

**MINUTES OF THE 51<sup>st</sup> EAC (THERMAL & COAL MINING PROJECTS) MEETING  
HELD ON 5<sup>th</sup> February, 2016**

The 51<sup>st</sup> EAC (Thermal & Coal mining projects) meeting was held on 5<sup>th</sup> February, 2016 in New Delhi to consider the proposals in coal mining sector. The list of participants of EAC and the proponents are at Annexure-1 & 2 respectively.

**B. Confirmation of Minutes:**

The Committee confirmed the minutes of the 49<sup>th</sup> EAC meeting held on 7- 8 January, 2016.

**C. The following proposals were considered.**

**Agenda 51.1**

**Expansion of Kaniha Opencast Coal Mine from 10 MTPA to 14 MTPA in ML area of 1880 ha of M/s Mahanadi Coalfields Limited, located in District Angul (Odisha)- EC under Clause 7(ii) of EIA Notification 2006- (further consideration)**

51.1.1 The proposal is for expansion of Kaniha Opencast Coal Mine Project from 10 MTPA to 14 MTPA in ML area of 1880 ha (Latitude 21° 03' 04" to 21° 05' 00" N and Longitude 85° 02' 20" to 85° 06' 00" E) of M/s Mahanadi Coalfields Limited, located in District Angul (Odisha).

51.1.2 The proposal was considered in 33<sup>rd</sup> EAC meeting held on 9-10 April, 2015. During the last meeting, the observations of the Committee were as under:-

- (i) Approved Mine closure plan to be submitted.
- (ii) Committee noted that though the EC for 10 MTPA was granted on 31.10.2007, no action has been taken for dispatch of coal through silo to the NTPC wagons at railway siding as per EC. The Committee desired that reasons for non-compliance of EC conditions (J-11015/134/2007-IA.II (M) dated 31.10.2007) and time bound Action Plan for the same should be submitted. The Action Plan should also include proposed mitigation measures for transportation of coal from mine to siding.
- (iii) Stage -1 FC for 161.80 ha should be obtained and submitted to the Ministry.

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

(i) Approved mine closure plan for 14 MTY expansion Kaniha OCP has been approved by MCL Board in its meeting held on 21/09/2015, and by MoC vide letter no. 34012/(04)/2011-CPAM dated 24/11/2015.

(ii) Though EC for 10 MTPA was granted on 31.10.2007 vide letter no. J-11015/134/2007-IA.II (M), the OB Removal in Kaniha OCP could only be started from November 2010 and coal production started from February 2011. This was due to delay in physical possession of land acquired under CBA (A&D), 1957, and the construction of the siding, thus the coal dispatch from railway siding to NTPC started from 02.05.2013. The details of production and dispatch of coal since inception is given below:-

MOM of 51<sup>st</sup> EAC 5<sup>th</sup> Feb, 2016\_Coal

Year	Coal Production in MT	Coal despatch in MT
2010-11	0.015	NIL
2011-12	0.33	NIL
2012-13	0.68	NIL
2013-14	4.53	5.32
2014-15	6.99	6.19

As the location of the siding and its operation could start in the FY 2013-14, planning and design of the Silo was delayed and now a fresh action plan has been prepared for compliance of this condition which is given below:-

#### **Time bound action plan for construction of Rapid Loading system with silo**

Sl.No.	Particulars	Proposed Schedule
1	Completion of preparation of draft e-NIT	Jan 2016
2	Completion of preparation of final e-NIT	Feb 2016
3	Uploading of NIT on MCL Portal	Mar 2016
4	Techno-economic, price bid opening & issue of LOI, contract agreement finalization etc. may be completed	May 2016
5	Completion of work (construction, fabrication, installation, commissioning, trial run, etc) by one yr.& six months	Dec 2017

#### **Proposed mitigation measures for abatement of dust pollution on coal transportation from mine to siding:-**

- i. A concrete coal transportation road from mine to siding having a total length of 1.5 km costing 26.92 Cr. has already been constructed and is in operation w.e.f. 15th August 2015.
- ii. 8 nos. of fixed sprinklers have been installed & commissioned at Railway siding at a cost of Rs. 2.1 Lakhs.
- iii. Action initiated for procurement of one no. of innovative dust suppression system Truck Mounted Mist Blower cum Road Fogger of value Rs 55.2 Lakhs for effective fugitive dust suppression on the coal transport road. This machine is likely to be commissioned by June 2016
- iv. Cleaning, up keeping of concrete coal transportation road is done regularly. This Work has been awarded (work order no. MCL/GM(KA)/SO(C)/ AOW/15-16/579 dt:06/10/15) for a value Rs 12.1 Lakhs (Annual).
- v. Regular water spraying for control of dust is done on the transportation road by means of 08 nos 12 KL water tankers & this spraying is integrated with composite contract of coal extraction, loading and transportation upto siding.
- vi. Providing Green Belt – Already 1200 nos of saplings has been planted near railway siding area at a cost of Rs 1.6 Lakhs. It is proposed to take up plantation of 2400 nos saplings during monsoon of 2016. The estimate cost is 18 Lakhs including maintenance cost.
- vii. 10 nos. of fixed type Mist Blower of 80 mts throw have been planned at the Railway siding for effective dust suppression. Estimate of Rs. 3.5 Cr. has been approved and pre-NIT meeting already conducted on 23/12/15 for finalization of technical specification. This system is also likely to be commissioned by June 2016.

**(iii) The status of Forest land diversion proposal of 161.80 ha is given below:**

- The diversion proposal was initially submitted vide state sl. No. 333/09 dt: 11/08/2009.
- Pillar posting around forest area to be diverted have been completed.
- GramaSabha Resolution: Application filed on 15.3.10. Meetings convened in 3 villages on 12.10.2011. Gramasabha resolution with signature has been completed in 3 villages. Gramsabha pending for village Jarada.
- DGPS survey completed by ORSAC on 25.02.13. after authentication re-submitted to DFO 02.05.2014.
- CA land in Marudhip PRF has been identified.
- Proposal returned for verification of Hal and Sabik record and CA scheme.
- After authentication of CA scheme proposal submitted to DFO on 05.12.14. But DFO did not accept the proposal and instructed for online submission of proposal as per MoEF&CC guidelines.
- Application uploaded online in MoEF&CC portal on dated 1.12.2015 vide proposal No. FP/OR/MIN/16760/2015 and processed vide State S.No.OR-084/2015 dtd 07.12.2015.

Evacuation of the coal from siding shall be eco-friendly as the NTPC Super Thermal Power Plant at Kaniha is located only at a distance of approximately 3 km and it is transporting coal from far distances at present.

51.1.4 *The Committee, after detailed deliberations (in the 51<sup>st</sup> meeting on 5<sup>th</sup> Feb 2016) 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.*

## **Agenda 51.2**

**Cluster 11 comprising of 11 mixed mines with combined production capacity of 8.20 MTPA (peak) ML area of 4218 ha located in Raniganj Coalfields, District Burdwan (West Bengal) of M/s Eastern Coalfields Limited - For amendment in Environmental Clearance**

51.2.1 The proposal is for amendment in EC granted on 21<sup>st</sup> July, 2015 to Cluster 11 comprising of 11 mixed mines with combined production capacity of 9.05 MTPA (Normative) and 10.90 MTPA (peak) ML area of 4218 ha located in Raniganj Coalfields, District Burdwan (West Bengal) of M/s Eastern Coalfields Limited.

51.2.2 The details of the project, as per the documents submitted by the project proponent (PP), and also as informed during the above said EAC meetings, are reported to be as under:-

i. Cluster No. 11 consists of 11 mixed mines with the total capacity of 8.20 MTPA.

ii. EC was granted to the project vide letter No.J-11015 /245/2011-IA.II (M) on 21<sup>st</sup> July, 2015 for Cluster 11 comprising of 11 mixed mines with combined production capacity of 9.05 MTPA (Normative) and 10.90 MTPA (peak) ML area of 4218 ha located in Raniganj Coalfields, District Burdwan (West Bengal) of M/s Eastern Coalfields Limited.

iii. The PP has proposed increase in production from some mines and reduction/closure by some mines within the cluster but maintaining the present EC production limit of coal production to 8.20 MTPA (peak) ML area of 4218 ha. A comparative picture is detailed as under:-

S. No.	Name of Mine	UG/OC	Lease hold Area (ha)	Present EC Capacity (MTY)	Re-assessment	UG / OC	Revised EC Capacity (MTY)	Life (Years)
1	Krishnanagar	UG	772	0.30	Capacity Reduction	UG	0.05	>25
2	Haripur	UG	242	0.78	Conversion to Opencast & Capacity Reduction	OC	0.75	15
3	Chora Block Incline	UG	611	UG : 0.99 OC : 0.50	Capacity Reduction	UG	0.10	>25
	Bonbahal OC Patch	OC			No Change	OC	0.50	3
4	Chora 7, 9 & 10 Pit	UG			Capacity Reduction	UG	0.15	>25
	Shankarpur /CL Jambad OC Patch	OC			OC Extension	OC	0.80	6
5	New Kenda	UG	742	0.14	Capacity Reduction	UG	0.05	>25
	W Kenda OC Patch	OC		0.75	Life increased from 2 to 6 years due to inclusion of lower seams	OC	0.75	6
	New Kenda OC Patch	OC		1.20 (3.9**)	No change	OC	1.20	8
6	Lower Kenda	UG	262	0.17	Capacity Reduction	UG	0.15	>25
7	Bahula	UG	255	0.31	Capacity Reduction	UG	0.25	>25
8	C L Jambad	UG	159	0.07	Capacity Reduction	UG	0.05	>25
9	Siduli UG	UG	335	0.30	Conversion to mixed mine	UG	1.02	>25
	Siduli OC Patch	OC		-		OC	1.20	1.20*
10	Khandra	UG	388	0.39	Capacity Reduction	UG	0.20	>25
11	Shankarpur Project	UG	452	1.16	Capacity Reduction	UG	1.16	>25
		OC		2.30		2.30*	OC	
<b>Total</b>			<b>4218</b>	<b>8.20 (10.9**)</b>			<b>8.20</b>	

\*OC mining will be done first followed by UG mining by CM. Thus, peak output from OC is taken as mine capacity

\*\* Capacity reflected in EC letter.

