

F. No.J-11015/177/2005-IA-II(M)  
Government of India  
Ministry of Environment, Forest and Climate Change  
IA-II (Coal Mining) Division

Indira Paryavaran Bhawan  
Jorbagh Road, N Delhi - 3  
Dated: 20<sup>th</sup> March, 2019

To,  
The General Manager,  
M/s Mahanadi Coalfields Limited,  
PO Jagruti Vihar, Burla - 768020  
**Sambalpur** (Odisha) Email: **gmenvt mcl@yahoo.co.in**

**Sub: Expansion of Jagannath Opencast Coal Mining project from 6 MTPA to 7.5 MTPA of M/s Mahanadi Coalfields Limited located in District Angul (Odisha) - Environmental clearance - reg.**

Sir,  
This has reference to your online proposal No. IA/OR/CMIN/57703/2016 dated 9<sup>th</sup> February, 2019 on the above-mentioned subject.


2. The Ministry of Environment, Forest and Climate Change, vide letter dated 6<sup>th</sup> September, 2018, has granted environmental clearance (EC) to the expansion of Jagannath Opencast Coal Mining Project from 6.0 to 7.5 MTPA involving increase in mine lease area from 430.736 ha to 553.946 ha in District Angul (Odisha), for a period up to 31<sup>st</sup> March, 2019, as an emergency measure, subject to compliance of certain terms and conditions.

3. Further, in view of the reported excess coal production during the period 2010-11 and thus violation of the EIA notification, 2006, proposal for ToR/EC is separately under consideration in pursuance of the Ministry's Notification, 14<sup>th</sup> March, 2017. As per recommendations of the EAC (Violation), ToR has been issued on 10<sup>th</sup> December, 2018 to carry out EIA/EMP studies for submission of the proposal after public consultation.

4. Meanwhile, it has been informed that public consultation/hearing would take time due to unavoidable circumstances and as such, violation proceedings might not be concluded till validity period of the said environmental clearance i.e. 31<sup>st</sup> March, 2019. Accordingly, proposal has been submitted for extension of validity of the said environmental clearance dated 6<sup>th</sup> September, 2018 for a period of one year to ensure continuation of mining operations.

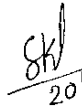
5. The proposal was examined by the Ministry, and in view of outcome of violation committee's proceedings might not be ready before 31<sup>st</sup> March, 2019, the Ministry hereby accords approval for extension of validity of the environmental clearance dated 6<sup>th</sup> September, 2018 for a period of six months (beyond present validity up to 31<sup>st</sup> March, 2019), as an interim measure only to prevent stoppage of mining operations.

6. All other terms and conditions stipulated in the environmental clearance dated 6<sup>th</sup> September, 2018 shall remain unchanged.

  
20/3/2019  
(S. K. Srivastava)  
Scientist E

**Copy to:**

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The APPCF, Regional office (EZ), Ministry of Environment Forests and Climate Change, A-31, Chandrashekarapur, Bhubaneswar - 751023
3. The Secretary, Department of Env & Forest, Govt of Odisha, Secretariat, Bhubaneswar
4. The Member Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
5. The Member Secretary, CPCB, CBD-cum-Office Complex, East Arjun Nagar, Delhi -32
6. The Member Secretary, Odisha State Pollution Control Board, Neelakanth Nagar, Unit-VIII, Bhubaneswar
7. The District Collector, Sundargarh, Government of Odisha
8. Monitoring File      9. Guard File      10. Record File      11. Notice Board

  
20/3/2019  
**(S. K. Srivastava)**  
**Scientist E**

**F. No.J-11015/177/2005-IA-II(M)**  
Government of India  
Ministry of Environment, Forest and Climate Change  
IA-II (Coal Mining) Division

Indira Paryavaran Bhawan  
Jorbagh Road, N Delhi - 3  
Dated: 6<sup>th</sup> September, 2018

To,

The General Manager,  
M/s Mahanadi Coalfields Limited,  
PO JagrutiVihar, Burla - 768020  
**Sambalpur** (Odisha) Email: [gmenvt\\_mcl@yahoo.co.in](mailto:gmenvt_mcl@yahoo.co.in)

**Sub: Expansion of Jagannath Opencast Coal Mining project from 6.0 MTPA to 7.5 MTPA with increase in mine lease area from 430.736 ha to 553.946 of M/s Mahanadi Coalfields Limited located in District Angul (Odisha) - Environment clearance - reg.**

Sir,

This has reference to your letter No.MCL/SBP/GM(ENVT)/F-47/2016-17/2259 dated 10<sup>th</sup> August, 2016 along with online proposal No.IA/OR/CMIN/57703/2016 dated 7<sup>th</sup> May, 2018 and subsequent letters dated 30<sup>th</sup> June, 2018 & 6<sup>th</sup> September, 2018.

