

Minutes of the 9th meeting of the EAC held on 27-28 April, 2017 for Thermal & Coal Mining Sector projects

A. The 6th meeting of the Expert Appraisal Committee (EAC) for Thermal & Coal mining projects was held on 27-28 April, 2017 in the Ministry to consider the proposals relating to coal mining sector. The list of participants and the project proponents are at Annexure-I & II respectively.

B. Confirmation of minutes

The Committee confirmed minutes of the 6th meeting held on 27-28 February, 2017.

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 9.1

Kaniha Opencast Coal Mine Expansion Project (from 10 MTPA to 14 MTPA in an ML area of 718 ha; of M/s Mahanadi Coalfields Limited, located in District Angul (Odisha) - For further consideration of EC

9.1.1 The proposal is for grant of environmental clearance to the expansion project of Kaniha Opencast Coal Mine from 10 MTPA to 14MTPA of M/s Mahanadi Coalfields Limited in ML area of 718 ha located in District Angul (Odisha).

9.1.2 The proposal was last considered in the 51st EAC meeting held on 5th February, 2016, wherein the Committee, after detailed deliberations recommended the project for grant of EC subject to Stage-I FC being obtained, along with the following specific conditions:

- The proposed mine void with a depth of 20-80 m would instead be backfilled with overburden of the neighbouring mine i.e. Gopalji and plantation would be done in this area. Till such time the overburdens are used for back filling, grass should be planted on the OB dumps to prevent erosion.
- The silo construction presently indicated as completion in December, 2017 should be advanced by at least three months i.e. by September, 2017.
- All the mist blowers (10 Nos) should be commissioned by June, 2016.
- There was lack of clarity regarding extent of diversion of forest land and project proponent was unable to resolve the discrepancy on the spot. In their own interest, project proponent was advised to sort out this matter expeditiously with the MoEF&CC.

9.1.3 The PP further submitted that:

(i) The Original EC was granted to the project vide letter no. J-11015/134/2007-IA.II (M) dated 31.10.2007 for 10 MTPA in an area of 1880 Ha. Now, the present request is for enhancement in capacity from 10 MTPA to 14 MTPA capacity within the existing ML of 718.00 Ha (Phase I).

(ii) As per OMs of MoEF&CC dated 19.12.2012 & 30.05.2014 application was submitted online on 30/01/2015 for Environmental clearance for expansion under clause 7(ii) involving **one time production capacity expansion** (10.0 to 14.0 MTPA) in the existing mining lease (i.e 1880 ha) so as to quickly ramp-up coal production. Subsequently, EAC meeting was held on 10.04.2015 & 05.02.2016.

(iii) Environment Clearance for 14.0 MTPA was recommended (subject to Stage-I FC) by EAC in its meeting held on 05.02.2016.

(iv) MCL, vide letter no. 456 dated 17.02.2016 requested for grant of EC for one time production capacity expansion within the existing mining lease as per the above O.Ms of MoEF&CC without linking it to FC.

(v) Joint Secretary, MoEF&CC desired for a presentation on the matter and the same was made on 29.03.2016. In the meeting it was advised to prepare and submit an approved mining plan for operating the mine within the existing operational area including the diverted forest land only and excluding all the non-diverted forest land.

(vi) Accordingly, a revised mining plan of Kaniha OCP (expansion from 10 Mty to 14 Mty) has been prepared and duly approved by MoC .This mining plan has been prepared within the existing operational area including the diverted forest land only (i.e. 1034 ha (phase-I) including land for residential colony (40 ha) & Rehabilitation site 276 ha)and excluding all the non-diverted forest land.

(vii) Requested to consider the above facts and grant EC for one time production capacity expansion of Kaniha OCP (from 10 MTPA to 14 MTPA) within the existing mining lease including the diverted forest land only and excluding all the non-diverted forest land. This is in the national interest since Kaniha OCP is linked to the Super Thermal Power Plant, NTPC-Kaniha and is located in the close proximity of the OCP.

(viii) The latitude and longitude of the project are 21° 03' 04" to 21° 05' 00" N and 85° 02' 20" to 85° 06' 00" E respectively.

(ix) Joint Venture: No Joint Venture.

(x) Coal Linkage: M/s NTPC, Talcher Super Thermal Power Station, Kaniha, Angul, Odisha

(xi) Employment generated / to be generated: Employment already provided to 1005 persons & 800 persons (approx) will be provided.

(xii) Benefits of the project: Increase in Employment Potential; Contribution to the Exchequer (Central & State) & Meeting Energy demand of the nation – linked project to Thermal Power Plant.

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

Land use Details:

S. No	Type of Land	Within mine lease area		Outside mine lease area		Total for 14.0 Mty
		Existing 10.0 Mty	Addl. land for incremental production	Existing 10.0 Mty	Addl. land for incremental production	
1.	Agricultural	501.77	0.00	0.00	0.00	501.77
2.	Forest	241.60	0.00	0.00	0.00	241.60
3.	Waste land (govt. & tenancy)	1094.89	0.00	0.00	0.00	1094.89
4.	Grazing	0.00	0.00	0.00	0.00	0.00
5.	Surface water bodies	18.80	0.00	0.00	0.00	18.80
6.	Others (settlement)	22.94	0.00	0.00	0.00	22.94
7.	Residential colony	0.00	0.00	40.00	0.00	40.00
8.	Rehabilitation site	0.00	0.00	276.00	0.00	276.00
Total Project area :		1880.00	0.00	316.00	0.00	2196.00

Pre-Mining:

Sl.	Item	For existing 10.0 Mty	Phase I	Total for 14.0 Mty
1.	Quarry excavation	1131.00	363.00	1188.00
	Dump area (external)	312.26	172.00	312.26
2.	Blasting Danger Zone	373.98	183.00	286.98
4.	Infrastructure	75.40		75.40
5.	Rationalization of project boundary	8.06		8.06
6.	Diversion of the road	9.30		9.30
	Mining lease area	1880.00	718.00	1880.00
7.	Residential colony	40.00	40.00	40.00
8.	Rehabilitation site	276.00	276.00	276.00
	Total :	2196.00	1034.00	2196.00

Post Mining:

Post-mining land use (at the end of phase-I mining activity)					
Sl. No.	Category	Land use (in ha)			
		Plantation/ grass carpeting	Dip side slope & haul road	Undisturb ed/ built up	Total
1	Excavation Area	196.00	167.00	-	363.00
2	OB dump Area (External)	172.00	-	-	172.00
3	Infrastructure (office, store, CHP & siding) & Blasting danger zone	20.00	-	163.00	183.00
	Total	388.00	167.00	163.00	718.00

Post Closure (After completion of Phase I & Phase II)

Post-Closure land use						
S. N.	Category	Land use (in ha)				Total
		Left out void/ water body	Afforested or arboriculture	Land to be converted to Agriculture (conceptual)	Undisturbed Built-up area	
1	Quarry excavation	339.0	298.60	550.40	--	1188.00
2	Safety zone for blasting	--	68.80	--	218.18	286.98
3	OB dump (External)	--	--	312.26	--	312.26
4	Infrastructure	--	15.08	--	60.32	75.40
5	Rationalisation of project boundary	--	8.06	--	--	8.06
6	Diversion of Road	--	4.00	--	5.30	9.30
7	Residential colony	--	4.0	--	36.00	40.00
8	Resettlement colony	--	55.20	--	220.80	276.00
	Total	339.0	453.74	862.66	540.60	2196.00

Core Area:

Sl. No.	Type of Land	Existing 10.0 Mty	Addl. land for incremental production	Total for 14.0 Mty
1.	Agricultural	501.77	0.00	501.77
2.	Forest	241.60	0.00	241.60
3.	Waste land (govt. & tenancy)	1094.89	0.00	1094.89
4.	Grazing	0.00	0.00	0.00
5.	Surface water bodies	18.80	0.00	18.80
6.	Others (settlement)	22.94	0.00	22.94
	Total for mining lease area	1880.00	0.00	1880.00

- (xiv) The total geological reserve is 755.96 MT. The extractable reserve is 656.54 MT (As on 01.04.2016). Phase I – 140.68 Mt (As on 01.04.2016) and Phase II – 515.86 Mt (As on 01.04.2016). The per cent of extraction would be 87.00 %.
- (xv) The coal grade is G9 to G12
- (xvi) The stripping ratio is 1.65 cum/t (phase-I: 1.36 cum/t). The average Gradient is 4.50-240. There will be 12 seam sections in 21 combinations (Seam-IVM to Seam-IIB1).
- (xvii) Total estimated water requirement is 3.70 MLD.

(All fig in MLD)			
	Existing 10.0 Mty	Addl. For 4.0 Mty	Total for 14.0 Mty
Potable	0.89	0.0075	0.90
Industrial	2.07	0.73	2.80
Total	2.96	0.74	3.70

- (xviii) The level of ground water ranges from 2.10 m to 6.67 m.
- (xix) The method of mining would be Opencast Mining by Shovel – Dumper in overburden, surface miner, loader and dumper in coal
- (xx) There will be one external dump during Phase I having an area of 172.0 Ha (around 59.17 Mcum during phase-I) with height of 85 meter above the surface level, this will be later re-handled. Remaining quantity of overburden will be internally backfilled having an area of 339 ha in phase-I.
- (xxi) The mine will be continued for phase – II operation after stage II forest clearance of the remaining area so mine will be ultimately closed only after phase II operation. The final mine void would be in 339.00 Ha with maximum depth up to 80 m out of the total quarry area of 1188.00 Ha. This void of 339.0 ha with depth of 80 m (max.) & 20 m (min.) is proposed to be converted into a water body. Remaining quarry area of 849 Ha will be backfilled. Out of 849.0 ha, 298.60 ha will be afforested and the remaining 550.40 ha will be used for agriculture purpose (conceptual) during mine closure period.
- (xxii) The seasonal data for ambient air quality has been documented for the period September 2013 to August 2014 and all results at all stations are within prescribed limits.
- (xxiii) The life of mine is 11years (Phase I) and 37 Years (Phase II). Total life of mine is 48 years as on 01.04.2016.
- (xxiv) Transportation: Coal transportation within pit and upto siding by Rear dumper/ tipper; loading at siding :

Existing Arrangement: by pay loader into NTPC wagon

Proposed Arrangement: rapid loading system into NTPC wagons

- (xxv) There is R& R involved. There are 1715 PAFs.
- (xxvi) Cost: Total capital cost of the project is Rs. 457.77 Crores. CSR Cost Rs. 225.25 Lakhs. R&R Cost Rs. 5158.79 lakhs. Environmental Management Cost Rs. 3419.49 lakhs as per approved PR.
- (xxvii) Water body: Brahmani river is about 1.0 km (East); Singada Jhor is about 0.30 km (south); Tikira river is about 1.25 km (north) Bhalutunguri nadi at a distance of 0.2 km from ML boundary.
- (xxviii) Approvals: Revised Mining Plan & Mine Closure Plan for Kaniha OCP (14 Mty) was approved by Ministry Of Coal vide letter no 34012/(4)/2011-CPAM dated 8th Feb'2017.
- (xxix) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km radius of the project area.
- (xxx) Forestry issues: There is 2.307 Ha forest land is involved in Phase I for which Stage -II FC granted vide no.8 (21)6/ 2000-FC DT: 24.05.06/ 01.06.06.
- (xxxii) Total afforestation plan shall be implemented covering an area of 384.94 ha at the end of mining. Green Belt over an area of 68.80 ha. Density of tree plantation is about 2500 trees/ ha.
- (xxxii) There are no court cases/violation pending with the project proponent.
- (xxxiii) Public Hearing was held on 16.05.2006 at Pabitra Mohan High School, Kaniha.