- i. However, in para 2 (xxvi) page 5 of EC letter where, reassessed capacity has been made with respect to New Kenda OCP from 3.9 to 1.2 MTPA due to which the capacity of the mine was reduced. Therefore, the actual EC capacity should be read as 8.20 MTPA.
- ii. There is no proposal for expansion as it is a case of EC modification within the capacity of 8.20 MTPA.
- iii. List of Mines in Cluster 11 with Proposed Re-assessment of Mine Capacities for EC Amendment:

51.2.3 The Committee, after detailed deliberations (in the 51<sup>st</sup> meeting on 5<sup>th</sup> Feb 2016) noted the following:

(i) There was lack of clarity on the part of the PP regarding the production capacity for which the EC has been granted in July, 2015. As against the MoEFF&CC's approved EC capacity of 9.05 MTPA normative and 10.9 MTPA peak, the project proponent has submitted an application for amendment only for a capacity of 8.20 MTPA. Since the PP is seeking an amendment in the EC, it has to be with reference to the approved EC capacity of 9.05 MTPA normative and 10.9 MTPA peak, and not for any other capacity.

(ii) In addition to the above, certain other discrepancies in the documentation such as in Form-I, Annexure-I circulated to the EAC were also pointed out to the project proponent which also needed to be rechecked such as:-

- increase in quarry area from 337 ha to 528 ha,
- proposed/existing discharge of water into local nalas,
- possible contamination of soil due to inadvertent spillage of oil etc (sl 4.9 of Form-I),
- apparent inadequate dust control measures considering that both the existing production of 1.33 MTPA as well as the proposed enhancement to 8.20 MTPA is being transported by road only,
- measurement of ambient air quality is very old and has been shown to have been done three years back in January 2013 (sl 28 of Annexure-I) ,
- R&R cost of approximately 5 crores appears to be very low compared to the total capital cost of Rs.296 crores as on March, 2015 which itself is almost a one year old figure (sl 35 of Annexure-I),
- mine closure plan presently shown in the documentation (sl 19 of Annexure-I) relates to September, 2013 and needs to be updated in line with the newly approved Mine Plan of Jan 2016.
- discrepancy in the proposed capacities; for eg, in the table in para 51.2.2 above, for both Siduli and Shankarpur mines (sl 9 & 11), the proposed UG & OC capacities do not total upto the final figure shown. In addition, the UG and OC production should be indicated separately.
- water clearance has not been obtained; the documentation only shows that an application has been made to the CGWA, without even mentioning the date of the application (sl 21 of Annexure-I)

51.2.4 *The proposal was, therefore, deferred for want of clarification on the above lines.*

### Agenda 51.3

**Expansion of New Sethia Opencast Coal Mine from 0.20 MTPA to 0.50 MTPA with increase in mining lease area from 91.503 ha to 144.453 ha of M/s Western Coalfields Ltd in Pench Valley Coalfield in District Chindwara (Madhya Pradesh)- (EC based on TOR granted on 25.02.2014)**

51.3.1 The proposal is for environmental clearance for Expansion of New Sethia Opencast Coal Mine from 0.20 MTPA to 0.50 MTPA with increase in mining lease area from 91.503 ha to 144.453 ha of M/s Western Coalfields Ltd in District Chindwara (Madhya Pradesh)

51.3.2 The details of the project, as per the documents submitted by the Project Proponent (PP), and also as informed during the above said EAC meeting are reported to be as under:

- i. The latitude and longitude of the project are 22<sup>o</sup>12'31" to 22<sup>o</sup>13'19" N and 78<sup>o</sup>50'15" to 78<sup>o</sup>51'46" E respectively.
- ii. Joint Venture: There is no Joint venture.
- iii. Coal Linkage: Sarni Thermal Power Plant of MP Electricity Board.
- iv. Employment generated / to be generated: Direct Manpower for the proposal of expansion is 67. In addition with the proposed expansion, no. of indirect employment opportunities will also be created.
- v. Benefits of the project: The Proposed expansion will bridge the gap between demand & availability of coal to the extent of the peak capacity.
- vi. The land usage of the project will be as follows:

#### Pre-Mining:

Sl. No.	Particular	Land (ha)
1.	Agricultural land	50.579
2.	Waste Land	40.924
3.	Already acquired land of company	52.95
	Total	144.453

#### Post- Mining:

Sl. No.	Land use	Land (ha)
1.	Plantation	43.75
2.	Water body	66.73
3.	Public Use	4.73
4.	Undisturbed/Reclaimed	29.243
5.	Total	144.453

- vii. The total geological reserve is 2.07MT. The mineable reserve 1.88 MT, extractable reserve is 1.88 MT. The per cent of extraction would be 87%.
- viii. The coal grade is G7/G8. The stripping ratio is 1:5.26 cum/tonne. The average Gradient is 1 in 10 to 1 in 12. There will be five seams with thickness ranging.

Description	Thickness range (m)
Upper group of seams	
Seam - I	2.33 – 6.21
Parting	2.70 – 6.28
Seam -II	1.36 – 2.70
Parting	1.76 – 7.16

Seam - III	0.81 – 2.00
Major parting between two groups of seams	16 - 20
Lower group of seams	
Seam - IV	0.72 - 2.93
Parting	13.53 - 22.76
Seam - V	0.52 – 2.46

- ix. The total estimated water requirement is 270m<sup>3</sup>/day. The level of ground water ranges from 0.10 m to 14 m bgl.
- x. The Method of mining would be Opencast with Shovel-Dumper Combination.
- xi. There is no external OB dump and two internal dumps with Quantity of 9.88 Mm<sup>3</sup> in an area of 21.60 ha.
- xii. The final mine void would be in 66.73 Ha with depth 97 m. and the Total quarry area is 74.33 ha. Backfilled quarry area of 21.60Ha shall be reclaimed with plantation. A void of 66.73 ha with depth 97 m which is proposed to be converted into a water body.
- xiii. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xiv. The life of mine is 5 years (balance).
- xv. Transportation: Coal transportation in pit by Dumpers from in pit to pit head coal handling plant, Surface to Siding by Tippers to Pre-weight Bin and loading at siding by Pay loaders.
- xvi. There is no R & R involved. There are no PAFs.
- xvii. Cost: Total capital cost of the project is Rs. 2.22 Crores (additional capital). CSR Cost as per extant CSR Policy 2% of last three years average net profit or Rs 2/ton of company production, whichever is higher is used for CSR activity. R&R Cost Nil. Environmental Management Cost 50 lakhs has been envisaged for Environmental protection measures.
- xviii. Water body : PENCH river passes at a distance of 50 mtrs from the mine site.
- xix. Approvals: Ground water clearance not applicable as it is not falling in critical area as per CGWA, Board's approval obtained on 28.05.2012. Mining plan has been approved on 28.05.2012. 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: no forest area involved.
- xxii. Total afforestation plan shall be implemented covering an area of 43.75 ha at the end of mining. Green Belt over an area of 15 ha. Density of tree plantation 2500 trees/ ha of plants.
- xxiii. There are no court cases/violation pending with the project proponent.
- xxiv. The project was accorded TOR vide letter No.J-11015/452/2007-IA.II(M) dated 25.02.2014.
- xxv. The project was accorded EC vide letter dated 19<sup>th</sup> February, 2008 for the production capacity of 0.20 MTPA.
- xxvi. Public Hearing was held on 17.10.2014 at Project site of New Sethia OC, Chhindwara Distt, MP The issues raised in the PH includes drinking water, water pollution, air pollution control, plantation and disposal of OB, water sprinkling & CSR works

51.3.3 The Committee, after detailed deliberations (in the 51<sup>st</sup> meeting on 05<sup>th</sup> Feb 2016) noted the following:

- (i) There was lack of clarity in the EIA document on certain issues such as:-
  - the ambient air quality (even the wind rose diagrams had not been given),

