

## **Final minutes of the 24<sup>th</sup> meeting of the EAC held on 11<sup>th</sup> January, 2018 for appraisal of Coal mining projects.**

**A.** The 24<sup>th</sup> meeting of the Expert Appraisal Committee (EAC) for Thermal & Coal mining projects was held on 11<sup>th</sup> January, 2018 in the Ministry to consider the proposals relating to coal mining sector. The lists of participants and the project proponents are at Annexure-I & II respectively.

### **B. Confirmation of minutes**

There being no comments from any of the members of the Committee, minutes of the 22<sup>nd</sup> meeting of the EAC held on 27<sup>th</sup> November, 2017 were confirmed.

**C.** Details of the proposals considered during the meeting, deliberations made and the recommendations of the Committee, are explained in the respective agenda items as under:-

### **Agenda No.24.1**

**Lakhanpur Open Cast Expansion (Phase-II) Coal Mine Project from 18.75 MTPA to 21 MTPA by M/s Mahanadi Coalfields Limited in an area of 2452 ha located in District Jharsuguda (Odisha)- For EC**

**[IA/OR/CMIN/71528/2017, F No. J-11015/391/2012- IA.II(M)]**

**24.1.1** The proposal is for grant of environmental clearance to the project for expansion of Lakhanpur Opencast (Phase-II) coal mine from 18.75 MTPA to 21 MTPA in a total area of 2452 ha (ML area 2240 ha) by M/s Mahanadi Coalfields Limited located in District Jharsuguda (Odisha).

**24.1.2** The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

- (i) Earlier, the Environmental Clearance of Lakhanpur Opencast Project was accorded vide MoEF&CC letter no. J-11015/14/87-IA.II/I dated: 10.09.1991 for production capacity of 5MTPA.
- (ii) Subsequently, the Environmental Clearance of Lakhanpur Opencast was accorded vide MoEF&CC letter no. J-11015/44/96-IA.II (M) dated: 24.10.1996 for expansion from 5 MTPA to 10 MTPA in the lease area of 1572.0 ha.
- (iii) Subsequently, the project was accorded Environmental Clearance from 10 MTPA to 15 MTPA vide letter no. J-11015/638/2007-IA.II (M) dated 02.07.2008 with increase in the lease area from 1467 Ha to 2485 Ha with PH held on 27.07.2007.
- (iv) Further, vide letter No. J-11015/391/2012-IA.II (M), dated 21.05.2014, the project was issued Environmental Clearance from 15 MTPA to 18.75 MTPA in the existing ML area of 2389.60 Ha (2485 – 95.40 = 2389.60 Ha) + ancillary activities of 212 Ha= 2601.60 Ha.
- (v) Meanwhile, OM letter no. J-11015/224/2015-IA.II, dated 15/09/2017, was issued for production capacity expansion up to 40% of PH capacity without Public Hearing with certain conditions. On the basis of the above said OM this proposal has been submitted for grant of EC for expansion of Lakhanpur opencast coal mine from 18.75 MTPA to 21 MTPA without public hearing within the existing mine lease area of 2240.0 Ha (Lease area has been restricted to 2240.00 Ha as mining is not possible in 95.4 Ha of non diverted forest land and part non forest land trapped within and adjacent to this forest land).
- (vi) The latitude and longitude of the project latitudes are 21° 47' 32" N to 21° 43' 12" N and longitudes 83° 47' 59" E to 83° 51' 30" E East respectively.

- (vii) Joint Venture: No  
 (viii) Coal Linkage : Thermal Power Plant & Basket Linkage  
 (ix) Employment generated / to be generated: Direct employment already provided to 3110 persons  
 (x) Benefits of the project:  
 (a) Improvement in Physical Infrastructure  
 (b) Improvement in Social Infrastructure  
 (c) Increase in employment potential  
 (d) Contribution to the Exchequer (both State and Central Govt.)  
 (e) Post mining enhancement of Green Cover  
 (f) Improvement of Electrical Power Generation and availability of electricity for 24x7 in rural areas  
 (g) Overall economic growth of the country.  
 (xi) The land usage of the project will be as follows:

Pre-Mining:

	Type of land	Area (Ha)
a.	Agriculture	1182.97
b.	Forest	233.43
c.	Waste Land(Govt. land)	780.98
d.	Grazing	
e.	Surface water Bodies	-
f.	Others (Specify) (Homestead other tenancy land)	42.62
	Total	2240.00

Post- Mining:

S. No.	Land Category use	Land use in ha				
		Left out void/Water body	Afforested or arboriculture/ grass carpeting	Land to be converted for agriculture (Conceptual)	Undistributed/ Built up area	Total area
1.	Quarry Excavation area	38.68	650.32	464.84	160.16	1314.00
2.	Blasting danger Zone	-	245.84	-	492.16	738.00
3.	OB dump (external)	OB area of 38.40 ha falls in safety zone				
4.	Infrastructure	-	42.66	-	145.34	188.00
	Total Lease Area	38.68	938.82	464.84	797.66	2240.00
5.	Residential colony	-	12.00	--	48.00	60.00
6.	Resettlement Site	-	30.40	--	121.60	152.00
	Total	38.68	981.22	464.84	967.26	2452.00

Core area:

S.no	Particulars	Land		
		Forest	Non-Forest	Total
1.	Quarry excavation	227.10	1086.90	1314.00
2.	Blasting danger Zone (Excluding the part of OB dump)		738.00	738.00
3.	OB dumps (External)	OB area of 38.40 ha falls in Safety Zone		
4.	Railway siding	-		
5.	Infrastructure	6.33	181.67	188.00
<b>6.</b>	<b>Mine lease Area (Subtotal from 1 to 5)</b>	<b>233.43</b>	<b>2006.57</b>	<b>2240.00*</b>
7.	Residential Colony	--	60	60
8.	Resettlement site	--	152	152
<b>9.</b>	<b>Outside lease area</b>	<b>--</b>	<b>212</b>	<b>212</b>
10.	<b>Grand Total</b>	<b>233.43</b>	<b>2218.57</b>	<b>2452.00</b>

\*Although, 2389.60 Ha of area has been considered approved mine lease area as per environmental clearance, Phase-I, lease area has been restricted to 2240.00 Ha as mining is not possible in 95.40 Ha of non diverted forest land and part non forest land trapped within and adjacent to this forest land. Phase-II of mining will be implemented after getting approval of forest diversion proposal for remaining 95.40 Ha.

(xii) The total geological reserve of the block is 215.89 MT. The minable reserve for the proposed project is 215.89 and extractable reserve is 215.89 MT (As on 01.04.2017). The percentage extraction would be 100 %.

(xiii) The coal grade is G-14. The stripping ratio is 2.42/tonne. The seam gradient varies from 3.7° to 5°. There will be one seam with thickness ranging (20.88m to 33.53m) in the full thickness area.

(xiv) The total estimated water requirement is 5950 KLD.

(xv) The level of ground water ranges from 2.20 to 8.95 mgbl (Pre-monsoon) and 1.05 to 6.70mgbl (post monsoon)

(xvi) The Method of mining would be Open cast mining (Coal- Surface Miner, OB- Shovel Dumper).

(xvii) There is two external OB dumps with Quantity of 1.94 Mm<sup>3</sup> in an area of 38.40 ha with height of 15 meters above the surface level and one internal dump with Quantity of 749.81 Mm<sup>3</sup> in an area of 1115.16 ha with height Up to ground level in major part, maximum up to 60 m above ground level at some parts.

(xviii) The final mine void would be in 38.68 Ha with maximum upto 150-155 m depth and the total quarry area is 1314.00 Ha. Backfilled quarry area of 1115.16 Ha (out of which 650.32 Ha will be done plantation/Grass carpeting and rest 464.84Ha will be converted in to agricultural land (Conceptual). The void of 38.68 Ha is proposed to converted in to water body of depth maximum up to 150-155m.

(xix) The life of mine is 11 Years as on 01.04.2017

(xx) Transportation: Coal transportation from face to pit top by trucks, surface to siding by truck (present) by conveyor (proposed) and Siding to loading by pay loader (present) by silo (proposed).

(xxi) There is no additional R & R involved.

(xxii) Total capital cost of the project is Rs. 436.79 Crores. CSR Cost According to New CSR policy, the fund for the CSR should be allocated based on 2% of the average net profit of the Company for the three-immediate preceding financial years or Rs. 2.00 per tonne of coal

production of previous year whichever is higher. R&R Cost Rs. 56.49 Crores. Environmental Management Cost Rs. 5.36 Cr. for the year 2016-17.

(xxiii) Phullijhore Nallah passing through the lease whose diversion is proposed. Lillari Nalla Passing through the mine lease remains undisturbed.

(xxiv) Ground water clearance: Not applicable.

(xxv) Mining plan for the 21 MTPA was approved by MCL Board on 07.11.2017 & by MoC Vide letter no. 34011/36/2017-CPAM dated 20-11-2017. Mine closure plan is an integral part of mining plan.

(xxvi) There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.

(xxvii) Total forest land 233.43 ha in ML area of 2240.0 ha, Forest clearance is granted vide letter no:8-280/89-FC dated 6<sup>th</sup> October, 1990.

(xxviii) Total afforestation plan shall be implemented covering of the mining. This will include green Belt over an area of 207.44 ha. Density of tree plantation 2500 trees/ ha of plants.

(xxix) There are no court cases/violation pending with the project proponent.

(xxx) To verify the status of compliance of EC conditions for Lakhanpur opencast expansion project 18.75 MTPA, the Regional Office of MoEF&CC, Bhubaneswar has carried out site inspection on 11<sup>th</sup> October, 2017. Certified compliance report has been submitted vide letter 101/936/EE.P/510-H dated 6<sup>th</sup> December, 2017.

#### **24.1.3** During deliberations on the proposal, the Committee noted the following:-

The proposal is for environmental clearance to the project for expansion of Lakhanpur Opencast Coal Mine (Phase-II) from 18.75 MTPA to 21 MTPA in a total area of 2452ha of M/s Mahanadi Coalfields Ltd located in Tehsil Lakhanpur, District Jharsuguda (Odisha).

The total area includes 2240 ha of mine lease area and the area outside mine lease is 212 ha. Total forest land involved is 233.43 ha in the mine lease area of 2240 ha. Stage-1 Forest Clearance for the entire forest land has been obtained for its diversion to non-forestry purposes.

Mining Plan for the 21 MTPA was approved by MCL Board on 7<sup>th</sup> November, 2017 & by Ministry of Coal vide letter no. 34011/36/2017-CPAM dated 20<sup>th</sup> November, 2017. Mine closure plan is an integral part of the Mining Plan.

Earlier, the Environmental Clearance to Lakhanpur Opencast Coal Mine for its expansion from 10 MTPA to 15 MTPA in mine lease area of 2485 ha, was accorded by the Ministry vide letter dated 2<sup>nd</sup> July, 2008. Public hearing for the project was conducted on 27<sup>th</sup> July, 2007. Main issues raised during the public hearing included concerns regarding discharging of mine water along with O&G and coal dust discharging to Lillari Nallah, filling up village ponds with coal dust, proper land acquisition, rehabilitation & settlement programme, regarding repairing of public and transportation roads, plantation in OB dumps and other areas, employment, free medical facilities to the affected people, recharging of groundwater level and water sprinkling in peripheral roads.

Further expansion of the project from 15 MTPA to 18.75 MTPA in a total area of 2601.60 ha (ML area - 2389.60 ha & 212 ha for ancillary activities) was accorded environmental clearance by the Ministry vide letter dated 21<sup>st</sup> May, 2014.

The present proposal for expansion from 18.75 MTPA to 21 MTPA in a total area of 2452 ha (leaving 149.60 ha of non-forest area) seeks environmental clearance without conducting the public hearing in view of this Ministry's OM dated 15<sup>th</sup> September, 2017. The said OM provides for exemption from public hearing in cases where the expansion in production capacity up to

40% is envisaged in 2-3 phases, subject to fulfilment of certain parameters of environmental concern. In compliance of the said OM, the status is reported to be as under:-

S. No.	Condition in OM	status
1.	Predicted air quality parameters are within the prescribed norms	The AQIP modelling has been carried out for incremental capacity of 2.25 MTPA (i.e. from present capacity of 18.75 MTPA to capacity of 21MTPA) using AERMOD software. The Ambient air quality within limit as per GSR742(E). Additional mitigative measures like <ol style="list-style-type: none"> <li>1. Dust extractor in drill machines.</li> <li>2. Green belt shall be developed</li> <li>3. Coal transportation through conveyor and loading by SILO.</li> </ol>
2.	Coal transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads.	Tendering process for installation of Pipe conveyor to IB-valley washery (10 MTY) (EC Obtained Ref No. J- 11015/171/2015-IA-II(M) Dated: 30/03/2017) and construction of SILO at Lakhanpur Area, MCL with all Civil, Mechanical, Environmental, Safety measures etc. for an estimated cost of 16051.63 lakhs is under finalization stage.
3.	Coal mining is done through deployment of surface miners, replacing three dust generating operations of the conventional mining system namely drilling, blasting and crushing in one go.	Coal production is by deployment of Surface Miners. The incremental coal production will also be done through deployment of surface miners.
4.	Public hearing already conducted for the total mine lease area involved and no more area is required for the proposed expansion.	Public hearing for Lakhanpur OCP Expansion (15.0 Mty) was held on 27.07.2007 at Bandabahal Gram Panchayat Office, District – Jharsuguda for mine lease area of 2485.0 Ha
5.	Compliance status of EC conditions monitored by the concerned Regional Office of this ministry is found to be satisfactory.	The Mine was inspected by the regional office of MoEF&CC on 11-10-2017. Certified compliance report was given vide letter 101/936/EE.P/510-H dated 06-12-17.
6.	Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance, etc are satisfactorily fulfilled.	Consent to Establish for 18.75 MTPA capacity obtained vide letter no. 12944/Ind-II-NOC-5839 dt: 08-08-2014. Consent to Operate for 18.75 MTPA capacity obtained vide letter no.4992/ IND-I-CON-1220 dt:22-03-2016 and is valid upto 31-03-2018 (Annexure -VII) Mining Plan and the Mine Closure Plan for 21.0 Mty approved by Ministry of Coal vide letter no.34011/36/2017-CPAM dt: 20- 11-2017. Forest Clearance: No additional Forest Land involved.