9.1.4 While deliberations on the proposal, the Committee noted the following:-

- (i) The Kaniha Opencast coal mine was earlier granted environmental clearance on 31st October, 2007 with its capacity of 10 MTPA in the total mine lease area of 1880 ha (includes 241.6 ha of forest land) based on the public hearing conducted on 16th May, 2006.

(ii) The proposal for grant of EC to the expansion project of Kaniha Opencast coal mine from 10 MTPA to 14 MTPA in the same mine lease area was considered by the EAC in its meeting held in April, 2015 and February, 2016.

(iii) The EAC in its meeting held on 5th February, 2016 recommended the expansion project for grant of EC subject to obtaining Stage-I FC along with certain conditions, which inter-alia include completion of silo by September, 2017, all the mist blowers to be commissioned by June, 2016, etc.

(iv) Due to delay in obtaining Stage-I FC for diversion of the forest land of 239.293 ha, the project proponent preferred to exclude the said forest land to take up the mining operations for 14 MTPA in phases. In phase-I, the mine lease area proposed to be covered in 718 ha, which would go upto 1880 ha after phase-II (includes total 241.6 ha of forest land).

(v) The present proposal is for grant of EC to the expansion project from 10 MTPA to 14 MTPA in mine lease area of 718 ha (includes 2.307 ha of forest land) without any fresh ToR or public hearing. As per the provisions of EIA Notification, 2006 and subsequent OMs, the EAC in its diligence may consider for waiving of the requirement of fresh ToR and the public hearing.

(vi) The issues raised during the last public hearing conducted on 16th May, 2006 included R&R for the project affected families, employment to the locals, reclamation and plantation, potable water, health, education, road, development of water bodies etc.

(vii) The Mine Plan and the Mine Closure Plan was revised accordingly which was approved by the MCL board on 31st January, 2017 and by Ministry of Coal on 8th February, 2017.

(viii) The Regional office of this Ministry at Bhubaneswar has inspected the site on 5th April, 2017 and the report was forwarded vide their letter dated 25th April, 2017. The Committee observed compliance of EC conditions not to their satisfaction especially in respect of storage of top soil, backfilling of de-coaled area, implementation of Disaster Management Plan, no reclamation of OB dump, no survival of leguminous plants, retaining wall at the toe of OB dumps not properly constructed, etc.

(ix) The progress on R&R and the funds allocated for it were meagre and needed significant improvements. A certification from the District Collector that R&R related to the existing mine has been satisfactorily completed is essential.

(x) The baseline ambient air quality values at monitoring locations namely, Old site Office, Patharamunda village, New Time Office and Project Office were in the range of PM_{2.5} 32 -144 ug/m³ during March, 2017 and PM_{2.5} 36 – 98 ug/m³ & PM₁₀ 83 -139 ug/m³ during April, 2017, and thus exceeding prescribed National Ambient Air Quality standards.

9.1.5 The Committee noted that the existing EC for Kaniha OCP is for the production capacity of 10 MTPA. Regarding expansion of the project by enhancing capacity to 14 MTPA, the EAC, suggested the project proponent to submit the time bound Action Plan on the observations of the Regional Office during site visit, certification of the District Collector regarding R&R, and thus to ensure the desired corrective actions. The proposal was, therefore, deferred.

Agenda 9.2

Kulda Opencast Expansion project from 10 MTPA to 15 MTPA in an area of 634.205 ha by M/s Mahanadi Coalfields Limited located in Tehsil Himgir District Sundargarh (Odisha)-TOR

9.2.1 The proposal is for grant of TOR to Kulda Opencast Expansion project from 10 MTPA to 15 MTPA in an area of 634.205 ha by M/s Mahanadi Coalfields Limited located in Tehsil Himgir District Sundargarh (Odisha).

9.2.2 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) The proposal is for grant of TOR for expansion of OCP from 10 to 15 MTPA in an area of 634.205 ha.
- (ii) EC for 10 MTPA was granted vide letter No. J-11015/10/95.IA.II(M) dated 24th December, 2002.
- (iii) The latitude and longitude of the project are 21°42'00" to 21°44'30" N and 83°43'00" to 83°46'30" E respectively.
- (iv) Joint Venture: There are no JV's
- (v) Coal Linkage : Thermal Power Plant & Basket Linkage
- (vi) Employment generated / to be generated: Employment provided so far around 320 nos. Additional 65 nos. shall be provided.
- (vii) Benefits of the project: (i) Improvement in Physical Infrastructure (ii) Improvement in Social Infrastructure (iii) Increase in employment potential (iv) Contribution to the Exchequer (both State and Central Govt.) (v) Post mining enhancement of Green Cover (vi) Improvement of Electrical Power Generation and availability of electricity for 24x7 in rural areas (vii) overall economic growth of the country.
- (viii) The land usage of the project will be as follows:

Sl. No.	Type of Land	Within ML area (Ha)		Outside ML area (Ha)		Total Area (Ha)	
		Existing	Proposed	Existing	Proposed	Existing	Proposed
1	Agricultural/Tenancy	455.790	259.794	37.500	37.500	493.290	297.294
2	Waste land	194.610	146.521	22.900	22.900	217.510	169.421
3	Forest Land	279.200*	227.890	0.000	0.000	279.200	227.890
4	Grazing	0.000	0.000	0.000	0.000	0.000	0.000
5	Surface water bodies	0.000	0.000	0.000	0.000	0.000	0.000
Total:		929.600	644.205	60.400	60.400	990.000	694.605

Instead of 929.60 EC is only granted for 878.29 because out of *279.20 Ha Forest Land FC is available only for 227.89 Ha (FC not available for 279.20 – 227.89 = 51.31 Ha).

Pre-Mining:

Particulars	Existing			Proposed		
	Forest	Non-Forest	Total	Forest	Non-Forest	Total
Excavation Area	241.700	294.300	536.000	187.155	134.755	321.910
Infrastructure/Embankment and other area including safety zone	32.900	189.930	222.830	36.615	115.178	151.793
External OB dumps	4.600	166.170	170.770	4.120	156.382	160.502
Mine Lease Area	279.200*	650.400	929.600	227.890	406.315	634.205
Residential Colony	0.000	37.500	37.500	0.000	37.500	37.500
Rehabilitation site	0.000	22.900	22.900	0.000	22.900	22.900
Outside lease area	0.000	60.400	60.400	0.000	60.400	60.400
Total	279.200	710.800	990.000	227.890	466.715	694.605

Instead of 929.60 EC is only granted for 878.29 because out of *279.20 Ha Forest Land FC is available only for 227.89 Ha (FC not available for 279.20 – 227.89 = 51.31 Ha).

Post- Mining:

Sl. No.	Land Use during Mining	Land Use (Ha)					
		Plantation/ grass carpeting	Water Body	Dip side slope & haul road	Undist urbed	Built – up area	Total
1.	Excavation Area	211.47	17.64	92.80	--	--	321.91
2.	OB dump Area	160.502	--	--	--	--	160.502
3.	Infrastructure	25.23	--	--	--	100.927	126.157
4.	Embankment	3.51	--	--	--	14.049	17.559
5.	Other area including safety zone & Road/Nallah Diversion	8.077	--	--	--	--	8.077
	Total	408.789	17.64	92.80	--	114.976	634.205

(ix) Total geological reserve is 438.90 MT. The mineable reserve 172.49 MT, extractable reserve is 132.29 MT. The per cent of extraction would be 70.20 %.

(x) The coal grade is C to G (Avg.- G11).The stripping ratio is 0.87 Cum/tonne. The average Gradient is 5⁰ to 8⁰. There will be three major seams with thickness ranging from 0.12-34.07 m.

(xi) Total estimated water requirement is 4083 m³/day. The level of ground water ranges from 1.57 m to 4.45 m.

(xii) The method of mining would be opencast.

(xiii) There are 2 (Two) (1 in phase-I) external OB dump with Quantity of 30.26 Mm³, 22.63 Mm³ (as on 01.4.16) in an area of 162.502 ha with height of 80-90 m (presently around 60 m) above the surface level and one internal dump with Quantity of 112.32Mbcm in an area of 17.64 Ha (Post Mining).

(xiv) The final mine void would be in 17.64 Ha (Post Mining) with depth varying up to 200 m and the Total quarry area is 321.91 Ha. Backfilled quarry area of 211.47 Ha shall be reclaimed with plantation. A void of 17.64 Ha (Post Mining) with depth varying upto 200 m is proposed to be converted into a water body.

(xv) The baseline data is being generated for the period March'17-June'17.

(xvi) The life of mine is 10 Years.

(xvii) Details of transportation of coal:

Existing:

- 94% coal production done by Surface Miner. Balance coal is sent to existing feeder breaker for sizing.
- The crushed as well the Surface Miner coal is sent to Kanika siding situated at a distance of 30.0 km by dumpers/tippers.

Proposed:

- The entire coal production of 15.0 Mty will be by Surface Miner.
- 4 No. of Reclaim Feeders near access trench will receive Surface Miner coal and will be transported to Basundhra Washery (10.0 Mty) by sets of Belt Conveyor.
- Washed coal to be transported through SILO.
- The balance 5.0 Mty will be transported to the upcoming siding at Barpali nearer to the project.

(xviii) There is R & R involved. There are 572 PAFs.

(xix) Total capital cost of the project is Rs.622.21 crores (including additional Rs.319.25 crore for expansion). 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 - Rs.63.40 crores.

(xx) Water body: Basundhara Nalla flows at a distance of 70 m; Iccha river flows at a distance of 9.2 km; Chattajor nallah passing through mine lease Area; Barhajharia nallah flows at a distance of 3.16 km; Bhaina jor flows at a distance of 0.5 km.

(xxi) Approvals: Ground water clearance: NA, as the area is not falling under critical area as per CGWA. Mine plan has been approved by Ministry of Coal vide Letter No. 34012/(04)/2011-CPAM dated 26-12-2016.

- (xxii) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xxiii) Forestry issues: Total forest area involved 227.89 Ha. Forest clearance for 227.89 ha obtained on 8th August, 2007.
- (xxiv) Total afforestation plan shall be implemented covering an area of **408.789** ha at the end of mining. Density of tree plantation 2500 No. trees/ ha of plants.
- (xxv) There are no court cases/violation pending with the project proponent.