- tables and the flow sheets regarding the water balance given in the EIA report (pg 185) were illegible,
- air quality was shown to be already exceeding the limits in certain locations (Chinda village and colony Chinda).
- with reference to the compliance status of the earlier EC for a capacity of 0.20 MTPA, the November 2015 report of the Regional Office of the MoEF&CC has clearly mentioned that though the mine has been lying closed, “.....most of the conditions are not complied” (Annex IV of EIA report). Accordingly, a fresh report from the RO showing compliance would be required for consideration of the present proposal for enhancement of the capacity to 0.5 MTPA
- contradictory statements were being made about the status of the mine closure plan. In the TOR (at Annexure-I) given in February 2014 for the proposed expansion to 0.5 MTPA, it had been recorded in para 3 that “the mine closure plan has been prepared and being processed for approval”. However in the EIA report it has been stated (pg 214) that the plan “...is under preparation and will be processed subsequently for approval of WCL Board”.
- at a time when safeguarding the environment is of major importance, more emphasis on this aspect on the part of the PP is required, as both under “Air and Dust Pollution’ and under “Noise Pollution” the EIA report (pg 211 and 212) states that “Moreover the scale of operation is very small and will last for only 5 year as such there will not be any significant impact on this account”.
- as mentioned above, TOR for this proposed expansion had earlier been issued in February 2014, and in fact, though the present proposal was supposed to be for grant of EC based on the ToR issued by the Ministry in February 2014, the EIA report (pg 215, Conclusion) had actually mentioned it as a proposal for grant of ToR.

(ii) The project proponent also indicated it would reconsider the entire matter of expansion of capacity from 0.2 MTPA to 0.5 MTPA and submit the revised proposal to the Ministry after considering the various alternatives available to it for continuing with the existing level of production of 0.2 MTPA.

51.3.4 *The proposal was, therefore, deferred.*

#### **Agenda 51.4**

#### **Conversion of Adasa UG to OC Mine from 0.5 MTPA to 1.5 MTPA (Normative) & 1.85 MTPA (Peak) along with increase in land area from 221 ha to 596.27 ha of M/s Western Coalfields Limited located in Tehsil Saoner, District Nagpur (Maharashtra)- TOR**

51.4.1 The proposal is for TOR for Conversion of Adasa UG to OC Mine from 0.5 MTPA to 1.5 MTPA (Normative) & 1.85 MTPA (Peak) along with increase in land area from 221 ha to 596.27 ha of M/s Western Coalfields Limited located in Tehsil Saoner, District Nagpur (Maharashtra).

51.4.2 The details of the project, as per the documents submitted by the Project Proponent (PP), and also as informed during the above said EAC meeting are reported to be as under:

- The project is for fresh TOR.
- The target capacity is 1.50 MTPA with peak at 1.85 MTPA having a life of 20 years.
- The total land area is increased from 221.0 Ha to 596.27 ha.



- iv. The latitude and longitude of the project are N 21°19'31" to N 21°21'16" and E 78°55'47" to E 78°58'40" respectively.
- v. Joint Venture: There is no Joint Venture.
- vi. Coal Linkage : Thermal power plants of MAHAGENCO & Miscellaneous consumers
- vii. Employment generated / to be generated: Required Manpower for the project is 128 Nos
- viii. Benefits of the project: In opencast method, the mineable reserves increase manifold and the target capacity is much more than underground mining. This project will thus bridge the gap (to the extent of the peak production capacity of the project) between demand & supply of non – coking coal for power plants & other bulk consumers from Western as well as Southern part of the country.
- ix. The land usage of the project will be as follows:  
Pre-Mining:

Sl. No.	Particulars	Existing Land (ha)	Additional land (ha)	Total Land (ha)
1)	Agricultural/Tenancy land	3.83	532.52	536.35
2)	Waste/ Government land	8.83	21.09	29.92
3)	Forest land	-	-	-
	<b>SUB TOTAL</b>	<b>12.66</b>	<b>553.61</b>	<b>566.27</b>
4)	Land for Kotodi & Yerangaon village rehabilitation	-	30.00	30.00
	<b>TOTAL</b>	<b>12.66</b>	<b>583.61</b>	<b>596.27</b>

Post- Mining:

S. No.	Land use during mining	Land use (ha)				Total
		Plantation	Water Body	Public use	Undisturbed	
1	External OB Dump	91.50	-	-	-	91.50
2	Excavation	178.93	135.0	-	-	313.93
3	Roads	1.0	-	3.0	-	4.0
4	Built up area	3.0	-	5.0	-	8.0
5	Undisturbed Area	100.0	-	-	64.84	164.84
6	Embankment	3.0	-	11.0	-	14.0
	<b>Total</b>	<b>377.43</b>	<b>135.0</b>	<b>19.0</b>	<b>64.84</b>	<b>596.27</b>

- x. The total geological reserve is 24.26 MT. The mineable reserve 22.08 MT, extractable reserve is 22.08 MT. The per cent of extraction would be 91.00%.
- xi. The coal grade is GCV – 5020 Kcal/kg, G8. The stripping ratio is 1: 6.63 Cum/tonne. The average Gradient is 1: 6.5 There will be five seams with thickness ranging -:

S.No	seam	Thickness (m)	
		Min	Max
1	V	1.60	5.25
2	IV (T)	0.15	2.16
3	IV (T) A	0.16	3.06
4	IV (M)	1.13	7.42
5	IV (B)	0.15	2.49

- xii. The total estimated water requirement is 390 m<sup>3</sup>/day. The level of ground water ranges from 0.90 m to 19.30 m.
- xiii. The Method of mining would be Opencast with Shovel – Dumper Combination.
- xiv. There is one external OB dump with Quantity of 41.12 Mbcm in an area of 91.50 ha with height of 90 meter above the surface level and one internal dump with Quantity of 104.33 Mbcm in an area of 178.93ha.
- xv. The final mine void would be in 135Ha with depth 114 m. and the Total quarry area is 313.93 Ha. Backfilled quarry area of 178.93 Ha shall be reclaimed with plantation. A void of 135 ha with depth 114 m which is proposed to be converted into a water body.
- xvi. The life of mine is 20 years including 3 years of land acquisition period.
- xvii. Transportation: Coal transportation in pit by through Dumpers from in pit to pit head coal handling plant, Surface to Siding by Tippers and loading at siding by By Pay Loaders.
- xviii. There is R & R involved. Two villages are proposed to be resettled viz. Kotodi and Yerangaon. There are 391 PAFs.
- xix. Cost: Total capital cost of the project is Rs. 300.8908 Crores. CSR Cost Rs 1068.46 per tonne(at 100%). R&R Cost Rs. 43.7395 Crores. Environmental Management Cost (Capital: - Rs. 0.9709 crores, Revenue @ Rs 6.00 per tonne).
- xx. Water body: Chandrabaghanadi flows along the south-eastern boundary of the project. Kolarnadi – about 5km East.
- xxi. Approvals: Ground water clearance not applicable as it is not falling in critical area as per CGWA, Board's approval obtained on 21.08.2015. Mining plan has been approved on 21.08.2015. Mine closure plan is an integral part of mining plan.
- xxii. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxiii. Forestry issues: there is no forest area involved.
- xxiv. Total afforestation plan shall be implemented covering an area of 377.43 ha at the end of mining. Green Belt over an area of 100 ha. Density of tree plantation 2500 trees/ ha of plants.
- xxv. There are no court cases/violation pending with the project proponent.

*51.4.3 The EAC, after detailed deliberations (in the 51<sup>st</sup> meeting on 05<sup>th</sup> Feb 2016), recommended the project for grant of TORs for preparation of EIA/EMP along with Public Hearing along with the following specific TORs as under:*

- *Permission for nalah diversion and design should be obtained from State Irrigation Department.*
- *No permanent dump will be permitted, and the dump will be re-handled to fill up the void.*
- *Ambient air quality has been shown to be already above the limits. Therefore, this should be properly taken care of in the EMP.*
- *Detailed R&R plan should be submitted at the time of EC along with time bound action plan for shifting the PAFs*

## **Agenda 51.5**

**Kakatiya Khani Opencast 2 (KTK OC-2) Coal Mining project of 1.25 MTPA (Normative) and 1.50 MTPA (Peak) in ML area of 668.23 ha of M/s The Singareni Collieries Company Limited in District Warangal (Telangana) – (EC based on TOR granted 18.06.2015)**

51.5.1 The proposal is for EC of Kakatiya Khani Opencast 2 (KTK OC-2) Coal Mining project for production of 1.25 MTPA (Normative) and 1.50 MTPA (Peak) in area of 668.23 ha; of M/s

The Singareni Collieries Company Limited in District Warangal (Telangana).

