

Minutes of the 28th meeting of the EAC held on 17-18 April, 2018 for appraisal of Coal mining projects at Indira Paryavaran Bhawan, Ministry of Environment, Forest and Climate Change, New Delhi-3

A. The 28th meeting of the Expert Appraisal Committee (EAC) for Thermal & Coal mining projects was held on 17-18 April, 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 27th meeting of the EAC held on 27th February, 2018 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.28.1

Barjora (North) Coal Mining Project of 3 MTPA of M/s The West Bengal Power Development Corporation Limited in a ML area of 260.14 ha located in village and Tehsil Barjora, District Bankura (West Bengal) - For Environmental Clearance

[IA/WB/CMIN/69394/2017, F.No.J-11015/90/2017-IA.II(M)]

28.1.1 The proposal is for grant of environmental clearance for Barjora (North) opencast Coal Mining Project of 3 MTPA of M/s The West Bengal Power Development Corporation Limited in a ML area of 260.14 ha located in village and Tehsil Barjora, District Bankura (West Bengal).

28.1.2 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) M/s West Bengal Power Development Corporation Limited (WBPDCCL) has been allotted the Barjora (North) Coal Block by Ministry of Coal, Government of India vide allotment order No.103/7/2015/NA dated 31/3/2015.

(ii) Before de-allocation, mining operation was being carried out till 31/3/2015 by the prior allottee M/s DVC EMTA, who possessed the mining lease for the non forest area of the said block along with Environmental Clearance No.J-11015/312/2007-IA.II(M) dated 13/3/2008.

(iii) WBPDCCL has already obtained the mining lease for the non forest area from Govt. of West Bengal as directed in the allotment order.

(iv) As per Circular No.11-584/2014-FC (pt) dated 9/6/2015 of MoEF&CC and letter No.J11015/312/2007-IA-II(M) dated 12/8/2015, WBPDCCL has already initiated the process of DGPS survey of forest land and CA (Compensatory Afforestation) land for online uploading in the website of MoEF&CC for getting the Stage- I Forest Clearance. The procedure of DGPS survey is time consuming, therefore, obtaining of Stage –I FC is likely to be delayed.

(v) WBPDCCL has already obtained the Mining Lease for the non-forest area from Dept of Commerce & Industries, Govt of West Bengal along with Consent to Establish and Consent to Operate with validity up to 30/11/2016 for the said coal mine from West Bengal State Pollution Control Board by making application as directed in the allotment order.

(vi) The Principal Secretary of Forest, Govt of West Bengal has also recommended the case for necessary action towards transfer of Environmental Clearance for the non-forest area of the mine vide letter No. 662/EN/T-II-I/017/2016 dated 17/3/2016.

(vii) The EC was granted to the project where total area was 927.513 ha. However, the presents scenario is as under:

The total Block Area	927.5 ha
Project Proponent applied for total ML area	663 ha
Approval obtained for of ML area	260.14 ha
Project proponent has mining right	260.14 ha
There is no forest land involved in the Approved ML area.	

(viii) M/s WBPDCCL would like to commence mining operation in the non forest area of the said coalmine, as was being done by the prior allottee, since mining lease has been granted for the non-forest area of the mine only.

(ix) The proposal was considered by the Expert Appraisal Committee (EAC) in the Ministry for Thermal & Coal Mining Projects in 62nd meeting held on 23-24 August, 2016. The EAC pointed out that in the light of the Notification dated 23rd March, 2015, it was not empowered to take up consideration of the proposal, and referred the matter back to the MoEF&CC for appropriate action.

(x) MoEF&CC granted ToR vide letter No. J-11015/90/2017-IA.II(M) dated 29/9/2017.

(xi) The proposal is for fresh EC.

(xii) The latitude and longitude of the project are 23025°59.238"N to 23027°42.094"N and 87013°17.106"E to 87015°26.268" E respectively.

(xiii) Coal Linkage: End Use Plants are as follows:

1. STPS, Santaldih, Purulia district.
2. KTPS, Mecheda, PurbaMedinipur district.
3. BkTPP, Bakreswar, Birbhum district.
4. BTPS, Tribeni, Hoogly district.
5. SgTPP, Manigram, Murshidabad district

(xiv) Employment generated / to be generated is estimated to be about 477.

(xv) Benefits of the project: The developments of mining in the area will provide direct and indirect employment opportunities, infrastructure development, communication and development socio-economic infrastructure. The important benefits accruing from the project can thus be stated as - boost to local and regional economy, direct contribution to the state exchequer. Indirect employees are shopkeepers, mechanic, drivers, transporters etc. The lessee (proponent) will be responsible for providing better social infrastructure benefits such as drinking water, health care measures, educational facilities, promotion of culture and religious activities in surroundings.

(xvi) The total block area is 800 ha. The total Mining lease area as per approved Mining Plan is 260.14 ha. The land usage of the project will be as follows:

Pre-Mining Land use	
Land-use Category	Area (in ha)
Mined out Voids	63.93
De-coaled waste filled area (Waste Dumps)	39.49
Soil and Sub-soil Storage Area	5.86
Infrastructure Area	9.11
Other Built-up Areas	5.61
Safety Zone	17.89

Coal Stack-yard	1.25
Office and VT Centre	3.50
Road	2.55
Access Trench	0.65
Water Body (mine sump)	1.67
Sub-Total	151.51
Unutilized Land	108.63
Total	260.14

Land Use Plan For during mining and Land use in ha after mining			
SI No	Land-use Category	Land use (Ha) during Mining	Land use (Ha) (End of Mining)
1.	Excavation area	191.00	
2	Backfilled Area(a+b)		156.47 (136.90+19.57)
a	Agriculture land		19.57
b	Plantation		136.90
3	Excavated Void		34.53
a	Water Harvesting		34.53
4	Top soil dump	5.86	5.86
5	Safety zone/Rationalization Area	17.89	17.89
a	Plantation		17.89
6	Road and Infrastructure Area	26.9	26.9
7	Garland Drain	2.25	2.25
8	Undistributed	5.62	5.62
9	Others(magazine, ETP, Access, Trench)	10.62	10.62
Total		260.14	260.14

(xvii) Total geological reserve is 25.85 MT. The mineable reserve 18.60 MT, extractable reserve is 11.56 MT. The per cent of extraction would be 44.71%.

(xviii) The coal grade is G-9 to G-13. The stripping ratio is 5.69 Cum/tonne. The average gradient 8°. There will be 9 seams with thickness as under:

Sl. No.	Seam Name	Thickness (m)			Depth range (m)
		Minimum	Maximum	Average	
1	Seam -IX	0.26	2.78	1.43	15.14-40.16
2	Seam -VIII	0.3	2.94	1.26	6.13-46.09
3	Seam -VII	0.55	4.72	2.11	9.00-76.38
4	Seam -VI	0.25	4.42	1.51	17.2-75.89
5	Seam -V	1.7	6.29	3.88	12.96-112.2
6	Seam -IV	0.20	1.30	0.67	
7	Seam -I / II / III	4.42	6.34	5.39	

(xix) Total estimated water requirement is 1652 m³/day. The level of ground water ranges up to 35 m below ground level.

- (xx) The Method of mining would be opencast.
- (xxi) There is no external OB dump. No waste will be dumped outside the leasehold area and from the very first day of development of this mine, internal dumping is envisaged and 3 internal dump with quantity of 65.85 Mbcm in an area of 156.47 ha.
- (xxii) The final mine void would be in 34.53 ha with depth max.145 m (before final mine closure) and the total quarry area is 260.14 ha. Backfilled quarry area of 84.81 ha shall be reclaimed with plantation. A void of 34.53 ha with depth 145 m which is proposed to be converted into a water body.
- (xxiii) The life of mine is 22 Years.
- (xxiv) Transportation: Surface Miner for coal winning and Dozer-Shovel-Dumper combination for loading and transportation. Occasionally use of FEL is envisaged for coal loading directly from face.
- (xxv) Rehabilitation and Resettlement have already been complied by prior allottee as per approved R & R Plan. However, if any left out families found within the leasehold area, WBPDCCL will implement approved R & R policy.
- (xxvi) Total capital cost of the project is Rs. 918.58 Crores. CSR Cost is yet to be finalised. Prior Allottee has already implemented R&R as per approved plan. However, is any further R&R is involved, WBPDCCL shall implement R&R as per new approved plan. Environmental Management Cost is also yet to be finalized.
- (xxvii) The main drainage of the area is controlled by the Damodar River which flows about 5 km north of the coalfield. Tartora nallah with a north-easterly flowforms the main drainage within the block with seasonal surface flow. However, Tartola nallah is not going to be affected in this proposed mining project.
- (xxviii) Approvals: No ground water will be drawn for the project. However, as mine depth is more than ground water table, application for NOC from CGWA will be submitted. Board's approval obtained on 5th December, 2016. Mining plan has been approved on 4th September, 2017. Mine closure plan is an integral part of mining plan.
- (xxix) **Wildlife issues:** There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 10 km buffer zone. Elephant Corridor is present in the study area.
- (xxx) Forestry issues: There are no forests involved in the mine lease area.
- (xxxi) Total afforestation plan shall be implemented covering an area of 84.81 ha at the end of mining. Green belt over an area of 17.89 ha. Density of tree plantation 2500 trees/ ha of plants.
- (xxxii) There are no court cases/violation pending with the project proponent.
- (xxxiii) Baseline air quality values at ambient air quality monitoring stations, are in the range of 17.2-65.00 ug/m³ for PM2.5, 46.7-160.0ug/m³ for PM10, SO2 from 10.2 -26.2 ug/m³ and NOx from 12.8 -53.4 ug/m³, and thus meeting the prescribed standards.
- (xxxiv) Public hearing for the project was held on 16th February, 2018 at Barjora Panchayat Samiti Meeting Hall, Barjora, District Bankura (West Bengal). The issues raised during the public hearing include employment, development of the neighbourhood, rehabilitation and resettlement, plantation, implementation of mine closure plan etc. Point wise response to the PH issues along with the action plan is as under:

Persons Name and Village	Points Raised	Action Plan
Sri Gunamoy Ghosh, Sri Partha Guin and Sri Rajesh Chnak, Barjora	Employment opportunity for the local people, development of the neighbourhood, Rehabilitation and Resettlement, implementation of mine closure plan etc.	The direct employment to be generated during the operation phase will be approximately 477, which will mostly include local workers. The preference will be given to locals as per their skill/qualification. In addition to that, an estimated 500 persons will get employment indirectly through contractors.
Srimati Tinku		

<p>Mondal, Barjora</p> <p>Sri Alok Mukherjee, Sri Sudip Pandey, Barjora</p>		<p>R&R package, if required, will be provided to them in consultation with the District Administration and representatives of the land losers.</p> <p>It was assured that there will be proper closure of mines after completion of mining. An amount of Rs 41.21 crores has been earmarked for mine closure</p>
<p>Sri Ashish Biruni, Barjora</p> <p>Sri Ganesh Mondal, Ghutgoria</p>	<p>Intensive plantation in and around the project area and also regarding proper post mining reclamation of land. They requested the WBPDCCL authorities to ensure the same; Arrange for drinking water facility, construction and maintenance of local roads and drainage facilities, development of infrastructure of local schools and colleges and other development programs through their CSR program.</p>	<p>It was assured that proper plantation will be done in the reclaimed area as well as the green belt. A total of 154.79 ha of land will be planted with a total of 232185 trees. Plantations will be done along the boundary and reclaimed areas.</p> <p>Although there is no scope of land acquisition presently as the land was already acquired by DVC-EMTA, it was assured by WBPDCCL that they will look into all the grievances raised by the land-losers and ensure that proper R&R package will be provided to them in consultation with the District Administration and representatives of the land losers.</p> <p>A total amount of Rs 440 lakhs will be spent on development activities, of which Rs 88 lakhs is on health related activities, Rs 58 lakhs on education, Rs 106 lakhs on livelihood and skill development and Rs 174 lakhs on infrastructure development</p>
<p>Sri Bivesh Khan and Sri Surajit Banerjee, Maliara</p> <p>Sri Subal Das and Smt. Tripti Dawn, Baguli</p> <p>Sri Uttam Karmakar of Manoharpur</p>	<p>Expressed their grievance against the former operator for not fulfilling their commitments and requested the project proponent to ensure the fulfilment of the same. They also requested the project proponent to give priority to local residents for employment in their proposed project.</p>	<p>The employment to be generated during the operation phase will be approximately 477, which will mostly include local workers. This will include skilled and semi-skilled manpower and preference will be given to locals as per their skill/qualification. In addition to that, an estimated 500 persons will get employment indirectly through contractors in jobs such as loaders, security persons, gardeners, etc, who will be sourced locally.</p>
<p>Sri Prabir Mondal, Barjora,</p> <p>Sri Swarup Das, Ghutgoria.</p> <p>Sri Ashok Ghosh,</p>	<p>Requested the project proponent to ensure fulfilment of all commitments regarding R&R issues and proper compensation to land losers WBPDCCL should contribute towards inclusive development</p>	<p>A total amount of Rs 440 lakhs will be spent on development activities, of which Rs 88 lakhs is on health related activities, Rs 58 lakhs on education, Rs 106 lakhs on livelihood and skill development and Rs. 174 lakhs on infrastructure development</p>

Saharjora Sri Manoj Dawn, Baguli	of the neighbouring villages through proper and time bound implementation of CSR programs.	
Sri Nihli Kumar Mondal, Baguli	Stated that the buildings provided by the previous operator to the land losers in the near proximity of the mining area have been seriously damaged due to vibration during blasting operation. He requested the WBPDCCL authorities to look into the matter and arrange for proper alternative arrangement or proper repairing of such damage.	The impact of blasting will be minimum outside the mining zone and will be less than 5 Hz in the neighbouring settlements and will thus have no impact on the structures. For blasting, following measures will be taken <ul style="list-style-type: none"> • Secondary blasting will be totally avoided; • Controlled blasting with proper spacing, burden and stemming will be maintained; The blasting will be carried out during favourable atmospheric condition and less human activity timings;
Sri Balaram Dawn, Baguli Sri Amit Mondal, Manoharpur	Requested the local administration to implement consistent R&R package for all the mining projects in the area. They also requested the WBPDCCL authorities to start their project work at the earliest and ensure proper socio-economic development of the area through their R&R package and CSR program.	Although there is no scope of land acquisition presently as the land was already acquired by DVC-EMTA, it was assured by WBPDCCL that they will look into all the grievances raised by the land-losers and ensure that proper R&R package will be provided to them in consultation with the District Administration and representatives of the land losers. WBPDCCL will ensure that there is development in all sectors such as education, health, livelihood, and empowerment. A total amount of Rs 440 lakhs will be spent on development activities, of which Rs 88 lakhs is on health related activities, Rs 58 lakhs on education, Rs 106 lakhs on livelihood and skill development and Rs 174 lakhs on infrastructure development
Sri Prabir Mondal, Barjora, Sri Swarup Das, Ghutgoria. Sri Ashok Ghosh, Saharjora Sri Manoj Dawn, Baguli	Requested the project proponent to ensure fulfilment of all commitments regarding R&R issues and proper compensation to land losers WBPDCCL should contribute towards inclusive development of the neighbouring villages through proper and time bound implementation of CSR programs.	A total amount of Rs 440 lakhs will be spent on development activities, of which Rs 88 lakhs is on health related activities, Rs 58 lakhs on education, Rs 106 lakhs on livelihood and skill development and Rs 174 lakhs on infrastructure development

28.1.3 During deliberations, the Committee noted the following:-

The proposal is for environmental clearance to Barjora (North) Coal Mining Project of 3 MTPA of M/s The West Bengal Power Development Corporation Limited in a total area of 260.14 ha located in village and Tehsil Barjora, District Bankura (West Bengal). There is no forest land involved.

