

**MINUTES OF THE 35<sup>th</sup> EAC (THERMAL & COAL MINING PROJECTS)  
MEETING SCHEDULED FOR 14<sup>th</sup> -15<sup>th</sup> May, 2015**

The 35<sup>th</sup> EAC (Thermal & Coal mining projects) Meeting was held on **14<sup>th</sup> -15<sup>th</sup> May, 2015** in New Delhi to consider the proposals in coal mining sector. The list of participants of EAC and the proponents are given at Annexure-1 and 2 respectively.

**B. Confirmation of Minutes: The Committee confirmed the minutes of the 33<sup>rd</sup> EAC meeting held on 9<sup>th</sup> -10<sup>th</sup> April, 2015.**

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

**35.1 Restructuring of Mine-1 Lignite Mine (reduction from 10.5 MTPA to 8 MTPA and expansion in ML area from 3178.4 ha to 3635.4 ha; latitude 11° 33' 00'' N to 11° 35' 00'' North and longitude 79° 28' 00'' E to 79° 32' 00'' East) of M/s Neyveli Lignite Corp. Ltd. Dist. Cuddalore, Tamil Nadu- (EC based on TOR granted on 20.05.2014 & TOR Modification on 22.10.2014).**

35.1.1 The proposal is for restructuring of Mine-1 Lignite Mine (reduction from 10.5 MTPA to 8.0 MTPA) and expansion in ML area from 3178.4 ha to 3635.4 ha of M/s Neyveli Lignite Corp. Ltd. Dist. Cuddalore, Tamil Nadu. The proponent made the presentation and informed that:

- i. The project was accorded TOR vide letter no. J-11015/01/2012-IA.II (M) on 20.05.2014 and TOR Aamendment vide letter no. J-11015/01/2012-IA.II (M) on 22.10.2014.
- ii. **Environmental Clearance for 10.5 MTPA** capacity was obtained vide letter no. J-11015/11/88-IA dated 06.03.1989.
- iii. The latitude and longitude of the project are 11° 33' 00'' N to 11° 35' 00'' North and 79° 28' 00'' E to 79° 32' 00'' East respectively.
- iv. Joint Venture: There is no Joint Venture
- v. Coal Linkage: Lignite will be used to sustain the Lignite requirement till the end of life of proposed linked Thermal Power Station (NNTPS) of 1000 MW at Neyveli.
- vi. Employment: Existing manpower 6515 (Executives – 596, Non-Executive – 2838; Contract workers – 3081),
- vii. Benefits of the project: Mine-I restructuring will help to sustain the Lignite production till the end of life of proposed linked Thermal Power Station (NNTPS) of 1000 MW at Neyveli.
- viii. The land usage of the project will be as follows:

## Pre-Mining:

Sl. No.	Name of the village (and status of Land Acquisition)	Resurvey Number involved	Classification-wise Extent of lands in Hectares						Total
			(Revenue classification within brackets)						
			Forest	Agricultural		Culturable Waste	Not available for cultivation		
	Irrigated (Patta/Wet)	Un-irrigated (Patta Dry)	(Govt. Tharisu)	Common facility (Govt. Poramboke)	Ear-marked For Housing (Govt. Natham)				
1	Ammeri (To be acquired)	1 to 47, 59 to 156, 157Part, 158Part, 159Part, 160, 161, 163, 164Part, 165 to 167, 168Part, 169 to 174, 195 to 200, 212, 311, 312, 354 to 361, 365, 367	0	37.765	187.59	1.75	37.055	4.66	268.82
2	Ammeri (Possession with NLC)	157Part, 158Part, 159Part, 162, 303 to 310	0	0	0	0	31.575	0	31.575
3	Vadakkuvellore (to be acquired)	54, 56 to 60, 61Part, 62 to 79, 80A, 80B, 81A, 81B, 82, 83, 84A, 84B, 85A, 85B, 86A, 86B, 87 to 104, 106, 107A, 107B, 108, 109A, 109B, 110, 111A, 111B, 112A, 112B, 113 to 142, 156, 157, 159, 160, 162, 163, 180, 181, 182A, 182B, 183, 185, 186B, 187B, 192A, 192B, 256, 257	0	40.03	41.07	6.095	49.805	11.885	148.885
4	Vadakkuvellore (Possession with NLC)	55, 59Part, 61Part, 80A-Part, 105, 143, 144, 158, 184, 186A, 187A, 421 to 426	0	0	0	0	7.3		7.3
<b>Total</b>			<b>0</b>	<b>77.795</b>	<b>228.66</b>	<b>7.845</b>	<b>125.735</b>	<b>16.545</b>	<b>456.58</b>

Post Mining:

Sl. No.	Land use during Mining	Plantation	Water Body	Public Use	Un-disturbed	Total
1	External OB Dump	478.14	-	-	-	478.14
2	Top soil Dump	-	-	-	-	-
3	Excavation	2795.56	253.48	-	-	3049.04
4	Roads	-	-	-	-	-
5	Built up area	-	-	-	-	-
6	Green Belt	108.22	-	-	-	108.22
7	Undisturbed Area		-	-	-	-
	<b>TOTAL</b>	<b>3381.92</b>	<b>253.48</b>	-	-	<b>3635.4</b>

