



File No.: J-11015/380/2010-IA.II(M)
Government of India
Ministry of Environment, Forest and
Climate Change
IA Division



Dated 15/04/2025



To,

Sh. Arun Prasad
M/s. Bharat Coking Coal Limited
Koyla Bhawan, Koyla Nagar, Dhanbad, Jharkhand, 826005 , DHANBAD
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Subject: Cluster X Coal Mining Project and Coal Washery (opencast cum underground coal mining in an reduced ML area from 2057.47 ha to 1670.52 ha and increase in production capacity from 2.289 MTPA to 2.746 MTPA) by M/s Bharat Coking Coal Limited, located at District Dhanbad; State: Jharkhand – Environmental Clearance for 20% (Phase – I) expansion as per the provisions of Ministry's OM dated 11/04/2022 and reduction in ML area from 2057.47 Ha to 1670.52 Ha-regarding.

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/JH/CMIN/518716/2025 dated 17/01/2025 along with submission of written information dated 28.03.2025 seeking for grant of prior Environmental Clearance (EC) under the provision of the EIA Notification 2006-and as amended thereof for the project mentioned above.

2. The particulars of the proposal are as below :

| | |
|--|--|
| (i) EC Identification No. | EC25A0605JH5828995N |
| (ii) File No. | J-11015/380/2010-IA.II(M) |
| (iii) Clearance Type | Fresh EC |
| (iv) Category | A |
| (v) Project/Activity Included Schedule No. | 1(a) Mining of minerals,2(a) Coal washeries |
| (vi) Sector | Coal Mining |
| (vii) Name of Project | Cluster X Coal Mining Project and Coal Washery |
| (ix) Location of Project (District, State) | DHANBAD, JHARKHAND |
| (x) Issuing Authority | MoEF&CC |
| (xii) Applicability of General Conditions | No |

3. M/s. Bharat Coking Coal Limited has made an online application vide proposal no. IA/JH/CMIN/518716/2025 Dated

17/01/2025 along with copy of EIA/EMP report, Form along with the certified compliance report and sought for Environment Clearance (EC) for expansion under para 7(ii)(a) based on OM dated 11.04.2022 under the provisions of the EIA Notification, 2006 for the project mentioned above.

4. The proposed project activity is listed at item no. 1 (a) Under Category “A” of the schedule of the EIA Notification, 2006.

5. The instant Proposal was considered in 22nd EAC meeting held on 17th -18th March, 2025. The written information was submitted on 28.03.2025. The MoM for the same may be seen using the web link: parivesh.nic.in.

Details submitted by the project proponent

6. The project of M/s BCCL is a brownfield project for Expansion (20 % in 1st Phase) of existing EC of Cluster X under para 7(ii) (a) based on OM dated 11.04.2022 with peak capacity change from 2.289 MTPA to 2.746 MTPA with mining lease area reduced to 1670.52 from 2057.47 Ha.

7. **Details of Previous Approvals in chronological orders:** PP submitted the details of previous approvals in the chronological order as follows:

| S. No. | Details of Letter No. | EC/Expansion EC/Amendment in EC/Validity extension/Transfer of EC | Date | Capacity (MTPA) | Area (Ha) | Remarks |
|--------|----------------------------|---|------------|-----------------|------------|---|
| 1 | J-11015/380/2010-IA.II (M) | EC | 06.02.2013 | 2.289 | 2057.95 | 55 th EAC 27 th -28 th August 2012 |
| 2 | J-11015/380/2010-IA.II (M) | Amendment in EC | 12.06.2019 | 2.289 | 2057.47 ha | 44 th EAC 24 th -25 th April 2019 |

Details of EC dated 06.02.2013: Environment Clearance dated 06.02.2013 was accorded by the Ministry to M/s BCCL for Cluster X Coal Mining Project and Coal Washery (opencast cum underground coal mining) in ML area of 2057.95 ha for the production capacity of 2.289 MTPA. The maximum production for the opencast and underground section in the Cluster for which EC was accorded is as follows:

| S. No. | Name of Mines | | Production capacity (MTPA) | | Leasehold Area | Life (years) | Status |
|--------|--|--------------------|----------------------------|--------------|----------------|--------------|-----------------------|
| | | | Normative | Peak | | | |
| 1. | Bhowrah North | UG Section | 0.11 | 0.143 | 208.83 | >30 | In operation |
| | | OC Section | 0.42 | 0.546 | | 4 | In operation |
| 2. | Bhowrah South | UG Section | 0.29 | 0.377 | 571.58 | >30 | In operation |
| | | 3 Pit OC Section | 0.235 | 0.305 | | 4.5 | In operation |
| | | Chandan OC Section | 0.158 | 0.205 | | 2.5 | In operation |
| 3. | Patherdih | UG Section | 0.054 | 0.07 | 244.34 | >30 | In operation |
| | | Chandan OC Section | 0.22 | 0.286 | | 4 | In operation |
| 4. | Sudamdih Incline (UG) | | 0.09 | 0.117 | 254.27 | >30 | In operation |
| 5. | Sudamdih Shaft (UG) | | 0.185 | 0.24 | 391.5 | >30 | In operation |
| 6. | Amlabad UG Mine | | | | 386.95 | | Closed for production |
| | Total | | 1.762 | 2.289 | 2057.47 | | |
| | Sudamdih Coal Washery (within the leasehold area of Sudamdih Shaft Mine) | | 1.6 | 2.08 | 18 | 18 | In operation |

Details of EC Amendment dated 12.06.2019: Amendment in Environment Clearance was granted to M/s BCCL for Cluster X Coal Mining Project and Coal Washery (opencast cum underground coal mining) in ML area of 2057.47 ha for the production capacity of 2.289 MTPA, vide letter dated 12.06.2019. The amendment was granted for restructuring/re-

appropriating individual mines in the cluster to implement the master plan dealing with fire and subsidence. The revised details granted were as follows:

| S. No. | Mine | Type of Mine | Production capacity (MTPA) | Lease Area (ha) | Mine life (years) | Remarks |
|--------|--|--------------|----------------------------|-----------------|-------------------|--|
| 1. | Bhowrah North | UG | 0.143 | 208.83 | >20 | |
| | | OC | 0.546 | | 6 | |
| 2. | Bhowrah South | UG | 0.377 | 571.58 | 30 | |
| | | OC | 1.2 | | 43 | Fire Dealing |
| 3. | Amalgamated Sudamdih Patherdih Mine | OC | 0.709 | 498.61 | 33 | Amalgamation of mines for fire dealing |
| 4. | Sudamdih Shaft | UG | 0.24 | 391.5 | 30 | |
| 5. | Amlabad Closed | UG | 0 | 386.95 | NA | |
| 6. | Sudamdih Coal Washery (within lease hold of Sudamdih Shaft Mine) | | 2.08 | 18 | 18 | |
| | Total | | 2.289 | 2057.47 | | |

8. **Production details of existing EC:** W.r.t the previous approvals, PP submitted the actual production details of the concerned mine and submitted that the mine became operational from 2013 onwards. CTO renewal of Cluster X has been obtained from the JPCB and is valid up to 31.12.2025. Details of the same are as follows:

| Year | Actual Production (MTPA) | Planned Coal production as per EC (Peak) (MTPA) | Excess production |
|---------|--------------------------|---|-------------------|
| 2013-14 | 0.528 | 2.289 | NIL |
| 2014-15 | 0.269 | 2.289 | NIL |
| 2015-16 | 0.580 | 2.289 | NIL |
| 2016-17 | 0.725 | 2.289 | NIL |
| 2017-18 | 0.757 | 2.289 | NIL |
| 2018-19 | 1.145 | 2.289 | NIL |
| 2019-20 | 0.499 | 2.289 | NIL |
| 2020-21 | 0.900 | 2.289 | NIL |
| 2021-22 | 0.667 | 2.289 | NIL |
| 2022-23 | 0.794 | 2.289 | NIL |
| 2023-24 | 1.117 | 2.289 | NIL |
| 2024-25 | 1.875 | 2.289 | NIL |

Mine-wise production details of the existing EC, since last amendment:

| S. No. | Name of the mine | Type of Mine | Lease/ Project Area (Ha) | EC Capacity (MTPA) | Production (in MTPA) | | | | | |
|--------|----------------------------|--------------|--------------------------|--------------------|----------------------|----------------|--------------|--------------|--------------|--------------|
| | | | | | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 |
| 1 | Bhowrah North | UG | 208.83 | 0.143 | 0.0065 | 0.000015 | 0 | 0 | 0 | 0 |
| | | OC | | 0.546 | 0 | 0 | 0 | 0 | 0 | 0.5459 |
| 2 | Bhowrah South | UG | 571.58 | 0.377 | 0.0003 | 0 | 0 | 0 | 0 | 0 |
| | | OC | | 1.2 | 0.318 | 0.675 | 0.261 | 0.362 | 0.7068 | 1.1998 |
| 3 | Amalgamated Patherdih Mine | OC | 498.61 | 0.709 | 0.175 | 0.225 | 0.406 | 0.432 | 0.4108 | 0.1300 |
| 4 | Sudamdih Shaft | UG | 391.5 | 0.24 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 |
| 5 | Amlabad Closed | UG | 386.95 | 0 | - | - | - | - | - | 0 |
| | Total | | 2057.47 | 2.289 | 0.4998 | 0.90015 | 0.667 | 0.794 | 1.117 | 1.875 |

9. **Certified Compliance Report:** The Status of compliance of earlier EC was obtained from Regional Office, Ranchi vide letter no. 103-402/13/EPE/10 dated 06.01.2025. The Action taken report regarding the partially/non-complied

condition was submitted to the Regional Office by the proponent vide letter dated 14.01.2025.

10. Details of present proposal: The instant proposal is for reducing the ML area of the cluster from 2057.47 Ha to 1670.52 Ha by removing the Amlabad mine (386.95 ha), amalgamating Bhowrah (North & South) Colliery and for increasing the production capacity of the cluster from 2.289 MTPA to 2.746 MTPA (i.e. first phase of 20% expansion) as per the provisions of Ministry's OM dated 11.04.2022.

The proposed mining scenario of the cluster is as follows:

| Name of Mines | Type of Mine | Proposed 20% Expansion | Lease Hold Area (Ha) | Life (Years) | Remarks |
|---|-----------------|------------------------|---|--------------|---|
| Bhowrah (North & South) Colliery | Mixed (UG & OC) | 2.30 | 780.41 | 9 | Amalgamation |
| Amalgamated Sudamdih Patherdih Mine | OC | 0.446 | 498.61 | 28 | |
| Sudamdih Shaft (UG) | UG | 0.00 | 391.5 | - | In-operative |
| Amlabad | UG | 0 | (-) 386.95 | - | ML Area removed |
| Total (Cluster X) | | 2.746 | 1670.52 (2057.14 – 386.95) | | |
| Sudamdih Coal Washery (Within lease of Sudamdih Shaft Mine) | Washery | 2.08 | 18 | 12 | In-operative. Under Asset Monetization. |

Justification:

a. Amalgamation of Bhowrah (North & South) Colliery: The Bhowra (South) and Bhowra (North) collieries are severely affected by fire, with coal reserves trapped within the burning areas and mine barriers. As a result, excavating the fire-affected coal, removing overburden (OB), and creating storage space for OB are necessary. To facilitate fire dousing and systematic OB stacking for the scientific reclamation of the mines, the amalgamation of Bhowra (North) and Bhowra (South) collieries has been proposed. Bhowra (North) Colliery and Bhowra (South) Colliery are amalgamated with Mining Plan Approved by 414th Board of BCCL on 19.10.2024.

b. Carving out of Amlabad Colliery from Cluster X: Amlabad Colliery has been excluded from Cluster X, as the mine was closed before 2009, and the Environmental Clearance (EC) for the cluster was obtained with no allocated capacity for it. Following the directives of the Ministry of Coal, it is now proposed to reopen and operate such closed mines under a Revenue Sharing model. To facilitate this, resource evaluation, reserve estimation, and a separate mining plan will be developed for the operationalization of Amlabad Colliery, which has remained closed for several years. Additionally, the mine is situated on the southern side of the Damodar River. To ensure a separate EC for its future mining prospects and to prevent planning delays for the currently operational mines within Cluster X, it is proposed to carve out Amlabad Colliery from the cluster. A fresh and separate EC, in accordance with the approved mining plan and the EIA Notification of 2006, will be obtained for Amlabad Colliery.