51.5.2 The details of the project, as per the documents submitted by the project proponent (PP), and also as informed during the above said EAC meeting are reported to be as under:

- i. The project was accorded TOR vide letter No. J-11015/162/2015-IA-II(M) on 18<sup>th</sup> June, 2015.
- ii. The latitude and longitude of the project are 18° 26' 41.67 04" - 18°28' 7.07 15" (North)and 79° 50' 16.14 45" - 79° 52' 36.32 61" (East) respectively.
- iii. Joint Venture: no Joint Venture
- iv. Coal Linkage : Basket linkage
- v. Employment generated / to be generated: Direct : 220, Indirect : 300
- vi. Benefits of the project: To fulfill the committed supply to 500 MW KTPP of TSGENCO beyond 2017-18.
- vii. The land usage of the project will be as follows:

Pre-Mining:

Sl.No.	Pre-mining Land use	Area in (Ha)
1.	KTK OC - I Quarry Area	133.38
2.	KTK OC - I External Dump Area	105.96
3.	Plantation	87.94
4.	Built up area	13.83
5.	Roads	24.00
6.	Nallah	0.36
7.	Surface water	1.56
8.	Single crop	72.32
9.	Land with scrubs	188.65
10.	Fallow land	36.94
	<b>Total Project Area</b>	<b>664.94</b>
11.	Built up area outside Project Area	3.29
	<b>Total Area</b>	<b>668.23</b>

Post- Mining:

Sl. No.	Land use during mining	Land Use (Ha.)				Total
		Plantation	Water Body	Public Use	Undisturbed	
1.	External OB Dump	349.51	0.00	14.86		364.37
2.	Top Soil Dump	267.17	0.00	9.44		276.61
3.	Excavation	2.01	0.00	3.32		5.33
4.	Roads	4.00	0.00	4.70		8.70
5.	Built up Area	5.84	4.09	0.00		9.93
	<b>Total Project Area</b>	<b>628.53</b>	<b>4.09</b>	<b>32.32</b>		<b>664.94</b>
6.	Outside the project area	0.00	0.00	--	3.29	3.29
	<b>Total Area</b>	<b>628.53</b>	<b>4.09</b>	<b>32.32</b>	<b>3.29</b>	<b>668.23</b>

Core area :

Sl. No.	Activity	Total land Requirement in Ha.
A.	Project Area	

1.	Quarry Area ( Including drains, bund etc.)	276.61
2.	External Dumpyards	
	(a) KTK OC Sector - I External Dump	143.54
	(b) KTK OC Sector - I Void Area	156.40
	(c) KTK OC - 2 External Dump yard	64.43
3.	Service Buildings	8.70
4.	Diversion of Road	5.33
5.	Diversion of Nallah	9.93
	<b>Total Project Area</b>	<b>664.94</b>
<b>B.</b>	<b>Area outside the Project</b>	
	Built up area	3.29
	<b>Total Land Requirement</b>	<b>668.23</b>

- viii. The total geological reserve is 25.68 MT. The mineable reserve 18.65 MT, extractable reserve is 17.00 MT. The per cent of extraction would be 91.15%.
- ix. The coal grade is G 9. The stripping ratio is 13.41 Cum/tonne. The average Gradient is 1 in 3 (18.4 degrees). There will be 15 seams with thickness ranging:

Seam / section		Thickness in m	
		Min.	Max
IA	Top	0.61	1.70
	Bottom	0.50	3.12
I		0.85	4.44
II	Top	0.20	2.35
	Bottom	0.35	5.16
IIIC		0.05	1.00
IIIB		0.10	1.26
IIIA		0.20	1.33
III		0.10	4.30
IVA		0.10	1.65
IV		0.30	2.00

- x. The total estimated water requirement is 1430 m<sup>3</sup>/day. The level of ground water ranges from 0.30 m to 14.00 m.
- xi. The Method of mining would be Opencast.
- xii. There is Two external OB dump with Quantity of 160.82 Mbcm in an area of 220.83 ha with height of 90m above the surface level and one internal dump with Quantity of 67.17 Mbcm in an area of 99.45 ha.
- xiii. The final mine void would be in 224.98 Ha with depth varying from 30 m to 250 m. and the Total quarry area is 276.61Ha. Backfilled quarry area of 257.04 Ha shall be reclaimed with plantation. No void will be left at the end of mining operations.
- xiv. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xv. The life of mine is 15 Years.
- xvi. Transportation: Coal transportation in pit by through 35T Dumpers from in pit to pit head coal handling plant, Surface to Siding By Belt conveyor to Pre-weigh Bin to Pre-weigh Bin and loading at siding by Loading coal to trucks for dispatch.
- xvii. There is R & R involved. There are 25 PAFs & 922 PDFs.

- xviii. Cost: Total capital cost of the project is Rs. 397.09 Crores. CSR Cost Rs. 5/- per Tonne of coal production. R&R Cost Rs.185.94 Crores. Environmental Management Cost (capital cost Rs4.80 Crores (Direct) and 2.39 Lakhs (Indirect), annual recurring cost 68.33 per tonne).
- xix. Water body "Are vagu" is flowing west side of the project.
- xx. Approvals: Ground water clearance obtained on 22.08.2015. Board's approval obtained on 13.05.2015. Mining plan has been approved on 17.08.2015. Mine closure plan is an integral part of mining plan.
- xxi. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxii. Forestry issues: there is no forest area involved.
- xxiii. Total afforestation plan shall be implemented covering an area of 628.53 ha at the end of mining. Green Belt over an area of 11.85 ha. Density of tree plantation 2500 trees/ ha of plants.
- xxiv. There are no court cases/violation pending with the project proponent.
- xxv. Public Hearing was held on 26.11.2015 at Mandal Parishad Primary School, Gaddiganipalli, Bhoopalpalli. The issues raised in the PH includes Employment; drinking water; ground vibration and fly rocks due to blasting operations;

51.5.3 The Committee, after detailed deliberations (in the 51<sup>st</sup> meeting on 05<sup>th</sup> Feb 2016) noted the following:

(i) It was noticed from the presentation by the PP that the mining plan had been submitted for approval to the Ministry of Coal almost six months back i.e. on 17<sup>th</sup> August, 2015. However, the approval was yet to be received. Accordingly, consideration of the proposal was deferred till such time as the Mine Plan approval is received. In addition, one NGO ERC had sent an e-mail on 4<sup>th</sup> February, 2016 raising certain issues in connection with the project. The project proponent was requested to also address these issues when the case was next brought before the EAC.

*51.5.4 The proposal was, therefore, deferred.*

## **Agenda 51.6**

**Expansion of Himgir Coal Washery from 5 MTPA to 10 MTPA in an area of 13.5 ha of M/s ACB (INDIA) Limited located in Tehsil Hemgir, District Sundargarh (Odisha) –Further consideration for TOR.**

*51.6.1 The project proponent, vide letter No.ACB(I) Ltd/Himgir Washery Expansion/EC/January 2016/001 dated 27<sup>th</sup> January, 2016 has regretted for not attending. Thus, the project could not be considered, and deferred.*

## **Agenda 51.7**

**Coal Washery of 2.5 MTPA in an area of 10.02 ha of M/s Phil Coal Beneficiation Pvt. Limited at Village Ghutku Tehsil Takhatpur, District Bilaspur (Chhattisgarh) - Further consideration for TOR**

51.7.1 The proposal is for the TOR for the proposed 2.5 MTPA Coal Washery **10.02 ha** of M/s Phil Coal Beneficiation Pvt. Limited at Village Ghutku Tehsil Takhatpur, District Bilaspur (Chhattisgarh)

MOM of 51<sup>st</sup> EAC 5<sup>th</sup> Feb, 2016\_Coal

51.7.2 The proposal was considered in 49<sup>th</sup> EAC meeting held on 7-8 January, 2016. During the last meeting, the observations of the Committee were as under:-

*The Committee, after detailed deliberations deferred the project for want of clarification from Railway Board regarding keeping of a minimum distance of 500 m between the proposed railway track/corridor and a project boundary.*

51.7.3 While appraisal, the Committee noted that in similar case of Bhengari coal washery of 5 MTPA in Tehsil Gharghora, District Raigarh (Chhattisgarh), the Ministry has granted ToR with specific condition in respect of the issue as at para 51.7.2 above.

51.7.4 *The EAC, after detailed deliberations (in the 51<sup>st</sup> meeting on 05<sup>th</sup> Feb 2016), recommended the project for grant of TORs for preparation of EIA/EMP along with Public Hearing with the following specific TORs as under:*

- *Washery shall be located keeping the required distance from the nearest railway line, as stipulated under the Railway regulations.*
- *Ground water permission from Central Ground Water Authority be obtained.*

### **Agenda 51.8**

**Expansion of Karo OCP from 1.5 MTPA to 2.5 MTPA in ML area of 226.33 ha of M/s Central Coalfields Limited located in Tehsil Bermo district Bokaro (Jharkhand) – (EC under Clause 7(ii) of EIA Notification, 2006).**

51.8.1 The proposal is for EC for expansion of Karo Open Cast Project from 1.5 MTPA to 2.5 MTPA in ML area of 226.33 ha of M/s Central Coalfields Limited, located in Tehsil Bermo district Bokaro (Jharkhand).