- ix. The total geological reserve is 171.425 MT. The mineable reserve 154.282 MT, extractable reserve is 150.425 MT. The per cent of extraction would be 97.5%.
- x. The coal grade is 2672 kcal/kg. The stripping ratio is 1:5 Cum / tonne. The average Gradient is 1 in 100. There will be 3 seams with thickness ranging upto 0.50 m and above.
- xi. The total estimated water requirement: Due to capacity reduction, there will be no additional water requirement.
- xii. The Method of Mining: Opencast deploying Bucket Wheel Excavator and Conveyor with Spreader Technology.
- xiii. No further external dump is planned for the project and the OB generated will be used in the existing dump yards (1 external and 1 internal). The existing external OB dump yard area is 478.4 Ha and external dump quantity is 239,1 Mm<sup>3</sup>. The existing internal dump yard area is 2795.56 Ha and internal quantity is 1958.83 Mm<sup>3</sup>.
- xiv. The final mine void would be in 253.48 Ha with depth 60 m. and the total quarry area is 3157 Ha. Backfilled quarry area of 2795.56ha shall be reclaimed with plantation. A void of 253.48 ha with depth 60 m which is proposed to be converted into a water body.
- xv. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xvi. The life of mine is 27 Years.
- xvii. Transportation: Coal transportation from pit to Lignite stockyard through belt conveyor and from

- Lignite stockyard to Thermal Power Station through belt conveyor.
- xviii. There is R & R involved. There are 1409 PAFs.
  - xix. Cost: Total capital cost of the project is Rs. 4.87 Crores. CSR Cost is Rs. 5.44 / Ton of coal production. R&R Cost is Rs. 11.80 Crores. Environmental Management Cost is Rs.210.0 Lakhs.
  - xx. Water body: No river/Nallha flowing near or adjacent to the proposed mine.
  - xxi. Approvals: Ground water clearance applied on 04.02.2003. NLC Board's approval obtained on 30.04.2013. Mining plan approval is awaited.
  - 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 in the mining area.
  - xxiv. Total afforestation plan shall be implemented covering an area of 3635.4 Ha at the end of mining. Green Belt over an area of 108.22 ha. Density of tree plantation 2500 trees/ ha of plants.
  - xxv. There are no court cases/violation pending with the project proponent.
  - xxvi. Public Hearing was held on 08.01.2015 at District Cuddalore, Tamilnadu. The issues raised in the PH includes facilities given to Ammeri village; Check dams; Employment; compensation to land losers; resettlement center; AAQ monitoring station; medical facilities etc.
- 35.1.2 Ground water modeling study for the multi-layer coastal aquifer system of Neyveli hydro-geological basin has been carried out by IIT, Madras. The major findings and recommendations are as follows:
- i. The Neyveli Aquifer System has been managed well without undue stresses by restricting the total pumping being limited to 149 MCM/year (even after restructuring), so that the decline of the Water table in the Confined Aquifers is protected without large depletion and with minimal or no impact on quality.
  - ii. It is inferred from the water quality analysis that more than 75 % (based on TDS) & 96 % (based on SAR) of wells are having excellent and good quality of water for irrigation purpose.
  - iii. It can be inferred that the proposed increased pumping in Mine-1A, associated with Mine –II pumping (Restructured Pumping) in the same periphery depletes or attains the cone of depression at a faster rate, resulting in less quantum of pumping from the aquifer.
  - iv. It can be stated that water balance in the upper confined aquifer has not been much altered when the “as-on-today” pumping strategy is concerned.
  - v. It was found there was no salt water intrusion in the aquifer system due to pumping. However there is a sporadic ingress of saltwater in the water table aquifer which is mainly due to the high tide/ back water /localized pumping near the sea side.
  - vi. The water quality in two dug wells near the coastal area exceeds mainly due to the local geological condition of calcareous formation and also due to excessive pumping from SIPCOT industrial estate. This aspect needs further research for finding out the reasons for the same.
  - vii. It was found that the flow from the southern boundary replenishes the aquifer, in the south west of the study area and act as a replenishment leading to the sustainability of the overall Neyveli Aquifer System. A research study needs to be undertaken to delineate the recharge area in this zone. Preliminary efforts by NLC is made to take up the electrical resistivity survey with GSI.

- viii. It is recommended that adequate number of observation wells may be made in the boundary area, on the south west side especially to monitor the water fluctuations both in upper-confined and lower-confined aquifers. Similarly, more number of wells at closer interval, with the existing GW monitoring system, may be required in the coastal area to delineate the sharp interface as well as for estimation of flux.
- ix. It is found that the Neyveli region has many potential sites for artificial recharge and hence it is recommended that more number of artificial recharge structures may be built in the region.

**35.2.3 The Committee, after detailed deliberations sought following additional information for further consideration:**

- i. Mine Plan approval
- ii. Rehabilitation plan for management old dump and system for reclamation
- iii. Project coal linkage as per original EC.
- iv. R&R Plan as the proposal for acquiring additional area involves displacement of 1400 PAFs
- v. Product plan for Mine I and Mine I-A
- vi. Impact of ground water pumping in the region and long term strategy for reducing the impacts such as subsidence
- vii. Current water table monitoring report to be submitted
- viii. Quality of mine water and quality of ground water
- ix. Mine closure plan.
- x. Justification for additional opening of area instead of adopting of phased approach.
- xi. Action plan for addressing Public Hearing issue.