11. Environmental Site Settings: The project area is covered under Survey of India Topo sheet No- 73 I/6 and is bounded by the geographical coordinates ranging from latitude 23°39'30" to 23°40'9" North and longitudes E 86°23'44" to 86°26'27" East.

Project does not fall in the Critically Polluted Area (CPA)/Severely Polluted Area (SPA), as per CEPI Assessment 2018.

Mining Lease: PP submitted the following details of Mine lease:

| S. No. | Govt. Order/Notifications as the case may be | Area (ha) |
|--------|--|-----------|
| 1 | <ul style="list-style-type: none"> Lease allotment: Coking Coal Mines (Nationalization) Act, 1972 (Act No. 36 of 1972) The Coal India (Regulation of Transfers and Validation) Act, 2000 (Act No. 45 Of 2000) Mineral Concession Rules Amendment dated 01.10.2021 (G.S.R. 717(E) dated 01.10.2021) | 1670.52 |

Period of Lease extended up to 07.12.2050 vide notification issued by Ministry of Coal, New Delhi, on the 1st October,

Forest Area: The project does not involve any forestland and there is no violation of Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980.

Other sensitive receptors:

| Project site proximity to sensitive area | Yes | | | |
|--|--|-------------------------------|--|------------|
| i. Habitation ii. School iii. River/Water Body iv. Forest v. Archaeological Survey of India (ASI) protected site | i. Habitation (Within 5 km buffer) | | | |
| | Village | Distance (km) | Direction | |
| | Bhowra | | | |
| | Gourkuthi | Within leasehold of Cluster X | | |
| | Mohalbani | Within leasehold of Cluster X | | |
| | Pargabad | Within leasehold of Cluster X | | |
| | Patherdih | Within leasehold of Cluster X | | |
| | Chandrabad | Within leasehold of Cluster X | | |
| | Gourigram | Within leasehold of Cluster X | | |
| | Sutukdih | Within leasehold of Cluster X | | |
| | Mohal | Within leasehold of Cluster X | | |
| | Swardih | Within leasehold of Cluster X | | |
| | Mohalbani | Within leasehold of Cluster X | | |
| | Sindri | 6 | West | |
| | Jharia | 5 | North | |
| | Bhojudih | 1 | South East | |
| | Amlabad | 1 | South West | |
| | Sitanala | 1 | South West | |
| | Jairampur | 1 | North | |
| | Jealgora | 2 | North | |
| | Bararee | 3 | North | |
| | Tisra | 3 | North | |
| | ii. School (Within 5 km buffer) | | | |
| | School | | Distance (Km) | Direction |
| | Bhowra Govt. High School | | Within leasehold of Cluster X | |
| | Denobli School, Digwadih | | 3 | East |
| | Rajkriyakrit Primary School, Sitanala | | 1 | South |
| | TATA DAV School, Jamadoba | | 2 | North West |
| | iii. River/Water Body (Within 5 Km) | | | |
| | Water Body | | Distance (Km) | Direction |
| | Damodar river | | Passing through Cluster leasehold area | |
| | A safety distance of 200 meters has been maintained between the workings and the Damodar River. HFL of Damdoar River in 1978 was 139 m. additionally, a dense green belt will be further developed within the safety barrier between the mines and the river, complementing the existing plantation efforts. | | | |
| | iv. Forest (Within 5 km buffer): Nil | | | |
| | v. Archaeological Survey of India (ASI) protected site: Nil | | | |
| | vi. Others | | | |
| | S. No. | Particulars | Distance (Km) | Direction |
| | 1. | Bhowra Regional Hospital | Within leasehold of Cluster X | |

| Project site proximity to sensitive area | Yes | | |
|--|-----|----------------------------|-------------------------------|
| | 2. | Sudamidh Washery | Within leasehold of Cluster X |
| | 3. | NH-218 | Within leasehold of Cluster X |
| | 4. | Jealgora Regional Hospital | 7 North |

No diversion of water body, road, HT/Transmission line, railway line is proposed in the project. Neither the same has been diverted in past.

Protected Area: The project is not located within 10 KM of any ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve/tiger corridor/elephant corridor etc. No schedule 1 species are reported in Cluster X as per Flora and Fauna Study done by IIT-ISM Dhanbad.

12. Method of Mining & Mining Plan:

i. Approval of Mine Plan and Mine Closure Plan:

| Name of Mine | Approved in BCCL Board | Date of approval |
|---|-------------------------------------|------------------|
| Bhowrah (North & South) Colliery | Approved in 414 th Board | 19.10.2024 |
| Amalgamated Sudamdih Patherdih Colliery | Approved in 348 th Board | 29.01.2019 |
| Sudamdih Shaft (UG) | Approved in 351 st Board | 28.05.2019 |

ii. Method of Mining:

| S. No. | Proposed Mines | Type of Mine |
|--------|---|-------------------------------|
| 1. | Bhowra (North & South) Colliery | Mixed (Opencast/ Underground) |
| 2. | Amalgamated Sudamdih Patherdih Colliery | Opencast |
| 3. | Sudamdih Shaft | Underground |
| | Sudamdih Coal Washery (Within lease hold of Sudamdih Shaft Mine) | Coal Washery |

iii. The net geological reserves with delineated boundary are 100.64 MT out of which mineable reserves are 96.596 MT and extractable reserves are 95.121 MT. Percentage of extraction is 90%.

iv. There are 20 nos of seams, thickness ranging between 0.08 m to 46.05 m.

v. Grade of coal is ST-I to W-IV.

vi. Stripping ratio is 7.23-9.98 cum/ Te.

vii. Life of mine:

| Sl. No | Name of Mines | Balance Life (Years) |
|--------|---|----------------------|
| 1 | Bhowrah (North & South) Colliery | 9 |
| 2 | Amalgamated Sudamdih Patherdih Colliery | 28 |
| 3 | Sudamdih Shaft (UG) | - |

viii. Top Soil Management:

- Quantity of Top Soil to be generated: 0.04 Mm³
- Storage of Top Soil: Will be used concurrently for Plantation
- Handling/Utilization of Top Soil: Carpeting over the external OB dumps and internal dump before plantation
- Area of Top Soil dump: Top soil will be concurrently used
- Number of Top Soil Dumps: Top soil will be use regularly for spreading on OB dump for plantation purpose; no top soil

dump will be created.

ix. Details of OB Dump:

(a) Dump details:

| Details | Mine | Internal Dumps | | External Dumps | | Remarks |
|----------|---|----------------|--|----------------|-----------------------------------|--|
| | | Nos. | Quantity of Waste/OB stored (Million m3) | Nos. | Quantity of Waste/OB stored (Mm3) | Whether external dump is outside mine lease area |
| Existing | Amalgamated Sudamdih Patherdih Colliery | 3 | 22.014 | 0 | Nil | No |
| | Bhowrah N&S | 2 | 77.43 | 0 | Nil | No |
| Proposed | Amalgamated Sudamdih Patherdih Colliery | 5 | 86.88 | 2 | 39.88 | No |
| | Bhowrah N&S | 4 | 46.13 | 4 | 57.35 | No |

(b) Specification of each dump:

Amalgamated Sudamdih Patherdih Colliery

| Dump No | Area (ha) | Height (m) | Quantity Million m ³ | Type (Internal/External) |
|---------|-----------|------------|---------------------------------|--------------------------|
| 1. | 7.85 | 25 | 1.727 | Existing internal |
| 2. | 16.02 | 85 | 13.617 | Existing internal |
| 3. | 7.85 | 85 | 6.67 | Existing internal |
| 4. | 30.74 | 85 | 26.10 | Proposed internal |
| 5. | 23.34 | 85 | 19.50 | Proposed internal |
| 6. | 22.50 | 80 | 17.83 | Proposed internal |
| 7. | 12.67 | 90 | 11.27 | Proposed internal |
| 8. | 11.50 | 90 | 12.18 | Proposed internal |
| 9. | 26.96 | 90 | 22.19 | Proposed external |
| 10. | 21.50 | 90 | 17.69 | Proposed external |

Bhowrah (North & South) Colliery

| Dump No | Area (ha) | Height (m) | Quantity Million m ³ | Type (Internal/External) |
|---------|-----------|------------|---------------------------------|--------------------------|
| 1. | 21.36 | 65 | 33.10 | Existing internal |
| 2. | 28.6 | 65 | 44.33 | Existing internal |
| 3. | 19.81 | 80 | 16.17 | Proposed internal |
| 4. | 18.8 | 80 | 12.08 | Proposed internal |
| 5. | 4.4 | 60 | 1.80 | Proposed internal |
| 6. | 19.8 | 85 | 16.08 | Proposed internal |
| 7. | 19.15 | 90 | 26.274 | Proposed external |
| 8. | 10.4.0 | 90 | 12.40 | Proposed external |
| 9. | 5.1 | 90 | 1.74 | Proposed external |
| 10. | 15.53 | 90 | 16.93 | Proposed external |

x. Land use details:

a. Pre-mining land use:

| S. No. | Land Use | Within ML Area (ha) | Outside ML Area (ha) |
|--------|----------|---------------------|----------------------|
| | | | |

| | | | | |
|----|--------------------------------------|----------------|----------|--|
| | | | | |
| 1 | Agricultural Land | 35.81 | 0 | |
| 2 | Forest land | 0 | 0 | |
| 3 | Waste land | 270.77 | 0 | |
| 4 | Grazing land | 0 | 0 | |
| 5 | Surface Water Bodies | 205.8 | 0 | |
| 6 | Settlements | 86.35 | 0 | |
| 7 | Other (Plantation) | 57.03 | 0 | |
| 8 | Railway | 54.175 | 0 | |
| 9 | Service building/mine infrastructure | 16.26 | 0 | |
| 10 | Road | 13.165 | 0 | |
| 11 | Barren land/abandoned quarry etc | 931.16 | 0 | |
| | Total | 1670.52 | 0 | |

b. Post mining land use:

| S. No. | Land use category | Present | Post closure | Land Use | | | |
|--------|-------------------------|----------------|----------------|---------------|---------------|---------------------|---------------|
| | | | | Plantation | Water Body | Public/ Company use | Undisturbed |
| 1 | External OB Dump | 0 | 98.64 | 42.47 | - | - | 56.17 |
| 2 | Top Soil Dump | 0 | 0 | - | - | - | - |
| 3 | Excavation/ Quarry Area | 88.16 | 115.24 | 56.21 | 7.23 | - | 51.8 |
| 4 | Backfilled Area | 219.65 | 245.24 | 245.24 | - | - | |
| 5 | Roads | 15.39 | 10.48 | - | - | - | 10.48 |
| 6 | Built Up Area | 161.78 | 98.27 | - | - | - | 98.27 |
| 7 | Green Belt | 101.41 | 89.25 | 89.25 | - | - | - |
| 8 | Safety Zone | 43.73 | 85.21 | 48.02 | - | - | 37.19 |
| 9 | Undisturbed Area | 1040.41 | 928.19 | 23.37 | 205.8 | 557.59 | 141.43 |
| | TOTAL | 1670.52 | 1670.52 | 504.56 | 213.03 | 557.59 | 395.34 |

xi. Details of transportation:

- In pit:** from face to surface coal dump 0- 3 km by dumpers
- Surface to siding:** By tippers from coal dump to railway siding (6 km; 3 km is public road and another 3 km is dedicated coal transportation road)
- Siding to loading:** pay loader loads the coal into the railway wagons for further transport.
- Quantity being transported by Road/Rail/conveyer/ropeway:** 1.031707 MT. (dispatch in 2023-24) [0.722195 MT by Rail (70% of coal production); 0.309512 MT by Road (30% of coal production up to the distance of 6-7 km)].