The AQIP analysis using AERMOD Modelling revealed that maximum incremental concentration for PM<sub>10</sub> due to the proposed expansion (capacity enhancement of 2.25 MTPA)

will be 47.72 µg/m<sup>3</sup> at one of the monitoring station 'West Side of Quarry No.4' in the work zone, with the additional air pollution control measures in place. These include water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, green belt, dust suppression arrangement at railway siding, etc.

The maximum concentration (GLC) of PM<sub>10</sub> is reported to be 253.52 µg/m<sup>3</sup>. It has been observed that due to the proposed expansion, increase in pollutant levels is marginal and absolute values are well within the permissible limits notified by the Ministry vide Notification No.742(E) dated 25<sup>th</sup> September, 2000, applicable for work zone in the existing coal mines/fields, commenced their mining operations prior to 25<sup>th</sup> September, 2000. No air quality data for the locations outside the work zone was made available due to no monitoring station for the project at such ambient locations.

Different works taken up under the CSR during last four years are reported to be as under:-

Sector	Financial year			
	2013-14	2014-15	2015-16	2016-17
Safe drinking water	44.44	25.32	54.69	52.30
Ecological Balance	0.00	10.26	1.47	15.98
Construction of Road	12.18	24.69	0.00	0.00
Education		39.08	74.30	41.45
Electrification & Infrastructure Development	40.34	143.92	91.64	90.30
Health & Sanitation	0.72	14.50	0.00	0.00
Promotion of Sports	0.00	6.62	0.98	12.88
Others	0.00	0.99	60.51	8.74
Total Amount (In lakhs of Rs.)	97.32	265.32	283.59	221.65

The Regional Office of the Ministry at Bhubaneswar, vide their letter dated 6<sup>th</sup> December, 2017, has forwarded the monitoring report on compliance status of the conditions stipulated in the last EC dated 21<sup>st</sup> May, 2014 (based on the site visit carried out on 11<sup>th</sup> October, 2017). Many of the conditions were found to be complied with and/or yet to be complied with. The project proponent has informed the Committee about the actions taken in response to the observations of the Regional Office. The Committee desired that the action taken report should be submitted by the project proponent to the Regional Office for examination at their end, and then forwarded to the Ministry along with the comments.

Consent to Operate for the Lakhanpur Opencast coal mine with its production capacity of 18.75 MTPA has been obtained from the Odisha State Pollution Control Board vide letter no: 4992/IND-I-CON-1220-Dt.22/03/16. The same is presently valid up to 31<sup>st</sup> March, 2018.

**24.1.4** *The EAC, after deliberations, recommended the project for grant of environmental clearance to the expansion of Lakhanpur Opencast Coal Mine (Phase-II) from 18.75 MTPA to 21 MTPA of M/s Mahanadi Coalfields Ltd in a total area of 2452 ha (ML area 2240 ha) located in Tehsil Lakhanpur, District Jharsuguda (Odisha) for a period of one year, subject to the compliance of terms and conditions as applicable, and the additional conditions as under:-*

*(i) Adequate ambient air quality monitoring stations shall be established in consultation with the State Pollution Control Board, and regular monitoring shall be carried out for particulate emissions (both PM<sub>10</sub> & PM<sub>2.5</sub>), SO<sub>2</sub> & NO<sub>x</sub>. The monitoring results for the period during summer season (April-June, 2018) shall be submitted to the State PCB and the Regional Office of this Ministry.*

- (ii) *The EAC shall review compliance of the actions taken on observations of the Regional Office before December, 2018, and make its recommendations for continuance of the project thereafter. Also, based on the monitoring results, the Committee shall examine adequacy and efficacy of the pollution control measures and its impact on ambient air quality.*
- (iii) *To control the dust generation at source, the crusher and inpit belt conveyors shall be provided with mist type sprinklers.*
- (iv) *Mitigative measures to be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers, preferably mist type mobile sprayers/sprinklers.*
- (v) *Regular monitoring of occupational safety and other health hazards of all employees including outsourced workers and the corrective actions shall be ensured. Report in this regard be submitted to the Regional Office of the Ministry.*
- (vi) *Controlled blasting techniques should be adopted to control ground vibration and fly rocks.*
- (vii) *Persons of nearby villages shall be given training for their livelihood and skill development.*
- (viii) *To ensure health and welfare of nearby villages, regular medical camps shall be organized and report shall be submitted to the Regional Office of the Ministry.*
- (ix) *Wind barrier wall/screen and vertical greenery system, green belt, dust suppression arrangement at railway siding to be installed.*
- (x) *Three tier multi-species green belt of not less than 7.5 m width should be developed all along the project to mitigate/check the dust pollution. Only native species to be used for plantation/greenbelt development.*
- (xi) *In view of the mining potential of the area and the prevailing environmental concerns, carrying capacity of the riverine eco-system shall be studied through some expert agencies to assess impact on the environmental components.*
- (xii) *A mitigation plan based on the study to be submitted to the MOEF&CC Regional Office/SPCB and displayed on company's website.*

## **Agenda No.24.2**

**Basundhara (West) Extension OCP of 8.75 MTPA by M/s Mahanadi Coalfields Limited in a total area of an area of 323.92 ha located in Ib Valley Coalfield, District Sundargarh (Odisha) - ForToR**

**[IA/OR/CMIN/63468/2017,F No. J-11015/26/2017- IA.II(M)]**

**24.2.1** The proposal is for grant of TOR Basundhara (West) Extension OCP 8.75 MTPA in an area of 323.92 ha by M/s Mahanadi Coalfields Limited located in Ib valley coal field, District Sundargarh (Odisha).

**24.2.2** The proposal was last considered in the 11<sup>th</sup> meeting of the EAC held on 30-31May, 2017, wherein observations of the Committee were as under:-

*“The EAC, after detailed deliberations, was not convinced with the OB dumping proposal and the proposed arrangement to meet the water requirement especially in view of Mine Closure Plan or the Closure Status Report for the Basundhara (West) Expansion OCP not yet in place. The Committee further desired for a site visit by 2-3 of its members for assessment of environmental concerns in and around the Ib Valley Coalfield, and to explore for more mining operations in the area. The proposal was, therefore, deferred”.*

**24.2.3** In response to the observations of EAC, the details submitted by the project proponent and/or as informed during the meeting, are as under:-

- (i) Two member committee along with the officer from Eastern Regional Office, MoEF&CC, Bhubaneswar visited the working mines (Basundhara (W) Expn. OCP & Kulda OCP).
- (ii) To avoid external dumping, it was proposed to dump 7.66 MM<sup>3</sup> of OB generated during initial three years on the partially filled voids of adjoining Basundhara (West) Expansion OCP.
- (iii) As per the observation of the EAC the same has been incorporated in the Mining Plan/ Mine Closure Plan of the Basundhara (West) Expansion OCP and approved by MoC vide letter no. 34011/36/2017-CPAM dtd. 20-11-17.
- (iv) As per the above Plan, 48.20 Ha will remain unchanged as a water body which will serve as an source for industrial water demand of Basundhara (West) Extension OCP till its own mine voids is developed for storing mine water.
- (v) Details will be brought out in the EIA-EMP.

**24.2.4** The sub-committee visited the working mines (Basundhara (W) Expn. OCP & Kulda OCP) and the proposed site of Basundhara (W) extension OCP on 5<sup>th</sup> November, 2017. The observation/ recommendation of the sub-committee were as under:-

- Scattered fire was observed in all the OB dump area of Basundhara (West) Expansion project and lot of smoke were observed. On enquiry it was told that in the OB dump, carbonaceous shells are present which have high volatile matter and they catch fire spontaneously.
- The sub Committee observed lot of coal dust on the road side trees.
- At present coal is transported through road mode only. However, committee has seen the rail siding works being carried out at project site. It was informed that the same will be completed within 3 months, and there after coal shall be transported through rail mode.
- It was informed that a bridge will be constructed across the river Basundhara for access to proposed project site.
- The OB from the proposed project is planned to be dumped in the mining lease area of Basundhara (West) expansion for initial period of 3 years.
- Sufficient infrastructure facilities for parking of trucks at loading and unloading site need to be provided. At the parking area, SO<sub>x</sub>, NO<sub>x</sub>, Lead, including noise level need to be monitored and mitigative measures to be taken to minimize its impact on surrounding areas.
- Water balance i.e. availability, present use of water and future requirement has been provided.
- Remedial measures need to be taken to combat occurrence of fire in the OB dump area.
- Observations made by the Regional Office (MOEF& CC) Bhubaneshwar in the month of November 2017 need to be seriously addressed.
- There is an urgent need to install appropriate CAAQMS stations in the surrounding area of ongoing and proposed project site so that effective air pollution control can be administered. The air quality monitoring data need to be provided at the time of application for grant of EC.
- Basundhara river is passing through the on-going and proposed project area, hence it is recommended that PP should prepare River Conservation and Protection Plan and submit at the time of application for grant of EC.



**24.4.5** During deliberations on the proposal, the Committee noted the following:-

The proposal is for grant of ToR to the project for Basundhara (West) Extension Opencast Coal Mine of 8.75 MTPA of M/s Mahanadi Coalfields Ltd in a total area of 369.77 ha (mine lease area 323.92 ha) located in Ib Valley Coalfield, District Sundargarh (Odisha).

The total area includes 227.62 ha of forest land. The project proponent has applied for stage-1 forest clearance for its diversion to non-forestry purposes.

Mining Plan for the project was approved by MCL Board on 28<sup>th</sup> February, 2017 and by Ministry of Coal vide letter dated 22<sup>nd</sup> March, 2017. Mine closure plan is an integral part of the Mining Plan.

As per the earlier recommendations of the EAC, sub-committee has visited the project site on 5<sup>th</sup> November, 2017. The site visit report along with the observations and recommendations was discussed at length. The Committee acknowledged the prevailing environmental concerns and stressed for immediate remedial measures before start of the project. However, for the present, the Committee asked for comments and the action taken on the site visit report of the sub-Committee, to be submitted.

**24.2.6** *The EAC, after detailed deliberations, recommended the project for grant of ToR to Basundhara (West) Extension Opencast Coal Mine of 8.75 MTPA of M/s Mahanadi Coalfields Ltd in a total area of 369.77 ha (mine lease area 323.92 ha) located in Ib Valley Coalfield, District Sundargarh (Odisha), and for preparation of EIA/EMP reports with public consultation subject to compliance of all conditions as specified/notified in the standard ToR applicable for opencast coal mines, along with the additional conditions as under:-.*

- *Corrective actions and remedial measures shall be taken on each of the observations of the sub-Committee, and incorporated separately in the EIA/EMP report.*
- *For proper baseline air quality assessment, adequate monitoring stations as per the extant guidelines/norms, in the downwind areas need to be set up and included in the air quality modelling.*
- *Ecological restoration and mine reclamation plan to be prepared with local/native species found in the area.*

### **Agenda No.24.3**

**Gondegaon Extension Opencast Coal Mine Expansion Project for expansion from 2.5 MTPA to 3.5 MTPA by M/s Western Coalfields Limited in a total project area of 917 ha (ML area of 845.74 ha) in Village Gondegaon, Tehsil Parseoni, District Nagpur (Maharashtra) - For EC**

**[IA/MH/CMIN/71601/2017, F.No.J-11015/106/2009-IA.II(M)]**

**24.3.1** The proposal is for grant of environmental clearance to Gondegaon Extension Opencast Coal Mine Expansion Project (Amalgamated Gondegaon Ghatrohan OC Mine) for expansion in capacity from 2.5 MTPA to 3.5 MTPA of M/s Western Coalfields Limited within existing ML area of 845.74 ha within the EC area of 917.00 Ha located in District Nagpur (Maharashtra), under section 7(ii) of EIA notification 2006.