The Ministry had earlier accorded environmental clearance vide letter dated 13th March, 2008 in favour of M/s DVC Emta Coal Mines Ltd for the project of capacity of 3 MTPA in a total area of 927.513 ha (including forest land of 384.01 ha). Subsequent to cancellation of the coal block pursuant to the orders of Hon'ble Supreme Court and its fresh allotment to M/s The West Bengal Power Development Corporation Limited, the said environmental clearance was not transferred to the new company due to no stage-1 forest clearance for the forest land within the project area. The project proponent was asked for revision in the Mining Plan accordingly for consideration of the proposal.

Mining Plan was subsequently revised excluding the forest land and the project area was reduced to 260.14 ha. The revised Mining Plan was approved by Ministry of Coal on 4th September, 2017. Mine closure plan is an integral part of the approved Mining Plan.

Terms of reference for the project was granted on 29th September, 2017. Public hearing was conducted by SPCB on 16th February, 2018. Main issues raised during the public hearing included employment, development of the neighbourhood, rehabilitation and resettlement, plantation, implementation of mine closure plan etc. The project proponent has submitted the action plan along with the timeline and funding management, to address the issues, suggestions and the representations received during public consultations.

Baseline air quality values at ambient air quality monitoring stations, are in the range of 17.2-65.00 $\mu\text{g}/\text{m}^3$ for $\text{PM}_{2.5}$, 46.7-160 $\mu\text{g}/\text{m}^3$ for PM_{10} , SO_2 from 10.2-26.2 $\mu\text{g}/\text{m}^3$ and NO_x from 12.8 - 53.4 $\mu\text{g}/\text{m}^3$, and thus observed to be on the higher side. The Committee insisted for adequate mitigating measures to address the air quality concerns.

28.1.4 *The EAC, after deliberations, recommended the project for grant of environmental clearance to 'Barjora (North) Coal Mining Project of 3 MTPA' of M/s The West Bengal Power Development Corporation Limited in a total area of 260.14 ha located in village and Tehsil Barjora, District Bankura (West Bengal), and subject to the compliance of terms and conditions as applicable, and the additional conditions as under:-*

- (i) To control the dust production at source, crusher and in-pit belt conveyors shall be provided with mist type sprinklers.*
- (ii) Mitigative measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions as presented before the Committee, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at railway siding, etc.*
- (iii) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.*
- (iv) To ensure health and welfare of nearby villages, regular medical camps shall be organized at least once in six months.*

(v) Thick green belt of adequate width in the down wind direction of the project site shall be developed to mitigate/check the dust pollution. Plantation plan shall be prepared in consultation with the State Forest Department.

(vi) The conservation plan for Elephant Corridor shall be prepared and submitted to the State Wildlife Department for approval, for its implementation in letter and spirit.

Agenda No.28.2

Expansion of Bhatadi Opencast Coal Mining Project from 0.975 MTPA to 1.465 MTPA of M/s Western Coalfields Limited within existing project area of 847.37 ha (ML area of 837.94 ha) located at District Chandrapur (Maharashtra) - for Environmental Clearance

[IA/MH/CMIN/72758/2018, F.No.J-11015/151/2014-IA.II(M)]

28.2.1 The proposal is for grant of environmental clearance for expansion of 'Bhatadi Opencast Coal Mining Project from 0.975 MTPA to 1.465 MTPA' of M/s Western Coalfields Limited within existing project area of 847.37 ha (ML area of 837.94 ha) located at District Chandrapur (Maharashtra) under 7(ii) of the EIA Notification, 2006.

28.2.2 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) Bhatadi opencast expansion coal mining project is located in Chandrapur district of Maharashtra and is under the administrative control of Chandrapur Area of Western Coalfields Limited. Mine was opened in Bhatadi block of Wardha Valley Coalfields in Chandrapur district. The mine can be approached by all-weather road from Nagpur-Chandrapur road upto Tirwanja village. The nearest rail head is Tadali which is about 8 to 9 km away from the mine and Chandrapur Station about 15 km away from the mine. Both the stations are on the main line of Central Railway.

(ii) The project lies between latitudes 20° 02' 27" - 20° 04' 25" and longitudes 79° 15' 18" - 79° 17' 35". This area is covered by Survey of India Topo Sheet No.55 P/08.

(iii) The last EC for Bhatadi OC coal mine from 0.65 to 0.975 MTPA in a total lease area of 847.37 ha with no forest land, was accorded vide letter dated 19th March, 2015.

(iv) The coal reserves of Padmapur OCM and HLOC of Chandrapur Area are about to last in coming 4-5 years. At the present rate of production the Chandrapur Area cannot fulfill the increasing demand of MAHAGENCO. Bhatadi Expansion OCM has a coal production potential of 1.465 MTPA.

(v) The level of coal production from Bhatadi OCM was near to its EC capacity i.e. 0.875 MTPA during 2016-17. In view of the above, the Mining Plan including the Mine Closure Plan for further expansion of the mine for increasing the production capacity from 0.975 MTPA to 1.465 MTPA within the existing land area and without any capital investment has been approved by the WCL Board in its 293rd meeting held on 31/10/2017 vide WCL/BD/SECTT/BM-293/2017/936 dated 10/11/2017.

(vi) Erai River and its tributaries flow in the area of Bhatadi OC Expansion. The general elevation of the area varies between 184 m and 212 m above mean sea level with slope towards South-East.

(vii) The geo-mining parameters of the project are as under:-

The existing Bhatadi Expansion OC mine has been divided into two quarries namely, quarry-I and quarry-II. Presently quarry-I is being worked whereas area of quarry-II is virgin.

S.N	Particulars	Quarry-I	Quarry-II	Total
1	Area of the Quarry			
a)	On floor (ha)	50.870	33.875	84.745

S.N	Particulars	Quarry-I	Quarry-II	Total
b)	On surface (ha)	88.92	72.60	161.52
2	Depth (m)			
a)	Initial	33	53	
b)	Final	150	150	-
3	Average gradient of Seam	1 in 6	1 in 6	
4	Average thickness of seam (m)	17	17	
5	Average strike length (m)	800	700	
6	Width on surface (m) (Dip Rise)	700	850	
7	Width on floor (m) (Dip Rise)	500	600	-
8	GCV (k Cal/ kg) (Overall)	4504 (G-10)		
9	Balance Mineable reserves (Mt) as on 1/4/2017	3.54	9.27	12.81
10	Total OB including Access Trench (Mm ³) as on 1/ 4/2017	19.78	51.07	70.85
11	Average Stripping ratio in m ³ /t. as on 1/ 4/2017	5.59	5.51	5.53

(viii) The calendar programme of excavation and OB dumping is as follows:

Sl. No.	Year	Coal Production (Mt)	OB Dumping (Mm ³)			SR
			Internal	External	Total	
3	2017-18	0.97	0	5.364	5.364	5.53
4	2018-19	1.4625	5.92	2.167	8.087	5.53
5	2019-20	1.4625	6.72	1.367	8.087	5.53
6	2020-21	1.4625	6.72	1.367	8.087	5.53
7	2021-22	1.4625	6.72	1.367	8.087	5.53
8	2022-23	1.4625	6.72	1.367	8.087	5.53
9	2023-24	1.4625	6.72	1.367	8.087	5.53
10	2024-25	1.4625	6.72	1.367	8.087	5.53
11	2025-26	1.4625	6.72	1.367	8.087	5.53
12	2026-27	0.153	0.79	0.00	0.79	5.16
Total		12.823	53.75	17.10	70.85	5.53

*- actual production.

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

Year	Coal Production	EC capacity
2016-17	0.875	0.975
2015-16	0.71	0.975
2014-15	0.71	0.975
2013-14	0.57	0.65
2012-13	0.49	0.65

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

Pre-mining land use details

Sl. No.	Particulars	Tenancy Land (ha)	Govt. Land	Forest Land	Total (ha)

			(ha)	(ha)	
1	Land Already acquired by existing Bhatadi Expansion OC Mine (ha)	785.69	52.25	0.00	837.94
2	Land for Bhatadi Village Rehabilitation to be Acquired	9.43	0.0	0.0	9.43
	Total	795.12	52.25	0.0	847.37

Note: Out of this, land acquired till date is 837.94 ha.

Land use of the project area during Mining:

SI No.	Particulars	Land Details (ha)
1	Quarry area	161.32
2	External OB Dump	142.10
3	Infrastructure	10.90
4	Colony	16.70
5	Embankment	13.00
6	Road	8.45
7.	Temporary top soil dump	40.20
8.	Miscellaneous (Blasting zone, river diversion, power line diversion & rationalization)	445.27
	Sub-Total	837.94*

* includes 9.43 ha land for resettlement of Bhatadi village.

Post-mining Land use pattern of ML/Project Area (ha)

S.N.	Land use during mining	Land use (ha)				Total
		Plantation	Water Body	Public use	Undisturbed	
1	Backfilled Area	50.00	38.92	0.00	0.00	88.92
2	Excavated Area	0.00	72.4	0.00	0.00	72.40
3	Embankment Area	13.00	0.00	0.00	0.00	13.00
4	External OB dump	142.10	0.00	0.00	0.00	142.10
5	Colony, Infrastructure etc.	6.00	0.00	21.60	0.00	27.60
6	Miscellaneous (Blasting zone, river diversion, power line diversion & rationalization)	50.00	0.00	0.00	435.47	485.47
7	Road	3.00	0.00	5.45	0.00	8.45
	Total	264.10	111.32	27.05	435.47	837.94

*- Additional 9.43 ha land is outside ML area for Bhatadi Village resettlement.

(x) The existing mine working including the proposed expansion will be limited within 847.37 ha (837.94 ha + 9.43 ha).

1. Mineable Coal Reserves in Million Tonnes as per R.P.R: 12.81 MT (as on 1/4/2017)
2. Stripping Ratio Cu.M./Te : 5.53 m³/t (Avg.)
3. Over Burden (Mm³) : 70.85 (as on 1/4/2017)

- (xi) The coal grade is G-10 and average gross calorific value is 4504 kCal /kg.
- (xii) Total estimated water requirement is 222 m³/day. The level of ground water ranges is given below:

Pre monsoon period	Core Zone	3.30 m to 09.65 m
	Buffer zone	3.35 m to 13.28 m
Post monsoon	Core Zone	2.15 m to 06.32m
	Buffer zone	0.10 m to 13.15 m

- (xiii) The method of mining would continue to be opencast with Shovel-Dumper combination.
- (xiv) There is 2 external OB dump with Quantity of 69.708 Mm³ in an area of 142.10 ha with height of 60 m and 1 internal dump with Quantity of 53.75 Mm³ in an area of 88.92 ha. Out of this 88.92 ha, 50 ha would be biologically reclaimed and 38.92 ha would be partially backfilled and converted into water body.
- (xv) The final mine void would be in 111.32 ha with depth of 150 m.
- (xvi) Total quarry area is 161.32ha. Out of total quarry area of 161.32ha, 88.92 ha would be backfilled and reclaimed. Out of which 50 ha area shall be reclaimed with plantation. A void of 111.32 ha with depth 150 m which is proposed to be converted into a water body.
- (xvii) The balance life of mine is 10 Years at the peak capacity of 1.465 MTPA.
- (xviii) Transportation: Coal transportation in pit by dumpers, surface to siding by dumpers and loading at siding by pay loaders.
- (xix) The details of R&R activities, carried out for the existing project is as follows: -
- Land acquired under CBA Act, 1957 in the year 1990 is 287.57 ha which includes 278.96 ha tenancy land and 8.61 ha Govt land. Employment provided against this land is 113 no. as per norm.
 - Land acquired under LA act 1897 in the year 2007 is 82.15 ha which includes 78.49 ha Tenancy land and 3.66 ha Govt. land. Employment provided against this land till date is 30 nos.
 - Land acquired under section 9(1) CBA Act, 1957 at 13.9.2011 is 467.21 ha which included 0.30 ha diverted plot area, 426.73 ha. Tenancy land 39.98 ha, Govt. land and 0.20 ha forest land. Administrative approval to 409 cases employment/monetary compensation has been approved by competent authority. Till date 284 cases of employment and 07 No. cases of M.C. is given and remaining cases of initiated employment/Monetary compensation is in process.
- (xx) Total capital cost of the project is Rs.304.5162 Crores as per PR and no additional capital is required for the present proposal. As per the PR, the Cost of Production is Rs.1979.08 per tonne, CSR cost will be Rs. 2 per tonne, R&R Cost will be Rs.79.79 Crore and the capital Environmental Management cost will be Rs. 0.9709 crores.
- (xxi) Bhatadi OC Expansion is drained by Erai River and its tributaries. The general elevation of the area varies between 184 m and 212 m from mean sea level with slope towards South-East. Erai River is within the mine lease boundary of the project. The proposal for Erai river diversion has been submitted to CDO, Nasik and there team is expected to visit site and further action will be taken as per their advice.
- (xxii) 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. The mining plan has been approved by WCL board vide WCL/BD/Sectt/BM-293/2017/936 dated 10.11.2017. Mine closure plan is an integral part of mining plan.
- (xxiii) There is no forest land involved in the project.
- (xxiv) Public Hearing conducted on 20th July, 2004 for 847.57 ha of land.
- (xxv) 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.
- (xxvi) There is no court cases/violation pending with the project proponent.

(xxvii) The existing Bhatadi OC has opened Escrow Account against the existing provisions and till 2016-17, Rs.16.9708 Crores have been deposited in the said Escrow Account.

(xxviii) In compliance of the OM dated 30/5/2012 certificate of compliance against the existing EC (0.975 MTPA- March 2015) has been obtained from Regional Office, MoEF&CC Nagpur vide its No.3-16/2015 dated 5/2/2018.

28.2.3 During deliberations, the Committee noted the following:-

The proposal is for environmental clearance to the project for expansion of Bhatadi Opencast Coal Mine from 0.975 MTPA to 1.465 MTPA of M/s Western Coalfields Limited within existing project area of 847.37 ha (ML area of 837.94 ha) located at District Chandrapur (Maharashtra). There is no forest land involved.

Mining Plan was approved by WCL Board vide letter No. WCL/BD/Sectt/BM-293/2017/936 dated 10th November, 2017. Mine closure plan is an integral part of the Mining Plan.

Earlier, the project for capacity of 0.975 MTPA in an area of 847.57 ha was granted environmental clearance by the Ministry vide letter dated 19th March, 2015, based on public hearing conducted by SPCB on 20th July, 2004. The present proposal is for consideration of the proposal of EC under the provisions of para 7(ii) of the EIA Notification, 2006 seeking exemption from fresh public hearing.

Certificate of compliance against the existing EC of 0.975 MTPA capacity has been obtained from MoEF&CC, Regional Office located at Nagpur vide letter No.3-16/2015 dated 5th February, 2018.

Air quality values for PM_{2.5} ranges from 43-80 µg/m³ in core zone and 7-60 µg/m³ in buffer zone. Also, PM₁₀ ranges from 44 - 258 µg/m³ in core zone and 16-97 µg/m³ in buffer zone and thus observed to be on the higher side. The Committee insisted for adequate mitigating measures to address the air quality concerns. Other air quality parameters namely, SO₂ & NO_x ranges from 10-21 µg/m³ & 4-9 µg/m³ in core zone and 4-30.3 µg/m³ in buffer zone & 4-7.2 µg/m³ in buffer zone, and thus meeting the prescribed standards.

Application for grant of Consent to operate was made to the MPCB and the same was considered in the meeting held on 09.02.2018. Formal letter is yet to be issued.

28.2.4 *The EAC, after deliberations noted that the last public hearing for the project was conducted by the State Pollution Control Board on 20th July, 2004 i.e. much before the inception of the EIA Notification, 2006 presently in force. The Committee desired for compliance of the present provisions of the said Notification, and insisted for fresh public hearing for the proposed expansion from 0.975 MTPA to 1.465 MTPA, even if the project area remains same.*

In view of the above, the proposal was not taken forward.