2. The Ministry of Environment, Forest and Climate Change has considered the proposal for environmental clearance to the expansion of Jagannath Opencast Coal Mining project from 6.0 MTPA to 7.5 MTPA of M/s Mahanadi Coalfields Limited in an area of 578.426 ha (involving increase in mine lease area from 430.736 ha to 553.946) located in District Angul (Odisha).

3. The proposal was considered by the Expert Appraisal Committee (EAC) in the Ministry for Thermal & Coal Mining Sector in its 30<sup>th</sup> & 34<sup>th</sup> meeting held on 17-18 May, 2018 and 24<sup>th</sup> July, 2018 respectively. 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 involves expansion of Jagannath Opencast Coal Mine by increasing production capacity from 6.0 MTPA to 7.5 MTPA as well as mine lease area from 430.736 ha to 553.946 ha. Additional land of 123.21 ha has been carved out from their adjoining operational Bharatpur OCP.
- (ii) Earlier, the project was accorded EC vide letter of even number dated 29<sup>th</sup> September, 2005 for production capacity of 6 MTPA within the mine lease area of 430.736 ha.
- (iii) ToR for the project was granted vide letter of even number dated 16<sup>th</sup> August, 2017.
- (iv) Joint Venture - No joint venture.
- (v) The latitudes and longitudes of the project are 20°58'42" to 20° 56'14" N and 85°07'10" to 85°08'55" E, respectively.
- (vi) Coal Linkage: NTPC Talcher Thermal Power Plant and other Power Plants & Basket Linkage.
- (vii) Employment generated / to be generated: 534 (Existing) + 185 (Expansion) – direct employment. Besides this, indirect employment will also be generated.



(viii) Benefits of the project: (a) Improvement in physical infrastructure and social infrastructure like roads, school buildings, provisions of drinking water, community hall, plantation etc. (b) increase in employment potential, (c) Contribution to the exchequer (both State and Central Govt.), (d) Improvement of electrical power generation and availability of electricity for 24x7 in rural areas, (e) overall economic growth of the country.

(ix) The total geological, mineable and extractable reserves estimated in the lease area stands at 82.97 MT, 72.14 MT and 72.14 MT, respectively. The per cent of extraction would be 100 %.

(x) The coal grade is G-12 (Average) with stripping ratio as 1.09 Cum/tonne and the gradient varies from 3° to 5°. There are 4 seams with six sections having thickness from 4.29 to 36.55 m.

(xi) Mining Plan was approved by the MCL Board on 18<sup>th</sup> April, 2017 and subsequently, by the Ministry of Coal, vide their letter no. 34012/(04)/2011-CPAM dated 16<sup>th</sup> May, 2017. The progressive Mine Closure Plan is an integral part of the Mining Plan.

(xii) The land usage of the project will be as follows:

| S. No.        | Type of Land                            | Within ML area (ha) |               | Outside ML area (ha) |              | Total Area (ha) |                |
|---------------|---|---------------------|---------------|----------------------|--------------|-----------------|----------------|
|               |   | Existing            | Additional    | Existing             | Additional   | Existing        | Additional     |
| 1             | Agricultural                            | 0.000               | 106.75        | 0.00                 | 0.00         | 0.000           | 106.750        |
| 2             | Waste land                              | 144.110             | 13.93         | 11.27                | 13.21        | 155.380         | 27.140         |
| 3             | Forest Land                             | 80.206              | 2.53          | 0.00                 | 0.00         | 80.206          | 2.530          |
| 4             | Grazing                                 | 0.000               | 0.00          | 0.00                 | 0.00         | 0.000           | 0.000          |
| 5             | Surface water bodies                    | 55.000              | 0.00          | 0.00                 | 0.00         | 55.000          | 0.000          |
| 6             | Others (afforestation by Jagannath OCP) | 151.42              | 0.00          | 0.00                 | 0.00         | 151.420         | 0.000          |
| <b>Total:</b> |   | <b>430.736</b>      | <b>123.21</b> | <b>11.27</b>         | <b>13.21</b> | <b>442.006</b>  | <b>136.420</b> |