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

- (i) The Kulda Opencast Coalmine project of capacity 10 MTPA in the mine lease area of 878.29 ha (includes forest land of 227.89 ha) was accorded environmental clearance vide this Ministry's letter dated 24th December, 2002.
- (ii) Now the proposal is for grant of ToR to the expansion project of the Coal Mine from 10 MTPA to 15 MTPA in the mine lease area of 634.205 ha (Total area 694.605 ha). Reduction in total area is in respect of non-forest land from 650.400 ha to 406.315 ha.
- (iii) Mine Plan for the expansion project was approved by the Ministry of Coal vide their letter dated 26th December, 2016.

9.2.4 *The EAC, after detailed deliberations, recommended the proposal for grant of ToR to the expansion project of Kulda Opencast Coal Mine from 10 MTPA to 15 MTPA in the mine lease area of 634.205 ha, and for preparation of EIA/EMP reports with public consultation subject to compliance of all conditions as specified and notified in the standard ToR applicable for Opencast Coal Mines, along with the additional conditions as under:-*

- *Cumulative impact of all the existing industrial activities in the study area and also those in the pipeline/proposed, shall be studied to arrive at a comprehensive picture and planning of adequate environmental safeguards. In doing the baseline air quality monitoring, additional monitoring stations in the downwind areas closer to the mine need to be set up and included in the air quality modelling.*
- *Ecological restoration and mine reclamation to be done with local/native species found in the area.*

Agenda 9.3

Malachaua Opencast Project of 3.00 MTPA (Normative) and 3.75 MTPA (Peak) in ML area 1020.492 ha of M/s South Eastern Coalfield Limited at District Umaria (Madhya Pradesh) - TOR

9.3.1 The proposal is for grant of TOR to Malachaua Opencast Project of 3.00 MTPA (Normative)/3.75 MTPA (Peak) in ML area of 1020.492 ha of M/s South Eastern Coalfields Limited in District Umaria (Madhya Pradesh).

9.3.2 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) It is a green field project. The proposal is for grant of terms of reference for the Malachua opencast coal mine project in Tehsil Pali, Districts Umaria (Madhya Pradesh).
- (ii) The latitude and longitude of the project site are 23° 14' 27" to 23°16' 23" N and 81° 12' 41" to 81° 15' 46" E respectively.
- (iii) Joint Venture: No joint venture
- (iv) Coal Linkage: Different power plants
- (v) Employment generated/to be generated: 215 Persons
- (vi) Benefits of the project:
 - a) Improvements in Physical Infrastructure

- b) Improvements in Social Infrastructure.
 - c) Increase in Employment Potential
 - d) Contribution to the Exchequer
 - e) Meet energy requirement
 - f) Post-mining Enhancement of Green Covert.
- (vii) The land usage of the project will be as follows.

Details of Land usage		
1.	Forest Land	283.320 Ha
2.	Tenancy Land	609.979 Ha
3.	Government Land	127.193 Ha
Total		1020.492 Ha

Pre- Mining

S.No.	LAND USE	Within ML Area(ha)	Outside ML Area (ha)	TOTAL (in ha.)
1.	Agricultural land	609.979	-	609.979
2.	Forest land (RF/CJJ/BJJ)	283.320	-	283.320
3.	Wasteland	86.402	-	86.402
4.	Grazing land	20.252	-	20.252
5.	Surface water bodies	20.539	-	20.539
Total		1020.492		1020.492

Post Mining

S.No.	LAND USE	Within ML Area(ha)	Outside ML Area (ha)	TOTAL (in ha.)
1.	Afforestation/Plantation	807.790	-	807.790
2.	Final voids (water body)	96.220	-	96.220
3.	Green Belt**	20.000**		20.000**
4.	Undisturbed Area (Safety Zone)	116.482	-	116.482
5.	Built-up area	-	10.73	
Total		1020.492		1020.492

** included in Safety zone

- (viii) Total geological reserve is 76.79 MT. The mineable reserve 57.54 MT, extractable reserve is 57.54 MT. The per cent of extraction would be 100%.
- (ix) The coal grade is G7, average stripping ratio is 13.78Cum/tonne and the average Gradient is 1 in 16.
- (x) There will be six seams with maximum thickness ranging from 2.26 m to 5.35 m.
- (xi) Total estimated water requirement is 556 KLD (Approx).
- (xii) The level of ground water ranges from 1.66 m to 17.86 m.
- (xiii) The method of mining would be Open cast mining Coal with Surface Miner and OB Shovel-Dumper combination.
- (xiv) There is 01 external OB dump with Quantity of 107.70 Mcm within quarry area with height of 60 m above the surface level and 01 internal dump with Quantity of 685.30 Mcm in an area of 807.79 ha.
- (xv) The final mine void would be in 96.22 Ha ha with depth 165 m. and the Total quarry area is 904.01 807.79 ha. Backfilled quarry area of 807.79 ha shall be reclaimed with plantation. A void of 96.22 ha with depth 165 m which is proposed to be converted into a water body.
- (xvi) The life of mine is 23 Years.
- (xvii) Transportation: Coal transportation from mine would be carried out up to proposed Malachua Railway siding by Truck and from Railway siding coal will be transported to different consumers by Rail. .
- (xviii) There is R & R involved. There are 884 PAFs.
- (xix) Cost: Total capital cost of the project is Rs. 488.33 Crores. CSR Cost According to New CSR policy, the fund for the CSR should be allocated based on 2% of the average net profit of the Company for the last three years or Rs. 2.00 per tonne of coal production of previous year whichever is higher. R&R Cost Rs.61.5194 Crores. Environmental Management Cost Rs.89.80 crores.

- (xx) Water body: Arar nallah flowing from west to North boundary and Baskati nallah from South to North West flow from mine block.
- (xxi) Approvals: Ground water clearance will be applied, Board's approval obtained on 28.10.15. Mining plan has been approved on 28.10.15. Mine closure plan is an integral part of mining plan.
- (xxii) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xxiii) Total afforestation plan shall be implemented covering an area of 807.79 ha at the end of mining. Green Belt over an area of 20.00 ha. Density of tree plantation 2500 trees/ ha of plants.
- (xxiv) There is no court cases/violation pending with the project proponent.

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

- (i) The proposal is for grant of ToR to the green field project of Malachaua Opencast Coal Mine of 3 MTPA (Normative)/3.75 MTPA (Peak) in the mine lease area of 1020.492 ha, including 283.320 ha of forest land.
- (ii) For diversion of 283.320 ha of forestland, request has been made for obtaining stage-I FC to enable its usage for non-forestry purposes.
- (iii) Mine Plan for the expansion project was approved by the Board of M/s SECL on 28th October, 2015.

9.3.4 *The EAC, after detailed deliberations, recommended the proposal for grant of ToR to the green field project of Malachaua Opencast Coal Mine of 3 MTPA (Normative)/3.75 MTPA (Peak) in the mine lease area of 1020.492 ha, and for preparation of EIA/EMP reports with public consultation subject to compliance of all conditions as specified and notified in the standard ToR applicable for Opencast Coal Mines, along with the additional conditions as under:-*

- *Cumulative impact of all the existing industrial activities in the study area and also those in the pipeline/proposed, shall be studied to arrive at a comprehensive picture and planning of adequate environmental safeguards also to take care that no previous subsidence exists like in Umaria.*
- *Study to be carried out for IRR of the project in environmental & societal dimension in association with IIT, ISM Dhanbad or ICFRI, Dehradun, and to be presented before EAC.*
- *Compensatory afforestation to be done at HFL level of Narmada river and SAL trees to be planted/transplanted preferably subject to permission granted by the State Government.*

Agenda 9.4

Expansion of Ghonsa OCP of capacity 0.60 MTPA of M/s Western Coalfields Ltd with increase in land area from 128.79 ha to 278.683 ha located in District Yavatmal (Maharashtra) - For further consideration of EC

9.4.1 The proposal is for grant of environmental clearance to the expansion of Ghonsa OCP of capacity 0.60 MTPA of M/s Western Coalfields Ltd with increase in land area from 128.79 ha to 278.683 ha located in District Yavatmal (Maharashtra).

9.4.2 The proposal was last considered by the in its 4th reconstituted EAC meeting held on 30-31 January, 2017, wherein the Committee, after detailed deliberations, observed that:

‘the proposal involves increase in mine lease area, and thus necessitates public hearing. Since the earlier public hearing conducted on 9th August, 2011 covered the total area of 293.65 ha, fresh public hearing may not be essentially required. However, the EAC insisted for a public notice to be issued in two local newspapers (both in English and Hindi) for inviting comments, clearly mentioning about the proposal and thus fulfilling the requirement of public consultations’.

9.4.3 In response to the observations of EAC, the details submitted by the PP and/or as informed during the earlier meeting, are as under:-

- (i) Notice for the subject project inviting public comments / suggestions were published in local newspapers and 3 weeks' time was given for public to submit their comments / suggestions.
- (ii) No comments / suggestions has been received from the public within the stipulated time of 3 weeks.
- (iii) Detailed report of the same has been prepared & submitted incorporating the above details along with the list of works done for the benefit of neighbouring community.

9.4.4 While deliberations on the proposal, the Committee noted the following:-

- (i) Earlier, the expansion project of Ghonsa OCP from 0.45 MTPA to 0.60 MTPA in mine lease area of 128.79 ha was granted EC on 8th December, 2014 based on the public hearing conducted on 9th August, 2011, and thus exempting the present proposal from fresh public hearing.
- (ii) The last public hearing was conducted on 9th August, 2011 for the expansion project of Ghonsa OCP involving increase in production capacity from 0.30 MTPA to 0.45 MTPA in a total area of 293.65 ha (including the mine lease area of 128.79 ha). Major issues raised were related to land compensation, air pollution control, plantation, disposal of OB, water sprinkling, CSR works, etc.
- (iii) The instant proposal is for grant of EC to Ghonsa OCP at its existing capacity of 0.60 MTPA, but in the mine lease area increased from 128.79 ha to 278.683 ha located in District Yavatmal (Maharashtra).
- (iv) Out of the total area of 278.683 ha, forest land involved is 24 ha, for which stage-I FC has been obtained on 8th March, 2016.
- (v) Mine Plan for the said proposal involving increase in land area from 128.79 ha to 278.683 at its existing capacity of 0.60 MTPA, was approved by the Board of M/s Western Coalfields Ltd on 21st August, 2015. Mine Closure Plan is an integral part of the Mine Plan.
- (vi) The Regional Office of this Ministry at Nagpur has forwarded the compliance status of EC conditions on 7th September, 2016, which is found to be in order.
- (vii) As desired by the EAC in its meeting held on 31st January, 2017, public notice was issued on 22nd February, 2017 in three local newspapers in English, Hindi and Marathi inviting comments/suggestions from the locals/stakeholders within three weeks, and thus fulfilling the requirement of public consultations. There has been no comments/suggestions so far.