Agenda No.28.3

Dinesh (Makardhokra-III) Opencast Coal Mine Expansion Project from 3 MTPA to 4.5 MTPA of M/s Western Coalfields Limited in an area of 1636.97 ha located in District Nagpur (Maharashtra) - For Environmental Clearance

[IA/MH/CMIN/20405/2011, F.No.J-11015/537/2008-IA.II(M)]

28.3.1 The proposal is for grant of environmental clearance to the project for expansion of Dinesh (Makardhokra-III) Opencast Coal Mine from 3 MTPA to 4.5 MTPA of M/s Western Coalfields Limited in an area of 1636.97 ha located in District Nagpur (Maharashtra).

28.3.2 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) Dinesh (Makardhokra-III) OCP is located in Umrer Tahsil, Nagpur district of Maharashtra State and is under the administrative control of Umrer Area of Western Coalfields Ltd. Mine was opened in Makardhokra-III geological block. The mine is approachable from Umrer Colliery and Umrer township by an all weather metalled road. The Umrer town is well connected by road and rail. The State Highway No. 92 passes through the town. Umrer Railway station on Nagpur-Chandrapur-Nagbhir railway line of the South Eastern Railway is located around 5 km east of the Block. The nearest major railway station is 53 km away at Nagpur.

(ii) The project lies between Latitudes: 20°52'15" to 20°55'16" N and Longitudes: 79°11'31" to 79°15'29" E. This area is covered by Survey of India Topo Sheet No.55 P/1 and P/5.

(iii) The earlier EC for Dinesh (Makardhokra-III) OCP for production capacity of 3.00 MTPA within ML area of 1636.97 ha which involves 69.85 ha of forest land, was accorded vide letter dated 21st June, 2011.

(iv) The project could not be implemented due to increase in capital cost owing increase in land prices by Govt. of Maharashtra and R&R Policy of CIL, 2012. Hence, Project Report for Dinesh (Makardhokra-III) OC was revised in August, 2014 with enhanced production capacity of 4.0 MTPA (Normative) & 4.50 MTPA (Peak) within same leasehold area of 1636.97 ha.

(v) The aforesaid Revised Project Report along with mine closure plan was approved by WCL Board on 2nd October, 2014 and subsequently CIL Board accorded final approval in its Board meeting held on 19-20 July, 2016 vide letter No.CIL:XI (D):04112:2016:14437 dated 17th August, 2016. The project with existing EC capacity 3.00 MTPA commenced operations on 25/11/2016. Coal production from the mine was 0.012 MT in 2016-17.

(vi) The coal reserves of adjacent Umrer OC (Production capacity-4.0 MTPA) is about to exhaust in next 4-5 years and further demand of coal from MAHAGENCO has been increased. Dinesh (Makardhokra-III) OCP has potential to produce coal in tune to 4.50 MTPA.

(vii) Amb nallah flow through the central part of the Quarry hence it is proposed to be diverted. The general elevation of the area varies between 274 m and 294 m above mean sea level sloping towards South-East.

(viii) The geo-mining parameters are placed below:-

S. N.	Particulars	Total
1.	Area of the Quarry	
a)	On floor (ha)	510.55
b)	On surface (ha)	674.05
2.	Depth (m)	
a)	Initial	45
b)	Final	200
3.	Gradient of Seams	1 in7 to 1 in 8
4.	Average thickness of seams (m)	
a	Seam – I	3
b	Seam –II (T)	3
c	Seam – III	2

d	Seam –IV	3
e	Seam – V	3
5.	Average Strike length (m)	5365
6.	Width on surface (m) [dip rise]	1225
7.	Width on floor (m) [dip rise]	925
8.	Weighted average coal quality (0.05m dilution at each contact point) GCV (kCal/kg)	4937
9.	Mineable Reserves (Mt)	87.36
10.	Total OB (including access trench)(Mm ³)	660.32
11.	Average stripping ratio (m ³ /t)	7.56

(ix) The calendar programme of excavation and OB dumping is as follows:

Year	Coal (Mt)	Overburden (Mm ³)	External Dump	Internal Dump	S.R. (m ³ /t)
I	Land Acquisition				
II	0.50	7.50	7.50	-	15.00
III	1.50	13.00	13.00	-	8.67
IV	2.50	21.00	21.00	-	8.40
V	4.00	32.00	32.00		8.00
VI	4.00	33.00	33.00		8.25
VII	4.00	33.00	23.00	10.00	8.25
VIII	4.00	33.00	23.00	10.00	8.25
IX	4.00	29.00	18.94	10.06	7.25
X	4.00	29.00	25.50	3.50	7.25
XI	4.00	29.00	23.50	5.50	7.25
XII	4.00	29.00	23.50	5.50	7.25
XIII	4.00	29.00	23.50	5.50	7.25
XIV	4.00	31.25	25.75	5.50	7.81
XV	4.00	31.25	18.75	12.50	7.81
XVI	4.00	31.25	2.75	28.50	7.81
XVII	4.00	34.00	-	34.00	8.50
XVIII	4.00	34.00	-	34.00	8.50
XIX	4.00	32.00	-	32.00	8.00
XX	4.00	32.00	-	32.00	8.00
XXI	4.00	33.25	-	33.25	8.31
XXII	4.00	34.00	-	34.00	8.50
XXIII	4.00	21.00	-	21.00	5.25
XXIV	4.00	17.66	-	17.66	4.42
XXV	2.86	11.16	-	11.16	3.90
Total	87.36	660.32	314.69	345.63	7.56

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

Pre-mining land use details

SI.No.	Particulars	Land(ha)
1)	Tenancy land	1385.37
2)	Government land	140.78
3)	Forest land (Zudpi Jungle)	69.85
	Sub Total	1596.00
4)	For Nala, Canal & Road diversion/ Colony/ Hevti village rehabilitation	40.97
	Total	1636.97

*1224.24 ha land has already been acquired for Dinesh OC Project against which compensation of Rs 334.99 crore has been paid till 31st December, 2017.

Land use of the project area during Mining

SI. No.	Particulars	Area (ha)
1.	Quarry Area	674.05
2.	External OB dump	582.73
3.	Infrastructure	10.00
4.	Area needed for rationalization and blasting zone	329.22
5.	Nala, Canal & Road diversion / Colony / Hevti village rehabilitation	40.97
	Total Land	1636.97

Post-mining Land use pattern of ML/Project Area (ha)

S. No.	Land use during mining	Land use (ha)				
		Plantation	Water Body	Public use	Undisturbed	Total
1	External OB Dump	582.73	0	0	0	582.73
2	Top soil dump	0	0	0	0	0
3	Excavation	250	152	0	272.05	674.05
4	Roads	2		7		9
5	Built up area	6	0	0	24	30
6	Undisturbed Area	320.22	0	20.97	0	341.19
	Total	1160.95	152	27.97	296.05	1636.97

(xi) The existing mine working including the proposed expansion will be limited within 1636.97 ha.

1. Total Mineable Coal Reserves in Million Tonnes : 87.36 MT
2. Stripping Ratio Cu.M./Te : 7.56 m³/t (Avg.)
3. Total Over Burden (Mm³) : 660.32 Mm³

- (xii) The average coal quality in GCV is 4937 k Cal /kg (Grade G-8).
 (xiii) Total estimated water requirement is 690 m³/day. The level of ground water ranges is given below:

Pre monsoon period.	Core Zone	4.7 to 8.55 m
	Buffer zone	2.6 to 11.45 m
Post monsoon period. Nov.(2016)	Core Zone	2.35 to 4.6 m
	Buffer zone	1.48 m to 8.25 m

- (xiv) The method of mining would continue to be Opencast with Shovel-Dumper combination.
 (xv) There are 2 external OB dump with quantity of 314.69 Mm³ in an area of 582.73 ha with maximum height of 90 m and 2 internal dump with quantity of 345.63 Mm³ in an area of 522.05 ha. Out of this 522.05 ha, the filled up void up to GL & above will cover about 250 ha. An area of 272.05 ha will be void but with reduced depth having filled up partially.
 (xi) The final mine void would be in 152 ha with maximum depth of 200 m.
 (xii) Total quarry area is 674.05 ha. Out of total quarry area of 674.05 ha, 522.05 ha would be backfilled. Out of which 250 ha area shall be reclaimed with plantation. A void of 152 ha with depth 150 m which is proposed to be converted into a water body.
 (xiii) The life of mine is 24 Years at the normative capacity of 4.00 MTPA.
 (xiv) Transportation: Coal transportation in pit by Dumpers, Surface to Siding by Through Dumpers and loading to siding by Pay Loaders.
 (xv) Rehabilitation of Hevti village has been proposed due to its proximity to proposed Overburden dump. Capital provision of Rs.35.92 crore has been made considering 360 Nos of PAF. The rehabilitation site is under construction near Udasa village on Umrer-Nagpur Highway. Total 18.66 ha land has been acquired for R&R site.
 (xvi) In lieu of the 1224.24 ha land acquired out of total 1636.97 ha for Dinesh (Makardhokra-III) OC project total Rs.334.99 Crore has been paid as land compensation till 31st December, 2017. About 792 nos of jobs has been provided to the land losers. Other than those who are provided employment.
 (xvii) Total capital cost of the project is Rs. 611.16 Crores. The Cost of Production: Rs 1201.06 per tonne, CSR cost: Rs. 2 per tonne, R&R Cost: Rs.35.92 Crore and Environmental Management cost: capital – Rs.1.2227 crores.
 (xviii) NOC for withdrawal of groundwater from CGWA has been applied vide 21-4/1023/MH/MIN/2017 dated 08.05.2017 as per amended rules of 2012. The mining plan has been approved by CIL Board in its 330th meeting held on 19th & 20th July, 2016 and communicated vide letter no CIL:XI(D):04112:2016:14437 dated 17th August, 2016. Mine closure plan is an integral part of the approved mining plan.
 (xix) There is 69.85 ha forest land involved in the project.
 (xx) Public Hearing conducted on 22nd October, 2010 for 1636.97 ha of land.
 (xxi) Total afforestation plan shall be implemented covering an area of 1160.95 ha at the post-mining. Density of tree plantation is 2500 trees/ ha.
 (xxii) There is no court cases/violation pending with the project proponent.
 (xxiii) The existing Dinesh (Makardhokra-III) has already opened Escrow Account against the existing provisions and Rs. 12.4113 crores have been deposited in the said Escrow Account till 2016-17.
 (xxiv) In compliance of the OM dated 30.05.2012 certificate of compliance against the existing EC (3.00 MTPA- June, 2011) has been obtained from Regional Office, MoEF&CC Nagpur vide No.3-23/2011(env)/3228 dated 07/02/2018.

28.3.3 During deliberations, the Committee noted the following:-

The proposal is for environmental clearance to the project for expansion of Dinesh (Makardhokra-III) Opencast Coal Mine from 3 MTPA to 4.5 MTPA of M/s Western Coalfields Limited in an area of 1636.97 ha located in District Nagpur (Maharashtra).

Out of the total project area, forest land involved is 69.85 ha. Stage-I forest clearance for the same was reported to be under process, and thus yet to be diverted for non-forestry purposes. No mining activities have been carried out in the said forest land.

Mining Plan for the proposed expansion was approved by CIL Board vide letter dated 17th August, 2016. Mine closure plan is an integral part of the Mining Plan.

Earlier, the project for capacity of 3 MTPA in an area of 1636.97 ha was granted EC by the Ministry vide letter dated 21st June, 2011, based on public hearing conducted by SPCB on 20th July, 2010. The present proposal is for consideration of the proposal of EC under the provisions of para 7(ii) of the EIA Notification, 2006 seeking exemption from fresh public hearing.

Certificate of compliance against the existing EC of 3 MTPA capacity has been obtained from MoEF&CC, Regional Office located at Nagpur, vide letter dated 7th February, 2018.

Air quality values for PM_{2.5} ranges from 5-59 µg/m³ in core zone and 13-55 µg/m³ in buffer zone. Also, PM₁₀ ranges from 17-332 µg/m³ in core zone and 18-128 µg/m³ in buffer zone, and thus observed to be on the higher side and not meeting the norms. The Committee insisted for adequate mitigating measures to address the air quality concerns. Other air quality parameters namely, SO₂ and NO_x ranges from 8-26 µg/m³ & 5-20 µg/m³ in core zone and 8-26 µg/m³ & 5-19 µg/m³ in buffer zone, and thus meeting the prescribed standards.

Consent to operate has been obtained for the existing capacity vide letter dated 7th April, 2018 and is valid upto 31st March, 2020.

28.3.4 *The EAC, after deliberations noted that the last public hearing for the project was conducted by the State Pollution Control Board on 22nd October, 2010, which was more than three years old, and thus not in conformity with the present norms/guidelines in this regard. Also, the baseline air quality for PM₁₀, both in core zone and the buffer zone, were not meeting the respective standards. Accordingly, the Committee desired for adequate mitigating measures to address the air quality concerns. The Committee also insisted for fresh public hearing for the proposed expansion from 3 MTPA to 4.50 MTPA, even if the project area remains same.*

In view of the above, the proposal was not taken forward.

Agenda No.28.4

**Cluster V (7 mines of a peak production of 6.311 MTPA in a combined ML area of 1957.08 ha) of M/s Bharat Coking Coal Ltd. located in Jharia Coalfields, District Dhanbad (Jharkhand) - For amendment in EC
[IA/JH/CMIN/6990/2011, F.No.J-11015/01/2011-IA.II(M)]**

28.4.1 The proposal is for amendment in environmental clearance dated 11th February, 2013 granted for the Cluster V (7 mines of a peak production of 6.311 MTPA in a combined ML area of 1957.08 ha) of M/s Bharat Coking Coal Ltd, located in Jharia Coalfields, District Dhanbad (Jharkhand).

28.4.2 The proposal was earlier considered by the EAC in its 21st meeting held on 27.10.2017 wherein the Committee deferred the proposal for want of Mining Plan for the cluster, revised and duly approved by the Ministry of Coal/Board of M/s BCCL. 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) The proposal has now further revised afresh for amendment in EC capacity of two mines only namely Sendra Bansjora and Kankanee colliery keeping cluster capacity and leasehold unchanged. Since, Sendra Bansjora and Kankanee mines lie in the vicinity of the Dhanbad - Chandrapura Railway line and are fire affected, fire dealing in these two mines has been prioritized for speedy control of the fire by mining of coal in line with dovetailing of EC with implementation of GOI approved Master Plan for dealing with fire and subsidence. The proposed amendment is as under:

S. No.	As per Existing EC					Amendment Sought				
	Name of the Mine		Peak Production Capacity (MTY)	Leasehold Area (ha)	Mine Life (Years)	Name of the Mine		Peak Production Capacity (MTY)	Leasehold Area (ha)	Mine Life (Years)
1	Nichitpur	OCP	0.78	150.00	10	Nichitpur	OCP	0.78	150.00	10
2	Tetulmari	UG Section	1.033	317.00	>30	Tetulmari	UG Section	1.033	317.00	>30
		OCP Section					OCP Section			
3	Mudidih	OCP	2.019	378.00	>30	Mudidih	OCP	2.019	378.00	>30
		UG Section					UG Section			
4	Sendra Bansjora	OCP	0.975	249.63	23	Sendra Bansjora	OCP	2.34	249.63	16
		UG Section								
5	Kankanee	OCP Section	0.624	258.12	>30	Kankanee	OCP	1.19	258.12	7
		UG Section								
6	Bansdeopur	OCP	0.879	104.72	>30	Bansdeopur	OCP	0.879	104.72	>30
		UG Section					UG Section			
7	Loyabad	UG Section	0	499.56	--	Loyabad	UG Section	0	499.56	-
Total			6.311	1957.08				6.311*	1957.08	

*Peak of Cluster will remain same, as peak of individual mine will be achieved in different years to offset loss of production in other mines.