#### Pre-mining land use

| S. No | Particulars                                | Existing (ha) |                              |            | Additional (ha) |                              |            | Grand Total (ha) |
|-------|--|---------------|------------------------------|------------|-----------------|------------------------------|------------|------------------|
|       |  | Forest        | Non-forest (Govt. & tenancy) | Total (ha) | For est         | Non-forest (Govt. & tenancy) | Total (ha) |                  |
| A     | Break-up of mining lease area              |               |                              |            |                 |                              |            |                  |
| 1     | Quarry excavation                          | 80.206        | 273.310                      | 353.516    | 2.53            | 120.68                       | 123.21     | 476.726          |
| 2     | External Dumps (In old Jagannath OCM only) | 0.000         | 36.470                       | 36.470     | 0.000           | 0.000                        | 0.000      | 36.470           |

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|          |   |               |                |                |              |                |               |                |
|----------|---|---------------|----------------|----------------|--------------|----------------|---------------|----------------|
| 3        | Infrastructure like workshop, store, CHP & land between infrastructure (In old Jagannath OCM) | 0.000         | 40.750         | 40.750         | 0.000        | 0.000          | 0.000         | 40.750         |
|          | <b>Sub-total (A) (Mining lease area)</b>  | <b>80.206</b> | <b>350.530</b> | <b>430.736</b> | <b>2.53</b>  | <b>120.680</b> | <b>123.21</b> | <b>553.946</b> |
| <b>B</b> | <b>Break-up of area outside mining lease area (in ha)</b>                                     |               |                |                |              |                |               |                |
| 1        | Land for rehabilitation colony  | 0.000         | 11.270         | 11.270         | 0.000        | 13.210         | 13.210        | 24.480         |
|          | <b>Sub-total (B)</b>  | <b>0.000</b>  | <b>11.270</b>  | <b>11.270</b>  | <b>0.000</b> | <b>13.210</b>  | <b>13.210</b> | <b>24.480</b>  |
|          | <b>Grand Total (A+B)</b>  | <b>80.206</b> | <b>361.800</b> | <b>442.006</b> | <b>2.53</b>  | <b>133.890</b> | <b>136.42</b> | <b>578.426</b> |

#### Postmining land use

| S. No. | Land use during Mining | Land Use (ha)                           |                |               |              |                |
|--------|------------------------|---|----------------|---------------|--------------|----------------|
|        |                        | Plantation                              | Water Body     | Grass land    | Undisturbed  | Total          |
| 1      | External OB dump*      | 36.47                                   | -              | --            | -            | 36.470         |
| 2      | Top soil dump          | will be spread over the backfilled area |                |               |              |                |
| 3      | Excavation             | 229.15                                  | 227.401        | 20.175        | --           | 476.726        |
| 4      | Built up area          | 8.15                                    | --             | --            | 32.60        | 40.750         |
|        | <b>Total</b>           | <b>273.77</b>                           | <b>227.401</b> | <b>20.175</b> | <b>32.60</b> | <b>553.946</b> |

\*External dump will be re-handled during post mine closure and will be converted into public use/agricultural land.

(xiii) The method of mining would be Opencast by shovel-dumper in OB; surface miner, pay loader & tipper in coal.

(xiv) Transportation of coal from the face to pit top will be undertaken by tippers/dumpers, surface to TTPS by closed conveyors, surface to sidings by tippers and siding to loading by pay loaders.

(xv) There are two existing external OB dumps enclosing 5.51 Mm<sup>3</sup> of OB over an area of 36.40 ha having heights reported to be of 30 m from the surface level and two internal dumps enclosing 158.43 Mm<sup>3</sup> of OB over an area of 249.325 ha with reported height upto ground level only.