**24.3.2** The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

- (i) Gondegaon Extension Opencast Coal Mine Expansion (Amalgamated Gondegaon-Ghatrohan OC Mine) is located in the Nagpur district of Maharashtra State and is under the administrative control of Nagpur Area of Western Coalfields Ltd. Mine was opened in Kamptee-Silewara Coalfields in Nagpur district and is about 35 km from Nagpur having a approach road of 7 km on Nagpur- Jabalpur national highway and the nearest railway station is of the mine is Kanhan (almost 15 Km).
- (ii) The project lies between latitudes E 21°14'59"- E 21°16'00" and longitudes N 79°10'22"- N 79°12'50". The area is covered by Survey of India Toposheet No.55 O/3.
- (iii) The EC for Gondegaon Extension Opencast Coal Mine Expansion Project (1.5 to 2.5 MTPA) for a total lease area of 917.00 ha was accorded vide letter dated 15th July, 2009.
- (iv) The mine is expected to achieve its EC target i.e 2.50 MTPA for this financial years (approx. Jan 2018). As per the direction of GOI, the production level of the Western Coalfields Ltd. must be increased to achieve the demand from the Power sector. To bridge the gap between the supply and demand of coal and to restore the production level of the Nagpur Area, it is proposed to enhance the annual coal production rate of the said mine from 2.50 MTPA to 3.50 MTPA.
- (v) In view of the above the Mining Plan including the Mine Closure Plan for further expansion of the subject mine for increasing the production capacity from 2.50 MTPA to 3.50 MTPA within the EC sanctioned land area and without any capital investment has been approved by the WCL Board in its meeting held on 31.10.2017 confirmed vide letter dated 10.11.2017.
- (vi) The proposed quarriable area is bounded by State high way No.233 in North, Kanhan River in West and South and in crop of seam-I in East. The surface area is generally undulating with elevations ranging from 278 m to 288 m above MSL.
- (vii) The geo-mining parameters are placed below

SI no	Particulars	
1.	Lease hold area	845.74 ha.
2.	Mineable coal reserve (2015-16)	29.23 MT
3.	Total OB including access trench (Balance as on 01.04.2017)	111.95 mm <sup>3</sup>
4.	Average stripping ratio	1:4.487
5.	Annual coal target	Existing: 2.5 MT Proposed: 3.5 MT
6.	Life of the project	Existing: 10 years proposed: 08 years
7.	Quarry area on floor	82.74 ha
8.	Quarry area on surface	277.13 ha
9.	Initial depth of the quarry	37 mtr.
10.	Final depth of the quarry	176 mtr
11.	Average strike length on floor	3000 mtr
12.	Average strike length on surface	3000 mtr
13.	Average width of the quarry on floor	750 mtr
14.	Average width of the quarry on surface	1010 mtr
15.	Gradient of the seam	1 in 3.5 to 1 in 5
16.	Effective thickness of composite seam	27.43 to 28.34

17.	Grade processed rom	G11
18.	Length of the access trench	300 mtr
19.	Manpower	450
20.	Boundaries	Latitudes: E21°14'59'-E21°16'00" Longitudes: N79°10'22''-N79°12'50''

(viii) The scheduled quantities for balance life of the mine with capacity enhancement from 2.50 to 3.50 MTPA are as under:

**Table 1 Calendar Programme**

Sl.No.	year	Coal Prod. MT	Over Burden Removal in Mm <sup>3</sup>		
			HOE	Dept.(consid ering as on date capacity)	Total
1	2015-16	2.13 (Act.)	0.42	3.84	4.26
2	2016-17	2.15 (Act.)	0.76	4.35	5.11
3	2017-18	2.8	6.82	4.8	11.62
4	2018-19	3.0	7.65	4.8	12.45
5	2019-20	3.2	8.48	4.8	12.28
6	2020-21	3.4	9.31	4.8	14.11
7	2021-22	3.5	10.90	4.8	15.70
8	2022-23	3.5	10.90	4.8	15.70
9	2023- 24	3.5	9.70	4.8	14.5
10	2024 - 25	2.05	9.78	4.8	14.58
	Total	29.23	74.72	46.59	121.31

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

Year	Coal Production	EC capacity
2016-17	2.15	2.50
2015-16	2.13	2.50
2014-15	1.86	2.50
2013-14	1.70	2.50
2012-13	1.82	2.50

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

The total land involved in existing Gondegaon OC is 845.74 ha is within the sanctioned EC area of 917.00 ha. The present proposal of expansion envisages only increase in production capacity from 2.50 MTPA to 3.50 MTPA. The land use changes will remain same as per the previously sanctioned EC letter No J-11015/106/2009-IA.II (M) dated 15th July, 2009.

(x) Details of change in land use as per sanctioned EC is provided below:

Pre-mining land use

S. No.	Particulars	Land(ha)
1)	Tenancy land	792.08
2)	Government land	53.41
3)	Forest land	NIL
	<b>Total</b>	<b>845.74</b>

During mining land use :

Sl. No.	Description	leasehold Area (Ha)
1	Quarry Area	277.13
2	Embankment Area	13.05
3	External OB dump	323.98
4	Infrastructure	50.00
5	Project Township	13.00
6	Rehabilitation Site	21.66
7	Area needed for rationalization and blasting zone	146.92
	<b>Total</b>	<b>845.74</b>

The post mining land use :

S. N.	Land use	Land use (ha)				Total
		Plantation	Water Body	Public use	Undisturbed	
1	External OB Dump	40.00	0.00	0.00	0.00	323.98
2	Excavation	40.00	237.13	0.00	0.00	277.13
3	Roads	1.00	0.00	4.74	0.00	5.74
4	Built up area	44.64	0.00	47.33	0.00	91.97
5	Undisturbed Area	130.00	0	0	16.92	146.92
	<b>Total</b>	<b>255.64</b>	<b>237.13</b>	<b>52.07</b>	<b>16.92</b>	<b>845.74</b>

(xi) The existing mine working including the proposed expansion will be limited within 845.74 Ha (as per approved RPR Nov.2015) & this mining plan under consideration.

1. Mineable Coal Reserves in Million Tonnes as per R.P.R: 29.23 MT.
2. Stripping Ratio Cu.M./Te : 4.15 m<sup>3</sup>/t
3. Over Burden (MM<sup>3</sup>) : 121.31

(xii) The coal grade is GCV (4001-4300) k Cal /kg (Grade G-11).

(xiii) Total estimated water requirement is 1450 m<sup>3</sup>/day. The level of ground water ranges from 6.25 m to 8.10m (Pre Monsoon), 2.10m to 6.10 m (Post Monsoon).

(xiv) The method of mining would continue to be Opencast with Shovel-Dumper combination.

(xv) There are six external OB dumps with Quantity of 81.01 Mm<sup>3</sup> and area of 323.98 ha and internal dump of 40.30 Mm<sup>3</sup> in an area of 79 ha. The final mine void would be in 198.13 ha with depth 176 m.

- (xvi) Total quarry area is 277.13 ha. Out of total quarry area of 277.13 ha, 79 ha would be backfilled and reclaimed. Out of which 40 ha area shall be reclaimed with plantation. A void of 198.13 ha with depth 176 m which is proposed to be converted into a water body.
- (xvii) The balance life of mine is 8 Years at the peak capacity of 3.5 MTPA.
- (xviii) Transportation: Coal transportation in pit by through Dumpers from in pit to pit head coal handling plant, Coal from CHP to consumer is transported to railway siding (Approximately 10 km) over fully black topped Road and in tarpaulin covered trucks.
- (xix) There is no additional R&R involved in the proposed scheme. The resettlement of Gondegaon village (Householders – 721) is already in progress. All basic amenities as per town planning department of Maharashtra State has been completed. Total land of the new rehabilitation site is 21.66 ha. The site has been provided with primary health centers, primary school, water pump house, gram panchayat office, WBM road, overhead water tank of capacity 2.00 Lakh Liters. 1100 no. of saplings have been planted and 2 no. of cattle shed constructed. 350 families have already shifted to new site. 150 houses are under construction.
- (xx) Cost: Total capital cost of the project is Rs. 198.6824 Crores excluding WDV of 39.7224 Crores (As on 13.02.2016) and no additional capital is required for the present proposal. CSR Cost based on 2% of the average net profit of the Company for the three-immediate preceding financial years or Rs 2.00 per Tonne of Coal Production of the previous year whichever is higher. Total Land compensation (R&R) Cost incurred is Rs.11,52,10,812.00 INR. Environmental Management Cost: Capital – Rs147.09 Lakhs and Revenue- @ Rs 6/tonne.
- (xxi) Water body: The main drainage is controlled by Southerly flowing Kanhan river along the Western and Southern boundaries of the block. Minor seasonal streams originating within the block drain into Kanhan river. In general, the area is sloping towards South West and South.
- (xxii) Approvals: Ground water clearance:- NOC for withdrawal of groundwater from CGWA has been applied vide letter no. WCL/ENV/HQ/20-J & 17-U/263 dated 13.06.2016 as per amended rules of 2012. Board's approval obtained on 10.11.2017. Mining plan has been approved on 10.11.2017. Mine closure plan is an integral part of mining plan.
- (xxiii) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xxiv) Public Hearing conducted on 26.04.2005 for 917.00 Ha land.
- (xxv) There is no forest land involved in the project.
- (xxvi) Total afforestation plan shall be implemented covering an area of 255.64 ha at the post-mining. Density of tree plantation is 2500 trees/ ha of plants.
- (xxvii) There are no court cases/violation pending with the project proponent.
- (xxviii) The existing Gondegaon OC has opened Escrow Account against the existing provisions and till 2016-17 Rs. 27.7047 Crores have been deposited in the said Escrow Account.
- (xxix) In compliance of the OM dated 30.05.2012 certificate of compliance against the existing EC (2.50 MTPA- July 2009) has been obtained from Regional Office, MoEF&CC Nagpur vide its F no. 3-11/2014(Env)/3035 dated 13.12.2017.

#### **24.3.3 During deliberations on the proposal, the Committee noted the following:-**

The proposal is for environmental clearance to the expansion of Gondegaon Extension Opencast Coal Mine Project from 2.50 MTPA to 3.50 MTPA in a total area of 917 ha (mine lease area 845.74 ha) of M/s Western Coalfields Ltd located in village Gondegaon, Tehsil Parseoni, District Nagpur (Maharashtra). There is no forest land involved.

Mining Plan for the proposed expansion has been approved by WCL Board on 31<sup>st</sup> October, 2017. Mine closure plan is an integral part of the Mining Plan.

Earlier, the Environmental Clearance to Gondegaon Extension Opencast Coal Mine Project for its expansion from 1.5 MTPA to 2.5 MTPA in a total area of 917 ha, was accorded by the

Ministry vide letter dated 15<sup>th</sup> July, 2009. Public hearing was conducted on 26.04.2005 for the total area of 917 ha in District Nagpur (Maharashtra).

The present proposal is for further expansion of the Coal Mine from 2.5 MTPA to 3.5 MTPA, as the mine is expected to achieve the sanctioned capacity of 2.50 MTPA up to January, 2018 only. To bridge the gap between supply and demand of coal and to restore the production level of the company, it is proposed to enhance the annual coal production of the mine from 2.50 MTPA to 3.50 MTPA

The monitoring report on compliance status of the existing EC conditions has been forwarded by the Regional Office, at Nagpur, vide their letter dated 13<sup>th</sup> December, 2017 based on inspection carried out on 29<sup>th</sup> November, 2017. Out of the total 40 conditions, 29 conditions were found to be complied with, and eight of the conditions were agreed to be complied by the project proponent.

Consent to operate for the project at its present capacity of 2.5 MTPA has been obtained from the State Pollution Control Board.

**24.3.4** *The EAC, after detailed deliberations, recommended the project for grant of Environmental Clearance, exempting requirement of preparation of EIA/EMP and Public consultation, to the expansion of Gondegaon Extension Opencast Coal Mine Project from 2.50 MTPA to 3.50 MTPA by M/s Western Coalfields Ltd in a total area of 917 ha (mine lease area 845.74 ha) located in village Gondegaon, Tehsil Parseoni, District Nagpur (Maharashtra) for a period of one year, subject to the compliance of the terms & conditions and environmental safeguards mentioned below:*

- (i) Mitigative measures to be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers. Mist type mobile sprayers/sprinklers shall be deployed for the project.*
- (ii) Regular monitoring of occupational safety and other health hazards of all employees including outsourced workers and the corrective actions shall be ensured. Report in this regard be submitted to the Regional Office of the Ministry.*
- (iii) Controlled blasting techniques should be adopted to control ground vibration and fly rocks.*
- (iv) Persons of nearby villages shall be given training for their livelihood and skill development.*
- (v) To ensure health and welfare of nearby villages, regular medical camps shall be organized and report shall be submitted to the Regional Office of the Ministry.*
- (vi) Wind barrier wall/screen and vertical greenery system, green belt, dust suppression arrangement at railway siding to be installed.*
- (vii) Three tier multi-species green belt of not less than 7.5 m width should be developed all along the project to mitigate/check the dust pollution. Only native species to be used for plantation/greenbelt development.*
- (viii) In view of the mining potential of the area and the prevailing environmental concerns, carrying capacity of the riverine eco-system shall be studied through some expert agencies to assess impact on the environmental components.*
- (ix) A mitigation plan based on the study to be submitted to the MOEF&CC Regional Office/SPCB and displayed on company's website.*

## Agenda No.24.4

### **Sayal D Opencast Coal Mine Project of 1.0 MTPA (Normative)/1.35 MTPA (Peak)of M/s Central Coalfields Ltd in a project area of 286.98 ha in District Ramgarh (Jharkhand) - For EC**

**[IA/JH/CMIN/27582/2015, F. No. J-11015/157/2015-IA.II(M)]**

**24.4.1** The proposal is for Sayal D Opencast Coal Mine Project (1.0 MTPA Normative and 1.35 MTPA Peak in a project area of 286.98 Ha; of M/s Central Coalfields Limited in District Ramgarh, (Jharkhand).