As per the original proposal, the coal was supposed to be transported through conveyor to railway siding after dousing of active fire and stabilization of land as per approved Jharia Master Plan. As fire dousing is continuing and accordingly Jharia Master Plan is under revision. The existing transport arrangement of transport up to railway siding by road shall continue.

xii. Reclamation: Afforestation shall be done progressively covering an area of: 504.56 ha at the end of mining. Additionally, Plantation is being undertaken by BCCL in an area of 100 Ha. Via DFO, Dhanbad outside leasehold of Cluster X, EJ Area in FY 2025-26. This will include:

- Reclaimed external OB dump (in ha): 42.47
- Internal dump (in ha): 245.24
- Green belt (in ha): 137.27 (48.02 ha safety zone included)
- Density of tree plantation (in no of plants): 2500/ha
- A void of 7.23 Ha is proposed to be converted into water body at depth 30m.
- 79.58 ha (56.21 ha in Quarry area and 23.37 ha in undisturbed area).

- xiii. **Details of plan to deal with fire in cluster and OB dumps:** As per approved Master Plan following method (one or combination) for control of fire will be employed
- Excavation of fire material and filling with cohesive soil
 - isolation by trench cutting and Backfilling
 - Cooling by water curtain/infiltration pond
 - cooling, quenching and removal of fiery coal
 - blanketing by soil

xiv. Details of Sudamdih Coal Washery: Sudamdih coal washery is situated on Eastern Part of Jharia coalfield adjacent to Damoda River. This washery has peak capacity of 2.08 MTPA. However, the washery is closed since 2020 and under Asset Monetization stage.

13. Baseline data:

| Period (01 st March to 31 st May 2024) | | Remark |
|--|--|--|
| AAQ parameters at 12 Locations (min. and max) | Core Zone:- $PM_{10} = 83 \text{ to } 125 \mu\text{g}/\text{m}^3$ $PM_{2.5} = 34 \text{ to } 66 \mu\text{g}/\text{m}^3$ $SO_2 = <10 \text{ to } 12 \mu\text{g}/\text{m}^3$ $NO_x = 25 \text{ to } 33 \mu\text{g}/\text{m}^3$ Buffer Zone:- $PM_{10} = 61 \text{ to } 125 \mu\text{g}/\text{m}^3$ $PM_{2.5} = 25 \text{ to } 62 \mu\text{g}/\text{m}^3$ $SO_2 = <10 \text{ to } 15 \mu\text{g}/\text{m}^3$ $NO_x = 21 \text{ to } 33 \mu\text{g}/\text{m}^3$ | The predicted values at core zones are within the permissible limits as per GSR 742(E) Coal Mines standards. |
| Incremental GLC Level (as per Addendum EMP) | Core Zone:- Incremental PM_{10} GLC at SA1= $55 \mu\text{g}/\text{m}^3$ Total PM_{10} = $153 \mu\text{g}/\text{m}^3$ Incremental GLC at SA2= $24 \mu\text{g}/\text{m}^3$ Total PM_{10} = $146 \mu\text{g}/\text{m}^3$ Incremental GLC at SA3= $21 \mu\text{g}/\text{m}^3$ Total PM_{10} = $129 \mu\text{g}/\text{m}^3$ Incremental $PM_{2.5}$ GLC at SA1: $5.4 \mu\text{g}/\text{m}^3$ Total $PM_{2.5}$ = $60 \mu\text{g}/\text{m}^3$ Incremental $PM_{2.5}$ GLC at SA2 = $2.4 \mu\text{g}/\text{m}^3$ Total $PM_{2.5}$ = $66 \mu\text{g}/\text{m}^3$ Incremental $PM_{2.5}$ GLC at SA3= $3.0 \mu\text{g}/\text{m}^3$ Total $PM_{2.5}$ = $65 \mu\text{g}/\text{m}^3$ Incremental SO_2 GLC at SA1= $8 \mu\text{g}/\text{m}^3$ Total SO_2 = $20 \mu\text{g}/\text{m}^3$ Incremental SO_2 GLC at SA2= $5 \mu\text{g}/\text{m}^3$, Total SO_2 = $17 \mu\text{g}/\text{m}^3$ Incremental SO_2 GLC at SA3= $5 \mu\text{g}/\text{m}^3$, Total SO_2 = $16 \mu\text{g}/\text{m}^3$ Incremental NO_x GLC at SA1= $8 \mu\text{g}/\text{m}^3$ Total NO_x = $42 \mu\text{g}/\text{m}^3$ Incremental NO_x GLC at SA2= $13 \mu\text{g}/\text{m}^3$, Total NO_x = $44 \mu\text{g}/\text{m}^3$ Incremental NO_x GLC at SA3= $9 \mu\text{g}/\text{m}^3$, Total NO_x = $40 \mu\text{g}/\text{m}^3$ | |

| | | |
|--|--|---|
| | Buffer Zone:- Min-Max Incremental PM ₁₀ GLC at Buffer zone = 1 µg/m ³ – 23 µg/m ³ Total PM ₁₀ range at Buffer zones =82 µg/m ³ – 128 µg/m ³ Min-Max Incremental PM _{2.5} GLC at Buffer zones= 0.2 µg/m ³ - 1.8 µg/m ³ Total PM _{2.5} range at Buffer zones = 38 µg/m ³ – 64µg/m ³ Min-Max Incremental SO ₂ GLC at Buffer zone = 1 µg/m ³ – 5 µg/m ³ Total SO ₂ range at Buffer zones = 11 µg/m ³ -- 17 µg/m ³ Min-Max Incremental NO _x GLC at Buffer zone = 1 µg/m ³ – 4 µg/m ³ Total NO _x range at Buffer zones = 26 µg/m ³ -- 35 µg/m ³ | |
| Ground water quality at 4 Locations | Core Zone:- pH: 7.68 Total Hardness: 562 mg/l, Chlorides: 138 mg/l, Fluoride; 0.44 mg/l. Heavy metals: Iron: 0.27 mg/l, Zinc: <0.1 , Manganese- 0.04 mg/l Sulphates: 122 mg/l Buffer Zone:- pH: 7.48 to 7.50 Total Hardness: 487 to 516 mg/l, Chlorides: 110 to 134 mg/l, Fluoride; 0.57 to 0.89 mg/l. Heavy metals: Iron: <0.2-0.3 mg/l, Zinc: 0.1 to 0.26 mg/l Manganese- <0.02 to 0.03 mg/l Sulphates: 75-138 mg/l | |
| Surface water quality at 3 Locations | Core Zone:- pH: 7.77 to 7.83 DO: 7.6 mg/l to 7.9 mg/l BOD: <2 mg/l. | All stations lying inside core zone |
| Mine water quality at 3 Locations | Core Zone:- pH: 7.74 to 7.86; COD: 36 to 40 mg/l and, BOD: <2.0 mg/l Fluoride; 0.62 to 0.92 mg/l. | All mine effluent stations lying within core zone |
| Noise levels Leq (Day and Night) at 12 locations | 32.6 dB (A) to 62.3 dB(A) for the day time and 32.1 dB(A) to 42.0 dB(A) for the Night time in core zone. | |
| Traffic assessment study findings | The level of service falls under category “D for Section 1, B for Section 2 and for section 3 falls under Category E. There is a marginal Increase in traffic congestion in all three sections due to increase in production. The proposed mitigative measures of diverting the existing HCV traffic of BCCL will decrease the level of service and mitigate the predicted congestion on Section 3. | |
| Flora and fauna | No schedule I fauna and endangered Flora found. There are no endangered or endemic species of flora and fauna in core zone. No migratory species were found in the core zone. | |
| Water Requirement | Source of Water: Mine water Ground Water Intersection: Yes, Ground water is reported to be between 1.85 m-7.75 m during pre-monsoon period and between 0.60 m-4.55 m during post-monsoon period. Water Requirement: 6,827 KLD NOC (For surface water): NA | |

| | | |
|--|---|--|
| | NOC (Ground Water): CGWA grant the NOC for ground water abstraction vide ref. no. CGWA/NOC/MIN/ORIG/2022/14594 from 17.02.2022 with validity upto 16.02.2024 and first renewal of Ground water clearance is applied vide Application no: 21-4/318/JH/MIN/2018 dated 16.02.2024 for 15156 KLD (Application under progress, quantum as per CGWB will be finalized upon approval). | |
|--|---|--|

14. Water Requirement: Water requirement submitted by the proponent is 6827 KLD and the same will be sourced from mine seepage water. NOC for the same has been obtained from CGWA vide ref. no. CGWA/NOC/MIN/ORIG/2022/14594 from 17.02.2022 with validity up to 16.02.2024 and first renewal of Ground water clearance is applied vide Application no: 21-4/318/JH/MIN/2018 dated 16.02.2024 for 15156 KLD. PP submitted that the excess water is being treated and is left in the nearby water bodies. No diversion of water body is involved in the present proposal.

PP also submitted that as per the approved mining plan, a safety distance of 200 meters has been maintained between the workings and the Damodar River. HFL of Damodar River in 1978 was 139 m. additionally, a dense green belt will be further developed within the safety barrier between the mines and the river, complementing the existing plantation efforts.

15. Power Requirement and details of diversion of Hi-Tension/ Transmission Line: Power requirement is of 6.90 MW being fulfilled from JBVNL/DVC. No diversion of HT line is proposed.