28.4.3 During deliberations on the proposal, the Committee noted the following:-

The proposal is for amendment in environmental clearance dated 11th February, 2013 granted by the Ministry for Cluster V (Group of 7 mines) of peak production of 6.311 MTPA of M/s Bharat Coking Coal Ltd in total mine lease area of 1957.08 ha located in Jharia Coalfields,

District Dhanbad (Jharkhand). The amendment has been proposed due to increase in capacity of individual mines namely, Sendra Bansjora OC (from 0.975 to 2.34 MTPA) and Kankanee OC (0.624 to 1.19 MTPA), without any change in combined peak production capacity of 6.311 MTPA in a total mine lease area of 1957.08 ha of the Cluster.

Revised Mining Plan for the changed capacities of individual mines namely, Sendra Bansjora and Kankanee collieries has been approved by the Board of M/s BCCL on 29th January, 2018 & 23rd November, 2017 respectively. .

28.4.4 The EAC, after deliberations, recommended the proposal for amendment in the environmental clearance granted vide letter dated 11th February, 2013, as per the details mentioned in the table in para 28.4.2 above. All other terms and conditions stipulated in the EC dated 11th February, 2013 shall remain unchanged.

Agenda No.28.5

Cluster VIII (Group of 10 mines) of total capacity 4.31 MTPA with peak production of 5.603 MTPA) in a combined ML area of 1183.92 ha of M/s Bharat Coking Coal Limited located in Jharia coalfields, District Dhanbad (Jharkhand)-For amendment in EC

[IA/JH/CMIN/17129/2010, F.No.J-11015/298/2010-IA.II(M)]

28.5.1 The proposal is for amendment in environmental clearance dated 15th February, 2013 granted for the Cluster VIII Group of 10 mines (Combined Capacity 4.31 MTPA with a peak production of 5.603 MTPA) in a combined ML area of 1183.92 ha (1200.41 ha-16.49 ha = 1183.92 ha) of M/s Bharat Coking Coal Ltd, located in Jharia coalfields, District Dhanbad (Jharkhand)

28.5.2 The proposal was earlier considered by the EAC in its 21st meeting held on 27.10.2017 wherein the Committee deferred the proposal for want of Mining Plan for the cluster, revised and duly approved by the Ministry of Coal/Board of M/s BCCL. In response to the observations of EAC, the details submitted by the project proponent and/or as informed during the earlier meeting, are as under:-

(i) The 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:-

Sl. No	As per Existing EC					Amendment Sought				
	Name of the Mine	Type of Mine	Peak Production Capacity (MTY)	Mine Life (Years)	Lease hold Area (ha)	Name of the Mine	Type of Mine	Peak Production Capacity (MTY)	Mine Life (Years)	Lease hold Area (ha)
1	Bastacolla Colliery	OC	0.130	3	239.45	Bastacolla Colliery	OCP	0.13	3	239.45
		UG	0.429	18			UG	0.429	18	
2	Bera Colliery	OCP	0.195	3	209.56	Bera Colliery	OCP	0.195	3	209.56
		UG	0.247	13			UG	0.247	13	
3	Dobari Colliery	UG	0.312	20	146.90	Dobari Colliery	OC	3.86	6	146.90
4	Ghanoodih Colliery	OC	1.820	5	73.00	Ghanoodih Colliery	OC	1.820	5	73.00
5	Kuya	UG	0.130	20	340.50	Kuya	OC	2.60	15	340.50

	Colliery	OC	0.780	5		Colliery				
	Goluckdih (NC)	OC	1.560	25						
6	Kujama Colliery	OC	0.780	5	191.00	Kujama Colliery	OC	0.780	5	191.00
	Total		5.603		1200.41			5.603*		1200.41

*Peak of Cluster will remain same, as peak of individual mine will be achieved in different years to offset loss of production in other mines.

(ii) There will be no change in the peak production capacity of 5.603 MTPA and the total area of 1200.41 ha of the cluster VIII (Group of 10 mixed mines).

(iii) Approvals of Mining Plans along with mine closure Plans for the Dobari colliery and Kuya Colliery has been submitted vide letter dated 6th March, 2018 and 29th March, 2018 respectively.

28.5.3 During deliberations, the Committee noted the following:-

The proposal is for amendment in environmental clearance dated 15th February, 2013 granted for the Cluster VIII (Group of 10 mines) of peak production of 5.603 MTPA of M/s Bharat Coking Coal Ltd in a total mine lease area of 1183.92 ha, located in Jharia coalfields, District Dhanbad (Jharkhand). The amendment has been proposed due to increase in capacity of individual mines namely, Dobari Colliery (from 0.312 to 3.86 MTPA) and Kuya Colliery & Goluckdih (NC) (from 2.470 to 2.60 MTPA), without any change in combined peak production capacity of 5.603 MTPA in a total mine lease area of 1183.92 ha of the Cluster.

Revised Mining Plan for the changed capacities of individual mines namely, Dobari Colliery and Kuya Colliery & Goluckdih (NC) has been approved by the Board of M/s BCCL on 6th March, 2018 & 29th March, 2018 respectively. .

28.5.4 *The EAC, after deliberations, recommended the proposal for amendment in the environmental clearance granted vide letter dated 15th February, 2013, as per the details mentioned in the table in para 28.5.2 above. All other terms and conditions stipulated in the EC dated 15th February, 2013 shall remain unchanged.*

Agenda No.28.6

Expansion of Samaleswari Opencast coal mine project of 15 MTPA in respect of increase in ML area from 928.264 ha to 1334.912 ha of M/s Mahanadi Coalfields Limited located in Ib Valley Area, Tehsil & District Jharsuguda (Odisha) - For ToR

[IA/OR/CMIN/73143/2018, F.No.J-11015/183/2008-IA.II(M)]

28.6.1 The proposal is for terms of reference to the expansion project of Samaleswari Opencast coal mine of 15 MTPA involving increase in mine lease area from 928.264 ha to 1334.912 ha of M/s Mahanadi Coalfields Limited located in Ib Valley Area, Tehsil & District Jharsuguda (Odisha).

28.6.2 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 earlier EC for the project was accorded for expansion from 5 MTPA to 11 MTPA in ML area of 928.264 ha vide letter dated 26/12/2014 subsequently under one time capacity expansion for expansion form 11 MTPA to 15 MTPA vide letter No. J-11015/183/2008-IA-II (M) dated 6/2/2015 in ML area of 928.264 ha.

(ii) The present proposal is for ToR for expansion in mining lease area from 928.264 ha to 1334.912 ha without change in capacity i.e. 15 MTPA.

(iii) The latitude and longitude of the project are 21°46'48" to 21°49'22" N and 83°52'23" to 83°56'00" E respectively.

(iv) Joint Venture: No

(v) Coal Linkage: Thermal Power Plants & Basket Linkage

(vi) Employment generated/ to be generated: 1511 (Existing). There is no additional manpower requirement though indirect employments will be generated.

(vii) Benefits of the project: (a) Improvement in physical and social infrastructure like roads, school building, provision of drinking water, community hall, plantation etc. (b) Increase in employment potential (c) Contribution to the Exchequer (both State and Central Govt.) (d) Improvement of Electrical Power Generation and availability of electricity in rural areas (e) Overall economic growth of the country by meeting the energy needs of the country

(viii) The total project area is 1384.767 ha. The pre-mining land use are following:

Pre-Mining:

S. No.	Type of Land	Existing (ha)	Additional (ha)	Total (ha)
1	Agricultural/Tenancy	86.448	--	86.448
2	Waste land	483.578	161.274	644.852
3	Forest Land	334.918	245.374	580.292
4	Grazing	0.000	---	0.000
5	Surface water bodies	23.320	---	23.320
Total		928.264	406.648	1334.912

Pre-Mining purpose wise:

S. No.	Item	For existing 15.0 MTPA (area in ha)			Addl. land for expansion (15 MTPA)(Ph-IV) (ha)			Total (ha)		
		Forest	Non-forest	Total	Forest	Non-forest	Total	Forest	Non-forest	Total
Within mining lease area										
1.	Quarry excavation	310.792	236.980	547.772	150.784	158.203	308.987	461.576	395.183	856.759
2.	Safety zone for blasting	--	301.627	301.627	3.806	3.071	6.877	3.806	304.698	308.504
3.	Ext OB dump	--	24.86	24.86	--	--	--	0	24.86	24.86
4.	Infrastructure	24.126	29.879	54.005	--	--	--	24.126	29.879	54.005
5.	Forest land outside Quarry area notified under CBA(A&D) Act	--	--	--	90.784	--	90.784	90.784	--	90.784
	Sub-total :	334.918	593.346	928.264	245.374	161.274	406.648	580.292	754.620	1334.912
Outside mining lease area										
5.	Residential Colony	--	49.855	49.855	--	--	--	--	49.855	49.855
6.	Rehabilitation Colony*	--	--	--	--	--	--	--	--	--
	Total land requirement	334.918	643.201	978.119	245.374	161.274	406.648	580.292	804.475	1384.767

Post- Mining:

Sl. No	Category	Land use (in Ha)					
		Plantation	Water body	Dip side slope and haul road	Undis- turbed	Built- up area	Total
1	Excavation (backfill) §	571.093	73.787	211.879	--	--	856.759
2	Danger zone for blasting	206.917	--	--	101.587	--	308.504
3	External OB dumps ^{\$\$}	24.860	--	--	--	--	24.860
4	Infrastructure	10.801	--	--	--	43.204	54.005
5	Residential colony	5.000	--	--	--	44.855	49.855
6	Forest land outside quarry area (modified under CBA (A&D) Act.	90.784	--	--	--	--	90.784
	Total	909.455	73.787	211.879	101.587	88.059	1384.767
<p>§ Out of the above area, 94.80 ha has already been technically and biologically reclaimed and afforested. \$\$ External OB dump area has already been reclaimed and afforested.</p>							

(ix) Total geological reserve is 179.75 Mt (as on 01-04-2017). The mineable reserve/ extractable reserve is 157.81 Mt (as on 01-04-2017)

(x) The coal grade is G12 to G13. The stripping ratio is 1.73 cum/tonne. The average gradient is 3⁰- 4⁰. There is one major seam with thickness ranging from 12.6 - 23.9 m and few local seams.

(xi) The total estimated water requirement is 5431 KLD. The level of ground water ranges from 0.95 m to 9.80 m below ground level.

(xii) The method of mining would be opencast mining using shovel-dumper/ripper-dozer in OB/ parting; surface miner, pay loader & tipper in coal

(xiii) There is no external OB dump proposed in the proposed expansion mine. However there are 6 nos. of existing external dumps with Quantity of 4.060 Mm³ in an area of 24.86 ha with height of 21 meter above the surface level. There will be two internal dumps with quantity of 445.97 Mm³ in an area of 782.972 ha (Post-mining)

(xiv) The final mine void (post-mining) would be in 73.787 ha with Maximum depth up to 183 m. and the total quarry area is 856.759 ha. Backfilled quarry area of 571.093 ha shall be reclaimed with plantation. A void of 73.787 ha with maximum depth up to 183 m is proposed to be converted into a water body.

(xv) Ambient Air quality Baseline data monitoring are been generated from 1st week of Feb, 2018 to 1st week of May, 2018 (Pre-monsoon season).

(xvi) The life of mine is 11 years (including 2017-18).

(xvii) Existing & Proposed: Coal production is being done by surface miner. In-pit by tipper/dumper. Surface to siding No 1, 2 & 3 by dumpers/tippers. Loading at siding by pay loader.

(xviii) There is R & R involved. There are 80 PAFs for this expansion project.

(xix) Capital Cost is Rs. 636.24 crore. CSR Cost: Fund for CSR will 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 the previous year whichever is higher. R&R Cost: Estimated around Rs. 630.66 lakhs (additional). Environmental Management Cost: Will be provided in EIA/ EMP.

(xx) Pandren Nalla flows within the Mine Lease area, Lilari Nalla flows at a distance of 60 m & Bagachhopa jhor at 100 m and IB river flows at a distance of 700 m from project site.

(xxi) Ground water clearance from CGWA under process. Mining plan has been approved in the 194th MCL Board meeting held on 08-09-2017 & by MoC vide letter dated 20-11-2017, Mine closure plan is an integral part of mining plan.

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

(xxiii) Total forest land area involved is 580.292 ha. FC available for 350.092 ha and forest diversion proposal for remaining 230.20 ha has been submitted vide proposal No. FP/OR/MIN/26817/2017 dated 07-10-2017.

(xxiv) Total afforestation plan shall be implemented covering an area of 571.093 ha till the end of mining. Green belt over an area of 297.701 ha. Density of tree plantation shall be 2500 trees/ha.

(xxv) Case under Section 15 & 16 of the Environment (Protection) Act, 1986 vide case No. 2(c) cc No. 172/2013 dated 11/02/2013 is pending in SDJM, Jharsuguda court.

(xxvi) Half yearly monitoring report on compliance status of existing EC conditions was deliberated during the meeting.

28.6.3 During deliberations on the proposal, the Committee noted the following:-

The proposal is for grant of ToR to the expansion project of Samaleswari Opencast Coal Mine (Phase IV) of capacity 15 MTPA of M/s Mahanadi Coalfields Limited, involving increase in project area from 978.119 ha to 1384.767 ha (mine lease area from 928.264 ha to 1334.912 ha), located in Tehsil Brajrajnagar, District Jharsuguda (Odisha).

The Ministry had earlier granted EC to the expansion project of Samaleswari Coal Mine from 11 MTPA to 15 MTPA in mine lease area of 928.264 ha vide letter dated 6th February, 2015.

With the proposed increase in mine lease area, total forest land would be increased from 334.918 ha to 580.292 ha. Out of it, forest land of 350.092 ha has already been diverted for non-forestry purposes. Stage-1 Forest Clearance for the remaining forest land of 230.20 ha, applied vide proposal No. FP/OR/MIN/26817/2017 dated 7th October, 2017, is presently under process.

Mining plan was approved in 194th MCL Board meeting held on 8th September, 2017 and by MoC vide letter dated 20th November, 2017. Mine closure plan is an integral part of Mining Plan.

In view of the extent of forest land involved, diversion of Nala and almost five-fold (400%) increase in production in a span of past mere two decades, It would not be improper to suggest for a probing study to be made by any reputed institution to know the effect on ecosystem- services available in the said mining area and assessment of carrying capacity of the extant ecology there-in before granting TOR to Samleswari project of MCL desirous of producing 15 MTY of coal.

The coal production during the period from 1996-97 to 2011-12 and then in 2014-15, has been more than the consented capacity for the respective periods, and thus amounts to violation of the EIA Notification, 2006.

28.6.4 *The EAC, after detailed deliberations, expressed its deep concern over the excess coal production during the periods from 1996-97 to 2011-12 and then in 2014-15, and thus repeated violation of the EIA Notification, 2006. The Committee desired that the Ministry should take a serious note of the same to consider the present proposal, even if the complaint case was already filed in the Court of Law for the said default.*

In view of the above, the Committee also preferred for compliance status of the conditions stipulated in the existing EC dated 6th February, 2015, through the Regional Office of the Ministry at Nagpur, to take the proposal forward.

Wednesday: 18th April, 2018

Agenda No.28.7

Expansion of Parsa East and Kanta Basan Opencast Coal Mine from 10 MTPA to 15 MTPA and Pit Head Coal Washery from 10 MTPA to 15 MTPA in total project area of 2711.034 ha of M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd, located in Hasdeo-Arand Coalfields in District Sarguja (Chhattisgarh) - For further consideration of EC

[IA/CG/CMIN/22290/2014, F.No. J-11015/120/2014-IA-II(M)]

28.7.1 The proposal is for grant of environmental clearance to expansion of Parsa East and Kanta Basan Opencast Coal Mine from 10 MTPA to 15 MTPA and Pit Head Coal Washery from 10 MTPA to 15 MTPA in total project area of 2711.034 ha of M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd, located in Hasdeo-Arand Coalfields in District Sarguja (Chhattisgarh)

28.7.2 The proposal was earlier considered by the EAC in its meetings held in January, 2017 and 30-31 May, 2017. As per recommendations of the EAC in its meeting held in January, 2017, site visit was conducted by a sub-committee of the EAC, comprising Dr. N. P. Shukla and Shri P. D. Siwal, along with Shri. Charanjeet Singh, Scientist C, Regional Office of MOEF&CC located at Nagpur during 22-23rd April, 2017. The sub-committee recommended that the grant of EC for expansion of coal mine and coal washery may be considered subject to the condition that final decision of the Hon'ble court in the matter will be binding on the project proponent. It further added that implementation of proposed project will help in improving the power generation situation of Rajasthan by reducing gap in demand and supply of electricity in the state and will also help in employment generation and development of surrounding villages.