The Committee also opined that in view of the proximity of Mine I and Mine I A, an integrated approach should be followed in the mining operations as well as management of environmental impacts due to mining activities. **The Committee also proposed to undertake a site visit.**

**35.2 Expansion of Mine-1 A (from 3 MTPA to 7 MTPA in and expansion in a total project area of 2005.8 ha (existing area 1623.8 ha + additional area 382.0 Ha); latitude 11° 32' 0" N to 11° 36' 0" North and longitude 79° 31' 0" E to 79° 32' 30" East) of M/s Neyveli Lignite Corp. Ltd. Dist. Cuddalore, Tamil Nadu- (EC based on TOR granted on 20.05.2014).**

- 35.2.1 The proposal is for Expansion of Mine-1 A (from 3 MTPA to 7 MTPA in and expansion in a total project area of 2005.8 ha (existing area 1623.8 ha + additional area **382.0 Ha**); latitude 11° 32' 0" N to 11° 36' 0" North and longitude 79° 31' 0" E to 79° 32' 30" East) of M/s Neyveli Lignite Corp. Ltd. Dist. Cuddalore, Tamil Nadu. The proponent made the presentation and informed that:
- i. The project was accorded TOR vide letter no. J-11015/02/2012.IA.II (M) on 20.05.2014.
  - ii. **Environmental Clearance for 3.0 MTPA** capacity obtained vide letter no. **J-11015/18/98-IA II (M)** dated **01.03.1999**.
  - iii. The latitude and longitude of the project are 11° 32' 0" N to 11° 36' 0" North and 79° 31' 0" E to 79° 32' 30" East respectively.

- iv. Joint Venture: There is no joint venture involved.
- v. Coal Linkage : Lignite will be used to sustain the Lignite requirement till the end of life of proposed linked Thermal Power Station (NNTPS) of 1000 MW at Neyveli
- vi. Employment generated: Total Manpower: 3098; Proposed manpower - 181 persons.
- vii. Benefits of the project: Mine-IA expansion will help to sustain the Lignite production till the end of life of proposed linked Thermal Power Station (NNTPS) of 1000 MW at Neyveli.
- viii. The land usage of the project will be as follows:

Pre-Mining:

Sl. No.	Name of the village (and status of Land Acquisition)	Resurvey Number of involved	Classification-wise Extent of lands in Hectares							Total
			(Revenue classification within brackets)						Total	
			Forest	Agricultural		Culturable Waste	Not available for cultivation			
	Irrigated (Patta/Wet)	Un-irrigated (Patta Dry)	(Govt. Tharisu)	Common facility (Govt. Poram-boke)	Ear-marked For Housing (Govt. Natham)					
1.	Thenkuthu (To be acquired)	1 to 6, 11 to 14, 32, 39 to 57, 70, 71, 74, 76 to 99, 104-115, 123 to 133, 137, 138, 140 to 142, 145, 159	0.000	8.930	150.201	6.710	19.682	6.471	191.994	
2.	Vadakuthu (To be acquired)	232, 233, 238, 239, 243, 245, 246, 250 to 252, 260 to 267, 271 to 279	0.000	9.920	26.895	1.595	13.130	0.000	51.540	
3.	Therkumelur (Possession with NLC)	5, 6, 12, 13, 42, 85, 98, 99, 106, 107, 109-114, 119, 124, 125, 135, 139-145, 148, 149, 166-168, 174	0.000	0.000	109.800	6.040	0.770	0.000	116.610	

4.	Veludayanpatu (Possession with NLC)	93-108,110-113, 228-230, 234, 237-246, 249, 250	0.000	2.607	16.453	0.000	2.433	0.000	21.494
<b>Total</b>			<b>0.000</b>	<b>21.457</b>	<b>303.350</b>	<b>14.345</b>	<b>36.015</b>	<b>6.471</b>	<b>381.638</b>

Post Mining:

Sl. No	Land use during Mining	Plantation	Water Body	Public Use	Un-disturbed	Total
1	External OB Dump	-	-	-	-	-
2	Top soil Dump	-	-	-	-	-
3	Excavation	1362.75	281.26	-	-	1644.01
4	Roads	-	-	-	-	-
5	Built up area	-	-	64.53	-	64.53
6	Green Belt	91.8	-	-	-	91.8
7	Undisturbed Area	-	-	-	205.66	205.66
	<b>TOTAL</b>	<b>1454.55</b>	<b>281.26</b>	<b>64.53</b>	<b>205.66</b>	<b>2006</b>

- ix. The total geological reserve is 234.826 MT. The mineable reserve 211.343 MT, extractable reserve is 206.060 MT. The per cent of extraction would be 97.5 %.
- x. The coal grade is 2672 kcal/kg. The stripping ratio is 1:7 Cum/tonne. The average Gradient is 17.0m. There will be 3 seams with thickness ranging upto 0.50 m and above.
- xi. The total estimated water requirement is 142.5 KLD ( Industrial 136.3 KLD + Domestic - 6.2 KLD). The level of ground water ranges from 70 m to 80 m below ground level.
- xii. Method of mining: Opencast deploying Bucket wheel Excavator & Conveyor with spreader. Shovel-Dumper Technology for removal of old Dump for short period.
- xiii. There is no external OB dump and one internal dump with Quantity of 1129.70 Mbcm in an area of 1410 Ha.
- xiv. The final mine void would be in 281.26 Ha with depth 70 m. and the Total quarry area is 1691 Ha. Backfilled quarry area of 1410 Ha shall be reclaimed with plantation. A void of 281.26 ha with depth 70 m which is proposed to be converted into a water body
- xv. The seasonal data for ambient air quality has been documented and all results at all stations are