16. Solid and Hazardous Waste:

| S. No | Type of Waste | Source | Quantity (TPA) | Mode of Disposal | Mode of Transport |
|-------|--|---|--|---|-------------------|
| 1. | Solid Waste (Domestic waste) | From Offices and Quarters under Cluster X , EJ Area | 2993 | Through municipal solid waste collection and disposal mechanism | By Road |
| 2. | Plastic Waste (Packing material) | Plastic waste from packaging at stores | 0.08 | To authorized recyclers | By Road |
| 4. | E-waste IT equipment, electronic parts, cartridges of printer) | Office equipment etc. | 0.04 | As per e-Waste Rules, 2016 | By Road |
| 5. | Batteries Waste | Batteries of Heavy Earth Moving Machinery, Light Vehicles | 1.20 | As per Battery (Management & handling) Rules. | By Road |
| 6. | Hazardous Waste (Sludge and filter contaminated with oil, Used or Spent Oil, Empty Barrels/ container, Waste / Residue containing oil) | HEMM Workshop | Sludge- 1.14 TPA Used or Spent Oil- 5.4 KL/yr | Sent to authorized recyclers as per Hazardous and other waste (Management and transboundary movement) Rule 2016 | By Road |

17. Status of implementation of action plan as per the Public Consultation held on 17.03.2012 for the EC accorded on 6/02/2013:

| | |
|---|---|
| Details of advertisement given | 17.02.2012 |
| Date of public consultation | 17.03.2012 |
| Venue | Bhowrah area stadium |
| Presiding Officer | Additional Collector, Dhanbad |
| Number of Person Attended Hearing | 227 |
| Number of representation received in writing from the district and outside of district. | Nil |
| Major issues raised | Dust suppression measures, Drinking/Domestic Water, Electricity/Amenities, Plantation, water sprinkling/covered truck |

| | |
|--|---|
| | transportation, Drinking water and Domestic water availability, Plantation, Health, Infrastructure and Employment |
|--|---|

Compliance of PH action plan:

| S. No. | Issue raised | Action taken by BCCL | Expenditure incurred | Proposed action to be taken by BCCL |
|--------|--|--|---|--|
| 1. | Dust Suppression Measures (Water Sprinkling/Covered Truck transportation/Pollution) | | | |
| | <ul style="list-style-type: none"> · Transportation of coal should not be done by open trucks. · Water Spraying should be done on road. · Pollution is spreading due to Transportation of coal. Drains should be cleaned. · Trucks should not be overloaded to prevent fall of coal on road. · Coal transportation should not be done through public road. · Pollution near o/c should be stopped. · Drain water should not be discharged to river. · Road is in poor condition · Air, water and land pollution should be minimised | Dust Suppression <ul style="list-style-type: none"> · 8 nos. of Mobile water sprinkler are deployed for water sprinkling · 1 no. Of Truck Mounted Fog Canon and 02 no. of Trolley Mounted Fog Canon are operational · Wheel washing facility installed at ASP colliery · 15 Fixed Sprinklers installed and commissioned at Weigh Bridge · 1 Mechanical Sweeper Covered Transport <ul style="list-style-type: none"> · Coal Transport contracts are issued with condition of covered transportation. · CISF Check points and weighbridge to ensure covered truck transportation only | Dust Suppression Machinery: 125 Lakhs (Excludes operational and maintenance cost) | <ul style="list-style-type: none"> ü Construction of PCC transportation road: 300 lakhs ü Procurement of 3 Trolley and 3 Truck Mounted Fog canons: 120 lakhs |
| 2. | Drinking Water/Domestic Water | | | |
| | <ul style="list-style-type: none"> · Drinking water should be made available adequately · water for agriculture should be arranged · Demand for water and plantation at Swardih Bast · Demand for drinking water at colony near 3-pit OCP, Jahajtand no. 19 & no.4 Basti. Jahajtand Basti · Pond should be arranged adequately · Mine water should be used for plantation and agriculture. · Pit water should be provided to villagers · O/C mines should be filled up for agriculture use. · Drinking water should be arranged for marriage, social works etc. | <ul style="list-style-type: none"> · Mine water through pipeline is being supplied to Parkhabad, Hathi Tola, Jhajtarh, Sudamdih Basti, Majhi Basti, Bhowra Area nearby River Side · In addition to this Cluster-X BCCL is paying to JMADA (Jharkhand Mineral Area Development Authority) as well for the supply of water to localities in EJ Area | <ul style="list-style-type: none"> · Mine Water provided free of cost to nearby population through pipeline · Details of payment made to JMADA is as mentioned below: 5 lacs per annum | |
| 3. | Electricity/Amenities | | | |
| | <ul style="list-style-type: none"> · Street light should be provided at | <ul style="list-style-type: none"> · Street lights have been | Electricity charges | |

| S. No. | Issue raised | Action taken by BCCL | Expenditure incurred | Proposed action to be taken by BCCL |
|--------|---|--|---|---|
| | Damodar river ghat · Electricity should be arranged · Street light should be arranged from Mohalbani to Check post · Electricity to be arranged for displaced people | provided at Damodar river ghat. · Electricity supply has been arranged near river ghat. · Street light provided from Mohalbani to Check post · Electricity arranged for displaced people. · Electricity supply has been provided to nearby community centre, hall, colony and for nearby people. | are borne by BCCL | |
| 4. | Plantation | | | |
| | · Plantation should be done at COCP (Patherdih) · Eco. restoration is not sufficient. Plantation has been done till 1995 only, · Maintenance of plantation is not adequate · After mining, land should be reclaimed for agriculture & returned to villagers. · Plantation & gardening should be started again. · Plantation work should be on regular basis · plantations should be arranged at Swardih Basti · Plantations should be arranged at Jahajtand Basti. · Land for agriculture should be restored · Dumping of OB from SAIL to EJ Area should be stopped · Soil should be covered on ash being dumped at Parsiabad | Plantation done over 61.26 ha after obtaining EC. (50 ha plantation done before 2013) Plantation of 15 ha at Riverside Plantation given to State Forest Department. Preparatory work ongoing (fencing/digging of holes) | Approx. 1019.21 Lakhs | ü In Cluster X, plantation over 504.56 ha is proposed along with 100 ha outside leasehold area. The total plantation will be 604.56 ha. ü Total cost to be incurred will be approx. Rs. 42.32 crs. for 504.56 ha and Rs. 2.82 cr for 100 ha. |
| 5. | Employment | | | |
| | · Employment should be provided to displace people. · Compensation & employment should be given. · Employment is not provided to land ousters. | Employment and Compensation is provided as per CIL R&R Policy Apart from that Local people are engaged in mines/collieries for work of operator, fitter, driver, etc as per their capabilities. | Employment given in outsourcing projects & as per R&R Policy | Employment and Compensation will be provided as per CIL R&R Policy. |
| 6. | Health | | | |

| S. No. | Issue raised | Action taken by BCCL | Expenditure incurred | Proposed action to be taken by BCCL |
|--------|---|---|---|--|
| | <ul style="list-style-type: none"> People suffering from pollution should be medically treated free of charge Sick villagers should be treated free of cost. | <ul style="list-style-type: none"> 1 Ambulance operating for providing Emergency transport facility Regional Hospital, Bhowrah & Sudamdih Main Colony Hospital provided free of Cost OPD consultation and critical cases are sent to Central Hospital Dhanbad Free Check Up camps, mega health camps and Medicine Distribution camps are organised periodically -500 beneficiaries every year. | Expenditure: 30 lakhs (recurring) | Renovation of Health Centre with increased capacity of handling OPD patients Expenditure; 100 lakhs |
| 7. | Repairing/Maintenance/construction | | | |
| | <ul style="list-style-type: none"> Pipe lines should be laid in health centers Arrangements of drainage of dirty water should be made Roof of quarter is falling down Repairing of no. 16 basti school Repairing of company quarters should be arranged Drains should be cleaned properly | <ul style="list-style-type: none"> ETP has been commissioned in EJ Area Repairing of quarters carried out for Main colony, Riverside Colony, Kandra Colony, Thana Basti, Gosai Asthan Colony, New Mines Colony etc. | ETP : 9.2 lakhs Repairing of Quarters: 80 lakhs | Up gradation of quarters and Roof Repair: 200 Lakhs |
| 8. | Infrastructure | | | |
| | <ul style="list-style-type: none"> There is provisions of Rs.2 crores for development of colonies but nothing has been done for development of village Development work should be done in the radius of 8 kms. Expenditure should be done on P.P.P. model so that villagers are involved. | <ul style="list-style-type: none"> Repairing of quarters carried out for Main colony, Riverside Colony, Kandra Colony, Thana Basti, Gosai Asthan Colony, New Mines Colony etc. Rehabilitation colony developed for shifting of PAFs | C-Type quarters and Quarters at Patherdih Colony developed under JMP head: 400 lakhs | Up gradation of quarters and Roof Repair: 200 Lakhs |
| | Total | | 1668.41 Lakhs | 4536 Lakhs |

PH Action Plan as per MoEFCC OM dated 03.09.2020

| S No. | Activity | Proposed year wise expenditure (in Lakhs) for next three years | | |
|-------|-------------------------------|--|--------|--------|
| | | Year 1 | Year 2 | Year 3 |
| 1. | Dust Suppression Measures | 150 | 100 | 50 |
| 2. | Drinking Water/Domestic Water | 5 | 3 | 2 |
| 3. | Electricity/Amenities | 5 | 3 | 2 |
| 4. | Plantation | 200 | 200 | 300 |
| 5. | Health | 80 | 10 | 10 |

| | | | | |
|----|--|-------------------|------------|------------|
| 6. | Repairing/Maintenance/construction & Infrastructure | 100 | 50 | 50 |
| | Total | 540 | 366 | 414 |
| | Total (A) (Amount being spent in first 3 years) | 1320 Lakhs | | |
| | Total (B) (Amount to be spent in remaining years during mine life) | 3216 Lakhs | | |
| | Grand Total (A+B) = | 4536 Lakhs | | |

18. EMP Budget: The capital cost of the existing and proposed project is Rs 114.65 Crores and the capital cost for environmental protection measures is proposed as Rs 5047.24 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 220 Lakhs. The employment generation from the proposed project / expansion is 210 nos. (Estimated Contractual employment).

The details of cost for environmental protection measures are as follows:

| Sl. No. | Activity | Capital Investment (Rs. Lakh) |
|---------|--|----------------------------------|
| 1 | Construction of Toe wall with quarry boulder random rubble masonry & garland drain with siltation pond along OB dump of Bhowrah North & South Colliery, ASP Colliery | 35 |
| 2 | Construction of additional wheel washing system at Bhowrah North & South Colliery, EJ AREA | 26 |
| 3 | Construction of Check dams along river bank/ nallah/ Jore/ other water bodies | 8 |
| 4 | Construction of Additional sheds and concrete flooring for storage of used oil / compliance of Hazardous waste Rule | 5 |
| 5 | Construction of green net covering along siding | 2 |
| 6 | Construction of Hanging water curtains at ASP & Bhowrah North & South, E.J. Area | 5 |
| 7 | Construction of two (2) nos. roof top Rain Water Harvesting Structure at CISF barrack river side Sudamdih under E.J. Area | 10 |
| 8 | Layout of pipeline & Fixed water sprinklers at Railway siding, different coal dumps & weighbridges of EJ Area | 10 |
| 9 | Development of Eco-parks/ Netaji Subash park at EJ area | 30 |
| 10 | Biological reclamation activity/ Avenue plantation/ Greenery development/ (Through the entire mine life) | 4232.24 |
| 11 | Kayakalp of Kamini Kalyan Herbal garden at ASP Colliery, E.J. Area | 15 |
| 12 | Procurement of continuous mine water discharge quality monitoring system | 6 |
| 13 | Ground water related work / Equipments | 6 |
| 14 | Ground water modelling study for coalfields for ground water clearance | 15 |
| 15 | Miscellaneous activities related to Environment to meet any exigency for Env. Compliance of EJ area | 40 |
| 16 | Proposed water Pollution control measures | 602 |
| | Total Cost | 5047.24 |

Recurring cost for EIA & EMP

| S. No. | Particulars/ Works | Annual Operating cost (in Rs. Lakhs) |
|--------|--|--------------------------------------|
| 1 | Environmental Monitoring cost of Air, water and noise levels in and around project area of Cluster X | 80.00 |
| 2 | Operation and maintenance of ETP | 25.00 |
| 3 | Operation and maintenance of Water tankers and Sprinklers | 50.00 |
| 4 | De-siltation / cleaning of Garland drains and culverts in different places of different mines at Cluster X | 45.00 |
| 5 | Other miscellaneous expenditure like World environment day and distribution of | 10.00 |

| S. No. | Particulars/ Works | Annual Operating cost (in Rs. Lakhs) |
|----------------------------------|---|--------------------------------------|
| | Fruit bearing plants among employee and villagers | |
| 6. | Operation & maintenance of 01 no. CAAQMS, and 02 nos. online PM10 analysers of EJ Area. | 10.00 |
| Total Revenue Expenditure | | 220.00 |

19. Plantation: Plantation done over 61.26 ha after obtaining EC. (50 ha plantation done before 2013). A total of 504.56 ha area will be developed as greenbelt inside the Cluster X leasehold. A 7.5 m wide greenbelt, consisting of at least 3 tiers around mine boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare with Total no. of 12,61,500 plants. In proposed project, plantation over 504.56 ha is proposed. The total plantation will be done in 504.56 ha (30.20 %) area.