28.7.3 During deliberations on the proposal, the Committee noted the following:-

(i) The proposal is for environmental clearance to the project for expansion of Parsa East and Kanta Basan (PEKB) Opencast Coal Mine from 10 MTPA to 15 MTPA along with the expansion of Pit Head Coal Washery from 10 MTPA to 15 MTPA by M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd (RRVUNL), in a total area of 2682.856 ha located in Hasdeo-Arand Coalfields in District Sarguja (Chhattisgarh).

(ii) Earlier, the environmental clearance was granted by the Ministry on 21st December, 2011 to the coal mine and washery of 10 MTPA capacity each, in a total area of 2711.034 ha.

(iii) Total project/mine lease area includes forest area of 1871.118 ha (1629.551 ha of revenue forest and 241.607 ha of forest land) as per the approved mining plan, which was earlier reported to be 1898.328 ha (comprising 1654.109 ha of revenue forest land and 244.219 ha of forest land) for which Stage-I FC has been obtained vide letter no. 8-31/2010-FC dated 12th April, 2018 subject to final outcome of the Civil Appeal No. 4395 of 2014.

(iv) Legal interventions

The National Green Tribunal, Principal Bench at New Delhi vide order dated 24th March, 2014 in Appeal No.73 of 2012 in the matter of 'Sudiep Srivastava Vs Rajasthan Vidyut Utpadan Nigam

Ltd' set aside the Ministry's order 23rd June, 2011 and the consequential order dated 28th March, 2012 passed by the Forest Department of the State Government of Chhattisgarh. Further, the case was referred to MoEF with the directions to seek fresh advice of Forest Advisory Committee within reasonable time on all aspects of the proposal. NGT also directed suspension of all works, except the conservation work of existing flora and fauna, till further orders passed by the MoEF.

Hon'ble Supreme Court vide order dated 26th April, 2014 in Civil Appeal No.4395/2014 in the matter of 'Rajasthan Rajya Vidyut Utpadan Nigam Ltd Vs Sudiep Shrivastava' stayed the directions contained in the impugned order dated 24th March, 2014 of NGT to the effect that all works commenced by the appellant pursuant to the order dated 28th March, 2012 by the State of Chhattisgarh u/s 2 of the Forest (Conservation) Act, 1980 shall stand suspended till further orders passed by the MoEF.

(v) Mining Plan and Mine Closure Plan for the proposed expansion was approved by the Ministry of Coal on 19th November, 2013, which was later revised vide their letter dated 12th August, 2016 to accommodate FBC power plant within the same mine lease area.

(vi) The ToR for the expansion project was granted on 10th September, 2014 and the public hearing was conducted on 11th September, 2016. The monitoring report on compliance status of EC conditions was forwarded by the Ministry's Regional Office at Nagpur vide their letter dated 21st November, 2016.

(vii) The proposal for EC was earlier considered by the EAC in its meetings held in January & May, 2017. As per the recommendations in its meeting held on 30th January, 2017, site visit was conducted by a sub-committee of EAC members. During the next meeting held on 30-31 May, 2017, the Committee deliberated on findings of the sub-committee and recommended as under:-

'The EAC, after detailed deliberations, desired that in view of the legal interventions, no final order of Hon'ble Supreme Court in Civil Appeal No.4395/2014 and the FAC having deferred consideration of the proposal, legal opinion may be sought in complete perspective to ensure that there is no violation of the orders of Hon'ble Court/NGT in letter and spirit and thus to take the proposal forward. The same was assured by the project proponent M/s RVUNL to provide through the State Advocate General.

The Committee further opined that for the present and till March, 2017 (phase-I), stage-I forest clearance is available only for 762 ha of forest land, and it is only after compliance report of phase-I, mining permission shall be considered for the remaining 1136 ha of forest land in phase-II. Mining permission/operations in phase-II are thus linked to the reforestation and bio-diversity management in phase-I. In such a case, the Committee desired for a clarification from the project proponent duly endorsed by the Ministry of Coal, whether the approved Mining Plan is in consonance with the phasing of diversion of forest land as stated in para 11.4.4 (f) above.

The EAC also desired to seek comments from FC division, and their line of action for compliance of the orders of Hon'ble Supreme Court/NGT.

(viii) As desired by the EAC, the project proponent submitted the opinion of the State Advocate General. On examination of the same and further deliberations in the Ministry, the matter was referred to Forest Conservation Division for the needful in compliance of the directions of the NGT in their order dated 24th March, 2014. In response, the letter dated 12th April, 2018 from the FC Division, addressed to the State Government of Chhattisgarh, quotes

that the whole issue was considered in the FAC meeting held on 25th January, 2018. The FAC has decided to recommend that the Ministry should ensure compliance of all conditions referred in stage-II clearance subject to final decision of Hon'ble Supreme Court in Civil Appeal No.4395 of 2014. The said letter dated 12th April, 2018 was duly taken note by the Committee.

(ix) Actual coal production during last 6 years i.e. since inception of the project in 2012-13 to 2017-18, has been 0.29 MTPA, 1.20 MTPA, 3.44 MTPA, 6.21 MTPA, 8.27 MTPA & 8.33 MTPA respectively, and as such no excess coal production vis-à-vis the sanctioned capacity has since been reported.

(x) Chhattisgarh Environment Conservation Board vide their letter dated 11th April, 2016 has last renewed the consent to operate under the Air Act, 1981 and the Water Act, 1974 to the project for mining and washing of coal of 10 MTPA, for a period of three years i.e. from 1st January, 2016 to 31st December, 2018.

28.7.4 *The EAC, after deliberations, recommended the project for grant of environmental clearance to the project for expansion of Parsa East and Kanta Basan Opencast Coal Mine from 10 MTPA to 15 MTPA and Pit Head Coal Washery from 10 MTPA to 15 MTPA, in a total area of 22682.856 ha located in Hasdeo-Arand Coalfields in District Sarguja (Chhattisgarh), subject to the compliance of terms and conditions as applicable, and the additional conditions as under:-*

(i) *To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.*

(ii) *Mitigative measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions as presented before the Committee, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at railway siding, etc.*

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

(iv) *To ensure health and welfare of nearby villages, regular medical camps shall be organized at least once in six months.*

(v) *Thick green belt of 75 m width at the final boundary in the down wind direction of the project site shall be developed to mitigate/check the dust pollution.*

Conditions for washery:

(vi) *The maximum production from the coal washery at any given time shall not exceed the limit as prescribed in the EC.*

(vii) *The project proponent shall obtain consent to establish from the State Pollution Control Boards of Chhattisgarh for the coal washery of 15 MTPA prior to commencement of the industrial operations.*

(viii) *Transportation of raw coal, washed coal and the rejects shall be through rail.*

(ix) *The technology so chosen for the washery should conform to 'Zero Liquid Discharge'.*

(x) *Efforts shall be made for utilizing alternate sources of surface water, abandoned mines or else whatsoever and thus minimizing the dependability on a single source.*

(xi) *Disposal of washery rejects shall be in accordance with the extant policy and guidelines, and environment friendly.*

(xii) *Total fresh water requirement shall be <1.5 cum/tonne of raw coal.*

Agenda No.28.8

Chotia-II Captive coal mining project of 1 MTPA of M/s Bharat Aluminium Company Limited (BALCO) in mine lease area of 316.826 ha located in Salaigot Village, Tehsil Podiuprodha, District Korba (Chhattisgarh) - For EC

[IA/CG/CMIN/50275/2016, F.No.J-11015/96/2004-IA.II(M)]

28.8.1 The proposal is for grant of environmental clearance to Chotia-II Captive coal mining project of 1 MTPA of M/s Bharat Aluminium Company Limited in total mine lease area of 316.826 ha located in Salaigot Village, Tehsil Podiuprodha, District Korba (Chhattisgarh).

28.8.2 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) Chotia-II Coal mine was earlier allocated to M/s Prakash Industries Limited (PIL). Environment Clearance for Chotia-II Coal Mine was granted by MoEF&CC vide its letter no. J-11015/95/2004-IA.II (M) dated 10th November, 2005 for 0.25 Million Tonne Per annum underground method only. Chotia-II Coal Mine was allocated to M/s Bharat Aluminium Company Limited (BALCO) w.e.f. 1st April, 2015 through a competitive electronic auction process conducted by Nominated Authority, Ministry of Coal. No mining activity has been done in the Chotia-II Coal Mine till date by M/s BALCO.

(ii) In 42nd meeting held on 31st August-1st September, 2015 and 44th meeting held on 8th -9th October, 2015, the EAC recommended that the project should be considered as a case of new proposal and not expansion since "no mining work has begun".

(iii) The project was accorded TOR vide letter no. J-11015/96/2004-IA-II(M) dated 6th June, 2016.

(iv) The latitude and longitude of the project are:

Chotia-II Co-ordinates				Chotia-II Co-ordinates			
SN	Name	Northing	Easting	Sn	Name	Northing	Easting
1	BP-1	22° 50' 32.2" N	82° 32' 51.6" E	9	BP-3	22° 51' 58.6" N	82° 31' 57.9" E
2	BP-2	22° 50' 40.6" N	82° 33' 01.2" E	10	BP-4	22° 51' 57.2" N	82° 31' 41.2" E
3	BP-2A	22° 51' 02.5" N	82° 32' 41.6" E	11	BP-4D	22° 51' 36.8" N	82° 31' 24.7" E
4	BP-2B	22° 51' 06.2" N	82° 32' 45.1" E	12	BP-5	22° 51' 33.4" N	82° 31' 26.9" E
5	BP-2L	22° 51' 37.0" N	82° 32' 17.4" E	13	BP-6	22° 51' 01.3" N	82° 31' 47.7" E
6	BP-18	22° 51' 33.7" N	82° 32' 06.1" E	14	BP-7	22° 51' 07.1" N	82° 31' 53.7" E
7	BP-19	22° 51' 42.4" N	82° 32' 00.7" E	15	BP-8	22° 50' 59.1" N	82° 32' 05.7" E
8	BP-20	22° 51' 53.2" N	82° 32' 02.8" E	16	BP-9	22° 50' 41.7" N	82° 32' 16.5" E

(v) Joint Venture: There is no joint venture.

(vi) Coal will be used to partially meet the coal requirement of 600 MW Captive Power Plant of BALCO at Korba.

(vii) Employment generation/to be generated: Employment already generated 200; maximum direct employment to be generated= 605

(viii) Benefits of the Project: Generation of additional 605 direct jobs. The project will also result in Improvement of physical infrastructure such as upgradation/black topping of road connecting Chotia-II Coal Mine to nearest state highway (Chotia-Chirimiri). Improvement in social infrastructure, contribution to Exchequer, and post mining enhancement of Green cover.

(ix) Mining lease areas as per approved Mining Plan is 316.826 ha.

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

Pre-mining:

SN	Landuse	Within ML Area (ha)	Outside ML Area	TOTAL (Ha)
1	Agricultural land	NIL	NIL	NIL
2	Forest land	316.826	NIL	316.826
3	Wasteland	NIL	NIL	NIL
4	Grazing land	NIL	NIL	NIL
5	Surface water bodies	NIL	NIL	NIL
6	Settlements	NIL	NIL	NIL
7	Others (specify)	NIL	NIL	NIL
	TOTAL	316.826	NIL	316.826

Post mining:

SN	Land use during Mining		Land use Post Mining				
			Land use (Ha)				
	Particular	Area	Plantation	Water	Public	Un	Total
1	External OB	3.0	3.0	0.00	0.00	0.00	3.0
2	Top Soil Dump	0.00	0.00	0.00	0.00	0.00	0.00
3	Excavation	79.40	79.40	0.00	0.00	0.00	79.40
4	Roads	0.00	0.00	0.00	0.00	0.00	0.00
5	Built Up Area	6.826	6.826	0.00	0.00	0.00	6.826
6	Green Belt	6.702	6.702	0.00	0.00	0.00	6.702
7	Un disturbed	220.898	0.00	0.00	0.00	220.898	220.898
	TOTAL	316.826	95.928	0.00	0.00	220.898	316.826

(xi) The total net geological reserve, mineable reserve and extractable reserve are 10.832 MT, 10.17 MT and 7.68 MT respectively. Thus percentage of extraction would be 70%

(xii) The coal grade is E-D. The stripping ratio is 4.82 Cum/Tonne. The average gradient is 2°-6°. There are 3 seams with thickness ranging from 0.06 m to 4.08 m

(xiii) The total estimated water requirement is 600 Cum/day out of which 250 Cum/day for mining purposes and 350 Cum/day is for domestic purposes. The level of ground water ranges from 45 m to 50 m below ground level.

(xiv) The method of mining would be conventional shovel & dumper combination for opencast mining and bord & pillar using SDL/LHD for underground mining.

(xv) There is one external OB dump with quantity of 1.5 Mm³ in an area of 3 ha with height of 15 meter above the surface level only for initial 3 months and thereafter it will be re-handled and backfilled in the mined out pit. One internal dump with quantity of 20.34 Mm³ in an area of 79.40 Ha with height of 15 meter above the surface level.

(xvi) Out of the total excavated area of 79.40 ha, 8.90 ha will be the final void. Initially this final void was proposed to convert into a water body. However, as per approved Mine Plan (3rd) revision by Ministry of Coal and suggestions by standing committee this void will be backfilled with fly ash brought from Balco's power plant which will be finally covered with top soil for plantation during final mine closure.

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

(xviii) Baseline air quality values at ambient air quality monitoring stations, are in the range of 14.1-23.1 µg/m³ for PM_{2.5}, 31.6-53.4 µg/m³ for PM₁₀, SO₂ from 8.1 -13.5 µg/m³ and NO_x from 10.1 -16.1 µg/m³, and thus meeting the prescribed standards.

(xix) Life of mine is 20 Years.

(xx) Transportation: Coal Transportation within the mine will be done by dumpers and from mine to end use plant located at Korba by tarpaulin covered trucks. Rail transportation is not

possible as the nearest rail head is situated at Korba itself. On enquiry with concerned authority of railways there is no current proposal of railway line near to Chotia II Mine.

(xxi) No R&R is involved since mining lease entirely in the forest land.

(xxii) The capital cost of project is Rs. 100 crores.

(xxiii) BALCO is a company incorporated under the Companies Act 2013. However, the responsibilities regarding CSR in terms of Section 135 (1) of the Companies Act are currently not applicable on BALCO since it is making losses for last three financial years. However, as a responsible corporate, BALCO continues to be committed to uplifting communities in its neighbourhood. As a part of this commitment, a social needs assessment was carried out in and around Chotia-II Coal Mine. Based on this assessment, a budget of Rs. 5/tonne is taken for Enterprise Social Commitment (ESC)

(xxiv) EMP Cost: Rs. 10/tonne of coal produced.

(xxv) Contribution to DMF: About Rs. 1.90 Crores per year.

(xxvi) Hasdeoriver flows at a distance of 1 km in east from the mine.

(xxvii) Mine Plan & Mine Closure Plan (3rd Revision) of Chotia Coal Mine was approved by MOC on 11th March, 2016 for Open cast Cum Underground (1.0 MTPA Peak Capacity) Mine Closure Plan is an integral Part of the approved Mine Plan

(xxviii) NOC issued by CGWA vide letter no. CGWA/NOC/MIN/ORIG/2016/2206 dated 23rd June, 2016.

