

Minutes of the 15th meeting of the EAC held on 25th July, 2017 for appraisal of Coal mining projects

A. The 15th meeting of the Expert Appraisal Committee (EAC) for Thermal & Coal mining projects was held on 25th July, 2017 in the Ministry to consider the proposals relating to coal mining sector. The lists of participants and the project proponents are at Annexure-I & II respectively.

B. Confirmation of minutes

There being no comments from any of the members of the Committee, minutes of the 13th meeting of the EAC held on 29th June, 2017 were confirmed.

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

Agenda 15.1

Bellampalli OC-II expansion from 0.40 MTPA to 1.0 MTPA in an area of 191.98 ha by M/s SCCL located near village Abbapur Tandur Mandal of Komaram Bheem in District Asifabad & Mancherial (Telangana)-TOR

15.1.1 The proposal is for grant of TOR to Bellampalli OC-II expansion from 0.40 MTPA to 1.0 MTPA in an area of 191.98 ha by M/s SCCL located near village Abbapur Tandur Mandal of Komaram Bheem in District Asifabad & Mancherial (Telangana)

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

- (i) The project was accorded EC vide letter no. J-11015/147/2005-IA.II (M) dated 11th September, 2006 for a capacity of 0.40 MTPA.
- (ii) The latitude and longitude of the project are 19⁰ 12' 34" to 19⁰ 12' 56" North and 79⁰ 20' 53" to 79⁰ 21' 41" East respectively.
- (iii) Joint Venture: there is no Joint Venture
- (iv) Coal Linkage : Basket Linkage
- (v) Employment generated / to be generated: Direct 265 Persons, Contractual 380 Persons
- (vi) Benefits of the project: Generation of direct and indirect employment, Meeting the demand of coal in the region, Improvement in social infrastructure, Conservation of non-renewable fossil fuel by excavating remnant coal locked in underground mine.

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

Pre-Mining:

Sl. No.	Pre-mining Land use	Area (ha)
01	Forest Land	137.40
02	Non-Forest Land	
(a)	Agricultural land	36.33
(b)	Waste land	8.67
(c)	Grazing land	5.93
(d)	Surface water bodies	3.65
	Sub Total	54.58
(1)+(2)	Grand Total	191.98

Post- Mining:

Sl. No.	Description	LAND USE DETAILS (ha.)				
		Planta-tion	Water body	Public Use	Other Uses	Total
1	Excavation Area					
	(a) Backfilled area (Block C & B Ext.)	49.87	--	--	--	49.87
	(b) Void area left of (Block-D)	*40.64		--	--	40.64
2	External waste dump	19.16	---	---	---	19.16
3	Diversion of Nallah	---	13.58	---	---	13.58
4	Diversion of public road	---	---	5.08	---	5.08
5	Area utilized for rehabilitation and resettlement	---	---	22.7	---	22.7
6	CHP and Service buildings	3.10	---	---	---	3.10
7	Protective bund around quarry& dump yard, safety distance & drains	37.85	---	---	---	37.85
	TOTAL	150.62	13.58	27.78		191.98

Core area:

Sl. No.	Particulars	Existing for 0.40 MTPA			Proposed for 1.00 MTPA
		Forest Land	Non-forest Land	Total	Total
1	Quarry, excavation area.	87.45	3.06	90.51	Same as for 0.40 MTPA
2	Safe barrier, drainage, protection bund etc	29.94	1.34	31.28	
3	Dump yard including drains around the dump	-	23.81	23.81	
4	Diversion of Nallah	11.95	1.57	13.52	
5	Diversion of public road	3.04	2.04	5.08	
6	Road between Block-b ext & Block-D	1.92	-	1.92	
7	CHP, ETP & Service buildings	3.1	-	3.10	
8	Land for R&R (Outside core area)	-	22.76	22.76	
Total		137.4	54.58	191.98	

(viii) The total geological reserve is 7.69 MT MT. The mineable reserve 6.80 MT (2.80 MT already extracted therefore, balance reserves are 4.00 MTPA), extractable reserve is 4.0 MT. The per cent of extraction would be 100 %.

(ix) The coal grade is G-9, G-7 & G-8. The stripping ratio is 1:6.50 Cum/tonne. The average Gradient is Block – B Extension: 1 in 3.2 to 1 in 4.0 and Block – D: 1 in 3.17 to 1 in 4.4. There will be three seams with thickness ranging as under :

Block – B Extension

Seam/ Sections	Thickness Range (m)	Average thickness (m)	Avg.GCV(K.cal/Kg)
Middle Seam	4.58-7.73	6.2	4646

Block – D

Seam/ Sections	Thickness Range (m)	Average thickness (m)	Avg.GCV(K.cal/Kg)
Top seam	1.22-3.57	2.00	5131
Parting			
Middle Seam	1.07-6.55	4.00	5322
Parting			
Bottom seam	2.13-5.19	3.80	5071

(x) Total estimated water requirement is 1200 m³/day. The level of ground water ranges

from 1.21 m to 14.33 m

- (xi) The method of mining would be Opencast.
- (xii) There is one external OB dump with Quantity of 3.60 Mbcm in an area of 19.16 ha with height of +30 m above the surface level and three internal dump with Quantity of 26.98 Mbcm in an area of 90.51 ha.
- (xiii) The final mine void would be in 40.64 ha. (Filled with adjacent Abbapur OC) with depth upto 130 m. and the Total quarry area is 90.51 ha. Backfilled quarry area of 49.87 ha shall be reclaimed with plantation. A void of 40.64 ha with depth upto 130 m which is proposed to be converted into a water body
- (xiv) The life of mine is 4 Years.
- (xv) Transportation: Coal transportation in pit by Dumpers, Surface to Siding by Trucks and loading at siding by Rail from Goleti CHP
- (xvi) There is R & R involved. There are 146 PAFs.
- (xvii) Cost: Total capital cost of the project is Rs. 79.03 Crores. CSR: 3% of average net profits of the company made during last three years. R&R Cost Rs 18.43 crore. Environmental Management Cost (capital cost Rs 574.58 Lakhs (Direct) and 1690.64 Lakhs (Indirect), annual recurring cost Rs 32.80 per tone).
- (xviii) Water body: There are three seasonal nallahs flowing across the project area. i.e., Narsapur Nallah (Block-C), a Nallah flowing on the western side of Block B-Extension, Sonapur Nallah (Block-D). Narsapur Nallah has already been diverted during excavation of Block-C. Seasonal nallah on the western side of Block-B Extn., and Sonapur Nallah have to be diverted all along the boundary of project area through I&CAD, State Government.
- (xix) Approvals: Ground water clearance obtained on 24th March, 2005 from state ground water department. SCCL Board's approved for 1.00 MTPA obtained on 4th November, 2016. Mining Plan for 1.00 MTPA capacity has been approved vide letter No 13016/6/2006-CA-II dated 26th July, 2016. Mine closure plan is an integral part of mining plan.
- (xx) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xxi) Forestry issues: Total forest area involved in the project is 137.40 ha. Forest land already diverted under F(C) Act, 1980
- (xxii) Total afforestation plan shall be implemented covering an area of 108.98 ha at the end of mining. Green Belt over an area of 3.10 ha. Density of tree plantation 2500 trees/ ha of plants.
- (xxiii) There are no court cases/violation pending with the project proponent.
- (xxiv) Public Hearing for 0.4 MTPA capacities was held on 15th December, 2004.
- (xxv) The compliance report of the, Regional Office, MoEFCC at Chennai monitored on dated 15.02.2017 & again on 25.03.2017 which was forwarded to the ministry vide no. EP/12.1/326/AP/0793 dated 25.05.2017 was deliberated in the EAC meeting. On examination of the compliance report non compliance was noted to which PP submitted the action plan which is as under:

- (i) An ETP (60 KL capacity) was provided near the base workshop to treat the washing effluents of HEMM. Periodical monitoring of effluents is being carried out to ensure compliance

to prescribed standards before discharging into natural water course. The effluents monitoring data reveals that effluents are within the prescribed limits. The effluents monitoring data is being submitted along with half yearly reports. The effluents monitoring data of ETP outlet of base workshop of the project has been submitted. At present sewage from the colony is being treated through septic tank followed by soak pits. Approval had been accorded by competent authority vide Itr.no.CRP/CVL/STP /72, dt.09.01.2015 for construction of STP for Goleti township. Vide Itr.no.CRP/CVL/STP/ 2789,dt.29.09.2016, the Engineering Staff College of India (ESCI) was requested to study and suggest appropriate technology for construction of STP and the ESCI already started work and it is under progress. The civil works are under progress.

(ii) Effective fixed water sprinkling arrangements are provided at crusher to check fugitive emissions at loading point, conveyor system, haulage roads and transfer points in place of bag filters due to constrains in the existing design. A 28KL, three nos. of 20KL & 16KL capacity mobile water sprinklers are being deployed to suppress the fugitive dust on the haul roads, dumps, around CHPs, etc., and above are being maintained properly.

(iii) This project consists of three blocks i.e. Block-C (R&R was not required and affected villages are not falling in this Block), Block-B Extn. & Block-D (villages are falling in this area). The various activities for implementation of R&R was started before starting of the project. The implementation of R&R was delayed due to changes in R&R policy i.e. G.O.M.S.No.68.of State Govt. Further, the diversion of balance forestland (i.e. 108.78Ha. in which the affected villages are falling) was delayed and the Forest Clearance (FC) was granted for the same vide Ir. no.F.No.8-21/2009-FC, on 04.09.2014. At that stage, the SCCL was in dilemma whether the balance forestland i.e.108.78Ha would be diverted by MoEF&CC or not in favour of SCCL. At the time of getting FC for balance forestland , the then existing (previous) R&R policy i.e. G.O.M.S.No.68 was kept under abeyance as new land acquisition act i.e.“The Right to Fair Compensation and Transparency in Land Acquisition and R&R Act, 2013 was in pipeline and it was passed by Central Govt., with amendments recently. To meet the demand of coal for power plants, with oral consent of villagers based on assurance given by SCCL with regard to implementation of R&R policy as per the directions of Revenue dept., (villagers already have more belief on SCCL), the mining activity was started in the area (in diverted balance forestland) which is far away from villagesproposed to be shifted. The district collectors of Kumram Bheem (Asifabad) district & Manchirial district under whose jurisdiction the project is falling are awaiting for G.O.(s) /Rules to be issued from Telangana State Government in respect of on amended Act ,2017 i.e. “The Right to Fair Compensation and Transparency in Land Acquisition and R&R Act, 2013 for fixing compensation for the lands of PDFs and for awarding R&R package to them. Detailed socio economic survey, Identification & Acquisition of R&R sites, Structures measurements & Estimation of the structures value were already completed as per the prescribed proforma by R&B dept., Mancherial in coordination with Revenue dept. The R&R package will be implemented immediately after receiving above G.O.(s) /Rules pertaining to the modified Act approved in place of R&R Act, 2013 by the central Central Govt., from

Telangana State Government. The expected period for R&R implementation is about three to six months.

(iv) The items being consumed are within the threshold limit as specified in the Ministry of Environment & Forestry Notification, S.O.227(E), dt.24.03.1992. So, PLI Act-1991 is not applicable for this project. The explosives, HSD oil, LPG & Acetylene cylinders are falling in the list of various substances / materials / liquids / gases notified in S.O.227(E), under PLI Act-1991. Max. consumption/max.storage capacity of above hazardous substances are given below;

Description	Consumption /Max. storage capacity	Threshold limit	Remarks
Ammonium nitrate	7t/day	350t	Within threshold limit.
HSD oil	0.8504t (1.2KL/Day) (1KL=0.7087t) SCCL purpose	25t	Within threshold limit.
	14.174t (20KL) (Off-loading purpose)	25t	Within threshold limit.
Acetylene cylinders	0.0055t (01no.)	5t	Within threshold limit.
Oxygen cylinders	23.961t (03nos.)	200t	Within threshold limit.

So, the public liability insurance scheme will be taken for this item at the earliest

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

- (i) The Bellampalli Opencast-II project with its capacity of 0.4 MTPA was earlier granted EC by the Ministry vide letter dated 11th September, 2006.
- (ii) The present proposal is for grant of ToR to the Bellampalli Opencast-II expansion project from 0.4 MTPA to 1 MTPA in an area of 191.98 ha in village Abbapur, Tandur Mandal in District Asifabad & Mancherial (Telangana)
- (iii) The total forest area involved is 137.40 ha for which forest clearance (Stage-II) has been obtained on 6th July, 2006 (for 28.62 ha) and 4th September, 2014 (for 137.40 ha). The forest area now reported is not consistent with that mentioned in the existing EC dated 11th September, 2006 for a capacity of 0.4 MTPA.
- (iv) Mining plan for the proposed expansion was approved by the Ministry of Coal by their letter dated 26th July, 2016. Subsequently, the approval of SCCL Board was obtained on 4th November, 2016. It was informed that the Board's approval after mining plan by the Ministry of Coal, was limited to consideration on financial implications vis-à-vis the mining plan. Mine Closure Plan is an integral part of Mining Plan.

(v) There has been no usage of ground water so far. A formal clearance in this regard was earlier issued by the State Ground Water Department vide their letter dated 24th March, 2005. Even for the proposed expansion, there shall be no requirement of ground water.

(vi) There is lack of clarity in Form-I in respect of forestry clearances, approval of mining plan, ground water clearance etc, which needs to be rectified.