**24.4.2** The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

- (i) This is a new proposal for EC.
- (ii) The project was accorded TOR vide letter no. J-11015/157/2015-IA.II (M) dated 18<sup>th</sup> June, 2015.
- (iii) The latitude and longitude of the project are 23° 40' 13" N to 23° 40' 20" N and 85° 18' 30" E to 85° 20' 00" E respectively.
- (iv) Joint Venture: There is no joint venture.
- (v) Coal Linkage :Power houses and other miscellaneous consumers
- (vi) Employment generated / to be generated: 51
- (vii) Benefits of the project: Improvements in Physical Infrastructure, Improvements in Social Infrastructure, Increase in Employment Potential, Contribution to the Exchequer, Meet energy requirement, Post-mining Enhancement of Green Cover.
- (viii) The total land area is 286.98 ha. Mining lease areas per approved Mining Plan is 286.98 Ha.
- (ix) The land usage of the project will be as follows:

S. N.	LANDUSE	Within ML Area (ha)	Outside ML Area (ha)	TOTAL
1	Agriculture	12.98	0	12.98
2	Forest	130	0	130
3	Scrub	0	0	0
4	Waste Land	35	0	35
5	Grazing	0	0	0
6	Surface Water Bodies	0	0	0
7	Plantation	85	0	85
8	Mining area	18	0	18
9	Settlement	6	0	6
	Total	286.98	0	286.98

Pre-Mining:

S.no	Land use	Within ML Area (Ha)	Outside ML area (Ha)	Total
1	Forest land	149.05	0.00	149.05
2	GMK JJ	37.00	0.00	37.00
3	Non Forest	100.93	0.00	100.93

	Land (tenancy)			
	Total	286.98	0.00	286.98

Post- Mining:

S No.	Description	Land-use (Ha)				Total
		Plantation	Water Body (Lagoon)	Public/ CCL use	Landscaped Quarry Batter	
1	External OB Dump	0.00	0.00	95.01	0.00	95.01
2	Top soil dump	0.00	0.00	0.00	0.00	0.00
3	Excavation/ Backfilled	0.00	0.00	101.59	0.00	101.59
4	Roads	0.00	0.00	16.42	0.00	16.42
5	Builtup area	0.00	0.00	4.38	0.00	4.38
6	Green belt/Safety zone	69.58	0.00	0.00	0.00	69.58
7	Undisturbed area	0.00	0.00	0.00	0.00	0.00
Total		69.58	0.00	217.40	0.00	286.98

Core area:

S.N	Particulars	Area (Ha)
1	Quarry	101.59
2	External OB dump	95.01
3	Haul road	16.42
4	Infrastructure	4.38
5	Green Belt/ Safety zone	69.58
	Total	286.98

(x) The total geological reserve is 119.52 MT. The mineable reserve 9.21 MT for this phase-1, 22.68 MT including phase II, extractable reserve is 9.21 MT & 22.68 MT including phase II. The per cent of extraction would be 100 %.

(xi) The coal grade is G-5. The stripping ratio is 4.32 Cum/tonne. The average Gradient is 11-13 degree. There will be 5 seams with thickness ranging from 0.8 m to 10 m.

(xii) The total estimated water requirement is 1714 m<sup>3</sup>/day. The level of ground water ranges from 2.20m to 7.20 m.

(xiii) The method of mining would be opencast with shovel-dumper combination.

(xiv) There is one external OB dump with Quantity of 39.73 Mbcm in an area of 95.01 ha with height of 70 m above the surface level and no internal dump.

(xv) The final mine void would be in 101.59 Ha (void over an area of about 70 ha will be created in 2<sup>nd</sup> phase) with depth varying upto 100 m. and the Total quarry area is 101.59ha.

(xvi) A void of 101.59 ha with depth varying from 30-100m will be kept for future expansion of



mining.

- (xvii) The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- (xviii) Ambient air quality data has been generated for Pre Monsoon March 2017 to May 2017. In general, all PM10, PM2.5, SO2 and NOx values are found to be well within prescribed limits of CPCB for residential and rural area.
- (xix) The life of mine is 11 Years.
- (xx) Transportation: Coal transportation in pit by Dumpers, Surface to Siding by trucks and loading at railway siding.
- (xxi) There are no R & R involved.
- (xxii) Cost: Total capital cost of the project is Rs.336.14 Crore (as per original PR) and Rs 45.83 Crore as per approved outsourcing variant). CSR Cost shall be as per new Company's Act 2013. R&R Cost Nil. Environmental Management Cost: Rs.849.72 lakhs
- (xxiii) Water body: Damodar River, flowing eastwards, skirts around the western limit of the block/mine and is the main drainage.
- (xxiv) Approvals: Mining Plan and Mine Closure Plan of Sayal D OCP (1/1.35 MTY) was approved in the 67<sup>th</sup> CCL Board meeting held on 3<sup>rd</sup> November, 2017 .
- (xxv) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xxvi) Forestry issues: Total forest land involved 149.05 Ha. Forest clearance obtained vide 8-66/2004 dated 17.07.2008 for 192.32 Ha forest land. In addition to this jungle-jhadi in an area of 37 Ha was broken before 1980.
- (xxvii) Total afforestation plan including green belt shall be implemented covering an area of 69.58 ha at the end of mining. Density of tree plantation 2500 trees/ ha of plants.
- (xxviii) There are no court cases/violation pending with the project proponent.
- (xxix) Public Hearing was held on 24<sup>th</sup> December, 2016 at Office premises of Project Officer-Sayal D OCP. The issues raised in the PH includes drinking water, electricity, unemployment, school education, land compensation of Saunda, effect of gas on health, Coal India policy related to returning land.

**24.4.3** During deliberations on the proposal, the Committee noted the following:-

The proposal is for environmental clearance to Sayal D Opencast Coal Mine of capacity 1.35 MTPA in a total area of 286.98 ha of M/s Central Coalfields Ltd located in SK Coalfield, District Ramgarh (Jharkhand).

The total project area includes 149.05 ha of notified forest land. The project proponent has already Stage-2 Forest Clearance for the entire forest land for its diversion to non-forestry purposes.

Terms of Reference for the project were granted on 18<sup>th</sup> June, 2015, and public hearing was conducted on 24<sup>th</sup> December, 2016. Main issues raised during the public hearing included compensation for land, provisions for drinking water supply, electricity, education, employment to the locals, plantation of fruit trees, etc.

Mining Plan has been approved by the CCL Board in its 67<sup>th</sup> CCL Board meeting held on 3<sup>rd</sup> November, 2017. Mine Closure Plan is an integral component of the Mining Plan.

**24.4.4** *The EAC, after detailed deliberations, recommended the proposal for grant of Environmental Clearance to Sayal D Opencast Coal Mine Project of capacity 1.35 MTPA of M/s Central Coalfields Limited in a total area of 286.98 ha in District Ramgarh (Jharkhand), under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent*

amendments/circulars thereto subject to the compliance of the terms & conditions and environmental safeguards mentioned below:

- (i) Mitigative measures to be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers. Mist type mobile sprayers/sprinklers shall be deployed for the project.
- (ii) Regular monitoring of occupational safety and other health hazards of all employees including outsourced workers and the corrective actions shall be ensured. Report in this regard be submitted to the Regional Office of the Ministry.
- (iii) Controlled blasting techniques should be adopted to control ground vibration and fly rocks.
- (iv) Persons of nearby villages shall be given training for their livelihood and skill development.
- (v) To ensure health and welfare of nearby villages, regular medical camps shall be organized and report shall be submitted to the Regional Office of the Ministry.
- (vi) Wind barrier wall/screen and vertical greenery system, green belt, dust suppression arrangement at railway siding to be installed.
- (vii) Three tier multi-species green belt of not less than 7.5 m width should be developed all along the project to mitigate/check the dust pollution. Only native species to be used for plantation / greenbelt development.
- (viii) In view of the mining potential of the area and the prevailing environmental concerns, carrying capacity of the riverine eco-system shall be studied through some expert agencies to assess impact on the environmental components.
- (ix) A mitigation plan based on the study to be submitted to the MOEF&CC Regional Office/SPCB and displayed on company's website.

#### **Agenda No.24.5**

**Basundhara Global Coal Washery Project of 5 MTPA of M/s Global Coal and Mining Pvt Ltd in an area of 10.11 ha located in Duduka Tehsil Hemgiri District Sundargarh (Odisha) - For extension of validity of ToR**

**[IA/OR/CMIN/20521/2013, F.No. J-11015/436/2013-IA.II(M)]**

**24.5.1** The proposal is for extension of ToR validity of Basundhara Global Coal Washery Project 5 MTPA Capacity in an area of 10.11 ha of M/S Global Coal And Mining Pvt Ltd located in Duduka Tehsil Hemgiri District Sundargarh(Odisha).

**24.5.2** The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

- (i) The ToR for the project was granted to the project vide letter No.J-11015/436/2013-IA-II(M) dated 30<sup>th</sup> December, 2014.
- (ii) The validity of ToR is up to 30<sup>th</sup> December, 2017. Since the Draft EIA/EMP report preparation is under process, as statutory clearances like acquisition of land, raw material linkage, water drawal permission etc are taking more time. Therefore requested for extension of ToR validity has been made in accordance to the Ministry's OM dated 29<sup>th</sup> August, 2017.

**24.5.3** During deliberations, the EAC noted that the ToR dated 30<sup>th</sup> December 2014 was initially valid for a period of 2 years, which was auto-extended up to 30<sup>th</sup> December, 2017 as per the provisions of this Ministry's OM dated 7<sup>th</sup> October, 2014. Now the instant proposal is for extending validity of the ToR for a further period of one year i.e. up to 30<sup>th</sup> December, 2018. The

committee found the request of the project proponent bonafide, and in conformity with this Ministry's OMs dated 7<sup>th</sup> October, 2014 & 29<sup>th</sup> August, 2017.

**24.5.4** *In view of the extant provisions facilitating extension of ToR validity beyond 3 years, and the submissions made by the project proponent in this regard, the EAC recommended for extension of validity of ToR for a further period of one year i.e. up to 30<sup>th</sup> December, 2018 with all terms and conditions remaining unchanged.*

**Agenda No.24.6**

**Expansion of Dudhichua Opencast Coal Mine Project from 15.5 MTPA to 20 MTPA (Normative)/25 MTPA (Peak) by M/s Northern Coalfields Limited in an area of 2390.722 ha located in Tehsil Waidhan District Singrauli (Madhya Pradesh) and Tehsil Dudhi District Sonebhadra (UP) - For ToR**

**[IA/UP/CMIN/71218/2017, F.No. J-11015/381/2008-IA.II(M)]**

**24.6.1** The proposal is for grant of ToR for expansion of Dudhichua Opencast Coal Mine Project from 15.5 MTPA to 20 MTPA (Normative)/25 MTPA (Peak) in an area of 2390.722 ha by M/s Northern Coalfields Limited located in Tehsil Waidhan District Singrauli(Madhya Pradesh) and Tehsil Dudhi District Sonebhadra (Uttar Pradesh).

**24.6.2** The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

- (i) The project was accorded EC vide letter no.J-11015/381/2008-IA.II (M) dated 10<sup>th</sup> December, 2008 for 15.5 MTPA capacity in project area 1762 ha.
- (ii) The present proposal is for ToR for expansion from 15.5 MTPA to 25 MTPA in an area of 2390.722 ha.
- (iii) The latitude and longitude of the project are 24<sup>0</sup>7'15.54"N to 24<sup>0</sup>10'56"N and 82<sup>0</sup>39'49.18"E to 82<sup>0</sup>43'19.75"E respectively.
- (iv) Joint Venture: No
- (v) Coal Linkage: Basket linkage mine for pit head power station of NTPC, UPRVUNL in Singrauli Coalfields and Power station in Western/ Northern India through their own MGR system and other consumers by Public Railway.
- (vi) Employment generated / to be generated: 3350 (Sanctioned manpower as per EPR)
- (vii) Benefits of the project: The project will be able to supply planned quantity of coal to pit head power stations of NTPC, UPRVUNL in Singrauli Coalfields and power stations in western/ Northern India through their own MGR system and other consumers by public railway system thus meeting the energy needs of the country
- (viii) The total land area is 2390.722ha. Mining lease area as per approved Mining Plan is 2390.722 Ha. The land usage of the project will be as follows:

**Pre-Mining:**

S.N.	LANDUSE	Within ML Area (ha)	Outside ML Area (ha)	TOTAL
1.	Agricultural land	806.913	Nil	806.913
2.	Forest land	1217.809	Nil	1217.809
3.	Wasteland	-	Nil	-
4.	Grazing land	-	Nil	-

5.	Surface water bodies	-	Nil	-
6.	Settlements	-	Nil	-
7.	Others (specify)	366.000	Nil	366
	TOTAL	2390.722	Nil	2390.722

Post- Mining:

S.N.	Land use during Mining	Land Use (ha)				TOTAL
			Water Body	Public Use	Undisturbed	
1.	External OB Dump	152.000	-	-	-	152.00
2.	Top soil Dump	Top soil will be completely used in reclamation of dumps.				
3.	Excavation	1316.000	324.0	-	-	1640.00
4.	Roads	-	-	174.00	-	174.00
4.	Built up area	-	-	198.00	-	198.00
5.	Green Belt	62.722	-	-	-	62.722
6.	Undisturbed Area	82.00	-	-	-	82.00
7.	Others	82.00	-	-	-	
	TOTAL	1694.722	324.0	372.00	-	2390.722

(ix) Total geological reserve is 361.34 MT (Balance as on 31.03.2016). The mineable reserve 320.01 MT (as on 31.03.2017), extractable reserve is 320.01 MT. The per cent of extraction would be 92.49%

(x) The coal grade is G-8, G-11 & (Avg.-G-10). The stripping ratio is 4.61 M<sup>3</sup>/t. The average Gradient is 2<sup>0</sup>-3<sup>0</sup>. There will be three seams with thickness ranging upto 25.75 m.

(xi) The total estimated water requirement is 2.60 MGD. The level of ground water ranges from 0.20 m to 20.85 m below ground level.

(xii) The Method of mining would be Opencast (Combined system of Mining deploying Dragline and Shovel- Dumper)

(xiii) There is one external OB dump with Quantity of 134 Mm<sup>3</sup> in an area of 152 ha (Old external dump already reclaimed. There is no external dumping in the proposed expansion project) with height of 90 meter above the surface level and two internal dump with Quantity of 1603.78 Mm<sup>3</sup> in an area of 1316 ha.