20. Rehabilitation and Resettlement: The mines in the Cluster X are affected by fire and subsidence, thus rehabilitation and resettlement (R&R) of the affected people has been envisaged in the Master Plan approved by Government of India. However, the Jharia Master plan is under revision and revised Jharia Master Plan was prepared by committee vide letter no. 22020/02/2015-CRG- II. The committee has submitted revised Jharia Master Plan to Ministry of Coal which is presently under review for obtaining approval from Govt. of India.

Total no. of Project Affected Families: 1670 (BCCL: 531 to be shifted by BCCL; Non-BCCL: 1139, to be shifted by JRDA)

Total no. of villages involved: 11 (Bhowra, Gourkuthi, Mohalbani, Pargabad Patherdih, Chandrabad Gourigram, Sutukdih, Mohal, Swardih, Mohalbani).

Total fund allocated for R&R: Rs. 70.87 crs

For Cluster X the current status of R&R is as follows:

| S. no. | Details on Resettlement | Numbers |
|--------|---|---------|
| 1 | Total PAF | 1670 |
| 2 | PAF shifted as per provisions of Approved Master Plan | 89 |
| 3 | No. of PAF yet to be Shifted | 1581 |

21. Project Cost: The capital cost of the proposed project is Rs 114.65 Crores and the capital cost for environmental protection measures is proposed as Rs 5047.24 Lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 220 Lakhs.

22. Details of pending litigation: PP reported that there is no legal issue/violation wr.t i) Environment (Protection) Act, ii) Air(P&CP) Act, Water (P&CP), Act, Forest Conservation Act, Wildlife Protection Act, CRZ Notification, MMDR Act, Factories Act. Further, there is no court case on the project. However, the WPC no. 4944 of 2011 was filed by BCCL challenging Closure directions issued by Jharkhand State Pollution Control Board in the Hon'ble Jharkhand High Court. In the said Writ Petition following status is submitted:

- Interim Order was passed on 18.01.2012, "Till then status quo as on today, shall be maintained by the parties"
- In Order dated 14.04.2013, interim order was not modified and was maintained with the IA disposed off.
- No further Interim order was passed.
- BCCL has now withdrawn the Writ petition and said Writ Petition is withdrawn and dismissed along with all IAs as per Order of Hon'ble High Court dated 28.01.2025.

23. Written Submissions: PP submitted the following during the meeting:

1. Undertaking of timeline for Compliance of EC Condition:

PP submitted the following timeline against partially complied EC conditions observed by IRO in observation Report dated 14.02.2025 vide file no. 103-402/13/EPE/101 will be adhered for ensuring EC compliance and on completion report will be submitted to office of IRO, MoEFCC, Ranchi and Member Secretary (Coal Mining), MoEFCC:

| Condition | Re-assessment by IRO dt 14.02.25 | Timeline for completion of Partially complied actions |
|---|---|---|
| Sp. Cond. (iii), (x) | Dense plantation (24.7 ha) along the banks of Damodar river has been observed. The proponent informed that 6.0 ha (out of this 4.02 ha under river side plantation) was taken up for plantation work in 2023-24. The proponent also informed that area of 15.00 ha has been awarded to DFO, Dhanbad for plantation work in 2024-2025. (Partially complied) | 15 Ha of plantation work awarded to DFO in 2024-2025 will be done by monsoon 2025 i.e. completion work in 2025-26 and annual maintenance work for next 8 years. |
| Sp. Cond. (xiv), (xv), (xvi), (xxvii), (xxxiii) | Geotagged photographs of the recent fog canons installed and commissioned have been received. Further, the proponent submitted that fire excavations requires removal and placing of OB up to bottom most seam for which space availability within existing colliery is not feasible. (Partially complied) | Action in process for fire dealing and dust suppression: · 2 trolley mounted has been commissioned (Action completed). · Construction of pucca approach road will be completed by October, 2025. (Tender copy submitted) · Truck mounted Fog canon will be procured by November 2025. |
| Sp. Cond. (vii), (xxix), (xxvi) | Undertaking for completion of renovation of water treatment plant within 4 months with estimated expenditure of 10.40 lakhs to be incurred and work schedule has been received. Comprehensive plantation plan with native plant species | |

2. **Undertaking for Bhowra N&S colliery:** PP submitted an Undertaking that Bhowra (N&S) Colliery will operate as opencast upto VII seam and extraction of coal from the remaining seams will be done through underground method.

3. **Undertaking regarding CAAQMS:** PP submitted that one Continuous Ambient Air Quality Monitoring System (CAAQMS) will be procured by August 2025. Following Status of CAAQMS installation is mentioned:

- Procurement action already initiated
- Tender will be done by April 2025.
- Procurement will be done by August 2025

4. Undertaking regarding mine wise land use

LAND USE (MINE WISE)

PP submitted the mine wise land use is submitted as mentioned below:

Land use during Mining of individual mines:

| S. No | Land Use during Mining | Bhowra (N+ S) | ASP | Sudamdih Shaft | Total* |
|-------|------------------------------------|---------------|--------|----------------|---------|
| 1 | External OB Dump | 0 | 0 | 0 | 0 |
| 2 | Top soil Dump | 0 | 0 | 0 | 0 |
| 3 | Excavation | 224.53 | 77.98 | 5.3 | 307.81 |
| 4 | Roads | 6.09 | 6.2 | 3.1 | 15.39 |
| 5 | Built up areas | 52.02 | 78.69 | 31.07 | 161.78 |
| 6 | Plantation (apart from Green Belt) | 20.18 | 41.08 | 40.15 | 101.41 |
| 7 | Safety Zone | 26.03 | 17.7 | 0 | 43.73 |
| 8 | Undisturbed Area | 451.565 | 276.96 | 311.88 | 1040.41 |
| Total | | 780.41 | 498.61 | 391.5 | 1670.52 |

**Present Mining Land Use*

Post mining land use of individual mines

| BHOWRAH (N&S) COLLIERY | | | | | | | |
|------------------------|------------------------|---------------|---------------|---------------|--------------|---------------------|---------------|
| S. No. | Land use category | Present | Post closure | Land use | | | |
| | | | | Plantation | Water Body | Public/ Company use | Undisturbed |
| 1 | External Ob Dump | 0.00 | 56.17 | | | | 56.17 |
| 2 | Top Soil Dump | 0.00 | 0 | | | | |
| 3 | Excavation/Quarry Area | 51.80 | 51.8 | | | | 51.8 |
| 4 | Backfilled Area | 0.00 | 168.02 | 168.02 | | | |
| 5 | Roads | 6.09 | 1.18 | | | | 1.18 |
| 6 | Built Up Area | 52.02 | 0 | | | | |
| 7 | Green Belt | 20.18 | 13.08 | 13.08 | | | |
| 8 | Safety Zone | 26.03 | 37.19 | | | | 37.19 |
| 8 | Undisturbed Area | 624.29 | 452.97 | | 81.2 | 371.77 | 0.00 |
| | TOTAL | 780.41 | 780.41 | 181.10 | 81.20 | 371.77 | 146.34 |

| AMALGAMATED SUDAMDIH PATHERDIH COLLIERY | | | | | | | |
|---|-------------------------|---------------|---------------|---------------|--------------|----------------------|--------------|
| S. No. | Land use category | Present | Post closure | LAND USE | | | |
| | | | | Plantation | Water Body | Public / Company use | Undisturbed |
| 1 | External OB Dump | 0.00 | 42.47 | 42.47 | | | |
| 2 | Top Soil Dump | 0.00 | 0 | | | | |
| 3 | Excavation/ Quarry Area | 36.36 | 63.44 | 56.21 | 7.23 | | |
| 4 | Backfilled Area | 41.62 | 71.92 | 71.92 | | | |
| 5 | Roads | 6.20 | 6.2 | | | | 6.2 |
| 6 | Built Up Area | 78.69 | 69.2 | | | | 69.2 |
| 7 | Green Belt | 41.08 | 36.02 | 36.02 | | | |
| 8 | Safety Zone | 17.70 | 48.02 | 48.02 | | | |
| 8 | Undisturbed Area | 276.96 | 161.34 | 0 | 53.1 | 102.68 | 5.56 |
| | TOTAL | 498.61 | 498.61 | 254.64 | 60.33 | 102.68 | 80.96 |

| SUDAMDIH SHAFT UG | | | | | | | |
|-------------------|------------------------|---------------|---------------|--------------|--------------|---------------------|---------------|
| S. No. | Land use category | Present | Post closure | Land use | | | |
| | | | | Plantation | Water Body | Public/ Company use | Undisturbed |
| 1 | External OB Dump | 0.00 | 0 | | | | |
| 2 | Top Soil Dump | 0.00 | 0 | | | | |
| 3 | Excavation/Quarry Area | 0.00 | 0 | | | | |
| 4 | Backfilled Area | 5.30 | 5.3 | 5.3 | | | |
| 5 | Roads | 3.10 | 3.1 | | | | 3.1 |
| 6 | Built Up Area | 31.07 | 29.07 | | | | 29.07 |
| 7 | Green Belt | 40.15 | 40.15 | 40.15 | | | |
| 8 | Safety Zone | 0.00 | 0 | | | | |
| 8 | Undisturbed Area | 311.88 | 313.88 | 23.37 | 71.5 | 11.08 | 207.93 |
| | TOTAL | 391.50 | 391.50 | 68.82 | 71.50 | 11.08 | 240.10 |

5. **Undertaking regarding Amlabad UG mine:** PP certified that the closed mine being carved out from Cluster X i.e. Amlabad Colliery shall apply and obtain fresh EC with approved mining plan as per EIA Notification 2006.