(vii) The last public hearing for the earlier capacity of 0.4 MTPA was conducted on 15th December, 2004 i.e. prior to the issue of the EIA Notification, 2006.

15.1.4 *The EAC, after detailed deliberations, opined for first resolving the following issues:-*

- *If the project proponent SCCL, although NABET accredited, can prepare the EIA/EMP report for its own project to refrain from any conflict of interest.*
- *The discrepancy in respect of forest areas, i.e. 117 ha reflected in the earlier EC and 137.40 ha proposed now in the same mine lease area 191.98 ha.*

Agenda 15.2

Jagannath OCP Expansion Project from 6.0 MTPA to 7.5 MTPA along with expansion in ML area from 430.736 ha to 553.946 ha of M/s Mahanadi Coalfields Limited located in District Angul (Odisha) - TOR

15.2.1 The proposal is for grant of Terms of Reference to Jagannath Opencast Expansion Project from 6.0 MTPA to 7.5 MTPA of M/s Mahanadi Coalfields Limited in a total area of **553.946** ha located in District Angul (Odisha).

15.2.2 **The salient features of the project and the present proposal is as under:-**

(i) The project was accorded EC vide letter no. J-11015/177/2005-IA.II (M) dated 29th September, 2005

(ii) The latitude and longitude of the project are 20^o 58' 42" to 20^o 56' 14" N and 85^o 07' 10" to 85^o 9' 55" E respectively.

(iii) Joint Venture: No Joint Venture

(iv) Coal Linkage : NTPC Talcher Thermal Power Plant, Other Power Plants & Basket Linkage

(v) Employment generated / to be generated: 534 (Existing) + 194 (Expansion) direct employment opportunity. Beside above indirect employments will also be generated.

(vi) Benefits of the project: The proposed project will result in improvement in Physical Infrastructure, improvement in Social Infrastructure, increase in employment potential, contribution to the Exchequer (both State and Central Govt.), post mining enhancement of

Green Cover, improvement of Electrical Power Generation and consequently rise in electric power consumption thereby improvement in overall economic growth of the country.

(vii) 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	Additional	Existing	Additional	Existing	Additional
1	Agricultural	0.000	106.75	0.00	0.00	0.000	106.750
2	Waste land	144.110	13.93	11.27	13.21	155.380	27.140
3	Forest Land	80.206	2.53	0.00	0.00	80.206	2.530
4	Grazing	0.000	0.00	0.00	0.00	0.000	0.000
5	Surface water bodies	55.000	0.00	0.00	0.00	55.000	0.000
6	Others (afforestation by Jagannath OCP) settlement	151.42	0.00	0.00	0.00	151.420	0.000
Total:		430.736	123.21	11.27	13.21	442.006	136.420

Pre-Mining:

Sl. No.	Particulars	Existing (in ha)			Additional (in ha)			Grand Total (ha)
		Forest	Non-forest (Govt. & tenancy)	Total (ha)	Forest	Non-forest (Govt. & tenancy)	Total (ha)	
A	Break-up of mining lease area:							
1	Quarry excavation	80.206	273.310	353.516	2.53	120.68	123.21	476.726
2	External Dumps (In old Jagannath OCM only)	0.000	36.470	36.470	0.000	0.000	0.000	36.470
3	Infrastructure like workshop, store, CHP & land between infrastructure (In old Jagannath OCM)	0.000	40.750	40.750	0.000	0.000	0.000	40.750

Sl. No.	Particulars	Existing (in ha)			Additional (in ha)			Grand Total (ha)
		Forest	Non-forest (Govt. & tenancy)	Total (ha)	Forest	Non-forest (Govt. & tenancy)	Total (ha)	
	Sub-total (A) (Mining lease area)	80.206	350.530	430.736	2.53	120.680	123.21	553.946
B	Break-up of area out side mining lease area (in ha):							
1	Land for rehabilitation colony	0.000	11.270	11.270	0.000	13.210	13.210	24.480
	Sub-total (B)	0.000	11.270	11.270	0.000	13.210	13.210	24.480
	Grand Total (A+B)	80.206	361.800	442.006	2.53	133.890	136.42	578.426

Post- Mining: Core zone

Sl. No.	Land Use during Mining	Land Use (ha)				
		Plantation	Water Body	Public Use/Agriculture	Undisturbed	Total
1	External OB Dump *	--	--	36.470	--	36.470
2	Top Soil Dump	will be spread concurrently in the backfilled area				
3	Excavation	129.15	227.401	120.175	--	476.726
4	Built up area	8.15	--	--	32.60	40.750
	Total	137.30	227.401	156.645	32.60	553.946

* External dump will be re-handled during post closure & proposed to be converted into public use / agricultural land.

(viii) The total geological reserve is 86.58 MT. The mineable reserve 75.75 MT, extractable reserve is 75.75 MT. The per cent of extraction would be 87.49 %.

(ix) The coal grade is G12. The stripping ratio is 1.07 Cum/tonne. The average Gradient is 3⁰ to 5⁰. There will be six seams with thickness ranging upto 36.55 m.

(x) The total estimated water requirement is 2219.30 m³/day. The level of ground water ranges from 0.80 to 13.27 m.

(xi) The Method of mining: Opencast Mining by Shovel – Dumper/Ripper-dozer in OB/parting; surface miner, pay loader & tipper in coal.

(xii) There is two external OB dump with Quantity of 5.51 Mcum in an area of 36.470 ha with height of 30 meter above the surface level and two internal dump with Quantity of 158.43 Mcum in an area of 249.325 ha.

(xiii) The final mine void would be in 227.401 ha with depth varying from 48 m to 165 m. and the Total quarry area is 476.726 ha. Backfilled quarry area of 129.15 ha shall be reclaimed with plantation. A void of 227.401 ha with depth varying from 48 m to 165 m which is proposed to be converted into a water body

(xiv) The life of mine is 11 Years.

(xv) Transportation: Coal transportation

in pit: **Existing:** 6.0 Mty through tippers to CHP.

Proposed: 7.5 MTPA Surface Miner coal through Tippers.

Surface to Siding: **Existing :** Surface to TTPS : 2.0 MTPA (through belt conveyer), Surface to siding : 3.0 MTPA (Through tippers), Surface to Road sale : 1.0 MTPA.

Proposed: Surface to TTPS : 2.0 MTPA (through belt conveyer), Surface to siding : 4.0 MTPA (Through Tippers), Surface to Road sale : 1.5 MTPA

Loading at siding : Proposed & existing : by pay loader.

(xvi) There is R & R involved. There are 230 additional PAFs.

(xvii) Cost: Total capital cost of the project is Rs. 409.08 Crores (including 337.66 Crores., Additional). CSR Cost : 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. 919.20 Lakh (Additional). Environmental Management Cost shall be provided in EIA/EMP.