9.4.5 *The Committee, after detailed deliberations, decided for exempting the proposal from the requirement of fresh ToR and fresh public hearing, and recommended for grant of EC to the Ghonsa OCP at its existing capacity of 0.60 MTPA in the mine lease area increased from 128.79 ha to 278.683 ha located in District Yavatmal (Maharashtra), subject to the specific and general conditions as applicable, and the additional conditions as under:-*

- *The project proponent shall obtain Consent to Establish/Operate under the Air Act, 1981 and the Water Act, 1974 from the State Pollution Control for the Ghonsa OCP of 0.60 MTPA in the mine lease area of 278.683 ha in District Yavatmal (Maharashtra).*
- *Transportation of coal to be carried out through rail network or the covered trucks. Mitigative measures to be undertaken to control dust and other fugitive emissions all along the roads by providing water sprinklers.*
- *Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.*
- *Controlled blasting technique should be adopted to control ground vibrations and fly rocks.*

Agenda 9.5

Padmapur Extn. Deep Opencast Mine 2.50 MTPA (Normative)/3.25 MTPA (Peak) in an area of 837.19 ha of M/s Western Coalfields Limited in District Chandrapur (Maharashtra)- Extension of ToR validity

9.5.1 The proposal is for extension of validity of TOR for Padmapur Extn. Deep Opencast Coal Mine of 2.50 MTPA (Normative)/3.25 MTPA (Peak) in an area of 837.19 ha of M/s Western Coalfields Limited District Chandrapur (Maharashtra).

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

(i) TOR for the Padmapur Extn. Deep OC mine project of 2.50 MTPA (Normative)/3.25 MTPA (Peak) in a total area of 837.19 ha located in Tahsil Chandrapur, District Chandrapur (Maharashtra) was granted vide letter No.J-11015/390/2012.IA-II(M) dated 25th February, 2014 with it validity of 2 years.

(ii) Application has been submitted for FC vide letter No.WCL/ENV/HQ/3-L/427 dated 22nd February, 2013, for diversion of 38.87 ha of forest land which is yet to be obtained. The application for EC requires submission of copy of Stage-I FC. Hence extension of validity of TOR is required.

(iii) Proposal for diversion of forest land submitted to Dy. CF, Chandrapur vide letter no. 7050 dated 15th March, 2013. Form-A along with relevant documents (5 copies) submitted to DFO, Chandrapur on 14th June, 2015. DFO, Chandrapur vide letter no.13th August, 2015, raised 6 point queries to AGM, Chandrapur Area. Joint spot inspection completed on 13th October, 2015, and report is submitted to Forest Department.

9.5.3 During deliberations, the EAC noted that the ToR dated 25th February, 2014, initially valid for a period of 2 years, got extended up to 3 years in view of this Ministry's OM dated 28th October, 2014 in this regard. Now the proposal is for extending ToR validity for a further period of one year i.e. up to 25th February, 2018, which is in conformity with the said OM.

9.5.4 *In view of the extant provisions facilitating extension of ToR validity beyond 3 years and the submissions made by the project proponent in this regard, the EAC recommended extension of validity of ToR for a further period of one year i.e. up to 25th February, 2018.*

Agenda 9.6

Nandan-II UG Extn. Coal Mining Project of 0.405 MTPA with increase in land area from 543.50 ha to 656.14 ha) of M/s Western Coalfields Limited located at District Chhindwara (MP) -Extension of ToR validity

9.6.1 The proposal is for extension of validity of TOR to Nandan-II UG Extn. Coal Mining Project of 0.405 MTPA with increase in land area from 543.50 ha to 656.14 ha of M/s Western Coalfields Limited located in District Chhindwara (Madhya Pradesh).

9.6.2 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) TOR for Nandan-II UG Extn. mine (In Dhau North Block) project of 0.405 MTPA with total land of 656.14 ha located in District Chhindwara (Madhya Pradesh) was granted vide letter no. J-11015/371/2013-IA.II(M) dated 23rd May, 2014,

(ii) The stage-I FC for diversion of 57.618 ha of forest land is yet to be obtained. The application for EC requires submission of a copy of Stage-I FC. Hence, extension of validity of TOR is required.

(iii) The proposal for diversion for 57.618 Ha. (Forest 55.03 Ha, Rev. Forest 2.588 Ha) submitted to DFO Chindwara on 24th July, 2013. Proposal returned by DFO on 10th Sept, 2013 for joint survey of the area. NOC from Gram Sabha obtained on 18th July 2013. Joint survey completed after submission of the requisite fee. Application has been resubmitted to DFO on 18th March, 2014.

(iv) GPS plan has been submitted on 19th March, 2014. As per the directives of APCCF (LM), Bhopal, proposal uploaded online in new format. Proposal accepted online on 7th December, 2016. Hard copies of proposals submitted on 23rd Jan, 2017. Proposal is under scrutiny at DFO level.

9.6.3 During deliberations, the EAC noted that the ToR dated 23rd May, 2014, initially valid for a period of 2 years, gets extended up to 3 years in view of this Ministry's OM dated 28th October, 2014 in this regard. Now the proposal is for extending ToR validity for a further period of one year i.e. up to 23rd May, 2014, which is in conformity with the said OM.

9.6.4 *In view of the extant provisions facilitating extension of ToR validity beyond 3 years and the submissions made by the project proponent in this regard, the EAC recommended extension of validity of ToR for a further period of one year i.e. up to 23rd May, 2018.*

Agenda 9.7

Gare Palma Sector I, Phase-I, Integrated Coal Mining Project of Production Capacity 21 MTPA (15 MTPA Opencast & 6 MTPA Underground mining) with a captive coal washery of capacity 21 MTPA, of M/s Gujarat State Electricity Corporation Limited in an area of 3583.81 ha in Tehsil Tamnar, District Raigarh (Chhattisgarh)- For consideration of TOR

9.7.1 The proposal is for grant of Terms of Reference for the Integrated Coal Mining Project of Gare Palma Sector I, Phase-I of production capacity 21 MTPA (15 MTPA Opencast mining and 6 MTPA Underground mining) along with a captive coal washery of capacity 21 MTPA, of M/s Gujarat State Electricity Corporation Limited (GSECL) in a total area of 3583.81 ha in Tehsil Tamnar, District Raigarh (Chhattisgarh).

9.7.2 The proposal was last considered in the 4th EAC meeting held on 30-31 January, 2017, wherein observations of the Committee were as under:-

'While deliberations on the proposal, the Committee in the first instance, observed large scale mismatch between the project details submitted and that presented during the meeting. Even the scope of the project, total area involved and the land use details, were found differing and no clarifications could be provided by the project proponent in this regard. The Committee also pointed out that the project proponent has not submitted any proposal for obtaining stage-I FC, and as such, the proposal should not have been listed even'

9.7.3 In response to the observations of EAC, the details submitted by the PP and/or as informed during the earlier meeting, are as under:-

(i) The project details submitted through Form-1 and PFR on 30th November 2016 were based on draft mining plan submitted by CMPDIL on 31st August, 2016. However, based on observations, land survey, socio-economic survey undertaken, CMPDIL submitted final draft mining plan on 22 Dec 2016. So due to the changes made in details regarding land use pattern, details of PAPs & PAFs, water requirement, life of the mine, washery details etc, there was mismatch between the project details submitted and that presented before 4th EAC committee during the meeting held on 30th January, 2017. Now same is corrected and updated Form-1 and PFR is uploaded.

(ii) As pointed out by the committee, GSECL has made the registration on MoEF&CC portal on 21 Feb 2017, for proposal for obtaining stage I Forest Clearance.

(iii) Submitted updated Form I and PFR with a request to kindly revise the project title as follows :
"Environmental Clearance for Gare Palma Sector I, Phase-I, integrated Coal Mining Project in 3583.81 Ha Tehsil Tamnar, District Raigarh, Chhattisgarh, with Production Capacity – 21 MTPA (15 MTPA from

open cast mining + 6 MTPA from underground mining) along with a captive coal washery of capacity 21 MTPA, of Gujarat State Electricity Corporation Limited (GSECL), Vadodara, Gujarat”.

9.7.4 As per the updated Form I and PFR of the project the details area as under:

- (i) The project is for obtaining fresh ToR for the OCP and the UG Coal mine with Captive coal Washery.
- (ii) The latitude and longitude of the project site are 22° 04' 0.095"N to 22° 08' 51.495"N and 83°25'17.333"E to 83°33'47.752"E respectively.
- (iii) Joint Venture: there no joint venture
- (iv) Coal Linkage : Captive Block (coal will be for different thermal power projects of GSECL)
- (v) Employment generated / to be generated: The proposed peak manpower of the OCP has been estimated as 2724 for the mine to be operated departmentally.
- (vi) In addition there will be requirement of unskilled manpower for different activities who may be employed by outsourcing means. About 390 unskilled manpower will be used in the proposed coal block project. No manpower has been provided for vehicles to be used in the mine, reclamation equipment, canteen etc, as these activities will be carried out by outsourcing means.
- (vii) Underground operation is proposed to be started at 15th years of opencast operation. About 950 manpower will be required for underground mining. About 300 manpower will be required for washery which is the part of Gare Palma Sector-I Coal Block
- (viii) Benefits of the project: In addition to generating revenue for the State Government and supplying coal to the GSECL Thermal Power Plants, the project is providing employment to local people directly and indirectly. Indirect employees are shopkeepers, mechanic, drivers, transporters etc. The lessee (proponent) will responsible for providing better social infrastructure benefits such as drinking water, health care measures, educational and training facilities, promotion of culture and religious activities in surroundings.
- (ix) The project is of utmost importance to the area/region for interest of mineral development and improves the socio-economic conditions of the local habitants. The operation of the proposed project will bestow various social and economic benefits to the local communities of the area in addition to the existing benefits due to better employment opportunities and improvement in social infrastructure of the area, apart from increased financial benefits accruing to State and Central agencies by ways of taxes, royalties, cess etc
- (x) The land usage of the project will be as follows:

As per Satellite Image:

Sl. No.	Land-use	Within ML Area (ha)	Outside ML Area (ha)	Total(ha)
1	Agricultural land	2622.12	26557	29179.12
2	Forest land	59.41	30187	30246.41
3	Wasteland	23.89	307	330.89
4	Grazing land	-	-	-
5	Surface water bodies	28.97	503	531.97
6	Settlements (built-up)	155.53	1845	2000.53
7	Others (specify)	693.9	18316	19009.9

As per Mine Plan:

Sl. No.	Particulars	Total land required in Ha	
1	Quarry Excavation	1620.31	
2	External OB dump	1447.50	
3	Infrastructure (Opencast and Underground)	Opencast	61.22
		Washery	40.0
		Underground	41.95
4	Siding, pipe conveyor and Conveyor belt	76.92	
5	Colony (Opencast and Washery)	47.57	