Observation and deliberation of the EAC:

24. Committee after deliberations noted the following:

1. Cluster X coal mining project and coal washery originally accorded EC vide letter dated 06.02.2013 within ML area of 2057.47 ha for the production capacity of 2.289 MTPA. As per the EC accorded, the cluster involved 6 mines both underground and opencast. Later, PP obtained amendment in the EC dated 06.02.2013 vide EC amendment letter dated 12.06.2019. The amendment was granted for restructuring/re-appropriating individual mines in the cluster to implement the master plan dealing with fire and subsidence.

2. The above EC is being implemented and the PP has achieved the production of 1.117 MTPA in FY 2023-24.

3. MoEF&CC has issued an OM on 11/04/2022 to facilitate all applications seeking prior EC for modernization/expansion with increase in production capacity up to 50% within the existing premises/ mine lease area, without any additional land acquisition. Through this OM, Ministry has provided guidelines for availing expansion up to 50% of the original EC capacity without Public Hearing in two stages (0-20% & 20-40%). Public Consultation (written comments) shall be required for third stage i.e., 40-50% expansion.

4. The instant proposal is for grant of Environment Clearance to Cluster X Coal Mining Project and Coal Washery (opencast cum underground coal mining in area being reduced from 2057.47 ha to 1670.52 ha and increase in production capacity from 2.289 MTPA to 2.746 MTPA), under para 7(ii) of EIA, 2006 as per MoEF&CC OM dated 11/04/2022 for 20% expansion. Committee observed that the proponent has submitted the compliance of Ministry's OM dated 11/04/2022.

5. Committee observed that the area being reduced is due to removal of Amlabad mine (386.95 ha), since the production from the same has been closed before 2009. And following the directives of the Ministry of Coal, it is now proposed to reopen and operate such closed mines under a Revenue Sharing model. To facilitate this, resource evaluation, reserve estimation, and a separate mining plan will be developed for the operationalization of Amlabad Colliery, which has remained closed for several years.

The proposed mining scenario of the cluster shall be as follows:

| Name of Mines | Type of Mine | Proposed 20% Expansion | Lease Hold Area (Ha) | Life (Years) | Remarks |
|--|-----------------|------------------------|----------------------|--------------|---|
| Bhowrah (North & South) Colliery | Mixed (UG & OC) | 2.30 | 780.41 | 9 | Amalgamation |
| Amalgamated Sudamdih Patherdih Mine | OC | 0.446 | 498.61 | 28 | |
| Sudamdih Shaft (UG) | UG | 0.00 | 391.5 | - | In-operative |
| Amlabad | UG | 0 | (-) 386.95 | - | ML Area reduced |
| Total (Cluster X) | | 2.746 | 1670.52 | | |
| Sudamdih Coal Washery (Within lease of Sudamdih Shaft Mine) | Washery | 2.08 | 18 | 12 | In-operative. Under Asset Monetization. |

6. Committee opined that PP shall apply for fresh EC for the Amlabad mine, which is being carved out from the said cluster.

7. Committee also deliberated on the reason for amalgamating Bhowrah (North & South) Colliery and observed that the Bhowra (South) and Bhowra (North) collieries are severely affected by fire, with coal reserves trapped within the burning areas and mine barriers. As a result, excavating the fire-affected coal, removing overburden (OB), and creating storage space for OB are necessary. To facilitate fire dousing and systematic OB stacking for the scientific reclamation of the mines, the amalgamation of Bhowra (North) and Bhowra (South) collieries has been proposed. Bhowra (North) Colliery and Bhowra (South) Colliery are amalgamated with Mining Plan Approved by 414th Board of BCCL on 19.10.2024.

8. The EAC took into consideration the project site through KML file on the Google Earth presented by the project proponent along with DSS of the project site on PARIVESH.

9. Project does not fall in the Critically Polluted Area (CPA)/Severely Polluted Area (SPA), as per CEPI Assessment 2018.

10. The project is not located within 10 KM of any ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve/tiger corridor/elephant corridor etc. No schedule 1 species are reported in Cluster X as per Flora and Fauna Study done by IIT-ISM Dhanbad. There is no violation of WLP, Act.

11. The project does not involve the forestland.

12. The block was allotted to PP vide Lease allotment: Coking Coal Mines (Nationalization) Act, 1972 (Act No. 36 of 1972), The Coal India (Regulation of Transfers and Validation) Act, 2000 (Act No. 45 of 2000) and Mineral Concession Rules Amendment dated 01.10.2021 (G.S.R. 717(E) dated 01.10.2021). Period of Lease extended up to 07.12.2050 vide notification issued by Ministry of Coal, New Delhi, on the 1st October, 2021 G.S.R. 717(E).

13. The Mine Plan and Mine Closure Plan has been approved by the Board of BCCL vide approval letter dated 19.10.2024, 29.01.2019 and 28.05.2019 for Bhowrah (North & South) Colliery, Amalgamated Sudamdih Patherdih Colliery and Sudamdih Shaft (UG) respectively.

14. Committee also observed that the coal washery which is located within the lease of Sudamdih Shaft mine is in-operative and under asset monetization. However, the Sudamdih Shaft (UG) is a non-operational mine.

15. The extractable reserves as on date submitted by the PP is 95,121 MT. Life of mines in cluster is 9 years and 28 years for Bhowrah (North & South) Colliery and Amalgamated Sudamdih Patherdih Colliery respectively.

16. Committee deliberated on the transportation of coal and observed that currently the 70% of total coal production is being transported from coal dump to nearest railway siding by road at a distance of 6 km, out of which 3 km is public road and 3 km is dedicated coal transportation road. Remaining 30% of the total coal transportation is being done by road to small consumers up to the distance of 6-7 km. Committee opined that a complete mitigation measures shall be carried out to mitigate pollution due to road transportation of coal. Further, Committee opined that proponent shall make sure that dense plantation is developed and maintained on both the side of the coal transportation roads and continuous dust suppression measures shall be taken.

17. Committee observed that there are total 5 internal OB dumps are existing within the cluster and there is no existing external dump. However, the PP has submitted that 9 internal dumps and 6 external dumps are proposed in future in the said cluster. The height of the OB dumps is varying between 25 m to 90 m.

18. Committee deliberated on the baseline data submitted by the PP and observed that the PM10 parameters are on the higher side. Committee opined that ambient air quality of the core and buffer zone shall be continuously monitored and 4 nos of additional CAAQMS shall installed and all the pollution mitigation equipments shall be in good working condition and regular maintenance shall be carried out. Along with that plantation activities should be diligently done and PP shall undertake gap plantation in the cluster area.

19. Committee observed that the water requirement for the said mines is 6827 KLD and the same will be sourced from mine seepage water. Renewal application for the same has been submitted to CGWA for 15156 KLD. Committee also observed that excess mine seepage water will be treated and released into the nearby water bodies. There is no diversion of any water body proposed for the instant project. Committee opined that the excess water shall be treated and the water requirement of villagers shall be fulfilled. The remaining treated water shall be released in nearby water bodies.

20. Committee also observed that Damodar River passes through the cluster in north and south direction. Committee deliberated on the safety aspects of the same and opined observed that HFL of Damdoar River in 1978 was 139 m and a safety distance of 200 meters has been maintained between the workings and the Damodar River. Committee opined that dense plantation shall be done along the safety barriers of Damodar River and only treated water shall be released into the Damodar River.

21. Power requirement for the project is 6.90 MW and the same will be fulfilled from JBVNL/DVC. Committee observed that HT line is proposed for diversion.

22. Committee deliberated on the compliance of Public hearing action plan for the Public Hearing held on 17.03.2012 and further observed the actions proposed to be taken by BCCL in this regard. Committee opined that the actions proposed to be taken for compliance of PH action plan shall be implemented in a time bound manner. PP shall also take measures to strengthen the Primary Health Centres and Community Health Centres in the core zone and buffer zone of the cluster area. Committee observed that expenditure of Rs. 1668.41 lakhs has already been made in this regard and expenditure of Rs. 4536 lakhs is further proposed.

23. Committee deliberated on the environmental protection measures and EMP budget submitted for the same. PP submitted the capital cost for environmental protection measures is proposed as Rs 5047.24 Lakhs and annual recurring cost towards the environmental protection measures is proposed as Rs 220 Lakhs. Committee opined that the EMP budget shall be utilized in an efficient and time bound manner. The equipments for environment protection shall be in good working condition and regular maintenance of the same shall be carried out.

24. Committee deliberated on the plantation activities already done by the PP and observed that plantation is already developed on 61.26 ha of land after obtaining the EC. Further the PP has submitted a total of 504.56 ha area will be developed as greenbelt inside the Cluster X leasehold. A 7.5 m wide greenbelt, consisting of at least 3 tiers around mine boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare with total no. of 12,61,500 plants. Committee opined that the quantum of plantation carried out by the PP till date is too less and the plantation activities shall be carried out diligently on the onset of monsoon 2025. This shall include 15 ha of riverside plantation and 50000 saplings of mainly fruit bearing species shall distributed to the villagers in the nearby area every year till the life of mine and shall also develop a plan to incentivize the villagers for maintaining the survival of these plants.

25. Committee deliberated on the rehabilitation and resettlement issues of the mines in Cluster X and observed that mines in the Cluster X are affected by fire and subsidence, thus rehabilitation and resettlement (R&R) of the affected people has been envisaged in the Master Plan approved by Government of India. However, the Jharia Master plan is under revision and revised Jharia Master Plan was prepared by committee vide letter no. 22020/02/2015-CRG- II. The committee has submitted revised Jharia Master Plan to Ministry of Coal which is presently under review for obtaining approval from Govt. of India. Committee observed that the total nos of PAFs in the said cluster are 1670 out of which 531 PAFs will be shifted by BCCL and remaining 1139 PAFs will be shifted by Jharia Rehabilitation and Development Authority. There are total 11 nos of villages involved (namely: Bhowra, Gourkuthi, Mohalbani, Pargabad Patherdih, Chandrabad Gourigram, Sutukdih, Mohal, Swardih, Mohalbani) in the said cluster. Out of 1670 PAFs, 89 nos of PAFs has already been rehabilitated as per the provisions of Approved Master Plan. Total fund allocated for R&R is Rs. 70.87 crores.

26. The capital cost of the proposed project is Rs 114.65 Crores.

27. The Committee observed that M/s BCCL had filed a writ petition vide WPC no. 4944 of 2011, challenging Closure directions issued by Jharkhand State Pollution Control Board in the Hon'ble Jharkhand High Court. In the said writ petition an interim order was passed on 18.01.2012, stating "Till then status quo as on today, shall be maintained by the parties". Further, vide Order dated 14.04.2013, interim order was not modified and was maintained with the IA disposed off. M/s BCCL has now withdrawn the Writ Petition and the said Writ Petition is withdrawn and dismissed along with all IAs as per Order of Hon'ble High Court dated 28.01.2025.

28. Committee deliberated on the Certified Compliance Report submitted obtained from Ministry's Regional Office, Ranchi, Action taken Report submitted by the PP thereon and the Closure report of Ministry's RO. Committee observed that there are certain partially complied condition and action being taken on the same has been submitted by the PP. Committee opined that the timeline for the actions to be taken on partially complied conditions shall be reworked and optimized. PP submitted the same.