(xviii) Water body: Bangaru jhor flows at a distance of about 100 m (North), Brahmani river flows at a distance of about 7.5 km (East), Nandira jhor flows at a distance of about 6.0 km (South), Singhara jhor flows at a distance of about 6.5 km (North-West).

(xix) Approvals: Ground water clearance not applicable, as the area is not falling under critical area as per CGWA. Board's approval obtained by MCL Board on 18th April, 2017 (189th meeting). Mining plan has been approved by MoC vide letter no. F.No.34012/(04)/2011-CPAM Dtd. 16th May, 2017. Mine closure plan is an integral part of mining plan.

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

(xxi) Forestry issues: Total forest area involved 82.736 ha. Stage - II Forest clearance for 82.736 ha (58.096 Ha & 24.64 ha) have been obtained on 9th November, 2005 and 7th February, 2014 respectively

(xxii) Total afforestation plan shall be implemented covering an area of 298.845 ha at the end of mining. Green Belt over an area of 8.15 ha. Density of tree plantation 2500 trees/ ha of plants.

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

(xxiv) Public Hearing for 6.0 MTPA was held on 11th January, 2004.

15.2.3 The proposal was last considered in the 62nd meeting of the EAC held on 23-24 August, 2016, where in the Committee, after detailed deliberations noted the following:

(i) To avoid confusion and other complications, title of the proposal needs to be corrected consistent with the existing EC dated 29th September, 2005 for 6 MTPA in mine lease.

(ii) To minimize coal transportation through road and thus to take care of dust suppression, silos are scheduled for completion in the following manner:-

- Silos I & II at Bharatpur by August, 2016 & October, 2016 respectively,.
- Two Silos at Lingraj by December, 2016
- For Ananta and Lakhanpur mines, silos are reported to be under construction.
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(iii) MCL Board's approval obtained on 26th May, 2014 (at Annex IV of the background document circulated to the EAC Members) is for production capacity of 6 MTPA (normative)/ 7.5 MTPA (peak). Mine Plan for the proposed expansion is under process. However, on perusal of the background document circulated to the EAC Members, at pg 11 of the prefeasibility report, the coal and OB production have been shown for the rest of the life of ten years as 7.5 MTPA every year, which is actually the peak production as per the approval.

(iv) During discussions, it was revealed that approval of competent authority for expansion of production capacity from 6 MTPA annually to 7.5 MTPA annually was not available, and accordingly the proposal could not be examined in detail. The project proponent was advised that the proposal will be taken up for detailed examination only after approval of the Board/competent authority is taken for 7.5 MTPA as normative production.

15.2.4 In response to the observations of EAC in its meeting held on 23-24 August, 2016, the details submitted by the project proponent and/or as informed during the meeting, are as under:-

(i) As per the suggestions of the EAC members, the title of the proposal has been changed from Jagannath Re-organisation Opencast Project to Jagannath OCP Expansion. Form-1 and Pre-feasibility report have been revised accordingly.

(ii) The status of SILO in MCL is tabulated below:

Ongoing SILOS:

Sl. No.	Job Description	Contract Value (in Rs)	Progress till 31 st May'17	Expected date of commissioning
1.	Bharathpur SILO (2X10 MTPA)	173.20 Cr	99.40%	September, 2017

2.	Lingaraj SILO (2X10 MTPA)	230.82 Cr	88.47%	January, 2018
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Upcoming SILOS:

Sl. No.	Job Description	Contract Value (in Rs)	Expected date of commissioning
1.	Ananta SILO (2X10 MTPA)	Estimate under preparation	July, 2019
2.	Lakhanpur SILO (10 MTPA)	160.52 Cr	December, 2018

(iii) MCL board in its 189th Board meeting held on 18th April, 2017 has approved the mining plan for expansion capacity of 7.5 MTPA as normative capacity and the same has been approved by MoC on 16th May, 2017.

(iv) The compliance report of the, Regional Office, MoEFCC at Bhubaneswar obtained vide letter No.101-174/ EPE dated 5th April, 2017 monitored on dated 23rd December, 2016 was deliberated in the EAC meeting.

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

(i) The Jagannath Opencast expansion project of capacity 6 MTPA in an area of 430.736 ha (includes 80.206 ha of forest land) was earlier granted EC by the Ministry vide letter dated 29th September, 2005.

(ii) The present proposal is for grant of ToR to the Jagannath Opencast expansion project from 6 MTPA to 7.5 MTPA with increase in area from 430.736 ha to 553.946 ha (increase in forest area from 80.206 ha to 82.736 ha) in District Angul (Odisha). The additional area of 123.21 ha has been carved out of the existing Bharatpur OCP, for which EC amendment would be sought after revision in the Mining Plan.

(iii) The total forest area involved is 82.736 ha for which stage –II forest clearance has been obtained. For 58.096 ha, stage-II FC was obtained on 9th November, 2005 and for 24.64 ha on 7th February, 2014.

(iv) Mining plan for the proposed expansion was first approved by the MCL Board on 18th April, 2017, and then by Ministry of Coal by their letter dated 16th May, 2017.

(v) Regarding ground water clearance from the concerned regulatory authority (CGWA), it was informed that the same is not applicable as the area is not falling under critical zone.

(vi) The proposal was earlier considered by the EAC in its meeting held on 24th August, 2016. During the meeting, the issues were raised in respect of project title, approval of MCL Board for the peak production, commissioning of silos to take care of dust suppression, etc. The para-wise response submitted by the project proponent was found to be in order.

(vii) Last public hearing for the earlier capacity of 6 MTPA was conducted on 11th January, 2004 i.e. prior to the issue of the EIA Notification, 2006. Also, the public hearing for the additional area of 123.21 ha carved out of Bharatpur OCP) was conducted on 15th January, 2007.

15.2.6 *The EAC, after detailed deliberations, recommended the project for grant of terms of reference to the **Jagannath OCP Expansion Project from 6.0 MTPA to 7.5 MTPA with increase in area from 430.736 ha to 553.946 ha of M/s Mahanadi Coalfields Limited located in District Angul (Odisha) for preparation of EIA/EMP reports alongwith public consultation, subject to compliance all the terms and conditions stipulated in the standard ToR applicable for such project and 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.*
- *For proper baseline air quality assessment, adequate monitoring stations (4-5 nos) in the downwind areas 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 15.3

Gayatri Underground Coal mine expansion project from 0.30 MTPA to 1.188 MTPA in an area of 507.472 ha by M/s South Eastern Coalfields Limited located in village Getra, District Sarguja (Chhattisgarh) - For consideration of ToR

15.3.1 The proposal is for grant of TOR to the expansion of Gayatri Underground Coal mine project from 0.30 MTPA to 1.188 MTPA in an area of 507.472 ha by M/s South Eastern Coalfields Limited located in village Getra, District Sarguja (Chhattisgarh).