- within prescribed limits.
- xvi. The life of mine is 27 Years.
  - xvii. Transportation: From pit to Lignite stockyard through belt conveyor and from Lignite stockyard to Thermal station through belt conveyor.
  - xviii. There is R & R involved. There are 695 PAFs.
  - xix. Cost: Total capital cost of the project is Rs. 1453.3 Crores. CSR Cost Rs. 5.44 / Ton of coal production. R&R Cost Rs. 8.95 crores. Environmental Management Cost Rs.13.01 Crores (Under Expansion Project head)+Rs. 84.90 Lakhs (under Revenue Head 2013-14).
  - xx. Water body : No river/Nallha flows near or adjacent to the proposed mine.
  - xxi. Approvals: Ground water clearance applied on 04.02.2003. Board's approval obtained on 30.04.2013. Mining plan for existing capacity has been obtained on 23.05.2014 Mine plan approval for expanded capacity has not been obtained.
  - 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 1783.06 ha at the end of mining. Green Belt over an area of 91.80 ha. Density of tree plantation 2500 trees/ ha of plants.
  - xxv. There are no court cases/violation pending with the project proponent.
  - xxvi. Public Hearing was held on 08.01.2015 in District Cuddalore, Tamilnadu. The issues raised in the PH includes Permanent Employment; land Compensation ; Lignite dust causes various diseases; Royalty to Project Affected persons; Ground water depletion; Medical aids; Compound wall around school; Ground water etc.

35.2.2 Ground water modeling study for the +multi-layer coastal aquifer system of Neyveli hydro-geological basin has been carried out by IIT, Madras. The major findings and recommendations area as follows:

- i. The Neyveli Aquifer System has been managed well without undue stresses by restricting the total pumping being limited to 149 MCM/year (even after restructuring), so that the decline of the Water table in the Confined Aquifers is protected without large depletion and with minimal or no impact on quality.
- ii. It is inferred from the water quality analysis that more than 75 % (based on TDS) & 96 % (based on SAR) of wells are having excellent and good quality of water for irrigation purpose.
- iii. It can be inferred that the proposed increased pumping in Mine-1A, associated with Mine –II pumping (Restructured Pumping) in the same periphery depletes or attains the cone of depression at a faster rate, resulting in less quantum of pumping from the aquifer.
- iv. It can be stated that water balance in the upper confined aquifer has not been much altered when the “as-on-today” pumping strategy is concerned.
- v. It was found there was no salt water intrusion in the aquifer system due to pumping. However there is a sporadic ingress of saltwater in the water table aquifer which is mainly due to the high tide/ back water /localized pumping near the sea side.
- vi. The water quality in two dug wells near the coastal area exceeds mainly due to the local geological condition of calcareous formation and also due to excessive pumping from SIPCOT industrial estate. This aspect needs further research for finding out the reasons for the same.

- vii. It was found that the flow from the southern boundary replenishes the aquifer, in the south west of the study area and act as a replenishment leading to the sustainability of the overall Neyveli Aquifer System. A research study needs to be undertaken to delineate the recharge area in this zone. Preliminary efforts by NLC is made to take up the electrical resistivity survey with GSI.
- viii. It is recommended that adequate number of observation wells may be made in the boundary area, on the south west side especially to monitor the water fluctuations both in upper-confined and lower-confined aquifers. Similarly, more number of wells at closer interval, with the existing GW monitoring system, may be required in the coastal area to delineate the sharp interface as well as for estimation of flux.
- ix. It is found that the Neyveli region has many potential sites for artificial recharge and hence it is recommended that more number of artificial recharge structures may be built in the region.

**35.2.3 The Committee, after detailed deliberations sought following additional information for further consideration.**

- i- Mine Plan approval
- ii- Rehabilitation plan for management old dump and system for reclamation
- iii- Project coal linkage as per original EC.
- iv- R&R Plan as the proposal for acquiring additional area involves displacement of 695 PAFs
- v- Product plan for Mine I and Mine I-A
- vi- Impact of ground water pumping in the region and long term strategy for reducing the impacts such as subsidence
- vii- Current water table monitoring report to be submitted
- viii- Quality of mine water and quality of ground water
- ix- Mine closure plan.
- x- Justification for additional opening of area instead of adopting of phased approach.
- xi- Action plan for addressing Public Hearing issue.

