).

(xxiii) PP shall plant additional 200 ha of Sal trees(only) and create a nursery of 10 ha to distribute the species freely in the region for redevelopment of Sal forest in the region.

(xxiv) PP should Install Wind breaker/shield arrangement along the railway siding for reducing the dust propagation in upwind direction.

(xxv) 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.

(xxvi) Compensation of the land acquired for the project shall be settled within one year as per R&R Policy.

(xxvii) Permanent Health care facilities of Hospital should be established within 5 km of project boundary for the local people.

(xxviii) 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.
(xxix) Domestic water shall be providing to the residents/villages which are coming under the zone of influence of the project due to ground water extraction

(xxx) 2 nos of Water Harvesting Pond with adequate area and depth shall be development within 5 km of project area.

(xxxi) PP shall submit the details of expenditure incurred for Wildlife conservation plan (earlier submitted) within six months to Ministry’s Regional Office.

(xxxii) Adequate facility of drinking water, plantation and other social amenities should be provided to established R&R villages.

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-l 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.


(b) Air quality monitoring and preservation

(i) Continuous ambient air quality monitoring stations as prescribed in the statue be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM$_{10}$, PM$_{2.5}$, SO$_{2}$ 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/PM2.5) 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 cffluent 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 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 along the major approach/coal transportation roads.
(h) Public hearing and Human health issues

(i) Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & it’s RO on six-monthly basis.

(ii) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.

(iii) Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.

(iv) Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.

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

(i) Corporate Environment Responsibility

(i) The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders.

(ii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

(iii) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
(iv) Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

(j) **Miscellaneous**

(i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent’s website permanently.

(ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

(iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

(iv) The project proponent shall monitor the criteria pollutants level namely; PM\textsubscript{10}, SO\textsubscript{2}, NO\textsubscript{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 29\textsuperscript{th} 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. Deputy Director General of Forests (C), Integrated Regional Office, Raipur
   The Secretary, Department of Environment & Forests, Government of Chhattisgarh, Secretariat, Raipur-492001 (Chhattisgarh)
3. The Chairman, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
4. The Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 32
5. The Chairman, Chhattisgarh State Environment Conservation Board, 1-Tilak Nagar, Shiv Mandir Chowk, Main Road, Avanti Vihar, Raipur - 492001 (Chhattisgarh)

(Lalit Bokolia)
Director