(xxix) There are no national parks, wild life sanctuaries, biospheres reserves found in 10 Km buffer zone.

(xxx) Forestry issues: Total forest land involved is 316.826 ha. Forest Clearance obtained vide letter No.8-64/2005-FC dated 18th May, 2015

(xxxi) Total afforestation will be done over an area 95.928 ha including green belt at the end of mining. Density of tree plantation will be 2500 saplings/ha. In addition, gap plantation will also be carried out over an un-disturbed area of 220.898 ha.

(xxxii) There are no court cases/violation pending with project proponent

(xxxiii) Public Hearing was held on 6th January, 2018 at Village-Bhujangkhar, Tehsil-Podiuprodha, District Korba. The issues raised during PH includes employment, infrastructure development, drinking water facilities, education and health. Issues raised during Public Hearing and action plan for the same is as under:

S No	Issues raised during Public Hearing	Response/Action Plan	Timeline & Budget
1	EMPLOYMENT: 1. Employment generation due to the project 2. Preference to be given to nearby villagers	1. 200 people already employed, 600 more direct jobs will be created over next 6 years. 2. Preference will be given to the local villagers. Out of 200 currently employed, 120 are local villagers. 3. In addition significant indirect job opportunities will also get created.	Timeline-6 years
2	PLANTATION: 1. Plantation plan of BALCO in Chotia Mine including native species. 2. Loss of local species and tribals dependent on them	1. Total approximately 2,00,000 saplings will be planted in the area under mining (89.226 Ha). In addition, greenbelt at the periphery of the mining lease will have approximately 20,000 saplings	Budget allocated for plantation is about Rs. 5 lakhs/year Timeline-Every

	should be avoided.	(6.702 Ha). The area 227.60 Ha will remain undisturbed and the trees & other vegetation will be protected. Indigenous species will be planted to maintain the floral vegetative diversity of the area. 2. Since 227.60 Ha vegetation will remain undisturbed, loss of vegetation and local species will be limited to 89.226 Ha only. However, entry to the local community cannot be allowed in this area due to reasons of safety & security. After surrender of the mining lease, the land will be reverted back to the forest department.	year
3	<u>Community Development:</u>	Activity chart on proposed Community development activities along with budget allocation for next five years is given in Chapter-8.	Annual budget – Rs. 50 lakhs Timeline – 5 Years
	<u>Infrastructure:</u> 1. Electricity, water, road, education and health facility to be provided in Salaigot village and all gram panchayats near to Salaigot by M/s Bharat Aluminium Company Limited (Balco) 2. The road connecting Chotia to Matindai Chowk must be constructed	1. Proposed infrastructure development works have been incorporated in the overall development plan. 2. The road connecting Matindai temple to Salaigot village will be constructed / strengthened.	1. Budget: Rs.54 lakhs Timeline- 5 years 2. Budget: About Rs. 1000 lakhs for road construction/strengthening. Timeline- 1 year
	<u>Education to Women:</u> 1. Special plan to educate the women and girls 2. Assistance to SHGs.	1. Literacy programmes will be undertaken through SHGs. Meritorious females will be supported for higher education. Under “Unnati” Project, women of local villages will be provided computer training, stitching training, art & craft training etc. 2. A separate budget has been taken under Community Development to develop SHGs for women	1. Budget: Rs. 11 Lakhs has been allotted for Project Unnati for next 5 years. 2. Budget: Rs. 15 Lakhs has been allotted for SHGs for next 5 years.

	<p><u>Health & Medical Facilities</u> 1. Hospital at Chotia 2. Doctor and compounder at the hospital</p>	<p>1. Primary Health Centre at Chotia being operated by BALCO and services are extended to all local villagers free of cost. A 24-hour ambulance free of cost service is also provided.</p> <p>2. Qualified staffs are available at PHC. Doctor will be placed once mining operation is commissioned.</p>	<p>Budget: Rs. 15 Lakhs/Year Timeline: Every year</p>
	<p><u>Drinking Water</u> 1. Drinking Water to be provided in Salaigot and other nearby villages.</p>	<p>As a part of Community Development activity, drinking water is being supplied through water tankers to the nearby villages of Chotia I Mine and the same would be continued in Chotia II as well.</p>	<p>Budget: Rs. 12 Lakhs/Year Timeline: Every year</p>
4	<p><u>Impact to Environment:</u></p> <p>1. The EIA contain no information about the impact on public health by coal fire emissions 2. Water level of nearby area will go down because of operating opencast and underground mine. What arrangements will be made for the same by company? 3. Crop of nearby farmers got destroyed because of mine water from Chotia Mine. Till date compensation to the farmers has not been paid by mine management. 4. By opening coal mine nearby area will have impact of coal dust because of which environment will be damaged</p>	<p>1. Incubation period of coal is more than 4 months. Coal extracted from Chotia mine will be despatched to BALCO's captive power plant at Korba on "First in First out" basis. Minimal stock will be maintained at Mine site. All preventive and control measures will be implemented to control fires even though the possibility of coal fires is negligible. There is no history of coal fire at Chotia Mine.</p> <p>2. As per CGWA Govt. of India Chotia-II Coal Mine comes under non notified area, which means the ground water development is more than ground water abstraction. Even though, adequate artificial recharge measures will be implemented through check dams, rain water harvesting systems in consultation with CGWA.</p> <p>3. Project has not yet started. Once project starts, mine water will be utilized for dust suppression and plantation within lease area. Proper measures such as garland drain, check dams will also be constructed to prevent run-off of mine water in the nearby area.</p> <p>4. Mitigation Measures for Coal Dust</p> <ul style="list-style-type: none"> • Dust will be controlled by water tanker and sprinkler. • Dust on haul roads due to traffic will be controlled by water sprinkling 	<p>Budget: Rs. 38 lakhs/Year Timeline: Every year</p>

		at regular interval. • Green belt will be developed along the haul road and overburden dump. • Trucks involved in coal transportation will be covered with Tarpaulin.	
5	<u>Impact on Water Environment:</u> What arrangement will be made to prevent water pollution by the mine management?	<u>Mitigation measures for preventing water pollution</u> 1.No wet processing is involved. 2. ETP will be installed for workshop effluents and treated effluents will be recycled. 3. Mine seepage water will be utilized for dust suppression and plantation excess if any will be discharged after silt settling.	Budget: Approximately Rs. 35 Lakhs Timeline: During implementation phase.
6	<u>Impact on Wildlife:</u> 1. There are 4 reserve forest and 2 protected forest situated in the 10 kilometer radius of mine area. Hasdeo arand is habitat of many wild fauna. Many schedule-I fauna as per Wildlife (Protection) Act, 1972 are found in this area. Their existence will be affected by the project. 2. Forest will be destroyed once mine starts because of which wild animals will harm villagers of nearby area. 3. Wild animal will extinct once mine starts.	1. Trees will be cut only in 89.226 Ha area and remaining area will be protected. 2. A Wildlife Conservation and Management Plan has been prepared and the required fund for implementation has been deposited in state CAMPA account. 3. Training and awareness programmes for employees and community will be organized in consultation with forest and wildlife department.	Rs.443 lakhs has already been deposited into CAMPA account for Wildlife Conservation and Management Plan.
7	<u>Land and Compensation:</u> 1. Till date land compensation to some of the farmers is not being paid for the land acquired by Prakash Industries Limited for Chotia Opencast mines. 2. Company should provide land in return to land to villagers 3. To operate the Chotia mine thousands of trees have been cut by the management without permission	1 & 2. The entire area of the project is forest land and necessary amount pertains to NPV, CA etc., has already been paid. 3. The Mine was handed over to BALCO from April 1, 2015. Post that, no tree felling has been done by BALCO.	

28.8.3 During deliberations on the proposal, the Committee noted the following:-

Earlier, the proposal for expansion of Chotia-II Captive coal mining project from 0.25 MTPA to 1 MTPA in mine lease area 411 ha was submitted for grant of environmental clearance, which was considered by the EAC in its meetings held in August/September, 2015 and 8-9 October, 2015. Subsequently, the project proponent was informed about the said project to be considered as fresh one and not of expansion due to no mining operations carried out at site.

Now the proposal is for environmental clearance to Chotia-II Captive coal mining project of 1 MTPA opencast cum underground of M/s Bharat Aluminium Company Limited (BALCO) in mine lease area 316.826 ha located in Salaigot Village, Tehsil Podiuprodha, District Korba (Chhattisgarh).

The said coal mining project is proposed in combined mine lease area of 1179.826 ha (both for Chotia-I&II), which includes mine lease area of 863 ha allocated for Chotia-I project and 316.826 ha for Chotia-II. The total mine lease area comprises 960.286 ha of forest land, which includes 643.460 ha for Chotia-I and 316.826 ha for Chotia-II. Out of the forest land of 316.826 ha for Chotia-II, an area of 273.906 ha has already been diverted for non forestry purposes, whereas stage-I forest clearance has been accorded for the remaining 42.92 ha of forest land.

Chotia-II coal mining project of 0.25 MTPA (underground mining) in mine lease area of 410.982 ha was earlier granted environmental clearance by the Ministry vide letter dated 10th November, 2009 in favour of M/s Prakash Industries Limited. Subsequent to cancellation of the coal block pursuant to the Order of Supreme Court, and its reallocation to M/s BALCO, the said EC was transferred in their name on 17th June, 2015, subject to the same set of conditions.

Terms of reference for the project was granted on 6th June, 2016. In fact, in view of earlier observations of the Committee and also as communicated vide letter dated 18th January, 2016, the proposal should have been for a capacity of 1 MTPA opencast cum underground. Public hearing was conducted by SPCB on 6th January 2018. Main issues raised during the public hearing included employment to local people, social welfare activities, greenbelt development, forest conservation, construction of road, etc. The project proponent has submitted the action plan along with the timeline and funding management, to address the issues, suggestions and the representations received during public consultations.

Mining Plan for peak capacity of 1 MTPA by opencast cum underground was approved by Ministry of Coal on 11th March, 2016. Mine closure plan is an integral part of the Mining Plan.

Baseline air quality values at ambient air quality monitoring stations, are in the range of 14.1-23.1 $\mu\text{g}/\text{m}^3$ for $\text{PM}_{2.5}$, 31.6-53.4 $\mu\text{g}/\text{m}^3$ for PM_{10} , SO_2 from 8.1 -13.5 $\mu\text{g}/\text{m}^3$ and NO_x from 10.1 -16.1 $\mu\text{g}/\text{m}^3$, and thus meeting the prescribed standards.

28.8.4 *The EAC, after deliberations insisted for single environmental clearance, both for Chotia-I & Chotia-II, against combined mining lease of 1179.826 ha and single Mining Plan. Further, in view of the Chotia-I remains an integral part of the combined mining lease area of 1179.826 ha, the Committee also asked for monitoring report on compliance status of the conditions stipulated in the EC dated 10th November, 2005 issued in favour of M/s Prakash Industries Ltd, later transferred to M/s Bharat Aluminium Company Ltd on 4th June, 2015.*

At the same time, the Committee, from environmental perspective and in view of separate ECs obtained earlier for Chotia-I & Chotia-II, their transfer to M/s BALCO subsequent to fresh allocation of these mines by the Nominated Authority and the ToR issued for the present

proposal, also recommended the project for grant of environmental clearance to Chotia-II Coal Mining project of capacity 1 MTPA (opencast)/0.30 MTPA (underground) of M/s Bharat Aluminium Company Limited in mine lease area of 316.826 ha located at village Salaigot, Tehsil Podiuprodha, District Korba (Chhattisgarh), for a period of one year, subject to the compliance of terms and conditions as applicable, and the additional conditions as under:-

- (i) The capacity of the project shall be 1 MTPA (opencast) for first 5 years and 0.30 MTPA (underground) from 6th year till life of the mine.
- (ii) The environmental clearance for the capacity of 1 MTPA (opencast) shall be valid for a period up to one year. Meanwhile, the project proponent shall comply with the observations of the EAC for single EC against the combined mining lease and mining plan, to consider continuance of the project thereafter.
- (iii) To control the dust production at source, crusher and in-pit belt conveyors shall be provided with mist type sprinklers.
- (iv) Mitigative measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions as presented before the Committee, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at railway siding, etc.
- (v) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.
- (vi) To ensure health and welfare of nearby villages, regular medical camps shall be organized at least once in six months.
- (vii) Thick green belt of adequate width in the down wind direction of the project site shall be developed to mitigate/check the dust pollution. Plantation plan shall be prepared in consultation with the State Forest Department.
- (viii) Mine water shall be disposed off after treatment.

The Committee, however, desired that the Ministry may ensure the legal requirements and also compliance of norms/guidelines on such issues.

Agenda No.28.9

Cluster No.4 (3 Mines of a combined prod. capacity of 6.35 MTPA (Normative)/7.71 MTPA (Peak) in a combined ML area of 3350.02 of M/s Eastern Coalfields Limited, located in Raniganj Coalfields, District Burdwan (West Bengal) - For amendment in EC

[IA/WB/CMIN/7370/2012, F.No.J-11015/106/2011-IA.II(M)]

28.9.1 The proposal is for amendment in Environmental clearance of Cluster No. 4 (group of 3 mines) project having EC capacity 7.71 MTPA (Peak) and Mine Lease Area of 3350.02 Ha (3353 ha - 2.98 ha forest land) of M/s Eastern Coalfields Limited, located in Raniganj Coalfields at District Paschim Bardhaman (West Bengal).

28.9.2 The proposal was earlier considered by the EAC in its 26th meeting held on 15-16 February, 2018. In response to the observations of EAC, the details submitted by the project proponent and/or as informed during the earlier meeting, are as under:-

Sl. No. (As per Lease hold)	Name of Mine	Type	Lease hold Area (Ha)	EC Capacity (MTY)	Life (Years)	Sl. No. (As per Leasehold)	Name of Mine	Revised Lease hold Area (Ha)	Proposed EC Capacity (MTY)	Revised Life (Years)
As per EC dated 21.07.2015						As per Revised Proposal				
1	Khoirabad UG	UG	380.00	-	-	1	Khoirabad UG & OC	-	-	-
	Khoirabad OC Patch	OC		0.13	4					
2	Gaurandih UG	UG	1865.00	0.08	> 50	2	Gaurandih & Gaurandih Begunia OC	1865.00	4.21	15
	Gaurandih Block – D Phase – I OC Patch	UG		0.50	5					
	Gaurandih-Begunia Phase – I OC Patch	UG		2.00	7					
3	Itapara OCP	OC	1108.00	5.00	26	3	Itapara OCP	855.87	3.50	26
Total			3353.00	7.71				2720.87	7.71	

28.9.3 During deliberations on the proposal, the Committee noted the following:-

The proposal is for amendment in environmental clearance dated 21st July, 2015 granted by the Ministry for Cluster No.4 (Group of 3 OC/UG coal mines) of peak production of 7.71 MTPA of M/s Eastern Coalfields Limited in a total mine lease area of 3350.02 Ha (3353 ha - 2.98 ha forest land), located in Raniganj Coalfields, District Paschim Bardhaman (West Bengal). The amendment has been proposed due to reassessment of capacity of individual mines namely, Gaurandih & Gaurandih Begunia OC (from 2.71 to 4.21 MTPA) and Itapara OC (5.0 to 3.50 MTPA), without any change in combined peak production capacity of 7.71 MTPA and with a reduction in the total mine lease area of from 3353.0 ha to 2720.87 ha of the Cluster.

Revised Mining Plan for the changed capacities of individual mines namely, Gaurandih & Gaurandih Begunia OC and Itapara OC has been approved by the Board of M/s ECL

28.9.4 The EAC, after deliberations, recommended the proposal for amendment in the environmental clearance granted vide letter dated 21st July, 2015, as per the details mentioned in the table in para 28.9.2 above. All other terms and conditions stipulated in the EC dated 21st July, 2015 shall remain unchanged.