The Committee also opined that Mine I A is relatively small and contiguous with Mine I and therefore, an integrated approach should be followed in the mining operations as well as management of environmental impacts due to mining activities. **The Committee also proposed to undertake a site visit.**

**35.3 Patherdih NLW Coal Washery (2.5 MTPA in an ML area 17.5 ha; Latitude 23<sup>0</sup> 40' 30" & 23<sup>0</sup> 40 '50" N and Longitude 86<sup>0</sup>26' 10" & 86<sup>0</sup> 26'30" E) of M/s Bharat Coking Coal Ltd., located at dist. Dhanbad, Jharkhand- (EC based on TOR granted on 30.09.2014)**

35.3.1 The proposal is of **Patherdih NLW Coal Washery (2.5 MTPA capacity in an ML area 17.5 ha; Latitude 23<sup>0</sup> 40' 30" & 23<sup>0</sup> 40 '50" N and Longitude 86<sup>0</sup>26' 10" & 86<sup>0</sup> 26'30" E) of M/s Bharat Coking Coal Ltd., located at dist. Dhanbad, Jharkhand.**The proponent made the presentation and informed that:

- i. Proposed Patherdih NLW Coal Washery, covering an area of about 17.5 Ha, is located South-east of Jharia Coalfield in the Dhanbad district of Jharkhand. It will be built in place of **existing washery** after dismantling the same.

- ii. It is adjacent to proposed Patherdih NLW coal washery (5 MTPA normative capacity with a peak capacity of 6.5 MTPA in an area of 12 Ha for which EC has been granted by MOEFCC vide J-11015/240/2010-IA.II(M).
- iii. The washery project is proposed to be established on “Build-Operate & Maintain ” basis.
- iv. The Washery is to be operated for washing coal from adjacent mines of BCCL i.e. from Gondudih OCP & Dhansar/Industry/Kusunda/KhasKusunda Mines of Jharia Coalfields of BCCL.
- v. The quantity of water required for the proposed washery is about 1162.5 KLD which is proposed from Jealgora 7 pit mine water about 5 km from the proposed washery site.
- vi. MOU have been signed with M/S Monnet Ispat & Energy Ltd and Keerthi Industries Ltd as qualified bidders for disposal of process rejects produced. The rejects will be sent to railway siding by conveyor from where it will be dispatch by rail to third parties to be utilized for power generation in FBC based TPP.
- vii. Washery rejects generated from the coal beneficiation process will be stored in a 4000 te capacity storage bunker for its disposal to the consumers
- viii. The project was accorded TOR vide letter no. Letter No.- . J-11015/432/2013-IA.II (M) on 30.12.2014.
- ix. The latitude and longitude of the project are 23<sup>0</sup> 40’ 30” & 23<sup>0</sup> 40 ’50” N and 86<sup>0</sup> 26’ 10” & 86<sup>0</sup> 26’30” E respectively.
- x. Joint Venture: There is no joint venture.
- xi. Coal Linkage: Gondudih OCP (1MT), Dhansar/ Industry/ Kusunda/ KhasKusunda Mines (1.5MTPA).
- xii. Employment generated/to be generated: Washery will be manned with 31 BCCL employees and 90 employees from operating company.
- xiii. Benefits of the project:
  - a. The Washery will produce environmental friendly clean coal to minimize the pollution levels.
  - b. It will reduce volume of coal transportation which will reduce pollution.
  - c. The rejects will be utilized for power generation in Fluidized Bed Combustion plants.
  - d. The project will create employment opportunities both for skilled and semiskilled persons in the area
  - e. Business opportunity in Secondary & Tertiary sectors will increase.
  - f. The Washery will produce metallurgical grade coal to be used in steel plants thus resulting in savings to the national exchequer
  - g. CSR activities will improve social infrastructure in the area

xiv. **The land usage of the project:**

**Land requirement**

Sl. No.	DESCRIPTION	AREA(ha)
<b>a</b>	<b>Plant Facilities</b>	<b>4.18</b>
<b>b</b>	<b>Effluent treatment plant</b>	<b>0.50</b>
<b>c</b>	<b>Approach roads</b>	<b>0.75</b>

<b>d</b>	<b>Green belt and 3-tier Plantation</b>	<b>7.64</b>
<b>e</b>	<b>Others (specify)</b>	<b>0.43</b>
	<b>i) Stores</b>	
	<b>ii) Security post</b>	
	<b>iii) Canteen</b>	
	<b>iv) Parking</b>	
	<b>v) Electrical Switch Yard</b>	
	<b>vi) Administrative building</b>	
	<b>vii) First Aid Center</b>	
<b>f</b>	<b>Rejects Storage</b>	<b>4.00</b>
	<b>Total</b>	<b>17.50</b>

- xv. The total estimated water requirement is approx. 0.25 MGD KLD as make up water & air pollution control sprinkling.
- xvi. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xvii. Economical life of the washery has been taken as 18 years.
- xviii. Transportation: Raw coal intake and product dispatch will be through conveyor at railway siding existing besides the proposed washery.
- xix. There is no R & R involved. There are no PAFs.
- xx. Cost: Total capital cost of the project is Rs. 278.91 Crores. CSR Cost Rs. Rs. 2/- per Tonne of coal production. R&R Cost Nil. Environmental Management Cost (capital cost Rs. 226 Lakhs, annual recurring cost Rs. 45 Lakhs).
- xxi. Water body: Damodar River flows at a distance of 3.5 Km from the project area.
- xxii. Approvals: Board's approval obtained on 30.08.2008.
- xxiii. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxiv. Forestry issues: There is no forest area involved.
- xxv. There are no court cases/violation pending with the project proponent.
- xxvi. Public Hearing was held on 27th March, 2015. The issues raised in the PH includes employment to local villagers especially employees of old washery after dismantling; water spraying to control fugitive emission; repair of Kulatand school and facilities such as school bus, drinking water, medical and sport facilities for the school children; etc. The PP has given a commitment to meet the above requirements and informed adequate funds for the same has been provided under CSR.