51.8.2 The details of the project, as per the documents submitted by the Project Proponent (PP), and also as informed during the above said EAC meeting are reported to be as under:

- i. Karo OCP is an operating mine. The project was accorded earlier EC vide letter No. J-11015 /544/2009-IA.II(M) Dated : 24.12.2014
- ii. The PR of Karo OCP was approved by CCL Board for a rated capacity of 3.5 MTPA (Quarry-I & II) in August, 2006.
- iii. The Public Hearing of the project for 3.5 MTPA capacity was held on 24.05.2007
- iv. The EC for this project was granted for 1.50 MTPA capacity for Quarry-I on 24.12.2014
- v. The latitude and longitude of the project are 23<sup>o</sup> 47' 02" N to 23<sup>o</sup> 48' 38" N and 85<sup>o</sup> 57' 27" E to 85<sup>o</sup> 58' 38" E respectively.
- vi. Joint Venture: Not Applicable
- vii. Coal Linkage : Power & Other consumers
- viii. Employment generated / to be generated: Employment have been given to 113 land losers.
- ix. Benefits of the project:
  - Improvements in Physical Infrastructure
  - Improvements in Social Infrastructure
  - Increase in Employment Potential
  - Contribution to the Exchequer
  - Meet energy and steel sector requirement

- The beneficiation/washing of coal will lead to improvement in performance of power plant,
- Reduction in particulate emission
- Reduction in load on Railway Network
- Reduction in handling and transportation cost of coal and solid waste.

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

Pre-Mining:

SN	Particulars	Forest	Non-forest	Area (Ha)
1	Quarry	46.69	98.7	145.39
2	External OB dump	21.63	15.44	37.07
3	Haul road	0	0	0
4	CHP	0	1.5	1.5
5	Infrastructure	3.93	0.13	4.06
6	Safety zone	5.18	15.72	20.9
7	Colony	0	14.41	14.41
8	Land for nala diversion & Road outside lease	0	3	3
	Total	77.43	148.9	226.33

Post- Mining:

S No.	Post-mining land use	(Area in Ha)
1	Reclaimed area	151.25
	Quarry batter for shrubs	25.65
2	Colony & public utility	14.41
	CCL future use	5.56
3	Green belt	5.56
4	Safety Zone	15.34
5	Water Body	8.56
	Total	226.33

Core area:

S N	Particulars	Forest	Non-forest	Area (Ha)
1	Quarry	46.69	98.7	145.39
2	External OB dump	21.63	15.44	37.07
3	Haul road	0	0	0
4	CHP	0	1.5	1.5
5	Infrastructure	3.93	0.13	4.06
6	Safety zone	5.18	15.72	20.9
7	Colony	0	14.41	14.41
8	Land for nala diversion & Road outside lease	0	3	3
	Total	77.43	148.9	226.33

xi. The total geological reserve is **56.96 MT**. The mineable reserve **49.16 MT**, extractable reserve is **49.16 MT**. The per cent of extraction would be 100%.

xii. The coal grade is **F &W-IV** The stripping ratio is 0.84 Cum/tonne. The average Gradient is **(6-10) deg**. There will be 6 seams with thickness ranging:-

SN	Particulars	Thickness
1	Seam-VI/VII/VIII	29.00
2	Seam-IX	3.50
3	Seam-X	11.00
4	Seam-XI	2.30

xiii. The total estimated water requirement is **705 m<sup>3</sup>/day**. The level of ground water ranges from **1.00 m** to 5.40 m.

xiv. The Method of mining would be Opencast method of mining with shovel-dumper combination.

xv. There is one external OB dump with Quantity of **6 Mbcm** in an area of **37.07 ha** with height of **30 meter** above the surface level and one internal dump with Quantity of **22.38 Mbcm** in an area of **114.18 ha**.

xvi. The final mine void would be in **31.21 ha** with depth varying from 60m to 70m and the Total quarry area is **145.39 Ha**. Backfilled quarry area of **114.18 ha** shall be reclaimed with plantation. A void of **31.21 ha** with depth varying from 60 to 70 m which is proposed to be converted into a water body.

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

xviii. The life of mine is 17 Years.

xix. Transportation: Coal transportation in pit by through Rear dumpers from in pit to pit head coal handling plant, Surface to Siding by trucks and loading at siding by rail to consumers.

xx. There is R & R involved. There are 160 PAFs.

xxi. Cost: Total capital cost of the project is Rs. **96.53 crore**. CSR Cost as per CSR policy & Companies Act, 2013. R&R Cost Rs. **566.40 lakhs**. Environmental Management Cost **Rs. 1446.76 lakh**.

xxii. Water body : The drainage of the block is controlled by two nallas, Amlo and Karo which cross the area and flow towards south. These nallas ultimately flow into Damodar river.

xxiii. Approvals: Ground water clearance to be Applied, Board's approval obtained on **21.05.2013**. Mining plan has been approved on **21.05.2013**. Mine closure plan is an integral part of mining plan.

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

xxv. Forestry issues: Total forest area is 77.43 ha for which Stage –I FC has been obtained vide letter No.8-22/2003-FC dated 31<sup>st</sup> March, 2004.

xxvi. Total afforestation plan shall be implemented covering an area of 156.81 ha at the end of mining. Green Belt over an area of **5.56 ha**. Density of tree plantation **2500 trees/ ha** of plants.

xxvii. There are no court cases/violation pending with the project proponent.

xxviii. Public Hearing was held on 24.05.2007 at Officer's Club, Central Coalfields Limited, District. Bokaro, State Jharkhand. The issues raised in the PH include Air, Water, Noise Pollution, drinking water etc.

xxix. The compliance report of the, Regional Office, MoEFCC issued vide letter No. 103-477/ROR-2015/307 dated 22<sup>nd</sup> January, 2016 was deliberated in the EAC meeting.



51.8.3 The Committee, after detailed deliberations (in the 51<sup>st</sup> meeting on 05<sup>th</sup> Feb 2016) noted the following :

- (i) This case had been listed in the agenda at a subsequent stage and it was informed that the listing has been done because of an emergency situation of the mine facing closure.
- (ii) The background documents for the proposal had however been received by the EAC in time. The PP was asked to bring out the main details of its proposal.
- (iii) The PP indicated that off take by road from CCL's other mines i.e. Amrapalli and Magadh had decreased during the last two-three months,
- (iv) In addition the railway line for the off take from those two mines was also behind schedule and not expected to be operational for at least another one year or more.
- (v) Therefore, the PP had approached the EAC for grant of an EC for an enhanced capacity from the existing 1.5 MTPA to 2.5 MTPA so as to meet CCLs overall target.
- (vi) It therefore, turned out that there is no emergency situation facing this mine of Karo.
- (vii) Certain other anomalies were also noticed i.e. that against an EC for 1.5 MTPA, Karo mine was already in violation having produced 1.63 MTPA in 2014-15.
- (viii) On a query, the PP informed that in the current year 2015-16, it had again gone into violation by having already produced 1.8 MTPA, at which stage the decision was taken to shut down mine production completely.
- (ix) However, the PP was unable to inform when the mine had been closed, and who had authorized closure of mine operations. It needs to be noted that closure of mine operation also has several other repercussions such as on the livelihood of the mine workers and of the neighbouring population.
- (x) Surprisingly, it was seen from the documentation submitted by the PP that a mine plan approval had been obtained for Karo expansion (for normative capacity of 11 MTPA and peak 15 MTPA) in May, 2013 on the basis of which the PP had applied and obtained from the MoEFCC, ToRs for 11/15 MTPA as recently as 3 months back ie on 1<sup>st</sup> November, 2015.
- (xi) On further enquiry, the PP mentioned that the present proposal for seeking EC for 2.5 MTPA was part and parcel of the larger proposal of 11/15 MTPA.
- (xii) Clearly, the same area cannot be simultaneously processed under 2 applications, ie one for ToR and one for EC.
- (xiii) It also turned out that while the EC is being applied for 2.5 MTPA, the mine approval plan had earlier been obtained by the PP for a larger capacity of 3.5 MTPA. The EC application should therefore have been as per the mine plan approval i.e. 3.5 MTPA.
- (xiv) The above position emerged only as a result of enquiry by the EAC and had not been stated by the PP in the documentation.
- (xv) The EAC took strong objection to the fact that the PP has sought to cover up its own infringements by approaching the EAC to give it an EC for 2.5 MTPA, thus covering up its own repeated violations of exceeding the EC approved annual production capacity of 1.5 MTPA as well as consequently enabling it to re-start the mine which is already lying closed.

51.8.4 *The PP was accordingly advised to clarify the above issues and approach the EAC only thereafter. The proposal was, therefore, deferred.*

## **Agenda 51.9**

### **Expansion of Ashok OCP from 10 MTPA to 14.00 MTPA in ML area of 793.14 ha of M/s Central Coalfields Limited in Tehsil Tandwa, District Chatra (Jharkhand) – (EC under 7(ii) of EIA Notification, 2006 )**

51.9.1 The proposal is for EC of expansion of Ashok Open Cast Project from 10 MTPA to 14 MTPA in ML area of 793.14 ha of M/s Central Coalfields Limited in Tehsil Tandwa District Chatra (Jharkhand) under 7(ii) of EIA Notification, 2006.