(xiv) The final mine void would be in 324.00 ha with depth varying from 30 m to 40 m. and the total quarry area is 1640 ha. Backfilled quarry area of 1316.00 ha shall be reclaimed with plantation. A void of 324 ha with depth varying from 30 to 40m which is proposed to be converted into a water body

(xv) Ambient Air quality Baseline data monitoring has been carried out during 15<sup>th</sup> March, 2016 to 15<sup>th</sup> June, 2016(Pre-monsoon season) and well documented. The results are found to be within permissible limits.

(xvi) The life of mine is 18 years (as on 01.04.2017).

(xvii) Transportation: From mine pit to crusher by rear dumpers, surface to siding by Coal Handling Plant and siding at loading by Automatic loading system through Silo.

(xviii) There is R & R involved. There are 502 PAFs for this expansion of project.

(xix) Cost: Total capital cost of the project is Rs. 2718.37 Crores. CSR Cost: As per CIL CSR policy of June 2014, the fund for the CSR should be allocated based on 2% of the average net profit of the company for the three immediate preceding financial year or Rs 2/- per tone of coal

production of previous year, whichever is higher. R&R Cost: 17.82 Crore. Environmental Management Cost :161.5278 Crore

- (xx) Water body: There is no river/Nallha flowing near or adjacent to the proposed mine area.
- (xxi) Approvals: Ground water clearance from CGWA obtained vide letter No. 21-4 (13)/NCR/CGWA/2007-626 dated 20.08.2007 for existing capacity. Board's approval obtained on 25.11.2017. Mining plan has been approved on 25.11.2017. Mine closure plan is an integral part of mining plan.
- (xxii) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xxiii) Forestry issues: Total forest land area involved is 1217.809 ha. FC granted for 750.00 Ha and for balance 467.809 Ha has to be acquired.
- (xxiv) Total afforestation plan shall be implemented covering an area of 1588 ha at the end of mining. Green Belt over an area of 120.722 ha. Density of tree plantation 2500 trees/ ha of plants.
- (xxv) There are no court cases/violation pending with the project proponent.
- (xxvi) Public Hearing was held in two districts. i.e. Sonebhadra (UP) on 10<sup>th</sup> October, 2006 and Singrauli (MP) on 20<sup>th</sup> January, 2007.
- (xxvii) The monitoring report on compliance status of existing EC conditions have been forwarded by the Regional Office, MoEFCC atBhopal vide letter dated 11<sup>th</sup> August, 2017.

#### **24.6.3** During deliberations on the proposal, the Committee noted the following:-

The proposal is for ToR to the expansion of Dudhichua Opencast Coal Mine by M/s Northern Coalfields Limited in an area of 2390.722 ha located in Tehsil Waidhan, District Singrauli (MP) and Tehsil Dudhi in District Sonebhadra (UP).

The total area includes 1217.809 ha of forest land. The project proponent has already obtained stage-2 forest clearance for 750 ha of forest land (For 555 ha in UP vide letter dated 30<sup>th</sup> July, 1990 and for 195 ha in MP vide letter dated 17<sup>th</sup> November, 2005) for its diversion to non-forestry purposes. Stage-1 Forest Clearance for the remaining forest land of 467.809 ha is presently under process.

Mining plan for the proposed expansion has been approved by the Board of M/s NCL in its meeting held on 25<sup>th</sup> November, 2017. Mine Closure Plan is an integral part of the Mining Plan.

The Ministry had earlier granted EC vide letter dated 10<sup>th</sup> December, 2008 for its capacity of 15.50 MTPA in an area of 1752 ha (includes 750 ha of forest land). The monitoring report on compliance status of EC conditions has been forwarded by the Regional Office vide their letter dated 11<sup>th</sup> August, 2017.

Though, the existing project falls in two districts i.e. Sonebhadra (UP) and Singrauli (MP). The Expansion proposed only in district Singrauli (MP) therefore the public hearing should be carried out only in District Singrauli (MP)

**24.6.4** *The EAC, after detailed deliberations, recommended the project for grant of ToR to the expansion of Dudhichua Opencast Coal Mine Project from 15.5 MTPA to 20 MTPA (Normative)/25 MTPA (Peak) in an area of 2390.722 ha by M/s Northern Coalfields Limited located in Tehsil Waidhan District Singrauli (Madhya Pradesh) and Tehsil Dudhi in District Sonebhadra (Uttar Pradesh), and for preparation of EIA/EMP reports with public consultation subject to compliance of all conditions as specified/notified in the standard ToR applicable for opencast coal mines, along with the additional conditions as under:-.*

- *Public consultation shall be carried out for the project site in District Singrauli (MP)*
- *For proper baseline air quality assessment, adequate monitoring stations as per the extant guidelines/norms, in the downwind areas need to be set up and included in the air quality modelling.*
- *Ecological restoration and mine reclamation plan to be prepared with local/native species found in the area.*
- *The mine is proposed for an increase in production by over 62%. As such, to know the pollution load bearing capacity of the surrounding ecosystem, a study of IRR in its ecological dimension may be arranged through an expert institution.*

### **Agenda No.24.7**

#### **Expansion of Srirampur Opencast Coal Mine-II from 2.50 MTPA to 3.50 MTPA by M/s The Singareni Collieries Company Limited with increase in ML area from 707.63 ha to 1604.11 ha located in District Mancherial (Telangana) - For ToR**

#### **[IA/TG/CMIN/71556/2017, F.No. J-11015/212/2007-IA.II(M)]**

**24.7.1** The proposal is for grant of ToR to the expansion of Srirampur Opencast-II from 2.50 MTPA to 3.50 MTPA along with increase in ML area from 707.63 ha to 1604.11 ha of M/s The Singareni Collieries Company Limited located in District Mancherial (Telangana).

**24.7.2** The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

- The project was accorded EC vide letter no. J-11015/212/2007-IA.II(M) dated 11<sup>th</sup> July, 2008.
- The latitude and longitude of the project are 18<sup>o</sup> 48' 02" to 18<sup>o</sup> 51' 18" (North) and 79<sup>o</sup> 28' 46" to 79<sup>o</sup> 31' 44" (East) respectively.
- Joint Venture: There is no Joint Venture
- Coal Linkage :Basket linkage
- Employment generated/to be generated: Direct 437, Outsourcing employees 750
- Benefits of the project: In addition to direct employment, indirect employment in contractual works, improvement in educational, transport, medical and other facilities, the proposal is to bridge the gap between coal demand and supply by extending the existing opencast projects
- The total land area is 1604.11 ha. Mining lease area as per approved Mining Plan is 1604.11ha. The land usage of the project will be as follows:

#### **Pre-Mining:**

Sl. No.	Type	Area in ha
1.	Forest Land	276.38 Ha
2.	Agricultural Land	1161.05 Ha
3.	Grazing Land	60.23 Ha
4.	Barren Land	41.91 Ha
5.	Built up area	39.15 Ha
6.	Water bodies	20.15 Ha
7.	Roads	5.24 ha

**Post- Mining:**

Sl. No.	Type	Total Area (Ha)	Agricultural (Ha)	Plantation (Ha)	Water Body (Ha)	Public/company use
1	<b>Excavation/Quarry Area:</b>					
	(a) Backfilled Area	286.68		286.68		
	(b) Excavated Void	360.74			360.74	
		<b>647.42</b>		<b>286.68</b>	<b>360.74</b> *	
2	Top Soil Dump including BC Soil storage dump yard	25.63	6.26	19.37		
3	External Dump	518.72		518.72		
4	<b>Safety Zone /Rationalisation area:</b>					
	(a) Safe barrier & Drain along the Quarry	94.68	5.92			64.66
	(i) Roads					9.53
	(ii) Garland drains				9.57	
	(iii) Settling ponds				5.00	
	(b) Safe barrier & Drain along the Ext dump :	183.00	159.16			
	(i) Roads					9.35
	(ii) Garland drains				10.49	
	(iii) Settling ponds				4.00	
		<b>277.68</b>	<b>165.08</b>		<b>29.06</b>	<b>83.54</b>
5	Road & Infrastructure area (Service Buildings and CHP)	13.23	13.23			
7	Embankment (Protection Bund along Godavari)	15.99		15.99		
8	Green Belt	52.00	52.00			
9	Others (Railway line)	53.44				53.44
	<b>Grand Total</b>	<b>1604.11</b>	<b>236.57</b> *	<b>840.76</b> *	<b>389.80</b>	<b>136.98</b>

**Note** - Actual area of plantation is 1077.33 ha, out which 236.57 ha of land shall be reclaimed for agricultural use, and balance area of 840.76 ha will be left as plantation area.

(viii) The total geological reserve is 136.59 MT. The mineable reserve 109.27 MT, extractable reserve is 86.41 MT. The per cent of extraction would be 63.26 %.

(ix) The coal grade is G-9. The stripping ratio is 9.98 Cum/tonne. The average Gradient is 1 in 5.8. There will be 10 seams with thickness ranging upto 5.28 m.

(x) Total estimated water requirement is 1508 m<sup>3</sup>/day. The level of ground water ranges from 1.24 m to 10.17 m.

(xi) The Method of mining would be Opencast.

(xii) There is one external OB dump with Quantity of 233.36 M.Cu.m of OB, 3.09 M.Cu.m. Top Soil in an area of 518.72 ha with height of 90 m above the ground and one internal dump with

Quantity of 503.67 Mm<sup>3</sup> in an area of 286.68 ha.

(xiii) The final mine void would be in 360.74 ha with depth of 350 m. Backfilled quarry area of 286.68 ha shall be reclaimed with plantation. A void of 360.74 ha with depth of 350 m is proposed to be converted into a water body.

(xiv) Ambient air quality data of winter (December, 2014 – February, 2015) has been documented and the results are within the prescribed limits.

(xv) The life of mine is 22 Years.

(xvi) Transportation: Coal transportation in pit through trucks from face to surface, surface to siding through trucks from pit head CHP to Area CHP, loading at siding a separate siding for dispatch of coal through rail is under construction.

(xvii) There is R & R involved. Four villages namely Tallapalli, Singapur, Guttedarpalli and Dubbapalli, which are falling within the Project Area, have to be evacuated. About 1209 PDF's and 653 PAF's belonging to these four villages have to be rehabilitated.

(xviii) Cost: Total capital cost of the project is Rs. 272.73 Crores. CSR Cost Rs. 5/- per tonne of coal production. R&R Cost 72.13 Crores. Environmental Management cost Rs. 4.80 Crores.

(xix) Water body: River Godavari is flowing in Northwest-Southeast direction on the South side of the mining lease area.

(xx) Approvals: Application is being submitted to State Ground Water Department for ground water clearance. However, ground water clearance is existing for SRP OC – II. Feasibility report has been approved in the SCCL Board of Directors meeting held on 04.11.2016 at Hyderabad. The mining plan and mine closure plan of the proposed project was approved by MoC, Gol Vide Lr. No. 13016/1/2017-PCA, dated 21<sup>st</sup> August 2017.

(xxi) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.

(xxii) Forestry issues: Total forest area involved for mining is 276.38 ha.

(xxiii) Total afforestation plan shall be implemented covering an area of 840.76 ha at the end of mining. Green Belt over an area of 52 ha. Density of tree plantation 2500 trees/ ha of plants.

(xxiv) There are no court cases/violation pending with the project proponent.

(xxv) Public Hearing shall be conducted after the grant of TOR.

#### **24.7.3** During deliberations on the proposal, the Committee noted the following:-

The proposal is for ToR to the project for expansion of Srirampur Opencast Coal Mine-II from 2.50 MTPA to 3.50 MTPA by M/s The Singareni Collieries Company Limited along with increase in ML area from 707.63 ha to 1604.11 ha located in District Mancherial (Telangana).

Total project area proposed now involves 276.38 ha of forest land. The project proponent has applied for obtaining stage-I forest clearance for diversion of the said forest land to non-forestry purposes on 25.10.2017.

Mining Plan and Mine Closure Plan for the proposed expansion was approved by Ministry of Coal vide their letter dated 21<sup>st</sup> August, 2017.

The project was earlier accorded EC on 11<sup>th</sup> July, 2008 by the Ministry for its capacity of 2.50 MTPA in a total area of 707.63 ha.

The Regional Office of the Ministry at Chennai has forwarded the monitoring report on compliance status of the conditions stipulated in the EC vide their letter dated 30<sup>th</sup> March, 2015.

One season baseline air quality data has been generated / collected during the December, 2014 - February, 2015.



**24.7.4** The EAC, after detailed deliberations, recommended the project for grant of ToR to the expansion of Srirampur Opencast Coal Mine-II from 2.50 MTPA to 3.50 MTPA by M/s The Singareni Collieries Company Limited with increase in mine lease area from 707.63 ha to 1604.11 ha located in District Mancherial (Telangana), and for preparation of EIA/EMP reports with public consultation, subject to compliance of all terms and conditions as specified/notified in the standard ToR applicable for opencast coal mines, along with the additional conditions as under:-

- For proper baseline air quality assessment, adequate monitoring stations as per the extant guidelines/norms, in the downwind areas need to be set up and included in the air quality modelling.
- Ecological restoration and mine reclamation plan to be prepared with local/native species found in the area.

### **Agenda No.24.8**

**Cluster IX (Group of 6 Mines) with peak production capacity of 8.512 MTPA in combined Cluster ML area of 1942.12 ha of M/s Bharat Coking Coal Limited located in Jharia Coal field, District Dhanbad (Jharkhand) - Amendment in EC**

**[IA/JH/CMIN/8452/2010, F.No.J-11015/307/2010-IA.II(M)]**

**24.8.1** The proposal is for amendment in environmental clearance dated 21<sup>st</sup> May, 2013 for the Cluster IX (Group of 6 Mines) with a peak production of 8.512 MTPA in combined Cluster ML area of 1942.12 ha of M/s Bharat Coking Coal Limited located in Jharia Coal field District Dhanbad (Jharkhand).