**35.3.2 The Committee, after detailed deliberations recommended the project for granting EC subject to following specific conditions:**

- i. There shall be no transportation of coal by road. Coal transportation shall be only by rail.

- ii. Raw coal intake and product dispatch will be through conveyor at railway siding existing besides the proposed washery.
- iii. Raw coal (-200 mm) from designated collieries, namely, Gondudh OCP and Godhur U/G (Dhansar / industry / Kusunda / Khas ) shall be transported by rail from KDS-Siding and KDS-K Siding and
- iv. Raw coal shall be received at the proposed Patherdih Coal Washery (2.5 MTPA) by rakes of BOBR Wagons and shall be unloaded into a 4500 Ton capacity receiving track hopper.
- v. Washed coal, from each coal washery unit, shall be transported by a belt conveyor and stored in Washed Coal storage bunker (4000 Tons capacity).
- vi. A travelling Tripper on top of the storage bunker shall distribute the washed coal into the bunker.
- vii. The mine water shall be used for washery and other purposes after appropriate treatment.
- viii. Catchment area / check dams be constructed for rain water harvesting and the water there from the utilized and after adequate treatment
- ix. Green belt shall be developed using local species all along the periphery of the site, along the areas such as the crushing units and stockyards, transfer and loading points. The development of green belt shall be monitored and six monthly report shall be submitted to regional office.
- x. Detailed plan for reclamation of land after dismantling of old washery shall be submitted within six months.

**35.4 Garjanbahal OCP coal block, 10 MTPA (Normative) and 13.0 MTPA (peak) in a total area of 795.38 Ha (ML area 653.83 Ha + Additional area 141.55 Ha); 21° 59' 43" to 22° 01' 35" North and longitudes 83° 44' 29" to 83° 46' 26" East. Of M/s Mahanadi Coalfields Limited in District Sundargarh Odisha- TOR.**

35.4.1 The proposal is for Garjanbahal OCP coal block (10 MTPA Normative and 13.0 MTPA peak in a total area of **795.38 Ha (ML area 653.83 Ha + Additional area 141.55 Ha; 21° 59' 43" to 22° 01' 35" North and longitudes 83° 44' 29" to 83° 46' 26" East.**) of M/s Mahanadi Coalfields Limited in District Sundargarh Odisha. The proponent made the presentation and informed that:

- i. It is a new project.
- ii. Earlier EC was granted for 10.0 MTPA capacity in an ML area of 603.45 Ha vide letter dated 03/05/2005, but mine could not be started due to delay in forest clearance.
- iii. The latitude and longitude of the project are 21°59'43" to 22°01'35" North and 83°44'29" to 83°46'26" East respectively.
- iv. Joint Venture: There is no joint venture.
- v. Coal Linkage : Basket Linkage
- vi. Employment generated / to be generated: 1567 direct employment opportunity. Beside indirect employments will also be generated
- vii. Benefits of the project: Improvement in physical infrastructure; improvement in social Infrastructure; increase in employment potential; contribution to the Exchequer (both State and Central Govt.); post mining enhancement of Green Cover; improvement of electrical power generation and consequently rise in electric power consumption thereby improvement in overall economic growth of the country.
- viii. The land usage of the project will be as follows:

Pre-Mining:

Sl. No.	Item	Forest Area (Ha)	Non-Forest Area (Ha)	Total Area (Ha)
1.	Quarry excavation area *	68.16	321.66	389.82
2.	Safety zone (7.5 m around excavation boundary of the forest land)	1.66	3.51	5.17
3.	Blasting danger zone (excluding the part of OB dump)(7.5 m safety zone to either block boundary or 300m from mine boundary)	3.86	132.98	136.84
5.	OB Dump area (external)	1.87	60.71	62.58
5.	Infrastructure including CHP, washery, SILO point, laying of railway line for dispatch etc.	13.35	36.31	49.66
6.	Rationalization of project boundary	-	9.76	9.76
	<b>Mining lease area</b>	<b>88.90</b>	<b>564.93</b>	<b>653.83</b>
8.	Other Infrastructure	-	40.00	40.00
9.	Residential colony	-	33.05	33.05
10	Rehabilitation site	-	68.50	68.50
	Total Project Area	<b>88.90</b>	<b>706.48</b>	<b>795.38</b>

Note: \* 4.97 ha of excavation area and 4.43 ha of blasting danger zone is not included. It is included in Kulda OCP

Post- Mining:

Post-mining land use :							
S. No	Category	Land use (in ha)					
		Plantation/ Grass carpeting	Water body	Dip side slope & haul road	Undisturbed	Built- up area	Total
1	Quarry excavation	230.00	20.00	139.82			389.82
2	External OB Dump	62.58*					62.58
3	Infrastructure	9.93			39.73		49.66
4	Forest Safety zone (7.5 m around forest)	5.17					5.17