(xvi) Total quarry area of the mine lease will be 476.726 ha and out of the total quarry area, an area of 229.15 ha will be used for plantation and another 20.175 ha will be converted to grass land while final mine void will be created over an area of 227.401 ha (with a depth ranging from 48 meter to 165 meters) which has been proposed to be converted into a water body.

(xvii) Life of the mine is 10 years.



(xviii) Total forest land involved under the project is 82.736 ha. Forest clearance for the entire forest area has been obtained by the project proponent vide letters dated 9<sup>th</sup> November, 2005 for diversion of 58.096 ha of forest land and 7<sup>th</sup> February, 2014 for 24.64 ha.

(xix) No issues related to wildlife in view of the fact that additional land of 123.21 ha is being carved out from the adjoining operational Bharatpur OCP. No National Parks, Wildlife Sanctuaries, Biosphere Reserves within 10 Km periphery/buffer zone of the project.

(xx) The project involves Resettlement and Rehabilitation of 230 families.

(xxi) Seasonal data for ambient air quality has been documented and all results at all stations are within the prescribed limits.

(xxii) Water bodies viz. Bangarujhor is reported to be located at a distance of 100 m (North), Bahmani river at a distance of approximately 7.5 km (east), Nandirajhor at a distance of 6 km (south) while Singharajhor is reported to be located at a distance of approximately 6.5 Km (north-east).

(xxiii) Total estimated water requirement is 2219.30 cm/day. The level of ground water ranges from 0.80 m to 13.27 m below ground level.

(xxiv) Total capital cost of the project is Rs. 409.089 crores (including additional cost of Rs. 337.66 crores).

(xxv) Expenditure of CSR has been allocated on the basis of 2% of the average net profit of the company for the three immediate preceding financial years or Rs. 2.0 per tone of the coal production of the previous year whichever is higher. R&R cost of project in addition to capital cost has been estimated at Rs. 919 Lakh.

(xxvi) The Ministry's Regional Office at Bhubaneswar has carried out the site visit on 23<sup>rd</sup> December, 2016 and submitted the monitoring report on compliance status of EC conditions vide letter dated 5<sup>th</sup> April, 2017. As desired by the Regional Office, action taken report on the non-compliance was first submitted on 15<sup>th</sup> April, 2017 and then on 10<sup>th</sup> May, 2018 by the project proponent.

(xxvii) The mine was again inspected by Eastern Regional office (ERO) of MoEF&CC on 26<sup>th</sup> June 2018. Monitoring report on compliance status of EC conditions has been forwarded vide their letter dated 29<sup>th</sup> June, 2018. The action taken report *vis-à-vis* their observations, was submitted on 13<sup>th</sup> July, 2018.

(xxviii) Coal production during the period 2010-11 is reported to be 6.33 MTPA i.e. more than the sanctioned capacity of 6 MTPA, which amounts to non-compliance of the EC conditions and thus violation of the EIA Notification, 2006. The same was noted during the meeting of the EAC held on 17-18 May, 2018.

(xxix) Jagannath Opencast Coal mine is the dedicated linked project to Talcher TPP and on the verge of closure due to limited land in the existing EC area. In addition, there are other potential consumers dependent upon coal supply from the project, with the details as under:-

| S. No. | Consumers   | Existing 6 MTPA | Proposed 7.5 MTPA |
|--------|---|-----------------|-------------------|
| 1.     | TTPS, NTPC, Talcher   | 2.0 MTPA        | 2.0 MTPA          |
| 2.     | By rail to power plants – APPDCL, APGENCO, NTPC (Shimadri, Mouda, Sholapur), NTECL, GMR, Haldia Energy Ltd, KPCL Raichur, NLC TPL | 3.0 MTPA        | 4.5 MTPA          |
| 3.     | Road sale to local consumers  | 1.0 MTPA        | 1.0 MTPA          |

In order to ensure regular supply of coal to Talcher TPP and other critical and super critical power plants and thus to meet growing energy demand of the country, the proposal needs consideration on priority.