51.9.2 The details of the project, as per the documents submitted by the Project Proponent (PP), and also as informed during the above said EAC meeting are reported to be as under:

- i. Earlier EC was granted for 10 MTPA Ashok Exp. OCP vide letter No. J-11015/610/2007-IA.II(M) dated 17.4.2008.
- ii. The latitude and longitude of the project are 23° 42' 53" to 23° 44' 41" N and 84° 57' 07" to 85° 02' 11" E respectively.
- iii. Joint Venture: no JV
- iv. Coal Linkage : TPS and other miscellaneous basket consumers
- v. Employment generated / to be generated: Employment have been given to 450 land losers.
- vi. Benefits of the project:
  - Improvements in Physical Infrastructure
  - Improvements in Social Infrastructure
  - Increase in Employment Potential
  - Contribution to the Exchequer
  - Meet energy and steel sector requirement
  - The beneficiation/washing of coal will lead to improvement in performance of power plant,
  - Reduction in particulate emission
  - Reduction in load on Railway Network
  - Reduction in handling and transportation cost of coal
- vii. The land usage of the project will be as follows:

This is a running mine and the land use of core zone is given below

SN	Particulars	Forest	Non-forest	Area (Ha)
1	Quarry	233.71	317.47	551.18
2	Washery	0.00	24.00	24.00
3	Workshop & store	0.00	14.35	14.35
4	Sub-station	0.00	2.00	2.00
5	CHP	0.00	31.78	31.78
6	Safety zone, green belt & plantation	5.60	164.23	169.83
	Total	239.31	553.83	793.14

#### Pre-Mining:

SN	Particulars	Forest	Non-forest	Area (Ha)
1	Quarry	233.71	317.47	551.18
2	Washery	0.00	24.00	24.00

3	Workshop & store	0.00	14.35	14.35
4	Sub-station	0.00	2.00	2.00
5	CHP	0.00	31.78	31.78
6	Safety zone, green belt & plantation	5.60	164.23	169.83
	Total	239.31	553.83	793.14

Post- Mining:

S N	Description	Land-use (Ha)				Total
		Plant- ation	Water Body	Public / CCL use	Undist urbed	
1	Backfilled Area/Internal OB Dump	377.08	0.00	0.00	0.00	377.08
2	Excavation void	0.00	128.51	45.59	0.00	174.10
3	Roads	0.00	0.00	0.00	0.00	0.00
4	Built-up (Infrastructure)	0.00	0.00	72.13	0.00	72.13
5	External OB Dump	0.00	0.00	0.00	0.00	0.00
6	Unworked Area & Safety Zone	100.00	0.00	64.23	5.60	169.83
	Total	477.08	128.51	181.95	5.60	793.14

Core area :

S N	Particulars	Forest	Non-forest	Area (Ha)
1	Quarry	233.71	317.47	551.18
2	Washery	0.00	24.00	24.00
3	Workshop & store	0.00	14.35	14.35
4	Sub-station	0.00	2.00	2.00
5	CHP	0.00	31.78	31.78
6	Safety zone, green belt & plantation	5.60	164.23	169.83
	Total	239.31	553.83	793.14

viii. The total geological reserve is 213.44 MT. The mineable reserve 186.16 MT, extractable reserve is 186.16 MT (the balance extractable coal reserve has been estimated as 109.98 MT (as on March '2015). The per cent of extraction would be 100 %.

ix. The coal grade is G8 & G10. The stripping ratio is 1.31 Cum/tonne. The average Gradient is 3- 4 deg. There will be 11 seams with thickness ranging :-

S N	Particulars	Thickness
1.	Seam Thickness	
A	Lower Dakra (Comb.	18.37- 23.09

B	Upper Dakra	1.30 - 4.54
C	Bukbuka (comb.)	9.14 -14.18
D	Bukbuka (Lower)	2.24 - 4.50
E	Bukbuka (Upper)	5.45 - 7.44
F	Bukbuka (Top)	0.59 - 6.22
G	Bisrampur (Lower)	3.06 - 5.92
H	Bisrampur (Upper)	2.15 - 4.44
I	Karkatta	3.67 – 6.31
J	K1	0.33 – 2.15
K	K2	0.75 – 2.03

- x. The total estimated water requirement is 3843 (m<sup>3</sup>/day). The level of ground water ranges from 3 m to 15 m.
- xi. The Method of mining would be Opencast. 12 MTPA by surface miner and 2 MTPA from Shovel Dumper.
- xii. There is no external OB dump and 1 internal dump with Quantity of 242.99 Mcum in an area of 377.08 ha.
- xiii. The final mine void would be in 174.10 ha with depth 124.7 m. and the Total quarry area is 551.18 Ha. Backfilled quarry area of 377.18 1 ha shall be reclaimed with plantation. A void of 128.51 ha with depth 124.7 m which is proposed to be converted into a water body.
- xiv. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xv. The life of mine is 9 Years.
- xvi. Transportation: Coal transportation in pit by Rear dumpers from in pit to pit head coal handling plant, Surface to Siding by Belt conveyors and loading at siding by Rail dispatch.
- xvii. There is R & R involved. There are 793 PAFs.
- xviii. Cost: Total capital cost of the project is Rs. 34163 lakhs. CSR Cost As per CSR policy & Companies Act,2013. R&R Cost 105 lakhs. Environmental Management Cost Rs. 4101.86 Lakhs.
- xix. Water body: Two nallas namely Dembua & Benti, originating from the block and joining Damodar river flowing from West to East of the main drainage region.
- xx. Approvals: Ground water clearance applied on 28.11.2013, The PFR was approved by CCL Board on 30.12.2015. Mining plan has been approved on 24.02.2012. Mine closure plan is an integral part of mining plan.
- xxi. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxii. Forestry issues: Total forest land involved is 259.17 Ha. For which FC has been obtained.

S.no	Forest Land diverted(Stage II)		Forest Land	
	Vide letter no	Area	In present proposal	Outside present proposal
1	8-178/97-FC, dated 9/11/1999.	166.91 Ha	147.05 Ha	19.86 Ha
2.	8-07/2013-FC dated 07-02-2014	92.26 Ha	92.26 Ha	0
Total		259.17 Ha	239.31 Ha	19.86 Ha

- xxiii. Total afforestation plan shall be implemented covering an area of 477.08 ha at the end of mining. Green Belt/safety zone/plantation over an area of 169.83 ha. Density of tree plantation 2500 trees/ ha of plants.
- xxiv. There are no court cases/violation pending with the project proponent.
- xxv. Public Hearing was held on 13.3.2007 at Sarswati Shishu Vidya Mandir (near Hanuman Mandir), B.O.C.N Company, Piparwar, PO Bachra, District Chatra Jharkhand.
- xxvi. The compliance report of the, Regional Office, MoEFCC issued vide letter No. 103-188/08/EPE dated 16<sup>th</sup> May, 2013 was deliberated in the EAC meeting.

51.9.3 The Committee, after detailed deliberation (in the 51<sup>st</sup> meeting on 05<sup>th</sup> Feb 2016) noted the following:

- a) This case has been listed in the agenda at a subsequent stage and it was informed that the listing had been done because of an emergency situation facing the mine. The background documents for the proposal had however been received by the EAC in time. The PP was asked to bring out the main details of its proposal.
- b) During the presentation it transpired that the PP does not have any approval for the mine plan and the mine closure plan for the proposed expansion from 10 MTPA to 14 MTPA.
- c) In addition, though the ground water clearance had been applied for as far back as November, 2013, no approval has as yet been given by the concerned authority.
- d) There was also lack of clarity on the part of the PP regarding the distinction between mine plan documents, mine closure documents and PFR documents, as these terms were surprisingly being used interchangeably.
- e) Furthermore, it was seen that the EC compliance report from the RO's office that the report was two and a half years old of May, 2013. In addition the RO in the report had pointed out non-compliance of several conditions.
- f) It was therefore necessary that an updated compliance report including steps taken to rectify shortcomings pointed out in the May, 2013 report ~~to~~ be submitted.

51.9.4 *The proposal was, therefore, deferred.*

### **Agenda 51.10**

**Baroud Washery of 10 MTPA in an area of 74.233 ha of M/s South Eastern Coalfield Limited in Tehsil Gharghoda, District Raigarh (Chhattisgarh)- Further consideration for TOR.**

51.10.1 The proposal is regarding TOR for Baroud Washery of 10 MTPA capacity in an area of **74.233** ha of M/s South Eastern Coalfield Limited in District Raigarh (Chhattisgarh).

51.10.2 The proposal was considered in 49<sup>th</sup> EAC meeting held on 7-8 January, 2016. During the last meeting, the observations of the Committee were as under:-

- (i) The details of the site selected to be provided for setting up the washery of 10 MTPA in an area of **74.233** ha at Saraipali for washing the coal from cluster of mines in its vicinity. The PP neither presented the alternate sites nor was the site proposed at pithead.