29. Committee opined that the PP shall align its activities with the sustainable development goals.

30. The Committee noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components.

31. The EAC also deliberated on the written submission of the project proponent and found it satisfactory.

32. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

Recommendations of the Committee:

25. Based on the discussions held and the documents submitted, the EAC recommended the instant proposal for grant of Environment Clearance for Cluster X Coal Mining Project and Coal Washery (opencast cum underground coal mining in an reduced ML area from 2057.47 ha to 1670.52 ha and increase in production capacity from 2.289 MTPA to 2.746 MTPA) by M/s Bharat Coking Coal Limited, located at District Dhanbad; State: Jharkhand subject to the stipulation of specific conditions in addition to the general/Standard EC conditions (**Annexure-I**).

26. The MoEF&CC has examined the proposal in accordance with the provisions contained in the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and based on the recommendations of the EAC hereby accords Environmental Clearance to **M/s. Bharat Coking Coal Limited** for “*Cluster X Coal Mining Project and Coal Washery (opencast cum underground coal mining in an reduced ML area from 2057.47 ha to 1670.52 ha and increase in production capacity from 2.289 MTPA to 2.746 MTPA, located at District Dhanbad; State: Jharkhand*” subject to compliance of the Specific Environmental safeguard Conditions in addition to the standard EC conditions (**Annexure-I**).

27. 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.

28. The Environmental Clearance to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

29. The PP is under obligation to implement commitments made in the Environment Management Plan, which forms part of this EC.

30. 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.

31. General Instructions:

(i) The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC website where it is displayed.

(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 must display the same for 30 days from the date of receipt.

(iii) The project proponent shall have a well laid down environmental policy duly approved by the Board of Directors (in case of Company) or competent authority, duly prescribing 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.

(iv) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the project proponent (during construction phase) and authorized entity mandated with compliance of conditions (during operational phase) shall be prepared. The year wise funds earmarked for environmental protection measures shall be kept in separate

account and not to be diverted for any other purpose. Six monthly progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

(v) 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

(vi) The Regional Office of this MoEF&CC 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.

(vii) Validity of EC is as per the provision of EIA Notification, 2006 and its subsequent amendment.

32. This issue with an approval of the Competent Authority.

Yours faithfully,

(Sundar Ramanathan)
Scientist 'F'
Tel: 011- 20819378
Email- r.sundar@nic.in

Copy To

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
2. The Secretary, Department of Environment & Forests, Government of Jharkhand, Secretariat, Ranchi.
3. Deputy Director General of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office, 2nd Floor, Headquarter- Jharkhand State Housing Board, Harmu Chowk, Ranchi, Jharkhand – 834 002.
4. The Chairman, Jharkhand State Pollution Control Board, TA building, HEC complex, PO Dhurwa, Ranchi.
5. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 32.
6. The Chairman, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
7. The Regional Director, Central Ground Water Board, Mid-Eastern Region, 6th& 7th Floor, Lok Nayak Jai Prakash Bhawan, Frazer Road, Dak Banglow, Patna- 800011, Bihar.
8. The District Collector, Dhanbad, Government of Jharkhand.
9. PARIVESH Portal.

Annexure 1

Specific EC Conditions for (Mining Of Minerals)

1. Specific Conditions

| S. No | EC Conditions | | | | | | |
|-------|---|--|-----------------|------------------------|----------------------|--------------|--------------|
| 1.1 | The maximum production from the opencast and underground section in the cluster shall not exceed beyond that for which environmental clearance has been granted for the cluster X as below: | | | | | | |
| | Name of Mines | | Type of Mine | Proposed 20% Expansion | Lease Hold Area (Ha) | Life (Years) | Remarks |
| | Bhowrah (North & South) Colliery | | Mixed (UG & OC) | 2.30 | 780.41 | 9 | Amalgamation |

| S. No | EC Conditions | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|----------------|-------|---|----|--|----------------------------|----|------|-------|---|--------------|--------------------------|--|--------------|----------------|--|--|--|---------|------|----|----|---|
| | <table><tr><td>Amalgamated Sudamdih Patherdih Mine</td><td>OC</td><td>0.446</td><td>498.61</td><td>28</td><td></td></tr><tr><td>Sudamdih Shaft (UG)</td><td>UG</td><td>0.00</td><td>391.5</td><td>-</td><td>In-operative</td></tr><tr><td>Total (Cluster X)</td><td></td><td>2.746</td><td>1670.52</td><td></td><td></td></tr><tr><td>Sudamdih Coal Washery (Within lease of Sudamdih Shaft Mine)</td><td>Washery</td><td>2.08</td><td>18</td><td>12</td><td>In-operative. Under Asset Monetization.</td></tr></table> | Amalgamated Sudamdih Patherdih Mine | OC | 0.446 | 498.61 | 28 | | Sudamdih Shaft (UG) | UG | 0.00 | 391.5 | - | In-operative | Total (Cluster X) | | 2.746 | 1670.52 | | | Sudamdih Coal Washery (Within lease of Sudamdih Shaft Mine) | Washery | 2.08 | 18 | 12 | In-operative. Under Asset Monetization. |
| Amalgamated Sudamdih Patherdih Mine | OC | 0.446 | 498.61 | 28 | | | | | | | | | | | | | | | | | | | | | |
| Sudamdih Shaft (UG) | UG | 0.00 | 391.5 | - | In-operative | | | | | | | | | | | | | | | | | | | | |
| Total (Cluster X) | | 2.746 | 1670.52 | | | | | | | | | | | | | | | | | | | | | | |
| Sudamdih Coal Washery (Within lease of Sudamdih Shaft Mine) | Washery | 2.08 | 18 | 12 | In-operative. Under Asset Monetization. | | | | | | | | | | | | | | | | | | | | |
| 1.2 | Project Proponent shall apply for fresh EC for the Amlabad mine, which is being carved out from the said cluster. No operations in the said mine shall be done without obtaining EC for the same. | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.3 | Project Proponent shall ensure that only 30% of the total coal production is allowed to transport by road, within a distance of 6-7 km. Remaining 70% of the coal shall be transported by railway only as committed. | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.4 | Project Proponent shall install the closed conveyor belt to the railway siding after the dousing of active fire and stabilization of land as per approved Jharia Master Plan (which is under revision as on date). Thereafter no coal transportation of towards railway siding will be allowed through road. | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.5 | Adequate air pollution mitigation measures shall be adopted to mitigate the pollution levels in the core zone and buffer zone of the cluster area. Project Proponent shall install four additional continuous ambient air quality monitoring stations in the Cluster X area, 2 each in core zone and buffer zone in consultation with JSPCB within one year from the date of grant of EC. | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.6 | Project Proponent shall treat the excess mine seepage water and fulfil the requirement of the nearby villagers, thereafter the excess treated mine seepage water shall be released with prior approval from JSPCB. | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.7 | Project proponent shall strengthen the Primary Health Centres and Community Health Centres in the core zone and buffer zone of the cluster area and the focus shall be on improving facilities for enhancing quality of public health. Compliance status in this regard shall be submitted along with the six monthly compliance to the concerned Regional Office of MoEF&CC. | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.8 | The budget proposed for PH (for next 3 years) is Rs. 4536 Lakhs. The budget proposed shall be kept in a separate account. Project proponent shall implement the action plan to address the issues raised during public hearing within the stipulated time frame. PP shall submit the progress report regarding the implementation of action plan to concerned RO along with the six monthly compliance report. | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.9 | Project Proponent shall implement the protective measure proposed in Environment Management Plan (EMP) in a time-bound manner. The budget earmarked for the same is Rs. 5047.24 Lakhs (capital cost) and Rs. 220 Lakhs (recurring cost), should be kept in separate accounts and audited annually. The implementation status along with the amount spent with documentary proof shall be submitted to the concerned Regional Office for the activities carried out during the previous year. | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.10 | Project Proponent shall develop dense plantation along the safety barriers of Damodar River in an area of 15 ha before the onset of monsoon 2025 itself and gap plantation shall be done on the existing OB dumps. Greenbelt in 504.56 ha shall be developed inside the Cluster X area within 2 years from the date of grant of EC. A 7.5 m wide greenbelt, consisting of at least 3 tiers around mine boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New | | | | | | | | | | | | | | | | | | | | | | | | |

| S. No | EC Conditions | | | | | | | | | | | | |
|---------------------------------|--|---|---|---|----------------------|---|--|---|---|---|---------------------------------|---|--|
| | Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare with total no. of 12,61,500 plants. In addition to this, Agro forestry shall be encouraged in consultation with the land owners. Further, PP shall provide 50,000 plant saplings with 4 feet tall fruit bearing plants to farmers for plantation in barren and agriculture lands in the study area every year till the life of the mine with incentive to improve the green cover in and around the cluster mine lease area. | | | | | | | | | | | | |
| 1.11 | Proponent shall carryout regular maintenance of the potholes on roads, repair and maintenance of roads, scrapping of material fallen on roads, and removal of scraps from mining areas. Along with this, PP shall make sure that all the pollution control equipments are in good working condition and maintenance of those equipment is regularly carried out. | | | | | | | | | | | | |
| 1.12 | As per the approved Master Plan, the remaining 1581 PAFs out of 1670 PAFs, which are yet to be rehabilitated, shall be resettled as per the approved R&R/ Jharia Master Plan. Compliance status in this regard shall be submitted to the concerned Regional Office of MoEF&CC along with the six monthly compliance report. | | | | | | | | | | | | |
| 1.13 | <p>The partially complied conditions as per the Closure Report of RO, shall be complied in the following stipulated timeline, as committed by the Project Proponent:</p> <table><tr><th>Condition</th><th>Re-assessment by IRO dt 14.02.25</th><th>Timeline for completion of Partially complied actions</th></tr><tr><td>Sp. Cond. (iii), (x)</td><td>Dense plantation (24.7 ha) along the banks of Damodar river has been observed. The proponent informed that 6.0 ha (out of this 4.02 ha under river side plantation) was taken up for plantation work in 2023-24. The proponent also informed that area of 15.00 ha has been awarded to DFO, Dhanbad for plantation work in 2024-2025. (Partially complied)</td><td>15 Ha of plantation work awarded to DFO in 2024-2025 will be done by monsoon 2025 i.e. completion work in 2025-26 and annual maintenance work for next 8 years.</td></tr><tr><td>Sp. Cond. (xiv), (xv), (xvi), (xxvii), (xxxiii)</td><td>Geotagged photographs of the recent fog canons installed and commissioned have been received. Further, the proponent submitted that fire excavations requires removal and placing of OB up to bottom-most seam for which space availability within existing colliery is not feasible. (Partially complied)</td><td>Action in process for fire dealing and dust suppression: Construction of pucca approach road will be completed by October, 2025. Truck mounted Fog canon will be procured by November 2025.</td></tr><tr><td>Sp. Cond. (vii), (xxix), (xxvi)</td><td>Undertaking for completion of renovation of water treatment plant within 4 months with estimated expenditure of 10.40 lakhs to be incurred and work schedule has been received. Comprehensive plantation plan with native plant species</td><td></td></tr></table> | Condition | Re-assessment by IRO dt 14.02.25 | Timeline for completion of Partially complied actions | Sp. Cond. (iii), (x) | Dense plantation (24.7 ha) along the banks of Damodar river has been observed. The proponent informed that 6.0 ha (out of this 4.02 ha under river side plantation) was taken up for plantation work in 2023-24. The proponent also informed that area of 15.00 ha has been awarded to DFO, Dhanbad for plantation work in 2024-2025. (Partially complied) | 15 Ha of plantation work awarded to DFO in 2024-2025 will be done by monsoon 2025 i.e. completion work in 2025-26 and annual maintenance work for next 8 years. | Sp. Cond. (xiv), (xv), (xvi), (xxvii), (xxxiii) | Geotagged photographs of the recent fog canons installed and commissioned have been received. Further, the proponent submitted that fire excavations requires removal and placing of OB up to bottom-most seam for which space availability within existing colliery is not feasible. (Partially complied) | Action in process for fire dealing and dust suppression: Construction of pucca approach road will be completed by October, 2025 . Truck mounted Fog canon will be procured by November 2025 . | Sp. Cond. (vii), (xxix), (xxvi) | Undertaking for completion of renovation of water treatment plant within 4 months with estimated expenditure of 10.40 lakhs to be incurred and work schedule has been received. Comprehensive plantation plan with native plant species | |
| | Condition | Re-assessment by IRO dt 14.02.25 | Timeline for completion of Partially complied actions | | | | | | | | | | |
| | Sp. Cond. (iii), (x) | Dense plantation (24.7 ha) along the banks of Damodar river has been observed. The proponent informed that 6.0 ha (out of this 4.02 ha under river side plantation) was taken up for plantation work in 2023-24. The proponent also informed that area of 15.00 ha has been awarded to DFO, Dhanbad for plantation work in 2024-2025. (Partially complied) | 15 Ha of plantation work awarded to DFO in 2024-2025 will be done by monsoon 2025 i.e. completion work in 2025-26 and annual maintenance work for next 8 years. | | | | | | | | | | |
| | Sp. Cond. (xiv), (xv), (xvi), (xxvii), (xxxiii) | Geotagged photographs of the recent fog canons installed and commissioned have been received. Further, the proponent submitted that fire excavations requires removal and placing of OB up to bottom-most seam for which space availability within existing colliery is not feasible. (Partially complied) | Action in process for fire dealing and dust suppression: Construction of pucca approach road will be completed by October, 2025 . Truck mounted Fog canon will be procured by November 2025 . | | | | | | | | | | |
| Sp. Cond. (vii), (xxix), (xxvi) | Undertaking for completion of renovation of water treatment plant within 4 months with estimated expenditure of 10.40 lakhs to be incurred and work schedule has been received. Comprehensive plantation plan with native plant species | | | | | | | | | | | | |
| 1.14 | Details of impact of mining on Damodar River should be assessed and provided along with the six-monthly compliance report. | | | | | | | | | | | | |