**24.8.2** The project was granted environmental clearance by the Ministry vide letter No. J-11015/307/2010-IA.II(M) dated 21<sup>st</sup> May, 2013. The project proponent has now requested for amendment in the EC in respect of capacities of individual mines in the cluster and lease hold areas due to different reasons, with the details as under:-

S. No.	Mine	Status	As per existing EC				Modification sought					
			Normative Capacity(MTY)	Peak Capacity (MTY)	Lease Hold Area (Ha)	Life (years)	Sl No	Name of the Mine	Production Capacity (MTY)		Lease Hold Area(Ha)	Life(Yrs)
									normative	peak		
1	Lodna UG	In operation	0.115	0.150	391.64	30	1	Amalgamated Joyrampur Colliery(OC)	2.512	3.25	1186.97	25
2	Bagdigi UG	In operation	0.110	0.143	61.0	30						
3	Joyrampur UG	In operation	0.153	0.199	89.04	30						
4	Bararee UG	In operation	0.170	0.221	475.0	30						

		tion										
5	Jealgora UG(close d for operation , mine not closed)		Nil	nil	138.0( will be close d after fire dealin g)	-						
6	NT/ST Expan. OCP	Propo sed	6.0	7.8	755.15	30	2	NT-ST expa nsion OCP (in oper ation )	6.0	7.8	755 .15	26
	total		6.548	8.512	1942.12*					8.512**	1942.12	

\*Inclusive of 14.24 ha of North Tisra UG & 18.05 ha of Jeenagora OCP.\*\*Peak of Cluster will remain same, as peak of individual will be achieved in different years.

**24.8.3** During deliberations, the EAC noted the following:-

The proposal is for amendment in environmental clearance dated 21<sup>st</sup> May, 2013 for the Cluster IX (Group of 6 Mines) of M/s Bharat Coking Coal Limited located in Jharia Coal Field, District Dhanbad (Jharkhand), in respect of restructuring of individual mines therein and their capacities, without any change in the peak production capacity of 8.512 MTPA and the total area of 1942.12 ha of the Cluster.

Revised Mining Plan for the changed capacities of individual mines has been approved by the Board of M/s BCC Ltd on 9<sup>th</sup>December, 2017.

**24.8.4** *The EAC, after deliberations, recommended the proposal for amendment in the environmental clearance granted vide letter dated 21<sup>st</sup> May, 2013, as per the details mentioned in the table in para 24.8.2 above. All other terms and conditions stipulated in the EC dated 21<sup>st</sup> May, 2013 shall remain unchanged.*

#### **Agenda No.24.9**

**Expansion of Krishnashila OCP from 6.25 MTPA to 7 MTPA of M/s Northern Coalfields Limited in an area of 851.78 ha located in Tehsil Dudhi, District Sonebhadra (Uttar Pradesh) - For EC [IA/UP/CMIN/72106/2018, F.No. J-11015/243/2011-IA.II(M)]**

**24.9.1** The proposal is for grant of EC to the project for expansion of Krishnashila OCP from 6.25 MTPA to 7 MTPA of M/s Northern Coalfields Limited in an area of 851.78 ha located in Tehsil Dudhi, District Sonebhadra (Uttar Pradesh).

**24.9.2** The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:-

- (i) The project was accorded EC vide letter no. J-11015/243/2011-IA.II (M) dated 13<sup>th</sup> February, 2017 for expansion of project from 5 MTPA to 6.25 MTPA under in a total area of 851.78 ha.
- (ii) The latitude and longitude of the project are 24°07'14.77" N - 24°09'3.33" N and 82° 43'59.78" E - 82°46'22.92" E respectively.
- (iii) Joint Venture: There is no joint venture.
- (iv) Coal Linkage: Renusagar Thermal Power of M/s Hindalco Industries by belt pipe conveyor (BPC) system and basket linkage.
- (v) Employment generated / to be generated: 634 Nos
- (vi) Benefits of the project: The project will be able to supply planned quantity of coal to Renusagar Thermal Power of M/s Hindalco Industries by belt pipe conveyor system thus meeting the energy needs of the country and other consumers by rail/road
- (vii) The total land area is 851.78 ha. Mining lease area as per approved Mining Plan is 851.78 ha. The land usage of the project will be as follows:

**Pre-Mining:**

S. No.	LAND USE	Within ML Area (Ha)	Outside ML area (Ha)	Total
1.	Tenancy Land(Agricultural	10.29	NIL	10.29
2.	Forest Land	720.89	NIL	720.89
3.	Wasteland	-	NIL	-
4.	Grazing land	-	NIL	-
5.	Surface water bodies	-	NIL	-
6.	Settlements	-	NIL	-
7.	Others (Government land)	120.60	NIL	120.60
<b>Total</b>		<b>851.78</b>	<b>NIL</b>	<b>851.78</b>

**Post- Mining:**

S.No.	Land use during Mining	Land Use (ha)				
		Plantation	Water Body	Public Use	Others	TOTAL
1	External OB dump	164.80	-	-	-	164.80
2	Top soil dump	Top soil will be completely used in reclamation of dumps.				
3	Excavation	435.75	34.05	-	-	469.80
4	Infrastructures (Workshop, CHP, Admn. Building & Roads)	-	-	19.75	-	19.75
5	Residential & Greenbelt	57.43	-	-	-	57.43
6	Undisturbed area (Forest land in Safety Zone)	-	-	-	140.00	140.00
<b>Total</b>		<b>657.98</b>	<b>34.05</b>	<b>19.75</b>	<b>140.00</b>	<b>851.78</b>

Core area : 851.78 Ha

- (viii) The total geological reserve is 102.24 MT. The mineable reserve 99.12 MT, extractable reserve is 99.12 MT. The per cent of extraction would be 96.94 %.
- (ix) The coal grade is G-8. The stripping ratio is 3.38 Cum/tonne. The average Gradient is 2 to 3 degree. There will be three seams with thickness ranging upto 25 m.
- (x) The total estimated water requirement is 2069 m<sup>3</sup>/day. The level of ground water ranges from 0.40 m to 13.79 m below ground level .
- (xi) The Method of mining would be Opencast.
- (xii) There are two external OB dumps with Quantity of 61.37 Mm<sup>3</sup> in an area of 164.80 ha with height of 90meter above the surface level and two internal dump with Quantity of 273.97 Mm<sup>3</sup> in an area of 435.75 ha.
- (xiii) The final mine void would be in 34.05 ha with depth varying from 30 to 40 m. and the Total quarry area is 469.80 ha. Backfilled quarry area of 435.75 ha shall be reclaimed with plantation. A void of 34.05 ha with depth varying from 30 to 40 m which is proposed to be converted into a water body
- (xiv) The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- (xv) The life of mine is 10 Years.
- (xvi) **Transportation:**
  - a) From Inpit to surface/siding by tippers & Dumpers and loading at siding into railway Wagon by pay loaders.
  - b) From Surface to Renu Sagar Power Division of M/s Hindalco Industries Limited (Consumer) by Belt Pipe Conveyor.
- (xvii) There is no R & R involved. There are no PAFs.
- (xviii) Cost: Total capital cost of the project is Rs. 741.62 Crores. CSR Cost 2% of the average net profit of the company for the three immediate preceding financial years. R&R Cost Nil. Environmental Management Cost Rs. 23.01 Crores.
- (xix) Water body: There is no river/Nallah flowing adjacent to the proposed mine site.
- (xx) Approvals: Board's approval obtained on 26.11.2017. Mining plan has been approved on 26.11.2017. Mine closure plan is an integral part of mining plan.
- (xxi) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xxii) Forestry issues: There is 720.89 ha of forest land involved in the project area for which Stage –II FC has been obtained.
- (xxiii) Total afforestation plan shall be implemented covering an area of 657.26 ha at the end of mining. Green Belt over an area of 57.43 ha. Density of tree plantation 2500 trees/ ha of plants.
- (xxiv) There are no court cases/violation pending with the project proponent for proposed expansion.
- (xxv) Last public hearing was held on 6th October, 2012. The issues raised during the public hearing included employment, compensation, controlled blasting, effect on flora and fauna etc.

**24.9.3** During deliberations on the proposal, the Committee noted the following:-

The proposal is for environmental clearance to the project for expansion of Krishnashila Opencast Coal Mine from 6.25 MTPA to 7MTPA by M/s Northern Coalfields Limited in an area of 851.78 ha located in Tehsil Dudhi District Sonbhadra (Uttar Pradesh).

Total forest land involved is 720.89 ha in the total/ML area of 851.78 ha. Stage-I & stage- II FC for the entire forest land has been obtained for its diversion to non-forestry purposes.

Mining Plan for the 7 MTPA was approved by NCL Board on 26<sup>th</sup> November, 2017. Mine closure plan is an integral part of the Mining Plan.

Earlier, the Environmental Clearance to Krishnashila Opencast Coal Mine for its expansion from 4 MTPA to 5 MTPA in mine lease area of 851.78 ha, was accorded by the Ministry vide letter dated 22<sup>nd</sup> August, 2014, based on public hearing conducted on 6<sup>th</sup> October, 2012. Main issues raised during the public hearing included concerns regarding providing employment of displaced persons, compensation under R&R policy, repairing of houses damaged due to blasting, effect on flora and fauna of the surrounding.

Further expansion of the project from 5 MTPA to 6.25 MTPA in a total area of 851.78 ha was accorded environmental clearance by the Ministry vide letter dated 13<sup>th</sup> February, 2017 as per the provisions contained in para 7(ii) of the EIA Notification, 2006.

The present proposal is for expansion from 6.25 MTPA to 7 MTPA in the same area of 851.78 ha seeking environmental clearance without conducting the public hearing in view of this Ministry's OM dated 15<sup>th</sup> September, 2017. The said OM provides for exemption from public hearing in cases where the expansion in production capacity up to 40% is envisaged in 2-3 phases, subject to fulfilment of certain parameters of environmental concern. In compliance of the said OM, the status is reported to be as under:-

S.No.	Condition in the OM	Status
1.	Predicted air quality parameters are within the prescribed norms	The AQIP modelling has been carried out for incremental capacity of 0.75 MTPA (i.e. from present capacity of 6.25 MTPA to capacity of 7MTPA) using FDM Modelling software. The Ambient air quality within limit as per GSR742(E). Additional mitigative measures like <ol style="list-style-type: none"> <li>1. Dust extractor in drill machines has been provided.</li> <li>2. Green belt is being developed</li> <li>3. Coal transportation through belt pipe conveyor and rail.</li> <li>4. Coal production is being done by deploying 01 no. Surface Miner, eliminating requirement of drilling &amp; blasting.</li> <li>5. 45 nos. of fixed sprinklers has been provided over a length of 01 Km and 04 nos. departmental mobile water sprinklers, 10 nos. mobile water sprinklers by O/s agencies has been provided.</li> </ol>
2.	Coal transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads.	Belt Pipe Conveyor of capacity 660 TPH for coal transportation with a length of 4.2 Km has been provided. Additionally, a Coal Handling Plant of 4.5 MT is under construction. At present, coal is being despatched through Rail by wharf Wall in addition to Belt Pipe Conveyor.
3.	Coal mining is done through deployment of surface miners, replacing three dust generating operations of the conventional	One surface miner has already been deployed and in operation.

	mining system namely drilling, blasting and crushing in one go.	
4.	Public hearing already conducted for the total mine lease area involved and no more area is required for the proposed expansion.	Public hearing for Krishnashila OCP Expansion (5.0 Mty) was held on 06.10.2012 at workers recreation centre, Bina OCP of M/s NCL, District-Sonebhadra for mine lease area of 851.78 ha.
5.	Compliance status of EC conditions monitored by the concerned Regional Office of this ministry is found to be satisfactory.	The Mine was inspected by the regional office of MoEF&CC on 19.11.2017. Certified compliance report was given vide letter IV/Env/UP/Mine-52/412/2017/353 dated 04.01.2018.
6.	Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance, etc are satisfactorily fulfilled.	Consent to Establish for 6.25 MTPA capacity from UPPCB has been obtained vide letter no. F98263/C-2/NOC/4204/17 dated 16.03.2017. Consent to Operate for 6.25 MTPA capacity has been obtained vide letter nos. F98526 and F98527 dated 21.03.2017. Mining Plan and the Mine Closure Plan for 7.0 Mty approved by NCL Board on 26 <sup>th</sup> Nov 2017. Forest Clearance: No additional Forest Land involved.

The AQIP analysis using FDM Modelling revealed that the maximum incremental concentration for PM<sub>10</sub> due to the proposed expansion (capacity enhancement of 0.75 MTPA) will be 63.527 µg/m<sup>3</sup> at one of the monitoring station 'Out sourcing Camp' in the work zone, with all the air pollution control measures in place. These include water sprinkling/ spraying on haul roads and loading sites, plantation on OB dumps, green belt development etc.

The maximum concentration (GLC) of PM<sub>10</sub> is reported to be 293 µg/m<sup>3</sup>. It has been observed that due to the proposed expansion, increase in pollutant levels is marginal and absolute values are well within the permissible limits notified by the Ministry vide Notification No.GSR 742(E) 2000, applicable for work zone in the coal mines/fields, including Singrauli, although commenced their mining operations after 25<sup>th</sup> September, 2000.