15.3.2 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) The project was accorded EC vide letter no. J-11015/26/2000-IA.II (M) dated 27.11.2002.
- (ii) Now, the proposal is for expansion from 0.30 MTPA to 0.88 MTPA (Normative & 1.188MTPA (Peak), Under Clause 7(ii) of EIA Notification 2006 within the same mining lease

area of 507.472 Ha.

(iii) The latitude and longitude of the project are 23° 05' 15" to 23 ° 07' 30" North and 82° 53' 32" to 82 ° 56' 53" East respectively.

(iv) Joint Venture: There is no joint venture

(v) Coal Linkage : Basket linkage for miscellaneous customers

(vi) Employment generated / to be generated: 815 Nos

(vii) Benefits of the project: Enhancement of production will considerably improve the socio-economic status of the adjoining areas. This will result in Improvement in physical & social infrastructure, Increase in employment potential, Contribution to the exchequer, Meet energy requirement

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

Pre-Mining:

SN.	Land use	Within ML area (ha.)	Outside ML area (ha.)	Total (ha.)
		Already acquired	Already acquired	
1	Agricultural land	200.71	0	200.71
2	Forest land	249.762	0	249.762
3	Waste Land	0	0	0
4	Grazing Land	41.00	0	41.00
5	Surface Water Bodies	0	0	0
6	Settlements	0	0	0
7	Others (Specify): Infrastructure & colony	16.00	0	16.00
	TOTAL	507.472	0	507.472

Post- Mining:

S No	Pattern of utilization	Area (ha)
1.	Reclaimed External and Internal dumps	NA
2.	Green belt/ Plantation	10.00
3.	Final void /Water body	NA
4.	Built up area (Infrastructure, colony, roads, R & R site)	16.00
5.	Undisturbed area	481.472
	Total	507.472

Core area :

S N.	Particulars	Tenancy land (Ha.)	Forest land (Ha.)	Government Land (Ha.)					Grand Total (Ha.)
				Grazing land	Waste land	Water body	Others	Total	
1	Mining Lease	200.710	249.762	41.000	-	-	-	41.000	491.472
2	Area for Top Soil	-	-	-	-	-	-	-	-
3	External dump	-	-	-	-	-	-	-	-
4	Infrastructure, etc	4.800	-	-	-	-	-	-	4.800
5	Roads	-	-	-	-	-	-	-	-
6	Residential Colony	8.550	-	-	-	-	-	-	8.550
7	R & R site	-	-	-	-	-	-	-	-
8	Explosive magazine	2.650	-	-	-	-	-	-	2.650
9	Nala Diversion, if any	-	-	-	-	-	-	-	-
10	Safety Zone	-	-	-	-	-	-	-	-
Total Land (in Ha)		216.710	249.762	41.000				41.000	507.472

(ix) The total geological reserve is 36.4077 MT. The mineable reserve 15.494 MT, extractable reserve is 15.494 MT. The per cent of extraction would be 42.56 %.

(x) The coal grade is G-6. The stripping ratio is not applicable as the Gayatri is UG mine. The average Gradient is 1 in 20. There will be two seams with thickness ranging from 0.90 m to 6.00 m.

(xi) The total estimated water requirement is 435 m³/day. The level of ground water ranges from 0.90 m to 8.70 m

(xii) The Method of mining would be underground. Bord & Pillar system, Conveyor belt and

LHD/SDL & Continuous Miner Package.

- (xiii) There is neither external nor internal OB dump as the mine is underground.
- (xiv) The life of mine is 21 Years.
- (xv) Transportation: In incline through conveyor belt to surface bunker, surface to siding by trucks, and siding to consumer by railway and to local consumers by trucks.
- (xvi) There is R & R involved. There are two PAFs.
- (xvii) Cost: Total capital cost of the project is Rs. 150.274 Crores. CSR Cost Rs. 2.0 per tonne of coal production. R&R Cost Nil. Environmental Management Cost Rs. 83.69 lakhs.
- (xviii) Water body: Main drainage in the mine block is controlled by Jobga Nalla, a tributary of Rehar river flowing from North-west to South-East in the Southern part of the block and joins the Rehar river easterly.
- (xix) Approvals: Ground water clearance obtained on 24.09.2001. Mining Plan for 0.30 MTPA was earlier approved by SECL Board on 8th April, 1999. For the proposed expansion from 0.30 MTPA to 1.188 MTPA (peak), approval of the Mining Plan/Project Report for incremental increase of 0.42 & 0.36 MTPA was granted by the SECL Board in two phases on 1st April and 2nd December, 2016 respectively. Mine closure plan is an integral part of Mining Plan.
- (xx) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xxi) Forestry issues: Total forest area involved 249.762 ha for mining. Final Forestry Clearance has been obtained for Rehar & Gayatri UG Mine combined for 547.012 ha vide letter No. 8-90/99-FC dated 27th September, 2000.
- (xxii) Plantation has been done in mine premise & at railway siding. Density of tree plantation 2500 trees/ ha of plants.
- (xxiii) There are no court cases/violation pending with the project proponent.
- (xxiv) Public Hearing for the last EC was held on 12.11.1999.
- (xxv) Subsequent to the inspection by the Regional Office, MoEFCC Nagpur on 19th May, 2017, the compliance report was forwarded to the Ministry on 23rd June, 2017.

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

- (i) The Gayatri UG Coal mine expansion project of the present capacity of 0.3 MTPA in total mining lease area of 507.472 ha (includes 249.762 ha of forest land) in village Getra, Tehsil Lakhanpur, District Surguja (Chhattisgarh) was earlier granted EC by the Ministry vide letter dated 27th November, 2002.
- (ii) Total mining lease area of 507.472 ha includes 249.762 ha of forest land, for which combined forestry clearance was already obtained (for diversion of 547.012 ha for Rehar and Gayatri projects vide letter dated 27th September, 2000) before issue of the earlier EC dated 27th November, 2002.
- (iii) The present proposal is for grant of ToR to the Gayatri UG Coal mine expansion project from 0.3 MTPA to 1.188 MTPA (peak) in an area of 507.472 ha.

(iv) Mining plan/Project Report for the proposed expansion was approved in phases by the SECL Board in April & December, 2016. Mine Closure Plan is an integral part of the Mining Plan.

(v) The Regional Office of the Ministry at Nagpur inspected the project on 19th May, 2017 and submitted the compliance status report on 23rd June, 2017. The same was deliberated and found to be largely in order.

(vi) Last public hearing for the present capacity of 6 MTPA was conducted on 12th November, 1999 i.e. prior to the issue of the EIA Notification, 2006.