Agenda No.28.10

Cluster No. 9 group of 15 mines project of 6.25 MTPA (Normative)/8 MTPA (Peak) in ML area of 7145.4 ha of M/s Eastern Coalfields Limited in District Paschim Bardhaman (West Bengal) - For amendment in EC

[IA/WB/CMIN/8807/2011, F.No.J-11015/38/2011-IA.II(M)]

28.10.1 The proposal is for amendment in Environmental clearance of Cluster No.9 (group of 15 mines) project having EC capacity 8.00 MTPA (Peak) and Mine Lease Area of 7145.4 Ha of M/s Eastern Coalfields Limited, located in Raniganj Coalfields at District Paschim Bardhaman (West Bengal).

28.10.2 The proposal was earlier considered by the EAC in its 26th meeting held on 15-16

February, 2018. In response to the observations of EAC, the details submitted by the project proponent and/or as informed during the earlier meeting, are as under:-

Sl No.	Name of the Mine	Lease Area (ha)	Production Capacity (MTY)	Mine Life (Yrs)	Sl No.	Name of the Mine	Lease Area (ha)	Production Capacity (MTY)	Mine Life (Yrs)	Sl No.	Name of the Mine	Lease Area (ha)	Production Capacity (MTY)	Mine Life (Yrs)
As Per EC dated 23.01.2015					As per 1st EC Amendment dated 23.03.2017					As per Revised Proposal				
1	Ratibati UG	249.00	0.12	> 40	1	Ratibati UG	249.00	0.04	> 40	1	Ratibati UG	249.00	0.04	> 40
2	Chapuik has UG	412.00	0.06	> 50	2	Chapuik has UG	412.00	0.06	> 50	2	Chapuik has UG & OC	412.00	0.06	> 50
	Chapuik has OC Patch		0.15	1		Chapuik has OC Patch		0.15	1					
3	Amritnagar UG	279.00	1.14	> 30	3	Amritnagar UG	279.00	0.60	> 50	3	Amritnagar UG	279.00	0.60	> 50
4	Tirat UG	214.50	0.08	> 10	4	Tirat-Kuardih UG	829.50	0.15	> 10	4	Tirat-Kuardih UG & OC	829.50	0.15	> 10
5	Kuardih UG	615.00	0.07	> 10		Kuardih OC Patch		0.25	2					
6	Nimcha UG	890.20	0.4	> 50	5	Nimcha UG	890.20	1.08	> 40	5	Nimcha UG & Amkola / Nimcha OC Patch	890.20	1.43	> 40
	Damalia OC Patch		0.4	1		Damalia OC Patch		0.40	1					
			Amkola / Nimcha OC Patch	0.25		3		Amkola / Nimcha OC Patch	0.25					
7	Ghusick UG	376.00	0.1	> 50	6	Ghusick - Muslia UG & OC	1548.00	1.93	> 25	6	Ghusick - Muslia UG & OC	1548.00	1.93	> 25
8	Muslia UG	948.00	0.05	> 50										
Muslia OC Patch	0.55		5											
9	New Ghusick UG	224.00	0.05	> 40										
10	Kalipahari UG	299.50	0.1	> 50	7	Kalipahari UG	299.50	0.10	> 50	7	Kalipahari UG & OC	299.50	0.40	> 50
	Kalipahari OC Patch A		0.22	2		Kalipahari OC Patch A		0.30	4					
	Kalipahari OC Patch B		0.2	2		Kalipahari OC Patch B								
	Kalipahari OC Patch C		0.15	1		Kalipahari OC Patch C								

	Kalipahari OC Patch D		0.15	1		Kalipahari OC Patch D								
11	Jemehari UG	118.00	0.04	> 10	8	Jemehari UG	118.00	0.04	> 10	8	Jemehari UG	118.00	0.04	> 10
12	J K Nagar UG	1237.00	0.87	> 30	9	J K Nagar UG	1237.00	0.20	> 50	9	J K Nagar UG & OC	1237.00	0.42	> 50
	J K Nagar OC Patch		0.4	3		J K Nagar OC Patch		0.40	3					
	Pure Searsole OC Patch		0.12	1		Pure Searsole OC Patch		0.12	1					
	Mallick Basti OC Patch		0.26	1		Mallick Basti OC Patch		0.26	1					
13	Damra UG	249.00	0.06	> 10	10	Damra UG	249.00	0.05	> 10	10	Damra UG	249.00	0.05	> 10
14	Mahabir UG	241.20	0.03	> 25	11	Mahabir UG	241.20	0.03	> 25	11	Mahabir UG & Egara OC	241.20	0.38	> 25
	Mahabir OC		0.4	4		Mahabir OC		0.30	3					
	Narainkuri OC Patch		0.55	4		Narainkuri OC Patch		0.40	4					
	Egara OC Patch		0.35	5		Egara OC Patch		0.35	5					
15	Narainkuri UGP	793.00	0.54	> 25	12	Narainkuri UGP	793.00	0.54	> 25	12	Narainkuri OCP	793.00	2.50	> 25
Total		7145.40	8			Total	7145.40	8.00			Total	7145.40	8.00	

28.10.3 During deliberations on the proposal, the Committee noted the following:-

The proposal is for amendment in environmental clearance to Cluster No. 9 (group of 15 mines) project having EC capacity 8.00 MTPA (Peak) and Mine Lease Area of 7145.4 ha of M/s Eastern Coalfields Limited, located in Raniganj Coalfields at District Paschim Bardhaman (West Bengal) was granted Environmental Clearance vide Letter No. J-11015/38/2011.IA-II(M) dated 23rd January, 2015 and further amended on vide even letter no. dated 23rd March 2017. As per EC Amendment, the number of mines in the cluster has been reduced from 15 to 12 owing to amalgamation of some mines. Based on the existing conditions, the project proponent has decided to introduce a new project, namely, Narainkuri OCP with a capacity of 2.5 MTPA in place of the non-starter Narainkuri UGP and to raise production from one other mine of the cluster, while, correspondingly, lowering the capacity of other mines of the cluster in which present conditions are not conducive to achieving the targeted production within the next few years, so as to achieve higher production from the cluster while keeping the overall capacity and area unchanged. In this regard, the capacities of Chapuikhas UG & OC, Tirat – Kuardih UG & OC, Nimcha UG & OC, J K Nagar UG & OC & Mahabir UG & OC have been reduced since the OC patches are either exhausted or could not be started owing to delays in land acquisition and, thus, dropped from the mining plan.

Supplementary Mining Plan on the proposals for conversion of Narainkuri UGP to Narainkuri OCP and capacity and life enhancement in Amkola/Nimcha OC Patch was duly revised on the above lines and subsequently approved by the Board of M/s Eastern Coalfields Ltd.

28.10.4 The EAC, after deliberations, recommended the proposal for amendment in the environmental clearance granted vide letter dated 23rd January, 2015, amended on 23rd March, 2017, as per the details mentioned in the table in para 28.10.2 above. All other terms and conditions stipulated in the EC dated 23rd January, 2015, amended on 23rd March, 2017, shall remain unchanged.

Agenda No.28.11

Cluster No.10 (Group of 19 OC/UG coal mines) of peak production of 7.70 MTPA of M/s Eastern Coalfields Limited in a total mine lease area of 6349 ha, located in Raniganj Coalfields, District Paschim Bardhaman (West Bengal) - For amendment in EC

[IA/WB/CMIN/30610/2010, F.No.J-11015/180/2011-IA.II(M)]

28.11.1 The proposal is for amendment in environmental clearance of Cluster No.10 (Group of 19 OC/UG coal mines) of peak production of 7.70 MTPA of M/s Eastern Coalfields Limited in a total mine lease area of 6349 ha, located in Raniganj Coalfields, District Paschim Bardhaman (West Bengal).

28.11.2 The proposal was earlier considered by the EAC in its 26th meeting held on 15-16 February, 2018. In response to the observations of EAC, the details submitted by the project proponent and/or as informed during the earlier meeting, are as under:-

Comparison chart of Revised proposal with existing EC of Cluster-10											
Sl. No. (As per Leasehold)	Name of Mine	Type	Lease hold Area (ha)	EC Capacity (MTY)		Life (Yrs)	Sl. No. (As per Leasehold)	Name of Mine	Revised Lease hold Area (ha)	Proposed EC Capacity (MTY)	Revised Life (Yrs)
As per EC dated 20.01.2015						As per Revised Proposal					
1	North Searsole UG	UG	360	0.20	2.0	>25	1	North Searsole OCP	360	2.0	19
	North Searsole (East) OC Patch	OC		0.90		6					
	North Searsole (West) OC Patch	OC		0.90		7					
2	Kunustoria UG	UG	383	0.24		> 25	2	Kunustoria & Amrasota UG	383	0.15	> 25
	Amrasota UG	UG		0.15		> 25					
3	Belbaid UG	UG	384	0.48	0.48	> 25	3	Belbaid UG	384	0.12	> 25
	Belbaid OC Patch	OC		0.20		5					
4	Bansra UG	UG	611	0.735	0.735	> 25	4	Bansra UG & OC	611	0.735	> 25
	Bansra OC Patch	OC		0.15		1					

5	Parasea UG	UG	481	0.36	0.6 1	> 25	5	Parasea UG & OC Patch	481	0.55	> 25
	Parasea OC Patch	OC		0.25		3					
	Parasea 6 & 7 UG	UG		0.06	> 25						
6	Jambad OC	OC	323	0.80	> 25	6	Jambad UG & OC	323	1.00	> 25	
	Jambad UG	UG		0.24	> 25						
7	Nabakajora UG	UG	703	0.30	> 25	7	Nabakaj ora UG & Nabakaj ora - Madhab pur UGP & Madhab pur OC	703	2.23	> 25	
	Madhabpur UG	UG									
	Madhabpur OC Patch	OC		0.50	15						
8	Lachipur UG	UG	570	0.06	> 25	8	Lachipur UG	419	-	-	
9	Central Kajora UG	UG	291	0.15	> 25	9	Central Kajora UG	291	0.12	> 25	
10	Khas Kajora UG	UG	188	0.35	> 25	10	Khas Kajora UG	188	0.35	> 25	
11	Moirra UG	UG	455	0.12	> 25	11	Moirra UG	455	0.06	2	
12	Madhusudan pur UG	UG	338	0.24	> 25	12	Madhus udanpur UG	338	0.12	2	
13	Madhujore UG	UG	463	0.12	> 25	13	Madhujo re UG	463	-	-	
14	Ghanshyam UG	UG	451	0.12	> 25	14	Ghansh yam UG	232	-	-	
15	Parascole East & West	UG	348	0.39	> 25	15	Parasco le East & West	348	0.26	> 25	
Total			6349	7.70				5979	7.70		

28.11.3 During deliberations on the proposal, the Committee noted the following:-

The proposal is for amendment in EC dated 20th January, 2015 granted by the Ministry for Cluster No.10 (Group of 19 OC/UG coal mines) of peak production of 7.70 MTPA of M/s Eastern Coalfields Limited in a total mine lease area of 6349 ha, located in Raniganj Coalfields, District Paschim Bardhaman (West Bengal). The amendment has been proposed due to reassessment of capacity of individual mines without any change in peak production of 7.70 MTPA but reduction in the total mine lease area of from 6349 ha to 5979 ha of the Cluster.

Revised Mining Plan for the changed capacities of individual mines has been approved by the Board of M/s ECL.

28.11.4 *The EAC, after deliberations, recommended the proposal for amendment in the EC granted vide letter dated 20th January, 2015, as per the details mentioned in the table in para 28.11.2 above. All other terms and conditions stipulated in the EC dated 20th January, 2015 shall remain unchanged.*

Agenda No.28.12

Ghogha-Surka Lignite Mine (2.25 MTPA in 1355 ha), Khadsaliya-I Lignite Mine (1.0 MTPA in 711.42 ha) and Khadsaliya-II Lignite Mine (0.75 MTPA in 914.14 ha) of M/s Gujarat Power Corporation Limited, located in District Bhavnagar (Gujarat) - For amendment in EC

[IA/GJ/CMIN/7805/2010, F.No.J-11015/202/2010-IA.II (M)]

28.12.1 The proposal is for amendment in environmental clearance of **Ghogha-Surka Lignite Mine (2.25 MTPA in 1355 ha), Khadsaliya-I Lignite Mine(1.0 MTPA in 711.42 ha) and Khadsaliya-II Lignite Mine (0.75 MTPA in 914.14 ha) of M/s Gujarat Power Corporation Limited, located in District Bhavnagar (Gujarat)**

28.12.2 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:-

Ghogha-Surka Lignite Mine (2.25 MTPA in 1355 ha), Khadsaliya-I Lignite Mine(1.0 MTPA in 711.42 ha) and Khadsaliya-II Lignite Mine (0.75 MTPA in 914.14 ha) of M/s Gujarat Power Corporation Limited, located in District Bhavnagar (Gujarat) was granted environmental clearance vide Letter No.J-11015/202/2010-IA-II.(M) dated 24th December, 2014. The project proponent has now requested for amendment in the said EC in respect of one of the specific condition, with the details as under:

Sl. No	Mine	Specific Condition as per existing EC	Amendment Sought	Justification
1	Ghogha-Surka Lignite OC	(Condition No. XXiii) Lignite Transportation from mine pits to lignite stackyard from where lignite after necessary blending shall be transported to adjacent pithead TPP by closed conveyor system has been envisaged.	Transportation of Lignite produced from Ghogha-Surka Lignite OC Mine by road to pithead TPP for a temporary period of two years and thereafter by closed conveyor.	As per proposal the lignite produced from three mines viz. Ghogha-Surka, Kadsaliya-II & Khadsaliya-I was for captive use of M/s BECL TPP located near Khadsaliya-II mine. As such this was to be transported to the Lignite Stackyard located at Khadaliya-II and from there by closed conveyor to adjacent pithead TPP . Since the Second unit of the TPP has been installed and is awaiting receipt of lignite from these mines to become operational. Further the land acquisition in Ghogha-Surka is near completion as such it is proposed to despatch lignite produced from Ghogha-surka mine directly by road (4 km)for a period of two years and thereafter by closed conveyor from this mine to TPP. Present status : Mining operations

				not yet started in any of these three leases. It may be added that there is no change envisaged in the production capacity, and area of these mines as well as no other amendment in earlier EC conditions is sought.
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28.12.3 During deliberations on the proposal, the Committee noted the following:-

The proposal is for amendment in environmental clearance granted by the Ministry vide letter dated 24th December, 2014 in favour of M/s Gujarat Power Corporation Limited for Ghogha-Surka Lignite Mine of 2.25 MTPA in 1355 ha, Khadsaliya-I Lignite Mine of 1.0 MTPA in 711.42 ha and Khadsaliya-II Lignite Mine of 0.75 MTPA in 914.14 ha located in District Bhavnagar (Gujarat).

The amendment in EC has been sought in respect of one of the specific condition (xx) stipulated therein, relating to transportation of Lignite from Ghogha-Surka Mine to Padva Pithead Thermal Power Plant. The transportation of lignite from stack yard of Ghogha Surka mine is now proposed through a black topped road of 2.7 km for a period of two years, and thereafter by closed conveyor. During road transportation, proposed mitigating measures include, avenue plantation of local tree species on both sides, tree guards, mist spray dust suppression system, trucks covered with trailer tarp roller kit facility, surveillance cameras at loading and unloading points, etc.

28.12.4 *The EAC, after deliberations, recommended the proposal for amendment in the environmental clearance dated 24th December, 2014, with the specific condition (xx) stipulated therein, to be read now as under:-*

‘Lignite from the stack yard of Ghogha Surka Mine to the Padva Power Plant, may be transported by black topped road of 2.7 km for a period of 15 months i.e. up to 30th June, 2019. Meanwhile, closed conveyor system shall be made operational for transportation of Lignite after the stipulated period. For other mines namely, Khadsaliya-I and Khadsaliya-II, the said condition shall continue.’