4. The sectoral Expert Appraisal Committee in its 34<sup>th</sup> meeting held on 24<sup>th</sup> July, 2018 has recommended the project for grant of environmental clearance. Based on recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to the project for **expansion of Jagannath Opencast coal mine from 6.0 MTPA to 7.5 MTPA of M/s Mahanadi Coalfields Limited in an area of 578.826 ha (increase in mine lease area from 430.736 ha to 553.946 ha) located in District Angul (Odisha) for a period up to 31<sup>st</sup> March, 2019**, under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the terms & conditions and environmental safeguards mentioned below:

- (i) There being excess coal production and non-compliance of the EC conditions, and thus violation of the EIA Notification, 2006, the proposal shall be separately considered by the EAC (Violation) in pursuance of the Ministry's Notification, 14<sup>th</sup> March, 2017. The project proponent shall be bound to undertake and comply with all the conditions stipulated by the EAC (Violation).
- (ii) The State Government shall take action against the project proponent under the relevant provisions of the Environment (Protection) Act, 1986 for the violation of the EIA Notification, 2006.
- (iii) To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.
- (iv) Mitigative measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions as presented before the Committee, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at railway siding, etc.
- (v) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.
- (vi) To ensure health and welfare of nearby villages, regular medical camps shall be organized at least once in six months.
- (vii) Thick green belt of 75 m width at the final boundary in the down wind direction of the project site shall be developed to mitigate/check the dust pollution.

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

**(a) Mining**

- (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) No change in mining method, calendar programme and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forest and Climate Change.
- (iii) 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).
- (iv) No mining shall be carried out in forest land without obtaining Forestry Clearance as per the Forest (Conservation) Act, 1980 and also adhering to The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 read with provisions of Indian Forest Act, 1927.



**(b) Land reclamation and water conservation**

(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 shall be submitted to Ministry of Environment, Forest and Climate Change/Regional Office.

(ii) 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/Gol 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.

(iii) 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 handed over to the respective state government as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27<sup>th</sup> August, 2009 and subsequent amendments.

(iv) 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 Ministry of Environment, Forest and Climate Change/Regional Office on six monthly basis.

(v) The top soil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized for long. 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 on six monthly basis.

**(c) Emissions, effluents, and waste disposal**

(i) Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM<sub>10</sub>/PM<sub>2.5</sub>) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.

(ii) Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area in a phased manner. The green belt comprising a mix of native species shall be developed all along the major approach/ coal transportation roads.

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(iii) The transportation of coal shall be carried out as per the provisions and route proposed in the approved Mining 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.

(iv) 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.

(v) 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.

(vi) Coal handling plant shall be operated with effective control measures viz. bag filters/water or mist sprinkling system etc to check fugitive emissions from crushing operations, conveyor system, transfer points, etc.

(vii) 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.

(viii) Catch/garland drains and siltation ponds of 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 measures and green belt development. 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.

(ix) 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 Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Oil and grease trap shall be installed and maintained fully functional with effluents discharge adhering to the norms. Sewage treatment plant of adequate capacity shall be installed for treatment of domestic waste.

(x) Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.

**(d) Illumination, noise & vibration**

(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 & its RO on six-monthly basis.



(ii) Adequate measures shall be taken for control of noise levels below 85 dB(A) 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.

(iii) Controlled blasting techniques shall be practiced in order to mitigate ground vibrations and fly rocks as per the guidelines prescribed by the DGMS.

(iv) 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) Occupational health & safety**

(i) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the workers 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 workers identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any.

(ii) Personnel (including outsourcing employees) working in dusty areas shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.

(iii) Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.

**(f) Ecosystem and biodiversity conservation**

(i) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered 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.

**(g) Public hearing, R&R and CSR**

(i) 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.

(ii) The project proponent shall ensure the expenditure towards socio-economic development in and around the mine, in every financial year as per the Corporate Social Responsibility Policy as per the provisions under Section 135 of the Companies Act, 2013

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(iii) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.11 (M) dated 29<sup>th</sup> October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

(iv) 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.

**(h) Corporate environment responsibility**

(i) The Company shall have a well laid down environment policy duly approved by Board of Directors. The environment 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 or forest norms/conditions. Also, the company shall have a defined system of reporting of non-compliances/violations of environmental norms to the Board of Directors and/or shareholders/stakeholders.

(ii) The project proponent shall comply with the provisions contained in this Ministry's OM dated 1<sup>st</sup> May, 2018, as applicable, regarding Corporate Environment Responsibility.

(iii) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions should be displayed on website of the Company.