15.3.4 *The EAC, after detailed deliberations, recommended the proposal for grant of ToR to the expansion project of Gayatri UG Coal mine from 0.30 MTPA to 1.188 MTPA (peak) in an area of 507.472 ha in village Getra, Tehsil Lakhanpur, District Surguja (Chhattisgarh) for preparation of EIA/EMP reports with public consultation subject to compliance of all the conditions as specified/notified in the standard ToR applicable for Underground 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.*
- *Compensatory afforestation to be done and native trees to be planted/transplanted preferably subject to permission granted by the State Government.*

Agenda 15.4

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

15.4.1 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).

15.4.2 The proposal was last considered in the 9th meeting held on 27-28 April, 2017, wherein observations of the Committee were as under:-

(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 is required to be submitted.

15.4.3 The project proponent, vide letter dated 10th May, 2017, has requested for correction in minutes of the meeting held on 28th April, 2017 with the details as under:-

S. No.	Statement in MOM	Correction required	Reasons
1	<p>Para 9.10.3(c):</p> <p>"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".</p>	<p>"Now it is proposed that coal from other nearby mines shall be transported by the dedicated road and rail to the washery and washed coal by pipe conveyor within steel plant and by rail for other companies, which would require amendment in the EC conditions".</p>	<p>JSPL in its proposal submitted that the coal from the nearby mines will be transported by the dedicated road and rail and washed coal by pipe conveyor within steel plant and by rail for other companies.</p>
	<p>Para 9.10.3(d):</p> <p>"The submissions of the</p>	<p>"The submission of project</p>	<p>During the meeting</p>

	<p>project proponent regarding coal transportation going on by dedicated road (nearly 600 trucks per day) and that too, from the coal washery (ies) other than allowed in the EC, amounts to violation of EC.”</p>	<p>proponent regarding coal transportation by dedicated road from the coal mines other than allowed in the EC, amounts to non-compliance of EC”.</p>	<p>EAC desired to know how many trucks will be required to transport 6.5 MTPA of coal by road and accordingly it was informed that it amounts to about 600 trucks per day the road.</p> <p>However, currently less than 2 MTPA of raw coal is being transported from mines to the washery by a combination of rail and dedicated road.</p>
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15.4.4 The Regional Office (ER) of MOEF&CC at Bhubaneswar has forwarded certified EC compliance report vide letter No.101-850/EPE dated 12th July, 2017, with the observations as under:

- PAs to conduct coal analysis (raw coal, washed coal and middling coal) by Internationally reputed Central Government Institute likes; Institute of Mineral and Meteorological Technology (CSIR-IMMT), Bhubaneswar and Central Institute of Mining and Fuel Research Institute (CSIR-CIMFR), Dhanbad for confirmation, whether beneficiation of coal, which is presently being procured is required or else re-evaluate the techno-economic feasibility of the coal washery on priority basis. In addition to collect coal analysis reports from respective mine for comparison and better interpretation the data,
- PAs are not conducting the coal analysis on yearly basis. As per the condition it shall be conducted on yearly basis and record maintained,
- Noise levels (day and night time) in almost all locations have been found above the prescribed limit including labour hutment gate. Therefore, to initiate immediate remedial measures for controlling of it,
- As per preamble of the EC, 2 ha land is allocated for construction of water storage area. It has been found that PAs have not constructed the water storage area in the washery plant. It is requested to submit present status/uses of 2 ha land, which has been dedicated for the storage of water for washery plant,

- PAs are using fresh water in coal washery. It is requested to explore the possibility for the use of treated waste water or cooling tower blow down on washery up to maximum extent. Water consumption per ton of raw coal should be submitted,
- Maintenance of raw coal yard is not up the mark. It is requested to construct/maintain garland drain & settling pit all around the coal yard. Fire hydrant needs to be maintained and mock drill will also be conducted on six monthly basis,
- PAs are not conducting third party analysis of ambient air quality; noise etc. by MOEF&CC or NABL accredited laboratory. It is requested to conduct third party analysis only by MOEF&CC or NABL accredited laboratory and results be submitted to Regional office on regular basis,
- Developed green belt in and around the washery need to be strengthened with three tier plantation especially with broad leaves/dense canopy indigenous variety of plant,
- It is required to increase the running frequency of the water sprinkler (used treated water) on the road, Project proponent has not submitted Environmental Statement (Form V) for 2016-17 to this Regional Office.

15.4.5 In response to the observations of the RO at Bhubaneswar, parawise submissions made by the project proponent included the following:-

- (i) Washed coal and middlings are transported by closed conveyor. Only Raw coal was transported through rail and dedicated road. A study has been initiated to assess impact of transportation of coal through dedicated road and report on the same will be submitted within 3 months and recommendations/suggestions emerging out of the study will be submitted.
- (ii) Garland drain and settling pit have been provided around the yard. Garland drains will be made pucca by December, 2017. Maintenance of the drains by way of de-silting has been started. It is assured that maintenance of fire hydrants will be improved and mock drills will be carried.
- (iii) Till date, 4 ha of green belt has been established and development of green belt in balance 1 ha has been initiated. Further, it is assured that the plantation along approach road to washery shall be taken on priority.
- (iv) As suggested, use of cooling tower blow down as make up water will be done.
- (v) Since the mine has been de-allocated, water reservoir to store water from the mine sump has not been constructed. It is assured that the reservoir will be constructed once mine sump water is available.
- (vi) Coal analysis through reputed Govt. institute will be carried yearly and the report will be submitted to MoEF&CC. We submit that ash analysis of raw, washed and middling coal is done every day internally as a part of process monitoring and heavy metal analysis is done on yearly basis through accredited third party also.
- (vii) Four continuous ambient air quality station have already been installed and PM10, PM2.5, SO2, NOx are monitored online and data is transferred to CPCB and SPCB servers on

real time basis. Heavy metals are analysed through NABL accredited laboratory on six monthly basis.

(viii) Noise monitoring is carried out monthly. The reported values of noise levels are minimum, maximum and average during the monitoring period. Comparison of weighted average value i.e Leq in dBA has been done with the standard. As evident, the average Leq (Equivalent noise level) were always within the standard i.e. below 75 dbA during day and 65 dbA during night.

(ix) It is submitted that CAAQMs and CEMS have been installed and are connected to CPCB and OSPCB servers for transmitting real time data. For remaining Environmental quality parameters, monitoring will be conducted through accredited lab.

(x) As desired, year wise expenditure will be submitted to RO, MoEF by 30th September, 2017.

(xi) The Environmental Statement (Form V) for 2016-17 will be submitted within the permitted time i.e. by 30th September, 2017.

15.4.6 While discussion on the proposal, the EAC was informed that in compliance to their observations in the last meeting on violation of the EC condition, the State Government of Odisha has already been requested for filing a case under Section 19 of Environment (Protection) Act, 1986 in the court of law. During further deliberations, the EAC expressed its deep concern over compliance status of the EC conditions, but preferred to give an opportunity to the project proponent for corrective actions in accordance with the time bound action plan presented before the Committee.