5	Undisturbed Blasting Danger Zone	27.37			109.47		136.84
6	Rationalization of project boundary	1.95			7.81		9.76
	Mining Lease Area	263.10	20.00	139.82	157.01		653.83
7	Residential colony	6.61				26.44	33.05
8	Rehabilitation site	13.70				54.80	68.50
9	Diversion of highway	8.00				32.00	40.00
10	Outside Mining lease area	28.31	0.00	0.00	0.00	113.24	141.55
	<b>Total</b>	<b>365.31</b>	<b>20.00</b>	<b>139.82</b>	<b>157.01</b>	<b>113.24</b>	<b>795.38</b>
*It will be re-handled during mine closure							

Core area:

Sl.No.	Type of Land	Within ML area (ha)
1.	Agricultural	398.65
2.	Forest	88.899
3.	Waste land	159.451
4.	Grazing	Nil
5.	Surface water bodies	3.84
6.	Others (specify) settlement	2.99
<b>Total for mining lease area :</b>		<b>653.83</b>

- ix. The total geological reserve is 262.75 MT. The mineable reserve 241.32 MT, extractable reserve is 229.25 MT. The per cent of extraction would be 87.25%.
- x. The coal grade is C to G (G9 to G13). The stripping ratio is 0.98Cum/tonne. The average Gradient is 3<sup>0</sup>to 7<sup>0</sup>. There will be 02 seams (Lajkura & Rampur Seam in 13 sections)
- xi. The total estimated water requirement is 3.15 MLD m<sup>3</sup>/day. The level of ground water ranges from 1.70 m bgl to 4.86 m.
- xii. Method of mining: Opencast Mining by Shovel-Dumper/Ripper-dozer in OB/ parting; surface miner, pay loader & tipper in coal.
- xiii. There are 2 external OB dump with Quantity of 21.09 Mbcm in an area of 62.58 ha with height of 90-100 for one dump & 55-60 m for another dump above the surface level and one internal dump with Quantity of 202.72 Mbcm in an area of 230 ha.
- xiv. The final mine void would be 159.82 Ha with depth of 260 m. and the total quarry area is 389.82 Ha. Backfilled quarry area of 156.10 Ha shall be reclaimed with plantation. A void of 233.72 ha with depth varying from 0 to 260 m is proposed to be converted into a water body.

- xv. The life of mine is 23 Years.
- xvi. Transportation: Coal transportation in pit by through Dumper/ dumper & conveyor from in pit to pit head coal handling plant, Surface to Siding by Conveyor to Pre-weigh Bin and loading at siding by SILO loading & rail transport.
- xvii. There is R & R involved. There are **1046 PAFs**.
- xviii. Cost: Total capital cost of the project is Rs. 1375.38Crores. CSR Cost Rs. 115.81 Crores of coal production. R&R Cost Rs. 146.07 Crores. Environmental Management Cost 171.96 Crores.
- xix. Water body: Basundhara River flows at a distance of 1.8 Km; Chhaten Jhor flows at a distance of 1.4 Km from the project area.
- xx. Approvals: Board's approval obtained on 13.02.15. Mining plan has been approved on 18.07.2014. 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 area involved is 88.90 ha. Application for Stage –I FC submitted vide State Serial No–131/04 Dtd-17.05.06. The FAC meeting held on 30.04.2015 and is to be again taken up in the next FAC meeting.
- xxiii. Total afforestation plan shall be implemented covering an area of 62.58 ha at the end of mining. Green Belt over an area of 32.54 ha. Density of tree plantation 2500 trees/ ha of plants.
- xxiv. There are no court cases/violation pending with the project proponent.
- xxv. Construction of Rail Infrastructure: 33.0 Km long Jharsuguda- Barpalli-Sardega rail link & doubling of Jharsuguda-Barpalli Rail link at an estimated cost of Rs. 2431 Cr. is under construction. Single line is likely to be completed by June 2016.
- xxvi. Baseline data has already been generated as per standard TOR, during the pre-monsoon season – March to June, 2014.

35.4.2 During the deliberations, the Committee sought the following clarifications for further considerations:

- i. Justification for delay in getting FC and reasons for lapse of EC.
- ii. The basic information related to post mining land use and the OBD management furnished by the PP should be revisited and the revised information should be submitted.
- iii. Response to the representation received from one of the NGOs requesting Ministry to address issues with regards to Competitive Users of Water; Cumulative Impact Assessment; Track Record of Compliances; Non Fulfillment of Commitments in its earlier Projects; Resistance from Villagers; Important Forest & Streams; Information on Biodiversity; Compliance of Forest Rights Act Required; etc;.

35.4.3 The Project Proponent responded to the above issues on the same day and submitted the following:

- A. Correction in the basic information submitted to MOEFCC
- B. Chronology of events related to the proposal for diversion of forest land. It was informed that as per the current status, FAC meeting for stage 1 approved was held 30.04.2015.