All other terms and conditions stipulated in the EC dated 24th December, 2014 shall remain unchanged.

Agenda No.28.13

Coal Washery of 4 MTPA of M/s Global Coal & Mining Private Limited in an area of 13.03 ha at village Kistaram, Mandal, Sathupalli, District Khammam (Telangana) - For ToR

[IA/TG/CMIN/72595/2018, F.No.J-11015/12/2018-IA.II(M)]

28.13.1 The proposal is for terms of Reference to the Coal Washery of 4.0 MTPA of M/s Global Coal & Mining Private Limited in an area of 13.03 ha located at village Kistaram, Mandal, Sathupalli, District Khammam (Telangana).

28.13.2 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 4.0 MTPA coal washery is proposed in an area of 13.03 ha (land allotted by M/S. SCCL vide its letter no: KGM/JVOROC/SUR53/17/886 dated 07.12.2017)
- (ii) The latitude and longitude of the project are 17°12'12.95"-17°12'38.84"N and 80°47'19.31"-80°47'39.22"E respectively
- (iii) Joint venture: There is no Joint venture
- (iv) Coal supply: The raw coal will be supplied by M/s.SCCL for washing purpose @3.32 MTPA and maximum of 4.0 MTPA.
- (v) Employment generated/to be generated: During construction stage nearly 56 persons and operational phase nearly 400 persons (skilled & unskilled) will be given employment opportunity for people of nearby area.
- (vi) Benefits of the project: The proposed coal washery will result in decrease of ash percentage

- SCCL proposed to wash the coal at pit head for the average G-12 grade coal with a yield of 55.29% to G-9 grade (Washed).
- The total G-12 coal produced from JVR OC-II project is planned to wash after installation of Washery plant. So, SCCL desires to set up the coal washery on Build-Own-Operate (BOO) basis
- Global Coal & Mining Pvt. Ltd. (GCMPL) was awarded the open tender as the BOO operator to install a coal washery for washing of 4.0 MTPA of raw coal for a period of 15 years under Build-Own-Operate (BOO) concept
- The 4.0 MTPA coal washery is proposed in an area of 13.03 ha. Land allotted by M/S. SCCL vide its letter no: KGM/JVOROC/SUR53/17/886 dated 07.12.2017

(vii) Environmental Clearance & Forest issues: M/s SCCL has earlier obtained environmental clearance for JalagamVengalrao Opencast Project-II (JVOCPP) of open cast coal mining project (4.0 MTPA normative and 5 MTPA peak) located in village Kommepalli, Mandal Sathupalli, district Khammam, Andhra Pradesh vide its letter no: J-11015/268/2007-IA.II(M) dated 28th March, 2010. Final stage-II forest clearance has been obtained by SCCL vide G.O.Ms.No.24 dated 6th July, 2017.

(viii) The land break up is as below:

Sr.No	Particulars	Area (ha)
1	Plant area	1.4
2	Roads	2.9
3	Service buildings	2.1
4	Rain water harvesting pond with storm water drains	1.05
5	Washed coal and rejects stacking area	1.62
6	Green belt area	2.78
7	Slurry settlement ponds	0.82
8	Reserve for raw water storage tank	0.36
	Total	13.03

(ix) The proposed project is within JVROCP premises. Hence it does not require any additional land so no rehabilitation and resettlement of displaced persons is required.

(x) Washing technology – Batac Jig & drum washer for each circuit having 2.0 MTPA capacity.

(xi) Water requirement: The total water requirement for the proposed washery will be met from SCCL mine pit water. Water consumption will be 100 litres/tonne of raw coal feeding to plant.

- (xii) Power requirement: The power requirement will be around 4 units per tonne of raw coal out of which 2.5 units per tonne will be provided free of cost by SCCL. The HT power supply source at the required capacity & rate of supply shall be made available by SCCL at the firm's sub-station point of the washery. The required energy meter shall be provided by SCCL in the premises of substation
- (xiii) Cost of the project: Total project cost has been estimated as about Rs.100 crores.
- (xiv) There are no court cases violations pending with project proponent
- (xv) Baseline environmental monitoring studies were commenced from 1st March 2018 after submission of Form-I application.

28.13.3 During deliberations on the proposal, the Committee noted the following:-

The proposal is for ToR to Coal Washery of 4 MTPA of M/s Global Coal & Mining Private Limited (GCMPL) in an area of 13.03 ha located at village Kistaram, Mandal, Sathupalli, District Khammam (Telangana). The said land has been allotted by M/s The Singareni Collieries Company Ltd (SCCL) to M/s GCMPL, out of its Jalagam Vengalrao Opencast Coal Mining Project-II, to install washery of 4 MTPA on Build-Own-Operate (BOO) basis.

The estimated water requirement will be 100 litres/tonne of raw coal, which will be sourced from SCCL mine pit water.

28.13.4 *The EAC, after detailed deliberations, observed that the above proposal would simultaneously require amendment in the environmental clearance dated 28th March, 2010 for Jalagam Vengalrao Opencast Project-II of capacity 4 MTPA (normative)/5 MTPA (peak) of M/s The SCCL. Also, the Committee, considering stake of M/s The SCCL desired for their presence and commitment to take the proposal forward.*

Agenda No.28.14

Discussion on any other item

PARTICIPANTS IN 28th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 17th - 18th April, 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. Sharadchchandra Lele	Member
5.	Dr. Jai Krishna Pandey	Member
6.	Dr. Manjari Srivastava	Member
7.	Dr. Gururaj P. Kundargi	Member
8.	Shri. S K Sinha	Member
9.	Shri N. S. Mondal	Member
10.	Dr. R.K. Giri	Member
11.	Shri S. K. Shrivastva	Member Secretary

PARTICIPANTS IN 28th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 17th - 18th April, 2018 ON COAL SECTOR PROJECTS.

28.1 Barjora (North) Coal Mine of M/s West Bengal Power Development Corporation Limited.

1. Shri Amalesh Kumar
2. Shri Laldke Kumar Nath
3. Shri Priyant Kumar
4. Shri Rahul Singh
5. Shri. S. Mukharjee
6. Smt. Nandni Chaudhari

28.2 Bhatadi OCP Expansion of M/S Western Coalfields Limited.

28.3 Dinesh (Makardhokra –III) of M/s Western Coalfields Limited.

1. Shri T.N.Jha
2. Shri K.Chakraborty
3. Shri S.C.Shankar
4. Shri R.M.Wanere
5. Km.Palak Sobti
6. Shri U.S.Shah
7. Shri V.K.Nagda

28.4 Cluster V (7 Mines) of M/s BCCL

28.5 Cluster VIII (10 Mines) of M/S BCCL

1. Shri D.Gangopadhyay
2. Shri A. Prasad
2. Shri Kumar Ranjeev
3. Shri S. Datta
4. Dr. Evr Raju
5. Shri Navin Kumar
6. Shri Rajesh Ranjan
8. Shri Adarsh Kumar
9. Shri Sumit Kr. Jha

28.6 Samaleshwari OCP Expan. of M/S Mahanadi Coalfields Limited

1. Shri O.P.Singh
2. Shri A.K.Samantaray
3. Shri C.Jagadev
4. Shri R.C.Sahoo
5. Shri S.K.Srivastava
6. Shir R.K.Das
7. Shri N.K.Singh
8. Shri M.G.Brahmaputra
9. Shri H.S.Sharma

28.7 Expansion of 'Parsa East and Kanta Basan'M/s RRVUNL

1. Shri N.K.Kothari
2. Shri Prakash Israni

3. Shri G V Prasad Rao

28.8 Chotia –II of M/S Bharat Aluminium Company Limited .

1. Md. Afroz Ali
2. Shri R.K.Narang
3. Shri Virendra Jaiswal
4. Shri Kundan Singh
5. Syed Md. Rafeek s

28.9 Cluster No -4 (3Mines) of M/S Eastern Coalfields Limited.

28.10 Cluster No- 9 (15 Mines) of M/S Eastern Coalfields Limited.

28.11 Cluster No-10 (19Mines) of M/S Eastern Coalfields Limited.

1. Shri S.K.Jha
2. Shri B.N.Prasad
3. Shri S.K.Sinha
4. Shri Sunil Kumar Bhawaria
5. Shri S.Kundu
6. Shri A.K.Singh
7. Shri S.Chakraborty

28.12 Ghogha- Surka Lignite OCP of M/S Gujarat Power Corporation Limited

1. Shri H.C.Patel
2. Shri Raj Kumar
3. Shri S.K.Goswami
4. Shri Shantanu Paranik
5. Shri A.D.Jamkdor

28.13 Coal Washery of M/S Global Coal & Mining Private Limited

1. Shri P.R.K. Rao
2. Shri Patro
3. Smt. Durga Bhawani
4. Dr. B.Chandra Shekher
5. Shri Rajashekar Tummala
6. Shri G.V.Rao

21.14 Discussion on any other item

ANNEXURE-3
Updated/ December, 2014

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 (PM₁₀, PM_{2.5}, SO_x and NO_x, 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-II013/25/2014-IA.I dated 11th 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 conform 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.

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 (PM₁₀, PM_{2.5}, SO_x, NO_x 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.
- (xxv) 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 st Year)	5 th Year	10 th Year	20 th Year	24 th 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 st year					
2.	3 rd year					
3.	5 th year					
4.	10 th year					
5.	15 th year					
6.	20 th year					
7.	25 th year					
8.	30 th year					
9.	34 th year(end of mine life)					
10.	34- 37 th 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			

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 (PM₁₀, PM_{2.5}, SO_x, NO_x 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 ofMTPA 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.

01/05/2018

https://mail.gov.in/iwc_static/layout/shell.html?lang=en&3.0.1.2.0_15121607

Subject: **Re: Revised MOM as per Lele Sir and Prof. S K Sinha Sir**

Date: 04/28/18 03:03 PM

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

From: navin chandra <navinchandrarrl@yahoo.com>

Revised Draft MOM to be sent to chairman and EAC me... (183kB)

28/04/2018

Dear Dr. Srivastava Ji,

I have gone through the final draft of Minutes of the 28th meeting of EAC held on 17-18 April, 2018, which incorporates the suggestions of Dr. Sharad Lele, and Dr. S.K. Sinha members EAC. The Minutes are in order and can be uploaded on the web site of Ministry of Environment, Forests and Climate Change.

(NAVIN CHANDRA)

Dr. Navin Chandra,
Director General
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Vigyan Bhawan, Nehru Nagar, Bhopal - 462003 (M.P.) India
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**28th EAC (THERMAL & COAL MINING PROJECTS) MEETING
SCHEDULED FOR 17-18 April, 2018.**

AGENDA

**Venue: Brahmaputra Conference Hall, 1st Floor, Vayu Wing,
Indira Paryavaran Bhawan, Jorbagh, New Delhi-110003.**

[Pl. check the MoEF website: http://environmentclearance.nic.in/Report/Default3.aspx](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 Project Proponent 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**

COAL MINING PROJECTS

Time: 10.00 AM: Tuesday: 17th April, 2018

28.1 Barjora (North) Coal Mining Project of 3 MTPA of M/s The West Bengal Power Development Corporation Limited in a total area of 260.14 ha located in village and Tehsil Barjora, District Bankura (West Bengal) – For EC

[IA/WB/CMIN/69394/2017, F.No.J-11015/90/2017-IA.II(M)]

28.2 Bhatadi Opencast Expansion Coal Mine Project from 0.975 MTPA to 1.465 MTPA within existing ML area of 847.37 ha of M/s Western Coalfields Limited Located at District Chandrapur (Maharashtra)- for EC

[IA/MH/CMIN/72758/2018, F.No.J-11015/151/2014-IA.II(M)]

28.3 Dinesh (Makardhokra-III) Opencast Coal Mine Expansion Project from 3 MTPA to 4.5 MTPA of M/s Western Coalfields Limited in an area of 1636.97 ha located in District Nagpur (Maharashtra) –For EC

[IA/MH/CMIN/20405/2011, F.No.J-11015/537/2008-IA.II(M)]

28.4 Cluster V (7 mines of a peak production of 6.311 MTPA in a combined ML area of 1957.08 ha.) of M/s Bharat Coking Coal Ltd. located in Jharia Coalfields, District Dhanbad (Jharkhand) –For amendment in EC

[IA/JH/CMIN/6990/2011, F.No.J-11015/01/2011-IA.II(M)]

28.5 Cluster VIII Group of 10 mines (Combined Capacity 4.31 MTPA with a peak production of 5.603 MTPA) in a combined ML area of 1183.92 ha (1200.41 ha-16.49 ha = 1183.92 ha) of M/s Bharat Coking Coal Limited located in Jharia coalfields, District Dhanbad (Jharkhand)-For further amendment in EC

[IA/JH/CMIN/17129/2010, F.No.J-11015/298/2010-IA.II(M)]

28.6 Samaleswari Opencast coal mine expansion project in respect of land area i.e. from 928.264 ha to 1334.912 ha of 15 MTPA of M/s Mahanadi Coalfields Limited located in Ib Valley Area, Tehsil & District Jharsuguda (Odisha)-For TOR

[IA/OR/CMIN/73143/2018, F.No.J-11015/183/2008-IA.II(M)]

Time: 10.00 AM: Wednesday: 18th April, 2018

28.7 Expansion of of ‘Parsa East and Kanta Basan’ Opencast Coal Mine (from 10 MTPA to 15 MTPA) and Expansion of Pit Head Coal Washery (from 10 MTPA to 15 MTPA) in total project area is 2711.034 ha of M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd, located in Hasdeo-Arand Coalfields in District Sarguja (Chhattisgarh) – For further consideration of EC

[IA/CG/CMIN/22290/2014, F.No. J-11015/120/2014-IA-II(M)]

28.8 Chotia-II Captive coal mining expansion project from 0.25 MTPA to 1.0 MTPA in ML area of 411 ha of M/s Bharat Aluminium Company Limited (BALCO) located in Salaigot Village, Tehsil Podiuprodha, District Korba (Chhattisgarh) – For EC

[IA/CG/CMIN/50275/2016, F.No.J-11015/96/2004-IA.II(M)]

28.9 Cluster No.4 (3 Mines of a combined prod. capacity of 6.35 MTPA (Normative) and 7.71 MTPA (Peak) in a combined ML area of 3350.02 (3353 Ha - 2.98 ha) of M/s Eastern Coalfields Limited, located in Raniganj Coalfields, District Burdwan (West Bengal) - For amendment in EC (EC granted on 21.07.2015)

[IA/WB/CMIN/7370/2012, F.No.J-11015/106/2011-IA.II(M)]

28.10 Cluster No. 9 group of 15 mines project of 6.25 MTPA (Normative)/8 MTPA (Peak) in ML area of 7145.4 ha M/s Eastern Coalfields Limited in District Burdwan (West Bengal) - For amendment in EC

[IA/WB/CMIN/8807/2011, F.No.J-11015/38/2011-IA.II(M)]

28.11 Cluster No. 10 of 19 mines (expn. from 2 MTPA(Normative) to 7.2 MTPA (peak) in a combined ML area of 6349 ha of M/s Eastern Coalfields Limited, located in Raniganj Coalfields, District Burdwan (West Bengal) - For amendment in EC

[IA/WB/CMIN/30610/2010, F.No.J-11015/180/2011-IA.II(M)]

28.12 Ghogha-Surka Lignite Opencast project in 1355 ha, Khadsaliya-I Lignite Mining and Khadsaliya-II Lignite Mining Project M/s Gujarat Power Corporation Limited, located in District Bhavnagar (Gujarat) -For amendment in EC

[IA/GJ/CMIN/7805/2010, F.No.J-11015/202/2010-IA.II (M)]

28.13 Coal Washery of 4.0 MTPA of M/s Global Coal & Mining Private Limited located at village Kistaram, Mandal, Sathupalli, District Khammam (Telangana) - For TOR

[IA/TG/CMIN/72595/2018, F.No.J-11015/12/2018-IA.II(M)]

28.14 Discussion on any other item.