15.4.7 *The EAC, after detailed deliberations, recommended for the proposed amendment in the environmental clearance in respect of the specific condition (i) to be replaced and now read as under:*

'Raw coal to be transported by the dedicated road in tarpaulin covered trucks from the nearby coal mines in Talcher Coalfield, and/or by rail to the coal washery. Washed coal to be transported through piped conveyor within the steel plant and by rail to the prospective buyers/customers having firm MoU in this regard.'

The Committee further suggested to review the implementation of the action plan submitted by the project proponent, by December, 2017 for compliance status of the EC conditions, and thus the continuation of the proposed arrangement vis-à-vis the revised EC conditions.

Agenda 15.5

Environmental Clearance for expansion of coal mining projects upto 40% with the exemption from Public Consultation under Clause 7(ii) of the EIA Notification, 2006

15.5.1 In a meeting held in the Ministry on 10th July, 2015 between the Hon'ble Minister for MOEFCC and the Hon'ble Minister of State for Coal, a request was made by Coal India Limited (CIL) to allow them to increase the production capacity by 50 % without Public Hearing under the clause 7(ii) of EIA Notification, 2006.

15.5.2 The proposal/request of Ministry of Coal/Coal India Ltd for increase in production capacity by 50% without the need for public hearing, was placed before the Expert Appraisal Committee in its meeting held in July, 2015. The EAC after detailed deliberation suggested the following:-

(i) Enhancement in production capacity will automatically reduce the mine life and adversely impact livelihood of the local communities. While considering any such proposal, a detailed sample study for socio-economic aspects needs to be carried out to assess the extent of impact.

(ii) The enhancement may also impact the air quality, coal handling and transportation. Blanket permission for 50 % expansion without public hearing under 7(ii) of EIA Notification, 2015 and without Capping for sustainable mining cannot be given.

15.5.3 Again in January, 2017, while considering the request for grant of EC to the said projects without the requirement of fresh ToR and the public hearing, the EAC suggested for a third party assessment of baseline environmental parameters and the prediction of likely impacts including socio-economic, due to the said expansion. The same may be undertaken through NEERI or any other expert agency identified by the Ministry.

15.5.4 The issue was again raised during the meeting of Secretary, Ministry of Coal with the Secretary (EF&CC) on 21st February, 2017. It was reiterated to consider the request for grant of EC to the expansion projects of coal mines with the exemption from public hearing especially in view of the following:-

(i) Predicted air quality parameters are within the prescribed norms.

(ii) Coal transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads.

(iii) Deployment of surface miners to carry out three operations namely, drilling, blasting and crushing in one go, and thus minimising the emissions at source and also the fugitive emissions.

- (iv) Public hearing already conducted for the total mine lease area involved and no more area would be required for the proposed expansion.
- (v) Compliance status of EC conditions monitored by the concerned Regional Office of this Ministry is found to be satisfactory.
- (vi) Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Forest Clearance, etc are satisfactorily fulfilled.

15.5.5 *The EAC, after detailed deliberations on the proposal in the background of its earlier observations, recommended for considering the proposals for grant of environmental clearances to the expansion projects of coal mines involving increase in production capacity up to 40% in 2-3 phases with the exemption from public hearing. While considering such proposals, the due diligence of the EAC would be based on fulfilling certain requirements as under:-*

- (i) Predicted air quality parameters are within the prescribed norms.*
- (ii) Coal transportation is through conveyor system up to the silo and then loading to railway wagons, involving no transportation through roads.*
- (iii) Coal mining is done through deployment of surface miners, replacing three dust generating operations of the conventional mining system namely drilling, blasting and crushing in one go.*
- (iv) Public hearing already conducted for the total mine lease area involved and no more area is required for the proposed expansion.*
- (v) Compliance status of EC conditions monitored by the concerned Regional Office of this Ministry is found to be satisfactory.*
- (vi) Other statutory requirements like Consent to Establish/Operate, Clearance from CGWA, approval of Mining Plan and the Mine Closure Plan, Mine Closure Status Report as applicable, Forest Clearance, etc are satisfactorily fulfilled.*

Agenda 15.6

Discussion on any other item

PARTICIPANTS IN 13th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 29th June, 2017 ON COAL SECTOR PROJECTS.

Sl. No.	List Of Participants Expert Appraisal Committee (Coal Mining)	
1.	Dr. Narmada Prasad Shukla	Member
2.	Shri N Mohan Karnat	Member
3.	Dr. Jai.Krishna Pandey	Member
4.	Dr. Gururaj P. Kundargi	Member
5.	Dr. R K Giri	Representative (Indian Meteorological Department)
6.	Dr. S K Paliwal	Representative of CPCB
7.	Prof. S D Vora	Member
8.	Shri S. K. Srivastava	Member Secretary

PARTICIPANTS IN 15th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 25th JULY, 2017 ON COAL SECTOR PROJECTS.

15.1 Bellampalli OC-II of M/s SCCL

1. Shri Bhaskara Rao
2. Shri Vasanta Kumar
3. Shri P. Ravi Kiran

15.2 Jagannath Re-Organization OCP of M/S Mahanadi Coalfield Limited

1. Shri S.R. Srivastava
2. Shri R.C. Sahoo
3. Shri S.S. Basu
4. Shri N.K. Singh
5. Shri M.Y. Brahma Putra

15.3 Gayatri UG of M/s South Eastern Coalfields Limited.

1. Shri P.K. Sinha
2. Shri S. Srivastava
3. Shri Amit Saxena
4. Shri A.K. Gupta
5. Shri Ashutoosh Kumar
6. Shri Praveen Shrivastava
7. Shri A.S. Bapat
8. Shri Swapnil Suman