Different works taken up under the CSR during last four years are reported to be as under:-

Sector	Financial year			
	2014-15	2015-16	2016-17	2017-18 (till now)
Safe drinking water	32.46	103.33	15.14	17.65
Ecological Balance	0.00	0.00	0.00	0.00
Construction of Road	0.00	85.57	2.24	0.00
Education	0.00	0.00	2.704	2.42
Electrification & Infrastructure Development	0.00	0.00	6.88	14.11
Health & Sanitation	0.00	0.00	0.636	0.00
Promotion of Sports	0.00	0.00	0.00	2.5
Others	0.00	0.00	0.00	
Total Amount (In lakhs of Rs.)	32.46	188.86	27.60	36.68

The Regional Office of the Ministry at Lucknow, vide their letter dated 4<sup>th</sup> January, 2017, has forwarded the monitoring report on compliance status of the conditions stipulated in the last EC dated 13<sup>th</sup> February, 2017 (based on the site visit carried out on 19<sup>th</sup> December, 2017). All the conditions were found to be complied with and/or agreed to comply with.

Consent to Operate for the Krishnashila Opencast Coal Mine with its production capacity of 6.25 MTPA has been obtained from the Uttar Pradesh Pollution Control Board vide letter nos: F98526 and F98527 dated 21.03.2017.

**24.9.4** *The EAC, after deliberations, recommended the project for grant of environmental clearance to the project for expansion of Krishnashila Opencast Coal Mine from 6.25 MTPA to 7 MTPA by M/s Northern Coalfields Limited in an area of 851.78 ha located in Tehsil Dudhi, District Sonbhadra (Uttar Pradesh) for a period of one year, subject to the compliance of terms and conditions as applicable, and the additional conditions as under:-*

- (i) Adequate ambient air quality monitoring stations shall be established in consultation with the State Pollution Control Board, and regular monitoring shall be carried out for particulate emissions (both PM<sub>10</sub> & PM<sub>2.5</sub>), SO<sub>2</sub> & NO<sub>x</sub>. The monitoring results for the period during summer season (April-June, 2017) shall be submitted to the State PCB and the Regional Office of this Ministry.*
- (ii) The EAC shall review compliance of the actions taken on observations of the Regional Office before December, 2018, and make its recommendations for continuance of the project thereafter. Also, based on the monitoring results, the Committee shall examine adequacy and efficacy of the pollution control measures and its impact on ambient air quality.*
- (iii) To control the dust generation at source, the crusher and belt pipe conveyors shall be provided with mist type sprinklers.*
- (iv) Mitigative measures to be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers, preferably mist type mobile sprayers/sprinklers.*
- (v) Regular monitoring of occupational safety and other health hazards of all employees including outsourced workers and the corrective actions shall be ensured. Report in this regard be submitted to the Regional Office of the Ministry.*
- (vi) Controlled blasting techniques should be adopted to control ground vibration and fly rocks.*
- (vii) Persons of nearby villages shall be given training for their livelihood and skill development.*
- (viii) To ensure health and welfare of nearby villages, regular medical camps shall be organized and report shall be regularly submitted to the Regional Office of the Ministry.*

## **Agenda No.24.10**

### **Discussion on any other item**

Standardization of EC conditions

The Committee desired to have one full day discussion to finalize Standardization of EC conditions, preferably on any working day in January, 2018.

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**PARTICIPANTS IN 24<sup>th</sup> EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 11<sup>th</sup> January. 2018 ON COAL SECTOR PROJECTS.**

Sl. No.	List Of Participants Expert Appraisal Committee (Coal Mining)	
1.	Dr. Navin Chandra	Chairman
2.	Dr. Narmada Prasad Shukla	Member
3.	Shri N.Mohan Karnat	Member
4.	Dr.Sharachchandra Lele	Member
5.	Dr. Jai Krishna Pandey	Member
6.	Dr. Gururaj P. Kundargi	Member
7.	Shri S D Vora	Member
8.	Dr.R.K.Giri	Member
9.	Shri S.K.Srivastava	Member Secretary



**PARTICIPANTS IN 24<sup>th</sup> EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 11<sup>th</sup> January. 2018 ON COAL SECTOR PROJECTS.**

**24.1 Lakhanpur OCP of M/s Mahanadi Coalfields Limited**

**24.2 Basundhara (West) OCP of M/s Mahanadi Coalfields Limited**

1. Shri O.P.Singh
2. Shri R.P.Gupta
3. Shri S.K.Srivastava
4. Shri R.C.Sahoo
5. Shri A.K.Samantaray
6. Shri C.Jagadev
7. Shri P.C.Jha
8. Shri N.K.Singh
9. Shir Sanay Kumar

**24.3 Gondegaon extension Coal Mine of M/s Western Coalfields Limited**

1. Shri T.N.Jha
2. Shri R.M Wanre
3. Shri Kaushik Chakrovorti
4. Shri S.C.Shankar
5. Shri U.S.Shah
6. Moh. Nooruddin
7. Shri V.K.Nagda

**24.4 Sayal D OCP of M/s Central Coalfields Limited.**

1. Shri A.K.Mishra
2. Shri A.K.Das
3. Shri S.Singh
4. Shri M.Kumar
5. Shri P.Prasad
6. Shri J Chakrabarty
7. Shri V.Singh
8. Shri Laxmideep G
8. Shri Pushkar

**24.5 Basundhara Global of M/s Global Coal & Mining**

1. Shri Kartikeshwar Patra

**24.6 Dudhichua Opencast Coal Mine of M/s Northern Coalfields Limited.**

**24.9 Krishnashila OCP of M/s Northern Coalfields Limited**

1. Shri G.Pandey
2. Shri R.K.Mchepalno
3. Shri Atal Bihari
4. Shri P.C.Jha
5. Shri Prem Prakash Kumar
6. Shri V.N.Dupattawala
7. Shri Omveer Singh Jadon
8. Shri G.Kumar
9. Shri Rakesh Kumar
10. Shri R.B.Prasad
11. Shri M.Kumar Prasad

**24.7 Srirampur Opencast of M/s Singareni Collieries Company Limited.**

1. Shri B.Bhaskar Rao
2. Shri P Sathaiah
3. Shri P.Ravi Kiran
4. Shri R.Bhaskar

**24.8 Cluster IX (Group of 6 Mines) of M/s Bharat Coking Coal Limited**

1. Shri Kishore Chaudhary
2. Shri Kalyanjee Prasad
3. Shri EVR Raju
4. Shri Kumar Ranjeev
5. Shri Rajiv Kumar Sinha
6. Shri Mariya Ahsan
7. Shri K. Vaibhav
8. Shri Abhisht Raj

**24.10 Discussion on any other item**

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### Generic ToR for coal washery

- i. Siting of washery is critical considering to its environmental impacts. Preference should be given to the site located at pit head; in case such a site is not available, the site should be as close to the pit head as possible and coal should be transported from mine to the washery preferably through closed conveyer belt to avoid air pollution.
- ii. The washery shall not be located in eco-sensitive zones areas.
- iii. The washery should have a closed system and zero discharge. The storm drainage should be treated in settling ponds before discharging into rivers/streams/water bodies.
- iv. A thick Green belt of about 50 m width should be developed surrounding the washery.
- v. A brief description of the plant alongwith a layout, the specific technology used and the source of coal should be provided.
- vi. The EIA-EMP Report should cover the impacts and management plan for the project of the capacity for which EC is sought and the impacts of specific activities, including the technology used and coal used, on the environment of the area (within 10km radius), and the environmental quality of air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts for the rated capacity. Cumulative impacts for air and water should be a part of EIA in case coal mine, TPP and other washeries are located within 10km radius. The EIA should also include mitigative measures needed to minimize adverse environmental impacts.
- vii. A Study Area Map of the core zone as well as the 10km area of buffer zone showing major industries/mines and other polluting sources should be submitted. These maps shall also indicate the migratory corridors of fauna, if any and areas of endangered fauna; plants of medicinal and economic importance; any ecologically sensitive areas within the 10 km buffer zone; the shortest distance from the National Park/WL Sanctuary Tiger Reserve, etc. alongwith the comments of the Chief Wildlife Warden of the State Govt.
- viii. Data of one-season (non-monsoon) primary- base-line data on environmental quality of air (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub> and NO<sub>x</sub>, noise, water (surface and groundwater), soil be submitted.
- ix. The wet washery should generally utilize mine water only. In case mine water is not available, the option of storage of rain water and its use should be examined. Use of surface water and ground water should be avoided.
- x. Detailed water balance should be provided. The break-up of water requirement as per different activities in the mining operations vis-a-vis washery should be given. If the source of water is from surface water and/or ground water, the same may be justified besides obtaining approval of the Competent Authority for its drawl.
- xi. The entire sequence of mineral production, transportation, handling, transfer and storage of mineral and waste, if any, and their impacts on air quality should be shown in a flow chart with specific points where fugitive emissions can arise and specific pollution control/mitigative measures proposed to be put in place. The washed coal and rejects should be transport by train as far as possible. Road transport of washed coal and rejects should generally be avoided. In case, the TPP is within 10km radius, it should be through conveyer belt. If transport by rail is not feasible because of the topography of the area, the option for transport by road be examined in detail and its impacts along with the mitigation measures should be clearly brought out in EIA/EMP report.
- xii. Details of various facilities proposed to be provided in terms of parking, rest areas, canteen etc. to the personnel involved in mineral transportation, workshop and effluents/pollution load from these activities should be provided.
- xiii. Impacts of CHP, if any, on air and water quality should also be spelt out alongwith

- Action Plan.
- xiv. O.M.no.J-II0I3/25/2014-IA.I dated 11<sup>th</sup> August, 2014 to be followed with regard to CSR activities.
  - xv. Details of Public Hearing, Notice(s) issued in newspapers, proceedings/minutes of Public Hearing, points raised by the general public and response/commitments made by the proponent along with the Action Plan and budgetary provisions be submitted in tabular form. If the Public Hearing is in the regional language, an authenticated English translation of the same should be provided. Status of any litigations/ court cases filed/pending, if any, against the project should be mentioned in EIA.
  - xvi. Analysis of samples indicating the following be submitted:
    - Characteristics of coal prior to washing (this includes grade of coal, other characteristics of ash, S and heavy levels of metals such as Hg, As, Pb, Cr etc).
    - Characteristics and quantum of coal after washing.
    - Characteristics and quantum of coal rejects.
  - xvii. Details of management/disposal/use of coal rejects should be provided. The rejects should be used in TPP located close to the washery as far as possible. If TPP is within a reasonable distance (10 km), transportation should be by conveyor belt. If it is far away, the transportation should be by rail as far as possible.
  - xviii. Copies of MOU/Agreement with linkages (for stand-alone washery) for the capacity for which EC is being sought should be submitted.
  - xix. Corporate Environment Responsibility:
    - a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
    - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
    - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
    - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
  - xx. A detailed action Plan for Corporate Social Responsibility for the project affected people and people living in and around the project area should be provided.
  - xxi. Permission of drawl of water shall be pre-requisite for consideration of EC.
  - xxii. Wastewater /effluent should confirm to the effluent standards as prescribed under Environment (Protection) Act, 1986
  - xxiii. Details of washed coal, middling and rejects along with the MoU with the end-users should be submitted.

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**GENERIC TOR FOR AN OPENCAST COALMINE PROJECT for EC**

- (i) An EIA-EMP Report shall be prepared for..... MTPA rated capacity in an ML/project area of.....ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.
- (ii) An EIA-EMP Report would be prepared for..... MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for..... MTPA of coal production based on approved project/Mining Plan for.....MTPA. Baseline data collection can be for any season (three months) except monsoon.
- (iii) A toposheet specifying locations of the State, District and Project site should be provided.
- (iv) A Study area map of the core zone (project area) and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries/mines and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given.
- (v) Land use map (1: 50,000 scale) based on a recent satellite imagery of the study area may also be provided with explanatory note on the land use.
- (vi) Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.
- (vii) A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.
- (viii) A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channelling of the water courses, etc., approach roads, major haul roads, etc should be indicated.
- (ix) In case of any proposed diversion of nallah/canal/river, the proposed route of diversion /modification of drainage and their realignment, construction of embankment etc. should also be shown on the map as per the approval of Irrigation and flood control Department of the concerned state.
- (x) Similarly if the project involves diversion of any road/railway line passing through the ML/project area, the proposed route of diversion and its realignment should be shown in the map along with the status of the approval of the competent authority.
- (xi) Break up of lease/project area as per different land uses and their stage of acquisition should be provided.

LANDUSE DETAILS FOR OPENCAST PROJECT should be given as per the following table:

Sl. No.	Landuse	Within ML area (ha)	Outside ML area (ha)	Total
1.	Agricultural land			
2.	Forest land			
3.	Wasteland			
4.	Grazing land			
5.	Surface water bodies			
6.	Settlements			
7.	Others (specify)			
	TOTAL			

- (xii) Break-up of lease/project area as per mining plan should be provided.
- (xiii) Impact of changes in the land use due to the project if the land is predominantly agricultural land/forestland/grazing land, should be provided.
- (xiii) One-season (other than monsoon) primary baseline data on environmental quality - air (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, NO<sub>x</sub> and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xiv) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
- (xv) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.
- (xvi) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
- (xvii) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xviii) Impact of mining on hydrology, modification of natural drainage, diversion and

channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.

- (xix) Detailed water balance should be provided. The break-up of water requirement for the various mine operations should be given separately.
- (xx) Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users in the upstream and downstream of the project site. should be given.
- (xxi) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xxii) Impact of blasting, noise and vibrations should be given.
- (xxiii) Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided.
- (xxiv) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xxiv) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xxv) Details of waste OB and topsoil generated as per the approved calendar programme, and their management shown in figures as well explanatory notes tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use should be given. OB dump heights and terracing based on slope stability studies with a max of 28° angle as the ultimate slope should be given. Sections of final dumps (both longitudinal and cross section) with relation to the adjacent area should be shown.
- (xxvi) Efforts be made for maximising progressive internal dumping of O.B., sequential mining , external dump on coal bearing area and later rehandling into the mine void.--to reduce land degradation.
- (xxvii) Impact of change in land use due to mining operations and plan for restoration of the mined area to its original land use should be provided.
- (xxviii) Progressive Green belt and ecological restoration /afforestation plan (both in text, figures and in the tabular form as per the format of MOEFCC given below) and selection of species (native) based on original survey/land-use should be given.