6	Other (Road diversion, nala diversion, embankment, Open space etc.)	207.74
7	UG below protected Forest	40.60
Total		3583.81

- (xi) Total geological reserve is 1936.08 MT. The mineable reserve 1290.82 MT, extractable reserve is 725.76 MT. The per cent of extraction would be 70.50% through opencast and 43.56% underground.
- (xii) The coal grade is G13, stripping ratio 6.55 Cum / tonne with an average gradient varying from 20 to 40. There will be 34 seams including splits with average thickness between 0.32 m and 13.26 m.
- (xiii) Total estimated water requirement is 3.396 m³/ day to be extracted from mine sump. No ground water will be extracted. The level of ground water ranges from 5 m to 10 m bgl.
- (xiv) The method of mining would be Opencast and underground both
- (xv) There is one external OB dump with quantity of 949.82 Mcum in an area of 1447.50 ha with height of 90m above the surface level and one internal dump with quantity of 1854.29 Mcum in an area of 825.36 ha which will be reduced to 723.16 filling up of void for water body.
- (xvi) The final mine void would be 897.15 ha with depth 60 m. which is proposed to be converted into a water body and the total quarry area is 1620.31 Ha. Backfilled quarry area of 723.16 Ha shall be reclaimed with plantation
- (xvii) The life of mine is 34 Years including construction period
- (xviii) Coal transportation:

(i) In pit:	High angle conveyors
(ii) Surface to siding:	Surface conveyors
(iii) Siding to loading:	Pipe conveyors upto loading silos and then via Railway

- (xix) Habitations in 13 out of 20 villages are falling within the proposed project area. They are required to be rehabilitated. To rehabilitate the project affected families, a Resettlement & Rehabilitation Plan is prepared and will be implemented as may be approved by the State Government. An R&R colony of 86.70 ha will be developed outside.
- (xx) Total capital cost of the project is Rs 15280.13 crores
- (xxi) Kelo River is flowing in the western part of the proposed coal block area and it constitutes the main drainage system. The main subsidiary stream channels draining in the block flow from north-west and south-east & joins the Kelo River at the extreme western part of the area. The subsidiary stream channel is fed by number of small tributaries rising from all hills both from north and south. Kelo River bifurcating the block into East and West. The river has not been proposed to be disturbed
- (xxii) The mining plan & mine closure plan has been prepared by CMPDI for phase-I and successfully uploaded on the portal of Ministry of Coal (MoC) on 30/12/2016 & modified on 7/04/2017.
- (xxiii) There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xxiv) Protected forest- 49.77 ha in Phase I in addition to revenue forests of 64.63 ha (chhote bade jhar ka jungle). Application for stage 1 Forest Clearance is uploaded on 22.2.17.
- (xxv) Plantation Details

Details of reclamation	Total Afforestation plan shall be implemented covering of mining. This will include:	
	(i) Reclaimed external OB dump (in ha) :	1447.50 ha
	(ii) internal dump (in ha),	825.36ha which will reduce to 723.16 ha for filling up of void
	(iii) Green belt (in ha)	154.17 ha
	(iv) Density of tree plantation (no. of plants)	Avg. 2500 trees per hectare 6113275 plants Area (ha)(External Dump + Final Internal Dump + Green belt + Dismantled Infrastructure) 1447.50+723.16 +154.17+120.48

	(v) Void (in ha) at a depth of (in m) which is proposed to be converted into water body	A void of 897.15 ha (surface area) upto a depth of 60m is proposed to be converted into a water body.
	(vi) Others in ha (such as excavation area along ML boundary, along roads and infrastructure, embankment area and in township located outside the lease etc).	Green belt : 154.17ha Dismantled infrastructure area: 120.48ha

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

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

(i) The proposal is for grant of ToR to the green field Integrated Coal Mining Project of Gare Palma Sector-I, Phase-I of production capacity 21 MTPA (15 MTPA Opencast mining and 6 MTPA Underground mining) along with a captive coal washery of capacity 21 MTPA in the mine lease area of 3583.81 ha of Mand Raigarh Coalfield in District Raigarh (Chhattisgarh).

(ii) The total mine lease area includes forest land of 59.41 ha. For diversion of the forestland, request has been made on 21st February, 2017 for obtaining stage-I FC to enable its usage for non-forestry purposes.

(iii) Mine Plan (including the Mine Closure Plan) for the Integrated Coal Mining Project was approved by the Board of M/s GSECL on 28th December, 2016, and now pending approval by Ministry of Coal.

9.7.6 *The EAC, after detailed deliberations, recommended the proposal for grant of ToR to the green field Integrated Coal Mining Project of Gare Palma Sector-I, Phase-I of production capacity 21 MTPA (15 MTPA Opencast mining and 6 MTPA Underground mining) along with a captive coal washery of capacity 21 MTPA in the mine lease area of 3583.81 ha in Mand Raigarh Coalfield, Tehsil Tamnar, District Raigarh (Chhattisgarh), for preparation of EIA/EMP reports with public consultation subject to compliance of all conditions as specified and notified in the standard ToR applicable for Opencast/Underground Coal and washeries, along with the additional conditions as under:-*

- *Cumulative impact of all the existing industrial activities in the study area and also those in the pipeline/proposed, shall be studied to arrive at a comprehensive picture and planning of adequate environmental safeguards.*
- *All the potential consumers of the washed coal to be explored/identified, especially the thermal power plant, along with the firm justification in this regard.*
- *Sustainable ground water availability and the water balance to be prepared for the project.*
- *Impact of the pollution load due to increased traffic on the nearby road network shall be studied.*
- *Additional air quality monitoring stations to be established in the downwind region in the proximity of the proposed site and the same to be included in air quality monitoring and modelling.*

Agenda 9.8

Coal washery of 2.0 MTPA of M/s Prakruthik Enterprises Pvt Limited in an area of 8.47 ha located in District Angul (Odisha) - For consideration of TOR

9.8.1 The proposal is for grant of Terms of Reference for the proposed coal washery of 2.0 MTPA of M/s Prakruthik Enterprises Pvt Ltd in an area of 8.47 ha located in District Angul (Odisha).

9.8.2 The proposal was last considered in the 61st meeting of the earlier EAC held on 28-29 July, 2016, wherein observations of the Committee were as under:-

(i) The PP has indicated that he has already been “allotted 101.81 acres” by IPICOL, which has recommended it to IDCO for allotment. It was pointed out to the PP that this was not yet an allotment, that 101.81 acres was far in excess of the land requirement of similar capacity washeries and such large requirements would not be considered, and that in any case at this stage, it was for the EAC to indicate which out of 3 potential sites identified by the PP can be taken up, rather than for the PP to approach the EAC with only one site. Furthermore, the identified site is having substantial forest area and also is close to an elephant corridor. As such, due to complexity of the area and the statutory clearances required, the site cannot be agreed to.

(ii) No IEM approval (attached by the PP as a “statutory” clearance), is required for the washery in terms of the EIA Notification, 2006.

(iii) There is no clarity in respect of clearances required for water withdrawal and the mode of coal transportation.

(iv) The nearby areas from all the three selected sites are having many surface water bodies and need reconsideration for identification from ecological consideration.

(v) The pre-feasibility reports submitted along with the Form-I were having many discrepancies, in terms of editing as well as technical inputs.

9.8.3 In response to the observations of EAC, the details submitted by the PP and/or as informed during the earlier meeting, are as under:-

(i) An area of 8.47 ha has been identified for plant purpose. This project site of 8.47 ha cre) comprises only 2.04 ha of forest land. Alternative sites were considered for selection of project site, considering the washery policy of the State. Due to proximity of the elephant corridor, PEPL shall prepare Site specific Wildlife Conservation Plan as applicable.

(ii) IEM approval was submitted as per requirement of State Govt. to approve the project in single window.

(iii) IPICOL has assessed the quantity & approved 680 KLD in their State Level Facilitation Cell dated 24.10.2016 and accordingly informed to the State Water Resources Department. However, water requirement will be fulfilled through Rain water harvesting & re-cycling of process water. Coal will be transported through rail & road combination.

(iv) Minimum criteria have been maintained from surface water bodies for selection of site. The details of site selection are given in Pre-feasibility report.

(v) Revised Form-1 and PFR is submitted, and accordingly, the project details are as under:-

(a) The proposal is for grant of fresh ToR to the proposed washery of 2 MTPA.

(b) Latitude and longitude for the project site are 21° 03' 23" N and 85° 08' 55" E respectively.

(c) Joint Venture: No Joint Venture

(d) Coal Linkage: Coal will be transported from nearby mines of Talcher coal field (MCL).

(e) Employment generated / to be generated: 150 Nos

(f) Benefits of the project: Economic growth will be improved; local people will be given employment.

(g) Washing technology: Heavy media Cyclone wet method.

(h) Total land area 8.47 ha, out of which 2.04 ha is forest area and 6.43 ha is waste land.

(i) There is no R & R involved. There is PAF.

(j) Total capital cost of the project is Rs. 58.30 Crores.

(k) Water body: No river/nallah flowing adjacent to the area.

(l) Wildlife issues: There is an elephant corridor existing within 10km of the project site.

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

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

(i) Taking note of the earlier observations of the EAC in its meeting on 28-29 July, 2016, total area of the project gets reduced from 41 ha to 8.47 ha having only 2.04 ha of forest land.

(ii) As suggested by the EAC, three potential sites were explored in accordance with the Notification dated 29th October, 2015 of the Steel & Mines Department of the State Government of Odisha on policy framework and guidelines for coal washeries to be set up in the State. The site identified earlier is the finally selected site.

(iii) For diversion of the forest land of 2.04 ha for non-forestry uses, the project proponent has applied for stage-I FC.

(iv) Industrial Promotion and Investment Corporation of Odisha Ltd (IPICOL), the State level Single window Clearance Authority has approved the proposal for setting up the washery at the given site.

(v) The State Level Facilitation Cell of IPICOL has assessed the water requirement for the project as 680 cum per day, and accordingly, request has been made to the Department of Water Resources of the State Government for necessary action. The estimated water requirement is 0.1241 cum per tonne of washed coal, and is in conformity with the normal range of <1 cum per tonne of washed coal.

(vi) The project proponent, the merchant, proposes to supply the washed coal to the thermal power plants of AP GENCO in the State of Telangana located at distances more than 1000 km.