(ii) The PP informed that the source of water is from Kurket river after construction of a check dam at the downstream (as indicated in the application) although sufficient mine water is available from nearby mines, whereas the site selected was almost abutting the Kurket river. The committee therefore felt that PP should choose potential alternative sites for the location of washery as the site selected is not an appropriate one environmentally.

(iii) The Committee also suggested that the PP should submit an original topo sheet showing all the sites evaluated and tabulate the same showing their merits and demerits.

(iv) A representation has been received from ERC, an NGO, expressing their apprehensions in respect of site selection, river Kurket, effluent discharge, rejects, impact on terrestrial and aquatic biota/ecosystem.

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

**Details of alternative sites examined are as under:**

**Site 1:** Total land involved for washery is 74.233 ha (15 ha for washery construction & associated activities + 25 ha for reject storage+20 ha for approach road & future expansion+14.233 ha for additional rail line from rail corridor track to mine for raw coal transportation from mine to washery).

**Site 2:** Total land involved for washery is 46.296 ha (15 ha for washery construction & associated activities + 25 ha for reject storage, 6.296 ha for approach roads).

**Site 3:** Total land involved for washery is 46.870 ha (15 ha for washery construction & associated activities + 25.00 ha for reject storage, 6.87 ha for approach roads).

(i) Alternative sites have been selected for the washery. Details have been given in point no.1. As mentioned above, for site no. 1, which is the most suitable site, the requirement of water is proposed to be fulfilled by the mine water of the nearby mines namely Baroud OC, Jampali OC and Bijari OC.

(ii) Three sites have been evaluated and their merits and demerits have been tabulated as under based on toposheet details:

S. No	Feature	Site 1	Site 2	Site 3
1	Location and land details	Village Phaguram, Tehsil- Gharghoda, Total land: 74.233 ha, Govt Land: 59.631 Ha, Tenancy land: 14.602 ha Forest land: Nil <b>Merit:</b> no forest land involved. Situated adjacent to Baroud OCP.	Village Phaguram and Karichhapar, Tehsil- Gharghoda, Total land: 46.296 ha Govt Land: 10.246 ha Tenancy land: 36.05 ha Forest land: Nil <b>Merit:</b> no forest land involved. <b>Demerit:</b> Situated at a distance of 12km from Baroud OCP.	Village Teram Tehsil- Gharghoda, Total land: 46.870 ha Govt Land: 13.633 ha Tenancy land: 32.492 ha Forest land: 0.745 ha <b>Demerit:</b> Situated at a distance of 16km from Baroud OCP. Forest land of 0.745 ha involved.

2	Water source	Mine water	Kurket river	Kurket river
3	Raw Coal transportation to railway siding	Through belt conveyor. Distance from Baroud OC to washery: 1Km	Through belt conveyor. Distance from Baroud OC to washery:: 10km	Through belt conveyor. Distance from Baroud OC to washery:: 16km
4	Washed Coal transportation to railway siding	Through belt conveyor. Distance from washery: 500m	Through belt conveyor. Distance from washery: 2km	Through belt conveyor. Distance from washery: 2km

51.10.4 The EAC, after detailed deliberations (in the 51<sup>st</sup> meeting on 5<sup>th</sup> Feb 2016), recommended the project for grant of TORs for preparation of EIA/EMP along with public hearing and the following specific TORs as under:-

- The waterbody located close to the proposed site for washery should be protected, and a thick green belt should be developed around it; no effluent should be discharged into the waterbody; and no solid waste should be dumped into it.
- River Kurket is located less than 1 km away from the proposed site for washery. A thick green belt should be developed in the space between River and the washery as buffer. No effluent should be discharged into the river nor dumping of solid waste is permitted.
- Since the proposed site is located close to the forests, a detailed conservation plan should be prepared for Schedule I animal species, if any.
- Only mine water should be used for washery.
- No water from the river and also from the ground water should be extracted for use in washery.
- To minimize dust pollution, road transport of raw coal, washed coal and rejects is not permitted.

## **Agenda 51.11**

### **Discussion on any other matters with the permission of the Chair.**

(i) As a general condition it is recommended that all areas whose land use has been modified because of a project, should be ultimately restored to their original land use.

(ii) It has been noticed that one NGO often sends various comments on the projects which are being placed before the EAC meeting. While recognising that some of the concerns/issues raised by the NGO may have some merit, receipt at the last stage makes it difficult for their proper consideration. In addition, since the PP is asked to respond to these issues, their late receipt one day before consideration of the proposal, and that too sometimes late in the evening invariably leads to a delay in the clearance as the proposal often get deferred. While deferment of the proposal may not be only on this ground, nevertheless a delay factor does come in on this account also. It is not the intention of the EAC to deny the right for any party to voice its concerns. However, the EAC is of the view that sufficient time is available for any organisation to give its views very much in advance of the day of consideration of a proposal. This is because the information / documents submitted by the project proponent are available in

the public domain the moment the project proponent uploads his application on the website of the MoEFCC; after uploading of the documents, there is normally a considerable time gap before the proposal is listed in the EAC agenda. *The EAC therefore, requests that the Ministry may consider issuing appropriate guidelines to all concerned clearly indicating that objections if any should be submitted at least a week in advance of the date of consideration of any proposal (It may be noted that even the project proponents are requested to submit their documentation to the EAC members at least a week before the date of consideration). The Ministry may also like to consider whether the objections should be sent directly to the EAC Members (as is happening at present), or they should be sent only to the Ministry which can in turn forward them to the EAC Members.*

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**PARTICIPANTS IN 51<sup>st</sup> EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 5<sup>th</sup> February 2016 ON COAL SECTOR PROJECTS.**

Sl. No.	LIST OF PARTICIPANTS Expert Appraisal Committee (Coal Mining)	
1.	Shri Anil Kumar	Chairman
2.	Prof C. R. Babu	Member
3.	Shri T. K. Dhar	Member
4.	Shri A. K. Bansal	Member
5.	Shri N. K. Verma	Member
6.	Shri G. S. Dang	Member
7.	Dr. S. D. Attri	Member
8.	Shri S. K. Shrivastva	Member Secretary

**PARTICIPANTS IN 51<sup>st</sup> EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 5<sup>th</sup> February 2016 ON COAL SECTOR PROJECTS.**

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

1. Shri J. P. Singh
2. Shri R.K. Srivastava
3. Shri Anwar Hussain
4. Shri A. K. Chakravarty
5. Dr. A K Samantaray
6. Shri K. Selvaganapathy
7. Shri U. P Sahoo
8. Shri S. K. Bhar
9. Shri C. Jaydev
10. Shri N. K. Singh

**51.2 Cluster 11 of M/s Eastern Coalfield Limited.**

1. Shri B. R. Reddy
2. Shri J. N. Biswal
3. Shri S. K. Sinha
4. Shri G. Prasad
5. Shri A. Shekhar
6. Shri A K Diwakar
7. Shri S. Chakraborty
8. Shri Anand Shekhar

**51.3 Expansion of New Sethia Opencast Coal Mine of M/s Western Coalfields Ltd.**

1. Shri S C Shankar
2. Shri K Chakraborty
3. Shri R M wanare
4. Shri K P Singh
5. Shri Pawan Kumar
6. Md. Noor Uddin
7. Shri Sandeep Sharma

**51.4 Adasa UG to OC Mine of M/s Western Coalfields Ltd.**

1. Shri S C Shankar
2. Shri K Chakraborty
3. Shri R M wanare
4. Shri K P Singh
5. Shri Pawan Kumar

6. Md. Noor Uddin
7. Shri Sandeep Sharma

**51.5 Kakatiya Khani Opencast 2 of M/s The Singareni Collieries Company Limited.**

1. Shri A. Manohar Rao
2. Shri M Vasanth Kumar

**51.6 5 MTPA to 10 MTPA Himgir Coal Washery of M/s ACB (INDIA) Limited.**

Absent

**51.7 2.5 MTPA Coal Washery of M/s Phil Coal Beneficiation Pvt. Ltd.**

1. Shri Pradip Jha
2. Shri Praveen
3. Shri Nagarjuna

**51.8 Karo OCP Expansion project of M/s Central Coalfields Limited.**

1. Shri S. Chandra
2. Shri P K Sinha
3. Shri Pushkar
4. Shri S. Singh
5. Ms. Sangeeta
6. Dr. Manoj Kumar
7. Shri Pawan Kumar
8. Shri Prabhu Prasad
9. Shri Aftab Alam
10. Shri. J. Chakravarty
11. Dr. A Sinha

**51.9 Ashok OCP expansion project of M/s Central Coalfields Limited.**

1. Shri S. Chandra
2. Shri P K Sinha
3. Shri Pushkar
4. Shri S. Singh
5. Ms. Sangeeta
6. Dr. Manoj Kumar
7. Shri Pawan Kumar
8. Shri Prabhu Prasad
9. Shri Aftab Alam
10. Shri. J. Chakravarty
11. Dr. A Sinha

**51.10 Baroud Washery of M/s South Eastern Coalfield Limited.**

1. Shri R P Thankur
2. Shri U T Kanzarkar
3. Shri D. Ram
4. Shri Pawan Kumar

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**Generic ToR for coal washery**

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

the mitigation measures should be clearly brought out in EIA/EMP report.