(iv) A separate environmental management cell both at the project and company headquarter level, with suitable qualified personnel shall be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.

(v) Action plan for implementing EMP and environmental conditions 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.

(vi) Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

**(i) Statutory Obligations**

(i) The environmental clearance shall be subject to orders of Hon'ble Supreme Court of India, Hon'ble High Court, NGT and any other Court of Law from time to time, and as applicable to the project.

(ii) This environmental clearance shall be subject to obtaining wildlife clearance, if applicable, from the Standing Committee of National Board for Wildlife.

(iii) The project proponent shall obtain Consent to Establish/Operate under the Air Act, 1981 and the Water Act, 1974 from the concerned State Pollution Control Board.



(iv) The project proponent shall obtain the necessary permission from the Central Ground Water Authority (CGWA).

**(j) Monitoring of project**

(i) Adequate ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations in consultation with the SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.

(ii) The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25.9.2000 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) The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.

(iv) The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-IA.11 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.

(v) 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 Ministry of Environment, Forest and Climate Change/Regional Office.

(vi) 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.

(vii) The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental conditions to the Ministry of Environment, Forest and Climate Change/Regional Office. For half yearly monitoring reports, the data should be monitored for the period of April to September and October to March of the financial years.

(viii) 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.



**(k) Miscellaneous**

(i) Efforts should be made to reduce energy consumption by conservation, efficiency improvements and use of renewable energy.

(ii) The project authorities shall inform to the Regional Office regarding commencement of mining operations.

(iii) A copy of the environmental clearance shall be marked to concerned Panchayat. A copy of the same shall also be sent to the concerned State Pollution Control Board, Regional Office, District Industry Sector and Collector's Office/Tehsildar Office for information in public domain within 30 days.

(iv) The EC shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain.

(v) The project authorities shall advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of this clearance, informing that the project has been accorded environmental clearance and a copy of the same is available with the State Pollution Control Board and also at website of the Ministry.

(vi) The environmental statement for each financial year ending 31 March in Form-V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the Company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF&CC by e-mail. Concerns raised during public hearing.

(vii) The above conditions will 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 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter.

5. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during presentation to the EAC. All the commitments made on the issues raised during public hearing shall also be implemented in letter and spirit.

6. The proponent shall obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

7. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.




8. The coal company/project proponent shall be liable to pay the compensation against the illegal mining, if any, and as raised by the respective State Governments at any point of time, in terms of the orders dated 2<sup>nd</sup> August, 2017 of Hon'ble Supreme Court in WP (Civil) No.114/2014 in the matter of 'Common Cause Vs Union of India & others.

9. The concerned State Government shall ensure no mining operations to commence till the entire compensation for illegal mining, if any, is paid by the project proponent through their respective Department of Mining & Geology, in strict compliance of the judgment of Hon'ble Supreme Court.

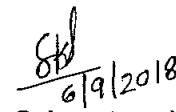
10. This environmental clearance shall not be operational till such time the project proponent complies with the above said judgment of Hon'ble Supreme Court, as applicable, and other statutory requirements.

11. This issues in supersession of the earlier EC granted vide letter No.J-11015/177/2005-IA-II(M) dated 29<sup>th</sup> September, 2005, after receipt of undertaking from the project proponent vide their letter no. MCL/SBP/GM(ENVT)/2018/4429 dated 6<sup>th</sup> September, 2018 regarding no violation of the EIA Notification, 2006 in future.

  
(S. K. Srivastava)  
Scientist E

**Copy to:**

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The APPCF, Regional office (EZ), Ministry of Environment Forests and Climate Change, A-31, Chandrashekarapur, Bhubaneswar - 751023
3. The Secretary, Department of Env& Forest, Govt of Odisha, Secretariat, Bhubaneswar
4. The Member Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
5. The Member Secretary, CPCB, CBD-cum-Office Complex, East Arjun Nagar, Delhi -32
6. The Member Secretary, Odisha State Pollution Control Board, Neelakanth Nagar, Unit-VIII, Bhubaneswar
7. The District Collector, Sundargarh, Government of Odisha
8. Monitoring File      9. Guard File      10. Record File      11. Notice Board

  
(S. K. Srivastava)  
Scientist E