| S. No | EC Conditions |
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| 1.15 | A Garland drain should be provided and the drain water should not be discharged in to Damodar River. |
| 1.16 | A herbal garden with medicinal plants be developed. |
| 1.17 | The measure identified in the environmental plan for cluster X groups of mine and the conditions given in this environmental clearance letter shall be dovetailed to the implementation of the Jharia Action Plan. |
| 1.18 | As there is no fire in Cluster X but the measure should be adopted by proponent to control spread of neighbouring fire to this Cluster X. The proponent shall prepare time -series maps of the Jharia Coalfields through NRSA to monitor and prevent fire problems in the Jharia Coalfields by Isothermal mapping /imaging and monitoring temperatures of the coal seams (whether they are close to spontaneous ignition temperatures) and based on which, areas with potential fire problems shall be identified. Measures to prevent ingress of air (Ventilation) in such areas, to prevent restart fresh/spread fires in other areas including in mines of cluster XIV shall be undertaken. |
| 1.19 | No mining shall be undertaken where underground fires continue. Measure shall be taken to prevent/ check such fire including in old OB dump. |
| 1.20 | Mining shall be carried out as per statuette from the streams/nalas flowing within the lease and maintaining a safe distance from the Nalas flowing along the lease boundary. A safety barrier of a minimum 60m width shall be maintained along the nalas/water bodies. The small water bodies in OC shall be protected to the extent feasible and the embankment proposed along water body shall be strengthened with stone pitching. |
| 1.21 | Regular monitoring of groundwater level and quality of the study area shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post monsoon (November) and winter (January) seasons and for quality including Arsenic and Fluoride during the month of May. Data thus collected shall be submitted to the Ministry of Environment & Forest and to the Central Pollution Control Board/SPCB quarterly within one month of monitoring. Rainwater harvesting measures shall be undertaken in case monitoring of water table indicates a declining trend. |
| 1.22 | Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads, and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures shall be taken to avoid loss of life and material. Cracks shall be effectively plugged with ballast and clayey soil/suitable material. |
| 1.23 | Sufficient coal pillars shall be left unextracted around the air shaft (within the subsidence influence area) to protect from any damage from subsidence, if any. |
| 1.24 | High root density tree species shall be selected and planted over areas likely to be affected by subsidence. |
| 1.25 | Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains. |

| S. No | EC Conditions |
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| 1.26 | Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads. |
| 1.27 | No depillaring operation shall be carried out below the township/colony. |
| 1.28 | The Transportation Plan for conveyor-cum-rail for Cluster- X should be dovetailed with Jharia Action Plan. Road transportation of coal during Phase-I should be by mechanically covered trucks, which should be introduced at the earliest. The Plan for conveyor-cum-rail for Cluster- XIV should be dovetailed with Jharia Action Plan. The road transpiration of coal during phase-I should be by mechanically covered trucks. |
| 1.29 | A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company for implementing environment policy and socio-economic issues and the capacity building required in this regard. |
| 1.30 | Implementation of final mine closure plan for Cluster X, subject to obtaining prior approval of the DGMS in regard to mine safety issues. |
| 1.31 | Third-party audit (by NEERI/CIMFR/IIT/NITs) for air & water quality shall be carried out annually to keep a check on the same. PP shall implement the recommendations of the audit and submit the outcome of the audit to the concerned RO of MoEF&CC. |
| 1.32 | 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 MoEF&CC. |
| 1.33 | PP shall ensure that all types of plastic waste generated from the plant shall be stored separately in isolated area and disposed of strictly adhering to the Plastic Waste Management Rules 2016 (as amended). In pursuant to the Ministry's OM dated 18/07/2022. PP shall also create awareness among the people working in the project area as well as in its surrounding area on the ban on Single Use Plastic (SUP) in order to ensure compliance of Ministry's Notification published by the Ministry on 12/08/2021. A report along with geo-tagged photograph on the measures taken shall also be included in the six monthly compliance report being submitted by PP. |
| 1.34 | Project proponent is advised to implement the 'Ek Ped Maa Ke Naam' Campaign which was launched on 5th June 2024 on the occasion of the World Environment Day to increase the forest cover across the Country. This plantation drive is other than Green belt development. The action in this regard shall be submitted concerned RO in six monthly report. |

Standard EC Conditions for (Mining of minerals)

1. Statutory Compliance

| S. No | EC Conditions |
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| 1.1 | The Environmental clearance shall be subject to orders of Hon'ble Supreme Court of India, Hon'ble High Courts, NGT and any other Court of Law, from time to time, and as applicable to the project. |
| 1.2 | The project proponent shall obtain clearance from the National Board for Wildlife, if applicable. |
| 1.3 | 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. |
| 1.4 | The maximum production or peak production at any given time shall not exceed the limit as prescribed in the EC. |
| 1.5 | Validity of EC is as per life of the mine mentioned in EC letter or 30 years as per EIA Notification, 2006 and its amendments therein. |

2. Air Quality Monitoring And Mitigation Measure

| S. No | EC Conditions |
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| 2.1 | Project proponent shall obtain requisite consent from State Pollution Control Board for 2.746 MTPA coal mining. |
| 2.2 | 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 particulates, SO ₂ and NO _x . Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive receptors in consultation with the State Pollution Control Board. |
| 2.3 | 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. |
| 2.4 | Effective control measures such as regular water sprinkling/rain gun/ Fog cannon /mist sprinkling etc., shall be carried out in critical areas prone to air pollution with higher level of particulate matter all through the coal transport roads, 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. |
| 2.5 | Major approach roads shall be black topped and properly maintained. |
| 2.6 | 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. |
| 2.7 | PP should Install Wind breaker/shield arrangement along the railway siding for reducing the dust propagation in upwind direction. |

3. Water Quality Monitoring And Mitigation Measures

| S. No | EC Conditions |
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| 3.1 | PP shall take approval from the CGWA/ Competent Authority prior to commencement of mining operations. |
| 3.2 | 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. |
| 3.3 | 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. |
| 3.4 | Garland drains (of suitable size, gradient and length) around the critical areas i.e. mine shaft and low lying areas, shall be designed keeping at least 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. The sump capacity shall also provide adequate retention period to allow proper settling of silt material of the surface runoff |
| 3.5 | 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 |
| 3.6 | Industrial wastewater from coal handling plant and mine 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 thereunder, and as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluent. Sewage treatment plant of adequate capacity shall be installed for treatment of domestic wastewater. |
| 3.7 | The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations shall be prepared, considering the presence of any river/rivulet/pond/lake etc., with impact of mining activities on it, and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the provisions of the approved Mining Plan/ EIA-EMP submitted to this Ministry and the same should be done 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. |
| 3.8 | The project proponent shall take all precautionary measures to ensure reverian/ riparian ecosystem in and around the coal mine upto a distance of 5 km. A revarian /riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government. |
| 3.9 | Industrial effluent and domestic wastewater shall be treated in the Effluent treatment Plant (ETP) and Sewage Treatment Plant (STP). After treatment, treated water shall be reused for plantation. |

4. Noise And Vibration Monitoring And Prevention

| S. No | EC Conditions |
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| 4.1 | 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. |
| 4.2 | 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. |

5. Mining Plan

| S. No | EC Conditions |
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| 5.1 | Project proponent shall obtain star rating as per the guidelines of Ministry of Coal. |
| 5.2 | Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable. |
| 5.3 | No change in mining method, calendar programme and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC). |
| 5.4 | 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). |
| 5.5 | Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy. |

6. Land Recalvation

| S. No | EC Conditions |
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| 6.1 | 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 (MoEF&CC) from time to time shall be submitted to the Regional Office of MoEF&CC. |
| 6.2 | 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. |
| 6.3 | 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. |

| S. No | EC Conditions |
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| 6.4 | 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 stabilized 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. |
| 6.5 | 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. |

7. Public Hearing And Human Health Issues

| S. No | EC Conditions |
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| 7.1 | Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored. |
| 7.2 | 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 |
| 7.3 | 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. |
| 7.4 | 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. |
| 7.5 | Effective arrangement shall be made to provide and maintain at suitable points conveniently situated, a sufficient supply of drinking water for all the persons employed. |
| 7.6 | The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z11013/5712014-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'. |

8. Corporate Environment Responsibility

| S. No | EC Conditions |
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| 8.1 | The company shall have a well laid down environmental policy duly approve by the Board of |

| S. No | EC Conditions |
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| | 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. |
| 8.2 | 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. |

9. Miscellaneous

| S. No | EC Conditions |
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| 9.1 | 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. |
| 9.2 | 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. |
| 9.3 | 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. |
| 9.4 | 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. |
| 9.5 | 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. |
| 9.6 | The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations. |
| 9.7 | The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government. |
| 9.8 | 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. |
| 9.9 | No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC). |

| S. No | EC Conditions |
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| 9.10 | 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. |
| 9.11 | The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory. |
| 9.12 | The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions. |
| 9.13 | 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. |
| 9.14 | 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 Transboundary 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. |