- xii. Details of various facilities proposed to be provided in terms of parking, rest areas, canteen etc. to the personnel involved in mineral transportation, workshop and effluents/pollution load from these activities should be provided.
- xiii. Impacts of CHP, if any, on air and water quality should also be spelt out alongwith Action Plan.
- xiv. O.M. no. J-II013/25/2014-IA.I dated 11<sup>th</sup> August, 2014 to be followed with regard to CSR activities.
- xv. Details of Public Hearing, Notice(s) issued in newspapers, proceedings/minutes of Public Hearing, points raised by the general public and response/commitments made by the proponent along with the Action Plan and budgetary provisions be submitted in tabular form. If the Public Hearing is in the regional language, an authenticated English translation of the same should be provided. Status of any litigations/ court cases filed/pending, if any, against the project should be mentioned in EIA.
- xvi. Analysis of samples indicating the following be submitted:
  - Characteristics of coal prior to washing (this includes grade of coal, other characteristics of ash, S and heavy levels of metals such as Hg, As, Pb, Cr etc).
  - Characteristics and quantum of coal after washing.
  - Characteristics and quantum of coal rejects.
- xvii. Details of management/disposal/use of coal rejects should be provided. The rejects should be used in TPP located close to the washery as far as possible. If TPP is within a reasonable distance (10 km), transportation should be by conveyor belt. If it is far away, the transportation should be by rail as far as possible.
- xviii. Copies of MOU/Agreement with linkages (for stand-alone washery) for the capacity for which EC is being sought should be submitted.
- xix. Corporate Environment Responsibility:
  - a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
  - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
  - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
  - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- xx. A detailed action Plan for Corporate Social Responsibility for the project affected people and people living in and around the project area should be provided.
- xxi. Permission of drawl of water shall be pre-requisite for consideration of EC.
- xxii. Wastewater /effluent should confirm to the effluent standards as prescribed under Environment (Protection) Act, 1986
- xxiii. Details of washed coal, middling and rejects along with the MoU with the end-users should be submitted.

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

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

Department of the concerned state.

- (x) Similarly if the project involves diversion of any road/railway line passing through the ML/project area, the proposed route of diversion and its realignment should be shown in the map along with the status of the approval of the competent authority.
- (xi) Break up of lease/project area as per different land uses and their stage of acquisition should be provided.

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

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

- (xii) Break-up of lease/project area as per mining plan should be provided.
- (xiii) Impact of changes in the land use due to the project if the land is predominantly agricultural land/forestland/grazing land, should be provided.
- (xiii) **One-season (other than monsoon) primary baseline data** on environmental quality - air (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, NO<sub>x</sub> and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season **met data** coinciding with the same season for AAQ collection period should be provided.
- (xiv) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.

- (xv) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a **Comprehensive Conservation Plan** along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.
- (xvi) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
- (xvii) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xviii) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xix) Detailed water balance should be provided. The break-up of water requirement for the various mine operations should be given separately.
- (xx) Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users in the upstream and downstream of the project site. should be given.
- (xxi) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xxii) Impact of blasting, noise and vibrations should be given.
- (xxiii) Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided.
- (xxiv) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.



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

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

S.N.	Land use Category	Present (1 <sup>st</sup> Year)	5 <sup>th</sup> Year	10 <sup>th</sup> Year	20 <sup>th</sup> Year	24 <sup>th</sup> Year (end of mine life)*
1.	Backfilled Area(Reclaimed with plantation)					
2.	Excavated Area (not reclaimed)/void					
3.	External OB dump Reclaimed with plantation)					
4.	Reclaimed Top soil dump					
5.	Green Built Area					
6.	Undisturbed area (brought under plantation)					
7.	Roads (avenue plantation)					
8.	Area around buildings and Infrastructure					
	TOTAL					

\* As a representative example

**Table 2 : Stage Wise Cumulative Plantation**

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

\* As a representative example

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

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

S.N.	Land use 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.
- (xxxiiii) 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.
- (xxxvi) 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.
- (xxxvii) 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.
- (xxxviii) 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.
- (xxxix) 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.
- (xl) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
- (xli) Status of any litigations/ court cases filed/pending on the project should be provided.
- (xlii) Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.

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

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

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

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**GENERIC TORs FOR AN UNDERGROUND COALMINE PROJECT**

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

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

#### Area under Surface Rights

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

- (viii) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a **Comprehensive Conservation Plan** along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.
- (ix) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
- (x) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xi) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.

- (xii) One-season (other than monsoon) primary baseline data on environmental quality - air (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, NO<sub>x</sub> and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xiii) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
- (xiv) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xv) Study on subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
- (xvi) Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.
- (xvii) Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.
- (xviii) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xix) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xx) Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.
- (xxi) The number and efficiency of mobile/static water sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality

should be provided.

- (xxii) Impacts of CHP, if any on air and water quality should be given. A flow chart showing water balance along with the details of zero discharge should be provided.
- (xxiii) Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.
- (xxiv) Greenbelt development should be undertaken particularly around the transport route and CHP. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.
- (xxv) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxvi) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
- (xxvii) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
- (xxviii) Corporate Environment Responsibility:
  - a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
  - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
  - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
  - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- (xxix) Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.



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

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

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

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

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51<sup>st</sup> EAC (THERMAL & COAL MINING PROJECTS) MEETING  
SCHEDULED FOR 5<sup>th</sup> February, 2016

AGENDA

Venue: Brahmaputra 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](mailto:sk.smree66@nic.in) at least one week prior to the EAC meeting.
- ii. Please indicate the agenda number on the document submitted as well as in the e-mail while forwarding the relevant information.
- iii. Without this information, EAC has discretion to invite the proponent for the meeting.
- iv. Please ensure that all the documents of the proposal received by the EAC Members a week before the meeting.
- v. No consultant is permitted into the meeting who has no accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) as per the MoEF OM dated 2nd December, 2009.

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COAL MINING PROJECTS

Friday, 5<sup>th</sup> February, 2016

10:00 AM -10:15 AM: Confirmation of Minutes

- 51.1 Kaniha Opencast Coal Mine Expansion Project (from 10 MTPA to 14 MTPA in an ML area of 1880 ha; Latitude 21° 03' 04" to 21° 05' 00" N and Longitude 85° 02' 20" to 85° 06' 00" E) of M/s Mahanadi Coalfields Limited, located in District Angul, Odisha- EC under 7(ii) of EIA Notification 2006- (further consideration)
- 51.2 Cluster No.11 (11 mixed mines of a combined production capacity of 9.05 MTPA normative 10.90 MTPA peak capacity in a combined ML area of 4218 ha, of M/s Eastern Coalfields Ltd., located in Raniganj Coalfields, District Burdwan, West Bengal-(EC granted on 21.07.2015)- Amendment in EC

51.3 Expansion of New Sethia Opencast Coal Mine (from 0.20 MTPA to 0.50 MTPA with the expansion in mining lease area from 91.503 ha to 144.453 ha) of M/s Western Coalfields Ltd., Dist. Chindwara, Maharashtra- (EC based on TOR granted on 25.02.2014)

51.4 Adasa UG to OC Mine for a 1.50 MTPA (Normative) & 1.85 MTPA (Peak) along with increase in land area from 221 ha to 596.27 ha; of M/s Western Coalfields Limited located in Tehsil Saoner District Nagpur Maharashtra- TOR

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LUNCH  
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51.5 Kakatiya Khani Opencast 2 (KTK OC-2) Coal Mining project for production capacity of 1.25 MTPA (Normative) and 1.50 MTPA (Peak) in an ML area of 668.23 Ha; of M/s The Singareni Collieries Company Limited- in District Warangal Telangana – (EC based on TOR granted 18.06.2015)

51.6 Expansion of Production Capacity from 5 MTPA to 10 MTPA in an area of 13.5 ha at M/s Himgir Coal Washery of M/s ACB (INDIA) Limited located in Tehsil Hemgir, District Sundargarh Odisha –Further consideration for TOR.

51.7 Proposed 2.5 MTPA Copal Washery of M/s Phil Coal Beneficiation Pvt. Ltd at Village Ghutku Tehsil Takhatpur, District Bilaspur (Chhattisgarh) - Further consideration for TOR.

**Additional agenda items :**

51.8 Karo OCP Expansion project from 1.5 MTPA to 2.5 MTPA in ML area of 226.33 ha; if M/s Central Coalfields Limited located in Tehsil Bermo district Bokaro (Jharkhand) – (EC under 7(ii) of EIA Notification, 2006).

51.9 Ashok OCP expansion project from 10 MTPA to 14.00 MTPA in ML area of 793.14 ha of M/s Central Coalfields Limited in Tehsil Tandwa district Chatra (Jharkhand) – (EC under 7(ii) of EIA Notification, 2006 )

51.10 Baroud Washery of 10.00 MTPA Capacity in an area of 40 Ha of M/s South Eastern Coalfield Limited in District Raigarh Chhattisgarh –(further consideration for TOR.

51.11 Discussion on any other matters with the permission of the Chair.

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