9.8.5 The EAC, after detailed deliberations, recommended the proposal for grant of ToR to the coal washery of 2MTPA (wet process) in a total area of 8.47 ha at Talcher, District Angul (Odisha), and for preparation of EIA/EMP reports with public consultation subject to compliance of all conditions as specified and notified in the standard ToR applicable for coal washeries, along with the additional conditions as under:-

- *All the potential consumers of the washed coal to be explored/identified, especially the thermal power plants, along with the firm justification in this regard,*
- *Sustainable ground water availability and the water balance to be prepared for the project. Permission to be obtained from the State Water Resources Department for withdrawal of surface water from Brahamani river. Impact of water withdrawal from the Brahamani River on downstream water users to be studied as part of the EIA.*
- *Permission also to be obtained from the concerned authorities in the State Government to the effect that the proposed site is not within the flood plain (corresponding to the HFL) of the river Brahamani.*
- *Wildlife Conservation shall be prepared, and Wildlife Clearance as required under the Wildlife (Protection) Act, 1972 shall be obtained from the Standing Committee of National Board for Wild Life.*
- *Impact of the pollution load due to increased traffic on the nearby road network shall be studied.*

Agenda 9.9

Expansion of Konar OCP from 4.10 MTPA (Normative)/ 5 MTPA (Peak) to 8.00 MTPA (Normative)/11.00 MTPA (Peak), Integrated Konar Non-coking Coal Washery of 7 MTPA capacity of M/s Central Coalfields limited, with increase in project area from 520.93 to 547.38 ha located in Bokaro and Kargali Area, District Bokaro (Jharkhand) – For further consideration for EC

9.9.1 The proposal is for environmental clearance to Expansion of Konar OCP from 4.10 MTPA (Normative)/ 5 MTPA (Peak) to 8.00 MTPA (Normative)/11.00 MTPA (Peak), Integrated Konar Non-coking Coal Washery of 7 MTPA capacity of **M/s Central Coalfields limited**, with increase in project area from 520.93 to 547.38 ha located in Bokaro and Kargali Area, District Bokaro (Jharkhand)

9.9.2 The proposal was last considered in the 58th EAC meeting held on 23-24 June, 2016, wherein observations of the Committee were as under:-

(i) The proposal envisages amalgamation of Konar OCP and the Khasmahal OCP (sanctioned /granted individually earlier) followed by integration with the proposed washery of 7 MTPA.. That would involve correction in area from the present of 620.08 ha. to 547.38 ha. The documentation needs to be revised accordingly.

(ii) The RO, MoEFCC Bhubaneswar has inspected the Khasmahal project on 23.08.2014 and Konar OCP on 04.09.2013. Another inspection for the Konar Expansion OCP was conducted on 17.06.2016. Certified EC Compliance report is awaited.

(iii) A large area has been occupied for external OBD and internal dump also of a height of 90 m above ground level matching with a height of external OBD. Whereas, much area has been left as void of depth of 180 m. The Committee observed that the same needs to be re-worked with minimum land degradation due to external OBD and in the form of mine void.

(iv) The washery proposal has been tendered and the technology will be finalised as per the tender received. The committee desired the submission of the Board's approval to the technology to be adopted and the details of technology should be also submitted for the perusal of Committee.

(v) The raw coal transportation from mine will be as under:-

- (a) 1 million tonne coking coal from Kargliwashery by road approx. 8 km away
- (b) 7 million tone of non-coking coal from CHP to Konarwashery by belt conveyor and washed coal will be conveyed by belt conveyor to the siding being made near the mine and would be loaded to railway wagons through silo. The Committee advised that the railway siding must come up within 3 years i.e. matching with the production of the non-coking coal.

(vi) Action Plan along with the proposed budgetary allocation should be submitted for issues during Public Hearing out of CSR Budget of Rs 400 Lakhs as agreed.

9.9.3 In response to the observations of EAC, the details submitted by the PP and/or as informed during the earlier meeting, are as under:-

(i) The TOR for Konar Expansion OCP was issued with increase in project area from 520.93 Ha to 729.40 Ha. In the prescribed TOR, the EAC desired that project proponent may explore the possibility of reducing forest land requirement by locating the washery & FBC plant in non-forest land. The project area of Khasmahal OCP as per EC condition is 318.71 Ha & Konar OCP is 301.37 Ha. The combined area comes to 620.08 Ha. However, these project areas overlap with each other to accommodate the common external OB dump for the two mines (to the extent of 99.16 Ha). After deducting the common area, the net project area of Khasmahal OCP as per EC condition is 219.56 Ha & Konar OCP is 301.37 Ha. Accordingly net combined project area of existing project becomes 520.93 Ha not 620.08 Ha. In view of observations of EAC regarding reduced use of forest land to the extent possible, the project area was reworked including reduction in area required for future use & boundary rationalisation. This exercise led to reduction in proposed project area from 729.40 Ha (as per TOR) to 547.38 Ha (as given in submitted EIA & EMP). The project area of 547.38 Ha, includes the common barrier between Khasmahal & Konar quarries (26.94 Ha). The present EIA & EMP document has been proposed with an area of 547.38 Ha.

(ii) The copy of latest certified EC Compliance report for (Khasmahal) & (Konar) obtained.

(iii) The matter has been examined in light of observations made by EAC. Please refer Annexure-III.

(iv) CCL Board has approved in its 437th meeting on 20/21.02.2017 for setting up of 7.0 MTY Konar washery on Build-Own-Operate concept with freedom of beneficiation technology i.e., dry/wet/comboination of dry and wet.

(v) Coking coal will be produced from seam-X & non-coking coal from seam VI/VII & VIII. CHP has been proposed near pit top to handle total coal production of this project. Non-coking coal @ 7.0 MTPA will be fed into proposed CHP for storage, reclamation and feeding to non-coking coal washery. The entire non-coking coal produced from Konar Expansion OCP will be washed in proposed 7.0 MTPA Konar washery. Washed non-coking coal from Konar Washery will be conveyed by belt to railway loading silo at proposed Konar siding. RoM Coking coal @ 1.0 MTPA (-100mm) will be transported to Kargali washery at about 9 km & washed coal despatch by rail from adjoining Kargali siding.

(vi) The project will spend four crore towards CSR this year for both Karo and Konar. The action has been taken in respect of issues raised in Public hearing.

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

(a) The proposal involves amalgamation of existing Konar OCP and the Khasmahal OCP, its expansion to 8 MTPA (Normative)/11 MTPA (Peak) followed by integration with the proposed washery of 7 MTPA.

(b) Earlier, separate ECs were issued for both the Opencast mines. For Konar OCP of 3.5 MTPA in an area of 301.37 ha, EC was issued on 2nd February, 2006. For Khasmahal OCP of capacity 0.6 MTPA (Normative)/1.5 MTPA (Peak) in 318.71 ha, EC was granted on 2nd August, 2010. The forest area involved was 288 ha and 201.42 ha respectively.

(c) The EC for Khasmahal OCP finds mention of 99.16 ha of OB dump, common for both the OCPs. As such, the net combined area of the existing OCPs is 520.93 ha.

(d) The Terms of Reference for the expansion project with washery in a total area of 729.40 ha was issued on 3rd November, 2015, which involved forest land of 489.42 ha.

(e) In view of the observations of the EAC to explore for reducing the forest land, the proposed project area was reduced from 729.40 ha to 547.38 ha (forest area 428.89 ha), which includes the common barrier between the respective quarries, FBC and allied infrastructure. With the total project area so firmed up, public hearing was conducted and the EIA/EMP reports were prepared accordingly.

(f) Now, the proposal has been further revised and the total area is reduced to 471.40 ha involving forest land of 360.49 ha, for which stage-II FC is already available.

(g) The Board of M/s Central Coalfields Ltd has approved the proposal for expansion of the amalgamated Konar OCP and the washery of 7 MTPA in its meeting held on 21st February, 2017. However, the technology for washery (dry/wet/combination of dry and wet) was left to the outcome of the bidding.

(h) Due to the washery technology not yet decided, it would not be possible to firm up the water requirement, its source and the waste disposal, and thus leaving the impact on water environment unaccounted.

(i) The action taken report on the compliance status of EC conditions for both the OCPs (visit conducted on 17th June, 2016) was not observed to be sufficiently satisfactory, especially in respect of construction of retaining wall around the OB dump, plantation, installation of piezometers, ETP, water sprinkler system at CHP and railway siding, Conservation Plan for flora and fauna to be prepared through ISM Dhanbad, etc.

(j) For Khasmahal OCP, Consent to Operate was obtained in the year 2008 with its validity of one year. Whereas, for Konar OCP (mining operations started in year 2014), Consent to Operate is yet to be obtained.

9.9.5 *The EAC, after detailed deliberations, was not convinced with the proposal especially in respect of (h), (i) & (j) above, and asked the project proponent for the needful. The proposal was deferred.*

Agenda 9.10

Coal Washery 6.5 MTPA of M/s Jindal Steel & Power Limited located in village Kalkata, Tehsil Chhendipada, District Angul (Odisha)- Amendment/modification in EC

9.10.1 The proposal is for amendment/modification in the EC dated 13th October, 2009 for Coal Washery of 6.5 MTPA ROM of M/s Jindal Steel & Power Limited located in village Kalkata, Tehsil Chhendipada, District Angul (Odisha).

9.10.2 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) EC was granted to the washery vide letter No.J-11015/1015/2007-IA-II(M) dated 13th October, 2009. The Coal washery has been established and is in operation since May, 2013. The coal for the washery was envisaged to be sourced from the Utkal B-1 coal block and transported to the washery located within the integrated steel plant complex through piped (closed) conveyers. Due to de-allocation of the said coal block, the coal procured through e-auction from Talcher Coalfields of MCL has to be transported through dedicated road and rail.

(ii) As per the EC, the washed coal is to be used in Coal Gasification Plant (CGP) of Integrated Steel plant and Middlings so generated is to be used for power generation in Captive Power Plant of the integrated steel plant. Presently, the CGP has been partially commissioned, having an yearly demand of about 1 million metric tons of washed coal, due to which the coal washery is highly underutilized.

(iii) Company is receiving several enquiries from various PSUs and other companies dealing with Thermal Power Generation, if this washery can be used to wash the raw coal received by them from nearby coal mines of MCL so that they can comply with MOEF Notification no. G.S.R. 02 (E) dated 02.01.2014 to use washed coal with an ash content of not more than 34%. Our coal washery is ideally located due to its proximity to the Mines (about 20 km) and railway siding is provided in the premises. Coal from mines can be transported by dedicated road/rail to the washery and washed coal will be transported by rail. In this regard, a Memorandum of Understanding(MOU) has been signed between M/s Jindal Steel & Power Ltd. and M/s Alps Mining Services to use the said washery for washing of 2 MTPA Coal which will be increased to 4.8 MTPA in future.

(iv) In the interest of the environment, JSPL proposes to use the washery for power utilities also till demand for entire washed coal is generated at its own Integrated Steel Plant.

(v) In view of above, amendment/modification is requested for the following:-

(a) To wash coal for other companies till in-house demand of 6 MTPA is achieved.

(b) To amend specific condition

i.e. (i) "The entire mineral transportation of raw coal, clean coal and middling shall be by piped (closed) conveyors only"

with

"The entire mineral transportation of raw coal shall be through dedicated road and rail only".

9.10.3 While deliberations on the proposal, the Committee noted the following:-

(a) As per the EC dated 13th October, 2009 for the coal washery of 6.5 MTPA, raw coal was to be supplied through Utkal B1 coal mine located at a distance of 5 km from the washery. After cancellation of the coal block, supply/source of coal is bound to be changed resulting in change in coal transportation/handling, coal characteristics, reject generation and disposal, etc.