Table 1: Stage-wise Landuse and Reclamation Area (ha)

S.N.	Land use Category	Present (1 <sup>st</sup> Year)	5 <sup>th</sup> Year	10 <sup>th</sup> Year	20 <sup>th</sup> Year	24 <sup>th</sup> Year (end of mine life)*
1.	Backfilled Area(Reclaimed with plantation)					
2.	Excavated Area					

	(not reclaimed)/void					
3.	External OB dump Reclaimed with plantation)					
4.	Reclaimed Top soil dump					
5.	Green Built Area					
6.	Undisturbed area (brought under plantation)					
7.	Roads (avenue plantation)					
8.	Area around buildings and Infrastructure					
	TOTAL					

\* As a representative example

Table 2 : Stage Wise Cumulative Plantation

S.N.	YEAR*	Green Belt	External Dump	Backfilled Area	Others(Undisturbed Area/etc)	TOTAL
1.	1 <sup>st</sup> year					
2.	3 <sup>rd</sup> year					
3.	5 <sup>th</sup> year					
4.	10 <sup>th</sup> year					
5.	15 <sup>th</sup> year					
6.	20 <sup>th</sup> year					
7.	25 <sup>th</sup> year					
8.	30 <sup>th</sup> year					
9.	34 <sup>th</sup> year(end of mine life)					
10.	34- 37 <sup>th</sup> Year (Post-mining)					

\* As a representative example

(xxix) Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.

Table 3: Post-Mining Landuse Pattern of ML/Project Area (ha)

S.N.	Land use	Land Use (ha)
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during Mining		Plantation	Water Body	Public Use	Undisturbed	TOTAL
1.	External OB Dump					
2.	Top soil Dump					
3.	Excavation					
4.	Roads					
5.	Built up area					
6.	Green Belt					
7.	Undisturbed Area					
	TOTAL					110

- (xxx) Flow chart of water balance should be provided. Treatment of effluents from workshop, township, domestic wastewater, mine water discharge, etc. should be provided. Details of STP in colony and ETP in mine should be given. Recycling of water to the max. possible extent should be done.
- (xxxi) Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given.
- (xxxii) Risk Assessment and Disaster Preparedness and Management Plan should be provided.
- (xxxiii) Integration of the Env. Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.
- (xxxiv) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxxv) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
- (xxxvi) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
- (xxxvii) Corporate Environment Responsibility:
- The Company must have a well laid down Environment Policy approved by the Board of Directors.
  - The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
  - The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
  - To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- (xxxviii) Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of

the same should be provided.

- (xxxix) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
- (xl) Status of any litigations/ court cases filed/pending on the project should be provided.
- (xli) Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.
- (xlii) Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.

FOREST CLEARANCE: Details on the Forest Clearance should be given as per the format given:

TOTAL ML/PROJECT AREA (ha)	TOTAL FORESTLAND (ha)	Date of FC	Extent of forestland	Balance area for which FC is yet to be obtained	Status of appl for. diversion of forestland
		If more than , provide details of each FC			

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**GENERIC TORs FOR AN UNDERGROUND COALMINE PROJECT**

- (i) An EIA-EMP Report shall be prepared for..... MTPA rated capacity in an ML/project area of.....ha based on the generic structure specified in Appendix III of the EIA Notification, 2006.
- (ii) An EIA-EMP Report would be prepared for..... MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for..... MTPA of coal production based on approved project/Mining Plan for.....MTPA. Baseline data collection can be for any season (three months) except monsoon.
- (iii) A Study area map of the core zone (project area) and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries/mines and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given.
- (iv) Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.
- (v) A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.
- (vi) A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channelling of the water courses, etc., approach roads, major haul roads, etc should be indicated.
- (vii) Original land use (agricultural land/forestland/grazing land/wasteland/water bodies) of the area should be provided as per the tables given below. Impacts of project, if any on the land use, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations should be analyzed. Extent of area under surface rights and under mining rights should be specified.

S.N	ML/Project Land use	Area under Surface Rights(ha)	Area Under Mining Rights (ha)	Area under Both (ha)
1.	Agricultural land			
2.	Forest Land			
3.	Grazing Land			
4.	Settlements			
5.	Others (specify)			

## Area under Surface Rights

S.N.	Details	Area (ha)
1.	Buildings	
2.	Infrastructure	
3.	Roads	
4.	Others (specify)	
	TOTAL	

- (viii) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.
- (ix) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
- (x) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xi) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xii) One-season (other than monsoon) primary baseline data on environmental quality - air (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, NO<sub>x</sub> and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xiii) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
- (xiv) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term

monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.

- (xv) Study on subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
- (xvi) Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.
- (xvii) Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.
- (xviii) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xix) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xx) Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.
- (xxi) The number and efficiency of mobile/static water sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.
- (xxii) Impacts of CHP, if any on air and water quality should be given. A flow chart showing water balance along with the details of zero discharge should be provided.
- (xxiii) Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.
- (xxiv) Greenbelt development should be undertaken particularly around the transport route and CHP. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.
- (xxv) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxvi) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
- (xxvii) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.

(xxviii) Corporate Environment Responsibility:

- a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
- b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
- c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
- d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

(xxix) Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.

(xxx) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.

(xxxi) Status of any litigations/ court cases filed/pending on the project should be provided.

(xxxii) Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.

(xxxiii) Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.

Details on the Forest Clearance should be given as per the format given:

Total ML /Project Area (ha)	Total Forest Land (ha)	Date of FC	Extent of Forest Land	Balance area for which FC is yet to be obtained	Status of appl. For diversion of forest land
		If more than one provide details of each FC			

**GENERIC TORs FOR AN OPENCAST-CUM-UNDERGROUND COALMINE PROJECT**

- (i) An EIA-EMP Report would be prepared for a combined peak capacity of .....MTPA for OC-cum-UG project which consists of .... MTPA in an ML/project area of ..... ha for OC and .... MTPA for UG in an ML/project area of ..... ha based on the generic structure specified in Appendix III of the EIA Notification 2006.
- (ii) An EIA-EMP Report would be prepared for..... MTPA rated capacity to cover the impacts and environment management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modeling for..... MTPA of coal production based on approved project/Mining Plan for.....MTPA. Baseline data collection can be for any season (three months) except monsoon.
- (iii) The ToRs prescribed for both opencast and underground mining are applicable for opencast – cum-underground mining.

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23/01/2018

[https://mail.gov.in/iwc\\_static/layout/shell.html?lang=en&3.0.1.2.0\\_15121607](https://mail.gov.in/iwc_static/layout/shell.html?lang=en&3.0.1.2.0_15121607)

Subject: **Minutes of the 24th EAC (Coal)**

To: "S.K Srivastava" <sk.smree66@gov.in>,  
Srivastava Additional Director <sk.smree66@nic.in>,  
Purushottam Ramdas Sakhare <sakhare.pr@nic.in>

Date: 01/23/18 01:31 PM

From: navin chandra <navinchandrarrl@yahoo.com>

23/01/2017

Dear Dr. Shrivastava Ji,

I am in receipt of the Minutes drafted by you and the suggestions received from Dr. Sharad Lele. It is a fact that the Ministry's OM of even date provides exemption possibility from Public Hearing for the projects requiring expansion of upto 40% enhancement in production but the OM is silent on issuance of TOR so that a proper EIA may be prepared. There is a need for clear policy and suitable frame work for processing such applications. In the interim, we may go ahead with following arrangement.

Under impression of exemption of TOR also, the coal mine units submitted (to MoEF) for grant of EC. The 40% enhancement in production is significant and hence it is necessary to acquire the data on environment parameters under enhanced production. The applicant may be granted one year EC for enhanced capacity. During this period, in non-monsoon affected season, the data on environment parameters may be collected for EIA report. For obtaining detailed ToR conditions, the coal mine unit (s) may submit the proforma for consideration by EAC.

Thanking you,  
yours sincerely,

(NAVIN CHANDRA)

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Dr. Navin Chandra,  
Director General  
M P Council of Science and Technology (MPCST),  
Vigyan Bhawan, Nehru Nagar, Bhopal - 462003 (M.P.) India  
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**24<sup>th</sup> EAC (THERMAL & COAL MINING PROJECTS) MEETING  
SCHEDULED FOR 11<sup>th</sup> January, 2018.**

**AGENDA**

**Venue: Narmada Conference Hall, Ground Floor, Jal Wing,  
Indira Paryavaran Bhawan, Jorbagh, New Delhi-110003.**

**Pl. check the MoEF website: <http://environmentclearance.nic.in/Report/Default3.aspx>**

**Important Note:**

- i. Please send the information as per Annexure 1 by E-mail in word format and also a signed & scanned copy, to the Member-Secretary at sk.smree66@nic.in at least one week prior to the EAC meeting.**
- ii. Please send soft copies of all project-related documents that have been uploaded onto the MOEFCC website to EAC members by e-mail [indicating agenda item numbers] immediately upon receiving this communication, and send hard copies of the same documents [indicating agenda items] to all the EAC members, at least one week prior to the meeting and ensure the receipt of same.**
- iii. Non receipt of the project will lead to deferment of the project.**
- iv. Please also provide a hard copy of presentation to the EAC Members during the meeting.**
- v. The Project Proponent should carry the KML/Shape Files of the mine lease area at the time of presentation before EAC and to present on the details of mine lease online to show the present status of mine lease**
- vi. The KML/Shape files should be emailed on the below mentioned email addresses at least 10 days prior to the meeting**
- vii. The PP to show the transportation route of minerals on maps during presentation.**
- viii. Without this information, EAC has discretion to invite the proponent for the meeting.**
- ix. No consultant is permitted into the meeting who has no accreditation with Quality Council of India (QCI) /National Accreditation Board of Education and Training (NABET) as per the MoEF OM dated 2nd December, 2009**

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**COAL MINING PROJECTS**

**Time: 10.00 AM: 11<sup>th</sup> January, 2018**

**38.1 Lakhanpur Open Cast Expansion (Phase –II) coal mine Project from 18.75 MTPA to 21 MTPA in an existing project area of 2601.60 (ML area 2389.60 ha) by M/s MCL located in District Jharsuguda (Odisha)—Expansion under 7(ii) 40%–EC**

**[IA/OR/CMIN/71528/2017, F No. J-11015/391/2012- IA.II(M)]**

**38.2 Basundhara (West) Extension OCP 8.75 MTPA in an area of 323.92 ha by M/s MCL located in Ib valley coal field, District Sundargarh (Odisha)-For further consideration of TOR (after Site visit)**

**[IA/OR/CMIN/63468/2017, F No. J-11015/26/2017- IA.II(M)]**

**38.3 Gondegaon Extension Opencast Coal Mine Expansion Project (Amalgamated Gondegaon Ghatrohana OC Mine) for Expansion in production capacity from 2.5 MTPA**

to 3.5 MTPA in a total project area of 917 ha (ML area of 845.74 ha ) of **M/s WCL** in Village Gondegaon, Tehsil Parseoni, District Nagpur (MS) – EC under section 7(ii) of EIA notification 2006

**[IA/MH/CMIN/71601/2017, F.No.J-11015/106/2009-IA.II(M)]**

- 38.4** Sayal D Opencast Coal Mine Project (1.0 MTPA Normative and 1.35 MTPA Peak in a project area of 286.98 Ha; of **M/s CCL** in District Ramgarh, Jharkhand- EC

**[IA/JH/CMIN/27582/2015, F. No. J-11015/157/2015-IA.II(M)]**

- 38.5** Basundhara Global Coal Washery Project 5 MTPA Capacity in an area of 10.11 ha of **M/S Global Coal And Mining Pvt Ltd** located in Duduka Tehsil Hemgiri District Sundargarh (Odisha) - Extension of Validity of TOR

**[IA/OR/CMIN/20521/2013, F.No. J-11015/436/2013-IA.II(M)]**

- 38.6** Expansion of Dudhichua Opencast Coal Mine Project from 15.5 MTPA to 20 MTPA (Normative)/25 MTPA (Peak) in an area of 2390.722 ha by **M/s Northern Coalfields Limited** located in Post Khadia, District Sonebhadra (Uttar Pradesh) - (TOR)

**[IA/UP/CMIN/71218/2017, F.No. J-11015/381/2008-IA.II(M)]**

- 38.7** Expansion of Srirampur Opencast –II of from 2.50 MTPA to 3.50 MTPA along with increase in ML area from 707.63 ha to 1604.11 ha of **M/s The Singareni Collieries Company Limited** located in District Mancherial (Telangana) - (TOR)

**[IA/TG/CMIN/71556/2017, F.No. J-11015/212/2007-IA.II(M)]**

- 38.8** Cluster IX (Group of 6 Mines) with a peak production of 8.512 MTPA in combined Cluster ML area of 1942.12 ha of **M/s BCCL** located in Jharia Coal field District Dhanbad (Jharkhand) - Amendment in EC

**[IA/JH/CMIN/8452/2010, F.No.J-11015/307/2010-IA.II(M)]**

- 24.9** Expansion of Krishnashila OCP from 6.25 MTPA to 7.0 MTPA in an area of 851.78 ha of **M/s Northern Coalfields Limited** located in Tehsil Dudhi District Sonebhadra (Uttar Pradesh) - (EC)

**[IA/UP/CMIN/72106/2018, F.No. J-11015/243/2011-IA.II(M)]**

#### **24.10 Discussion on any other item.**

Standardization of EC conditions