15.4 Coal Washry of M/s Jindal Steel & Power

1. Shri J.K. Soni
2. Shri Yogesh Saudhi
3. Shri Alok Sahoo
4. Shri Mehrishe Sharma
5. Shri Rajan Anand

Generic ToR for coal washery

- i. Siting of washery is critical considering to its environmental impacts. Preference should be given to the site located at pit head; in case such a site is not available, the site should be as close to the pit head as possible and coal should be transported from mine to the washery preferably through closed conveyer belt to avoid air pollution.
- ii. The washery shall not be located in eco-sensitive zones areas.
- iii. The washery should have a closed system and zero discharge. The storm drainage should be treated in settling ponds before discharging into rivers/streams/water bodies.
- iv. A thick Green belt of about 50 m width should be developed surrounding the washery.
- v. A brief description of the plant alongwith a layout, the specific technology used and the source of coal should be provided.
- vi. The EIA-EMP Report should cover the impacts and management plan for the project of the capacity for which EC is sought and the impacts of specific activities, including the technology used and coal used, on the environment of the area (within 10km radius), and the environmental quality of air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts for the rated capacity. Cumulative impacts for air and water should be a part of EIA in case coal mine, TPP and other washeries are located within 10km radius. The EIA should also include mitigative measures needed to minimize adverse environmental impacts.
- vii. A Study Area Map of the core zone as well as the 10km area of buffer zone showing major industries/mines and other polluting sources should be submitted. These maps shall also indicate the migratory corridors of fauna, if any and areas of endangered fauna; plants of medicinal and economic importance; any ecologically sensitive areas within the 10 km buffer zone; the shortest distance from the National Park/WL Sanctuary Tiger Reserve, etc. alongwith the comments of the Chief Wildlife Warden of the State Govt.
- viii. Data of one-season (non-monsoon) primary- base-line data on environmental quality of air (PM₁₀, PM_{2.5}, SO_x and NO_x, noise, water (surface and groundwater), soil be submitted.
- ix. The wet washery should generally utilize mine water only. In case mine water is not available, the option of storage of rain water and its use should be examined. Use of surface water and ground water should be avoided.
- x. Detailed water balance should be provided. The break-up of water requirement as per different activities in the mining operations vis-a-vis washery should be given. If the source of water is from surface water and/or ground water, the same may be justified besides obtaining approval of the Competent Authority for its drawl.
- xi. The entire sequence of mineral production, transportation, handling, transfer and storage of mineral and waste, if any, and their impacts on air quality should be shown in a flow chart with specific points where fugitive emissions can arise and specific pollution control/mitigative measures proposed to be put in place. The washed coal and rejects should be transport by train as far as possible. Road transport of washed coal and rejects should generally be avoided. In case, the TPP is within 10km radius, it should be through conveyer belt. If transport by rail is not feasible because of the topography of the area, the option for transport by road be examined in detail and its impacts along with the mitigation measures should be clearly brought out in EIA/EMP report.
- xii. Details of various facilities proposed to be provided in terms of parking, rest areas, canteen etc. to the personnel involved in mineral transportation, workshop and effluents/pollution load from these activities should be provided.
- xiii. Impacts of CHP, if any, on air and water quality should also be spelt out alongwith Action Plan.
- xiv. O.M.no.J-II013/25/2014-IA.I dated 11th August, 2014 to be followed with regard to CSR activities.

- xv. Details of Public Hearing, Notice(s) issued in newspapers, proceedings/minutes of Public Hearing, points raised by the general public and response/commitments made by the proponent along with the Action Plan and budgetary provisions be submitted in tabular form. If the Public Hearing is in the regional language, an authenticated English translation of the same should be provided. Status of any litigations/ court cases filed/pending, if any, against the project should be mentioned in EIA.
- xvi. Analysis of samples indicating the following be submitted:
 - Characteristics of coal prior to washing (this includes grade of coal, other characteristics of ash, S and heavy levels of metals such as Hg, As, Pb, Cr etc).
 - Characteristics and quantum of coal after washing.
 - Characteristics and quantum of coal rejects.
- xvii. Details of management/disposal/use of coal rejects should be provided. The rejects should be used in TPP located close to the washery as far as possible. If TPP is within a reasonable distance (10 km), transportation should be by conveyor belt. If it is far away, the transportation should be by rail as far as possible.
- xviii. Copies of MOU/Agreement with linkages (for stand-alone washery) for the capacity for which EC is being sought should be submitted.
- xix. Corporate Environment Responsibility:
 - a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
 - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- xx. A detailed action Plan for Corporate Social Responsibility for the project affected people and people living in and around the project area should be provided.
- xxi. Permission of drawl of water shall be pre-requisite for consideration of EC.
- xxii. Wastewater /effluent should confirm to the effluent standards as prescribed under Environment (Protection) Act, 1986
- xxiii. Details of washed coal, middling and rejects along with the MoU with the end-users should be submitted.

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.
- (xxxi) Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given.
- (xxxii) Risk Assessment and Disaster Preparedness and Management Plan should be provided.
- (xxxiii) Integration of the Env. Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.
- (xxxiv) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxxv) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
- (xxxvi) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
- (xxxvii) Corporate Environment Responsibility:
 - 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.

(xxxii) 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.

31/07/2017

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

Subject: **Re: Draft Minutes of the 15th meeting of the EAC held on 25th July, 2017
for appraisal of Coal Mining projects**

To: Purushottam ramdas Sakhare <sakhare.pr@nic.in>

Date: 07/28/17 06:35 PM

From: "Dr. Narmada Prasad Shukla" <shuklanp55@gmail.com>

Dear Shri Shrivastav Ji and Shri Sakhare Ji,

I have gone through with minutes of the meeting and find the contents are in the order. Hence from my side it is approved as proposed.

Regards,

Dr. N.P Shukla

Dr. N. P. Shukla

On Wed, Jul 26, 2017 at 5:31 PM, Purushottam ramdas Sakhare <sakhare.pr@nic.in> wrote:

**15th EAC (THERMAL & COAL MINING PROJECTS) MEETING
SCHEDULED FOR 25th July, 2017.**

AGENDA

**Venue: Teesta, 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>

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. Please also provide a hard copy of presentation to the EAC Members during the meeting.**
- v. The Project Proponent should carry the KML/Shape Files of the mine lease area at the time of presentation before EAC and to present on the details of mine lease online to show the present status of mine lease**
- vi. The KML/Shape files should be emailed on the below mentioned email addresses at least 10 days prior to the meeting**
- vii. The Project Proponent to show the transportation route of minerals on maps during presentation.**
- viii. Without this information, EAC has discretion to invite the proponent for the meeting.**
- ix. No consultant is permitted into the meeting who has no accreditation with Quality Council of India (QCI) /National Accreditation Board of Education and Training (NABET) as per the MoEF OM dated 2nd December, 2009**

COAL MINING PROJECTS

Time: 10.00 AM: Tuesday: 30th May, 2017

15.1 Bellampalli OC-II expansion from 0.40 MTPA to 1.0 MTPA in an area of 191.98 ha by M/s SCCL located near village Abbapur Tandur Mandal of Komaram Bheem in District Asifabad & Mancherial (Telangana)-TOR

15.2 Jagannath OCP Expansion Project from 6.0 MTPA to 7.5 MTPA along with expansion in ML area from 430.736 ha to 553.946 ha of M/s Mahanadi Coalfields Limited located in District Angul (Odisha) - TOR

15.3 Gayatri Underground Coal mine expansion project from 0.30 MTPA to 1.188 MTPA in an area of 507.472 ha by M/s South Eastern Coalfields Limited located in village Getra, District Sarguja (Chhattisgarh) - For consideration of ToR

15.4 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

15.5 Environmental Clearance for expansion of coal mining projects upto 40% with the exemption from Public Consultation under Clause 7(ii) of the EIA Notification, 2006

15.6 Discussion on any other item