(b) In fact, the coal linkage was predefined and the EC was granted accordingly. At no point of time, it was the choice of the project proponent.

(c) One of the specific conditions (i) of the EC quotes-

'The entire mineral transportation of raw coal, clean coal and middlings shall be by piped (closed) conveyors only'

Now it is proposed that coal from other nearby mines shall be transported by the dedicated road to the washery and washed coal by rail, which would require amendment in the EC conditions.

(d) The submissions of the project proponent regarding coal transportation going on by dedicated road (nearly 600 trucks per day) and not through the closed conveyors, and that too, from the coal washery (ies) other than allowed in the EC, amounts to violation of the EC conditions.

(e) In view of the above findings, the present compliance status of EC conditions from the Ministry's Regional Office seems is required to be submitted.

9.10.4 *The EAC, after detailed deliberations, desired that necessary action may be taken by the Ministry on its observations in respect of non-compliance of EC conditions. Also, in view of the above observations, the compliance status of EC conditions is also required to be deliberated by the Committee. The proposal was accordingly deferred.*

Agenda 9.11

Moher & Moher Amlohri Extension coal blocks project of M/s Sasan Power Ltd in an area of 2037 ha located in District Singrauli (MP) - For amendment/modification in EC

9.11.1 The proposal is for amendment/modification in the environmental clearance dated 30th June, 2015 in respect of increasing the OB dump height from 90 m to 150 m, for the expansion project of Moher & Moher Amlohri Extension coal blocks from 16 MTPA to 20 MTPA of M/s Sasan Power Ltd in a total area of 2037 ha (Moher Block –10.70 km² & Moher Amlohri Extension Block - 4.69 km²) located in District Singrauli (MP).

9.11.2 The proposal was last considered in the 4th EAC meeting held on 30-31 January, 2017, wherein observations of the Committee were as under:-

(i) Stability of the proposed OB dump of 150 m height, and insisted for necessary safeguards backed up by scientific studies in this regard. The Committee further asked for the requisites/approvals in respect of the following:-

- (a) Permission required, if any, from the Director General of Mines Safety (DGMS),
- (b) Approval from the Ministry of Coal for the Mine Plan revised to extending the OB dump height from 90 to 150 m.
- (c) Compliance status of EC conditions from the concerned Regional Office of MoEF&CC,

9.11.3 In response to the observations of EAC, the details submitted by the PP and/or as informed during the earlier meeting, are as under:-

(i) DGMS is the Regulatory Agency of Government of India for enforcement of the provision of the Mines Act, 1952 and Rules, Regulations and Order made there under for compliance. They generally grant statutory permission, exemptions & relaxations and give approval for mine safety equipment, material and appliances to absorb and accommodate the technical advancements in a comprehensive, practicable and legally sound way. They also carry out periodic inspection of mines to oversee compliance of safety laws. They honor any change based on scientific study provided the requested proposal is safe.

(ii) However, following steps were taken in the mean time:-

- On 31st January 2017, a letter was sent to the DMS, Varanasi Region along with Study Report titled "*Optimal slope design of external dump at Moher & Moher-Amlohri Extension Opencast Project of M/s Sasan Power Limited*" dated January 2017 prepared by Central Institute of Mining and Fuel Research (CIMFR), where we have mentioned about the dump height of 150 m with a factor of safety of 1.31, which as per DGMS is considered "SAFE".
- On 3rd February 2017 we have again requested DMS, Varanasi Region for granting permission/NOC for increasing the height of external overburden dump at Sasan Power Limited's Moher & Moher-Amlohri Extension Coal Mine from 90 m to 150 m.

- On 17th February 2017, we again wrote a letter to DMS, Varansai Region for considering our request of increase in dump height and also enclosed MOM of 4th EAC meeting held on 30th/ 31st January 2017.

(iii) From our preliminary discussion with DGMS, we understand that DGMS may not issue any letter permitting increase in the dump height from 90 m to 150 m. However, DGMS will ensure that the project proponent must adhere to the guideline dated 6th July 2010 on *Design, Control and Monitoring of Pit and Dump slopes in Open Cast Mines*. The DGMS has also referred to clause 1.1 of their letter No. S 29020/21/VR(NZ)/2014-15/11013/1147 dated 28th May 2015 to Sasan Power Limited, which states that:

“All internal and external overburden dumps shall be so designed and kept maintained as to have a factor of safety in excess of 1.2”

As the Safety Factor for a dump height of 150 m is 1.31 as per the study report submitted by Central Institute of Mining and Fuel Research dated January 2017, which is well beyond the factor of safety 1.2, as required under the clause No. 1.1 of permission letter referred above.

(iv) The Directorate of Mines Safety, Ministry of Labour & Employment, North Zone at Varanasi (UP), vide their letter dated 25th April, 2017 has accorded permission to increase height of OB dump up to 150 m, subject to compliance of certain conditions as stipulated therein.

(v) Regarding, revision of the Mining Plan due to change in dump height, we wish to respectfully submit that as per the *“Guidelines for Preparation of Mining Plan for Coal and Lignite blocks”* published by Ministry of Coal dated 4th April 2011, increase in dump height is not one of the reasons for revision in mining plan.

The reasons for the revision of Mining Plan as per the said guideline are (Refer Section D –(o) of the document):

Details of changes in the new mining plan compared to earlier approval:

- (i) *Change in Lease Area:*
- (ii) *Change in Block Boundary:*
- (iii) *Change in production level:*
- (iv) *Change in coal reserves:*
- (v) *Change in Mining Technology:*
- (vi) *Change in land use pattern.*

In light of above, there is no need to revise the Mining Plan due to increase in dump height.

(vi) Regarding Compliance status of EC conditions from RO, Bhopal As per MoEF&CC OM No.J-11013/41/2006-IA.II(I) dated 20th October 2009 on *“Consideration of Expansion Proposals for grant of Environmental Clearance under EIA Notification, 2006 – regarding.”* which states that:

“It has been decided that while considering expansion proposals for grant of Environmental Clearance by the respective EACs under EIA Notification, 2006 besides seeking information on various environmental issues, the information on the following may also be asked and discussed during the meeting and duly recorded in the minutes:

1. *Status of compliance of the conditions and environmental safeguards stipulated in the earlier clearance letters.”*

(vii) As we are seeking amendment in the EC due to increase in dump height and not due to capacity expansion, there is no need to submit compliance status of EC conditions from the concerned Regional Office of MoEF & CC Bhopal.

9.11.4 During deliberations, the EAC noted that although the Directorate of Mines safety has accorded permission to increase the OB dump height, but the requirement for compliance status of EC conditions has not been fulfilled.

9.11.5 *The EAC, after deliberations, insisted for the present compliance status of EC conditions to be deliberated for further consideration of the proposal. The proposal was accordingly deferred.*

Agenda 9.12

Relaxation of plantation density guidelines on over-burden dumps in coal mine area for promotion of bio-energy biomass development by M/s VayuGrid Marketplace Services Pvt Ltd

9.12.1 The proposal is for seeking relaxation of plantation density guidelines on over-burden dumps in coal mine area for promotion of bio-energy biomass development by M/s VayuGrid Marketplace Services Pvt. Ltd.

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

(i) Consulted Advisor Projects, Ministry of Coal, on 25th October 2016, and discussed about letter, which indicated the issue of planting 2,500 trees/ha as per a circular issued by the Ministry of Environment & Forest (MoEF). In view of VayuSap's large canopy, we can plant only 625 trees/ha.

(ii) As per MOC request discussed the matter with Director (FC) MoEF&CC, on 27th October 2016, who heard out VayuGrid and the value proposition of VayuSap BioEnergy Plantations, and after being convinced, advised to apprise officers in the Ministry.

(iii) However, while they both were convinced of the value proposition, and the fact that with 625 trees/Ha, the crown density would be the same as with 2,500 trees/Ha but with far greater environmental benefits, Mr Kutty was of the opinion that the matter should be taken up by the coal companies themselves or by the Ministry of Coal. He expressed that such matters are regularly brought up by coal companies to MoEF&CC, and this too should be similarly brought to their attention for relaxation of number of trees in order to promote biodiesel/bioenergy plantations.

(iv) Further to this, once again met with Advisor Projects and apprised him of the meeting with MoEF&CC. MOC suggested to bring the whole facts to attention with a request to take up the matter with MoEF&CC or to take up the matter with Advisor Projects, MoC, in order to resolve the issue.

9.12.3 While deliberations on the proposal, the Committee noted that the project proponent wishes to experiment with their afforestation methodology on the overburden dump sites of the coal mines in the command area of M/s Mahanadi Coalfields Limited (MCL). However, the committee felt that such a proposal (for permission to change planting norms, if any) needs to be submitted by the concerned coal company only. The project proponent was accordingly informed, and the proposal was not taken forward.

Agenda 9.13

Discussion on any other item

Coal Washery of 10 MTPA capacity in an area of 39.35 ha by M/s Mahanadi Coalfields Limited located at Ib Valley in Lakhanpur area, District Jharsuguda (Odisha) - Correction/Modification/Amendment in EC

9.13.1 The proposal is for amendment in the environmental clearance dated 30th March, 2017 for the Coal Washery of 10 MTPA capacity in an area of 39.35 ha by M/s Mahanadi Coalfields Limited located at Ib Valley in Lakhanpur area, District Jharsuguda (Odisha).

9.13.2 During the meeting, the project proponent requested for amendment/correction in certain conditions stipulated in the EC dated 30th March, 2017 as per the following details:-

EC letter Condition No.	EC Condition	Modification requested	Reason for modification
Specific condition 4 A(iv)	Transport of raw coal, clean coal, middling and rejects by rail with wagon loading through silo.	<p>Raw coal is to be transported by covered belt conveyor.</p> <p>Rejects will be transported by belt conveyor from washery to the temporary rejects storage site.</p>	<p>At S. No.3(xiv) (on page no.2) of the EC letter, it is specified that the mode of transportation of raw coal from linked mine to washery shall be by covered belt conveyors.</p> <p>Washed coal transportation from washery to Silo near railway siding will be done by twin covered belt conveyors (2x2000 TPH) for dispatch to consumers by rail.</p> <p>Rejects will be transported by belt conveyor from washery to the temporary reject storage site where from reject will be finally disposed off to the prospective buyers either through e-auction or MOU route in environment friendly manner.</p>
		The word "middling" may be deleted in view of two stagewashery.	At S. No.3(ii) (on page no.1) of the EC letter, it is mentioned that the washery is a two stage washery having closed circuit technology. So, there is no possibility of generation of middlings.

9.13.3 *The EAC, after deliberations, recommended for amendment in the EC on the above lines with all other terms and conditions stipulated therein remaining unchanged.*

LIST OF EAC MEMBERS PARTICIPATED IN 9th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 27-28 April, 2017 ON COAL SECTOR PROJECTS.

Sl. No.	List Of Participants Expert Appraisal Committee (Coal Mining)	
1.	Dr. Navin Chandra	Chairman
2.	Dr. Narmada Prasad Shukla	Member
3.	Shri N Mohan Karnat	Member
4.	Dr. Sharachchandra Lele	Member
5.	Prof. S K Sinha	Representative (ISM, Dhanbad)
6.	Dr. R K Giri	Representative (Indian Meteorological Department)
7.	Dr. S.K.Paliwal	Member
8.	Shri S. K. Shrivastva	Member Secretary

LIST OF PROPONENTS PARTICIPATED IN 9th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 27-28 April, 2017 ON COAL SECTOR PROJECTS.

9.1 Kaniha Opencast Coal Mine Expansion Project of M/s Mahanadi Coalfields Limited.

1. Sh. O.P.Singh
2. Dr. A.K.Samantaray
3. Sh .S.K.Srivastava
4. Sh. P.K.Mishra
5. Sh. M.L.Prajapat
6. Sh. N.Kalla
7. Sh. G.R.Reddy
8. Sh. Biswajit Das
9. Sh. S.K.Bhar
10. Sh. R.C.Sahoo
11. Sh. N.K.Singh
12. Sh.Raji Jasua

9.2 Kulda Opencast Expansion project by M/s Mahanadi Coalfields Limited

1. Sh. O.P. Singh
2. Dr. A.K. Samantaray
3. Sh .S.K. Srivastava
4. Sh. P.K. Mishra
5. Sh. M.L. Prajapat
6. Sh. N. Kalla
7. Sh. G.R. Reddy
8. Sh. Biswajit Das
9. Sh. S.K. Bhar
10. Sh. R.C.Sahoo
11. Sh. N.K. Singh
12. Sh.Raji Jasua

9.3 Malachaua Opencast Project of M/s South Eastern Coalfield Limited.

1. Sh. P.K.Sinha
2. Sh. Amit Saxena
3. Sh. Manoj Kumar
4. Rahmat Ali Khan
5. Sh. Praveen Srivastava
6. Sh. A.K.Tiwary
7. Sh. A.C.Jain

9.4 Expansion of Ghonsa OCP of M/s Western Coalfields Ltd

1. Sh. T.N. Jha
2. Sh. Kaushik Chakravarti
3. Sh. U.S. Shah
4. Sh. M.V. Balakrishna
5. Sh. Sandeep Sharma
6. Sh. K. Chakraborty

- 9.5 **Padmapur Extn. Deep Opencast Mine of M/s Western Coalfield Limited**
1. Sh. T.N.Jha
 2. Sh. Kaushik Chakravarti
 3. Sh. U.S.Shah
 4. Sh. M.V.Balakrishna
 5. Sh. Sandeep Sharma
 6. Sh. K.Chakraborty
- 9.6 **Nandan-II UG Extn. Coal Mining Project of M/s Western Coalfields Ltd.**
1. Sh. T.N.Jha
 2. Sh. Kaushik Chakravarti
 3. Sh. U.S. Shah
 4. Sh. M.V. Balakrishna
 5. Sh. Sandeep Sharma
 6. Sh. K. Chakraborty
- 9.7 **Gare Palma Sector I, Phase-I, of M/s Gujarat State Electricity Corporation Limited (GSECL).**
1. Sh. H.D. Joshi
 2. Smt. Nandini
 3. Sh. C.G.Parekh
 4. Sh. A.B. Jaiswal
 5. Sh. H.N. Bani
 6. Sh. K.D. Chaudhary
- 9.8 **Proposed Coal Washery of M/s Prakruthik Enterprises Pvt. Limited.**
- 1.Sh.Pradipta Kishor Sahoo
 - 2.Sh.ANJAN Bose
 - 3.Sh. Kumar Ranjan
- 9.9 **Expansion of Konar OCP of M/s Central Coalfields limited.**
- 1.Sh.A.K. Mishra
 - 2.Sh.A.K. Das
 - 3.Sh.T.Chakravarty
 - 4.Sh.S.Singh
 - 5.Sh.Pushkar
- 9.10 **Proposed Coal Washery of M/s Jindal Steel & Power Limited**
- 1.Sh.J.K. Soni
 - 2.Sh.Yogesh Sindhu
 - 3.Sh.Sernny Malik
 - 4.Sh. Alok Sarma
- 9.11 **Moher & Moher Amlori Extension coal blocks project of M/s Sasan Power Ltd.**
- 1.Sh.Shrikant Kulkarni
 - 2.Sh.Bijan Mishra
 - 3.Sh.N.Kumar
 - 4.Sh.Jagat Paikam
 - 5.Sh.Bhola Singh
 - 6.Sh.Unnikrishnan

9.12 Proposal for seeking relaxation of plantation density by M/s VayuGrid Marketplace Services Pvt. Ltd.

- 1.Sh.B.P.Singh
- 2.Smt.Latha Chandvdeep

9.13 Discussion on any other item.

9.13.1 Coal Washery by M/s Mahanadi Coalfields Limited

1. Sh. O.P. Singh
2. Dr. A.K. Samantaray
3. Sh .S.K. Srivastava
4. Sh. P.K. Mishra
5. Sh. M.L. Prajapat
6. Sh. N. Kalla
7. Sh. G.R. Reddy
8. Sh. Biswajit Das
9. Sh. S.K. Bhar
10. Sh. R.C.Sahoo
11. Sh. N.K. Singh
12. Sh.Raji Jasua

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 Repot 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-II0I3/25/2014-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.
- (xxiv) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xxv) Details of waste OB and topsoil generated as per the approved calendar programme, and their management shown in figures as well explanatory notes tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use should be given. OB dump heights and terracing based on slope stability studies with a max of 28° angle as the ultimate slope should be given. Sections of final dumps (both longitudinal and cross section) with relation to the adjacent area should be shown.
- (xxvi) Efforts be made for maximising progressive internal dumping of O.B., sequential mining , external dump on coal bearing area and later rehandling into the mine void.--to reduce land degradation.
- (xxvii) Impact of change in land use due to mining operations and plan for restoration of the mined area to its original land use should be provided.
- (xxviii) Progressive Green belt and ecological restoration /afforestation plan (both in text, figures and in the tabular form as per the format of MOEFCC given below) and selection of species (native) based on original survey/land-use should be given.

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

S.N.	Land use Category	Present (1 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 during Mining	Land Use (ha)				
		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.

(xxxii) 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.

(xxxiii) Risk Assessment and Disaster Preparedness and Management Plan should be provided.

(xxxiv) Integration of the Env. Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.

(xxxv) 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:
 - 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.
- (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.

**9th EAC (THERMAL & COAL MINING PROJECTS) MEETING
SCHEDULED FOR 27th - 28th April, 2017.**

AGENDA

**Venue: Bhramaputra, Conference Hall, First 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 hard copies of the 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. Without this information, EAC has discretion to invite the proponent for the meeting.**
- v. Please also provide a hard copy of presentation to the EAC Members during the meeting.**
- vi. 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: Thursday: 27th April, 2017

- 9.1 Kaniha Opencast Coal Mine Expansion Project (from 10 MTPA to 14 MTPA in an ML area of 1034 ha; of **M/s Mahanadi Coalfields Limited**, located in District Angul, **Odisha- (EC under 7(ii) of EIA Notification 2006)** - EC
- 9.2 Kulda Opencast Expansion project from 10 MTPA to 15 MTPA in an area of 634.205 ha by M/s Mahanadi Coalfields Limited located in Tehsil Himgir District Sundargarh (Odisha)-TOR
- 9.3 Malachaua Opencast Project of 3.00 MTPA (Normative) and 3.75 MTPA (Peak) in an ML area 1020.492 ha of **M/s South Eastern Coalfield Limited** at District Umaria (Madhya Pradesh)-TOR
- 9.4 Expansion of Ghonsa OCP of capacity 0.60 MTPA of M/s Western Coalfields Ltd with increase in land area from 128.79 ha to 278.683 ha located in District Yavatmal (Maharashtra) - For further consideration of EC
- 9.5 Padmapur Extn. Deep Opencast Mine (Prod. Capacity 2.50 MTPA (Normative) 3.25 MTPA (Peak) in an area of 837.19 ha) of M/s Western Coalfield Limited District Chandrapur, Maharashtra-TOR granted on 25.02.2014- (Extention of ToR validity)
- 9.6 Nandan-II UG Extn. Coal Mining Project of (Production Capacity 0.405 MTPA as per EC with increase in land area from 543.50 ha to 656.14 ha) of M/s Western Coalfields Ltd., located at District Chhindwara (Madhya Pradesh)-TOR granted on 23.05.2014- (Extention of ToR validity)
- 9.7 Gare Palma Sector I, Phase-I, integrated Coal Mining Project with Production Capacity 21 MTPA (15 MTPA from open cast mining + 6 MTPA from underground mining) along with a captive coal washery MOM of 9th EAC 27-28 April, 2017_Coal

of capacity 21 MTPA, of M/s Gujarat State Electricity Corporation Limited (GSECL), in 3583.81 Ha Tehsil Tamnar, District Raigarh (Chhattisgarh)-TOR

- 9.8 Proposed Coal Washery of 2 MTPA of **M/s Prakruthik Enterprises Pvt. Limited** in an area of 8.47 ha at Tehsil Kaniha District Angul (**Odisha**)- **further consideration for TOR**
- 9.9 Expansion of Konar OCP from 4.10 MTPA (Normative)/ 5 MTPA (Peak) to 8.00 MTPA (Normative)/11.00 MTPA (Peak), Integrated Konar Non-coking Coal Washery of 7 MTPA capacity of M/s Central Coalfields limited, with increase in project area from 520.93 to 547.38 ha located in Bokaro and Kargali Area, District Bokaro (Jharkhand)-(further consideration for EC)
- 9.10 Proposed Coal Washery 6.5 MTPA ROM) of M/s Jindal Steel & Power Limited located in village Kalkata, Tehsil Chhendipada, District Angul Odisha - Amendment in EC
- 9.11 Moher & Moher Amlori Extension coal blocks project (expansion from 16 MTPA to 20 MTPA, in area of 2037 ha; [15.39 Km² (Moher Block –10.70 Km² & Moher Amlohri Extension Block - 4.69 Km²)] of M/s Sasan Power Ltd., located at district. Singrauli, (Madhya Pradesh) - (For Consideration of Amendment/Modification in EC.
- 9.12 Proposal for seeking relaxation of plantation density guidelines on over-burden dumps in coal mine area for promotion of bio-energy biomass development by M/s VayuGrid Marketplace Services Pvt. Ltd.
- 9.13 Discussion on any other item.
- 9.13.1 Coal Washery of 10 MTPA capacity in an area of 39.35 ha by **M/s Mahanadi Coalfields Limited** located at Ib Valley in Lakhanpur area in district Jharsuguda (Odisha)- **(Correction/Modification/Amendment in EC)**