C. Response to queries raised by the NGO was provided as follows:

- i. The total water requirement for the project is 3152 KLD out of which the potable water requirement is 915 KLD. This potable demand will be met from the existing three nos. weirs constructed at Basundhara River. The necessary permission has been obtained from the Govt. of Odisha. The Industrial demand of 2237 KLD will be met from mine water of Basundhara (E) quarry till sufficient sump gets created in the Garjanbahal OCP. At any point of time the flow of Basundharariver will not be impounded, so that the downstream users will not be deprived.
- ii. This proposal is for grant of TOR for formulation of EIA-EMP. The impact assessment shall be done as per the approved ToR
- iii. Backfilling and reclamation is being progressively done in all the Opencast Projects of Mahanadi Coal fields Limited. The land reclamation monitoring based on satellite data is generated regularly for the opencast projects of MCL and is available on the company website [www.mcl.gov.in](http://www.mcl.gov.in)
- iv. The R&R including employment to the land oustees are being provided as per approval of Supreme Court appointed Claim Commission. The R&R details are given in the presentation booklet. Many CSR activities are taken up regularly within the peripheral villages. The details of expenditure during the last three years in Sundergarh District is given in the presentation booklet.
- v. Since the R&R including employment and disbursement of compensation to the land oustees are being provided as per approval of Supreme Court appointed Claim Commission the resistance from the villagers has now reduced to a great extent.
- vi. This proposal is for grant of TOR for formulation of EIA-EMP. Study on biodiversity shall be done as per the approved TOR.
- vii. Important Forests & Streams are given on page no. 14 of Form-I. The Form-I does mention Hunderkhol RF, Satparila RF & Balijori RF. However the details of all Forest & Streams within 10 km will be given in the EIA-EMP.
- viii. The issue has been addressed properly. No Objection Certificate has been issued under Forest Rights Act by the Collector Sundergarh. The stage-I approval is in the advanced stage of consideration by the FAC.
- ix. The Project could not be started due to delay in Forest Clearance. Presently the forest diversion proposal is in advanced stage for grant of stage-I approval. The previous EC was granted vide letter dt: 03/05/2005, under the EIA notification 1994. As per the EIA notification 1994 “The clearance granted shall be valid for a period of five years for commencement of the construction or operation of the project”. For the above reasons fresh EC proposal has been submitted.

**35.4.4 The Committee, after detailed deliberations recommended the proposal for grant of TOR subject to preparation of EIA/EMP Reports as per the model TOR issued by MOEFCC and posted on the website of the Ministry**

**35.5 Dhanpuri Under Ground (UG) Coal Mine project for production capacity of 0.216 MTPA in an ML area of 231.63 ha; Latitude 23 ° 10’ 21” to 23 ° 10’ 49” N and Longitude 81 ° 31’ 51” to 81 ° 34’ 17” E of M/s South Eastern Coalfields Limited in District Shahdol, Madhya Pradesh – TOR.**

35.5.1 The proposal is for Dhanpuri (UG) Coal Mine project for production capacity of 0.216 MTPA in an ML area of 231.63 ha; Latitude 23° 10' 21" to 23° 10' 49" N and Longitude 81° 31' 51" to 81° 34' 17" E of M/s South Eastern Coalfields Limited in District Shahdol, Madhya Pradesh. The proponent made the presentation and informed that:

- i. The project is a new project.
- ii. Dhanpuri UG is a running mine which started in 1978 and the original period of lease were 30 years from 1<sup>st</sup> May, 1973 to 30<sup>th</sup> April, 2003.
- iii. Dhanpuri UG mine was previously under Western Coalfields Limited whose title and rights were transferred to SECL in 1985. Accordingly, the lease of Dhanpuri UG became a fresh lease valid from 1985 and valid up to 2015. The above lease is expiring on 28.11.2015. The lease renewal requires prior environmental clearance as per EIA Notification, 2006.
- iv. Dhanpuri UG mine was previously under Western coalfields Limited whose title and rights were transferred to SECL in 1985. Dhanpuri UG Mine is situated in the Dhanpuri block of Sohagpur Coalfield in Shahdol District, Madhya Pradesh.
- v. The latitude and longitude of the project are 23°10'21" to 23°10'49" (N) and 81°31'51" to 81°34'17" (E) respectively.
- vi. Joint Venture: There is no Joint Venture.
- vii. Coal Linkage: Different thermal power Plants (PSEB ROPAR PH, RVUN Kota P.H, GSECL WKB PH GNCPPH, Sikka PH.)
- viii. Employment generated: 587 Numbers
- ix. Benefits of the project: Coal production 0.216 MTY for power supply.
- x. The land usage of the project will be as follows:

Pre-Mining:

<i>Details of Land usage</i>				
i- Per- Mining LANDUSE DETAILS				
1.		Forest Land		65.00 Ha
2.		Tenancy Land		144.646 Ha
3.		Government Land		21.984 Ha
<b>Total</b>		<b>231.630 Ha</b>		<b>231.63</b>
S.No.	LAND USE	Within ML Area(ha)	Outside ML Area (ha)	TOTAL (in ha.)
1.	Agricultural land	119.42	-	119.42
2.	Forest land	65.0	-	65.0
3.	Wasteland	Nil	-	Nil
4.	Grazing land	Nil	-	Nil
5.	Surface water bodies	2.370	-	2.370
6.	Settlements	5.0	-	5.0
7.	Road	6.0	-	6.0
8.	Infrastructure	1.50	-	1.50
9.	Green belt	32.34	-	32.34
<b>Total</b>		<b>231.63</b>		<b>231.63</b>

Post- Mining

S.No.	LAND USE	Within ML Area(ha)	Outside ML Area (ha)	TOTAL (in ha.)
1.	Agricultural land	119.42	-	119.42
2.	Forest land	65.0	-	65.0
3.	Wasteland	Nil	-	Nil
4.	Grazing land	Nil	-	Nil
5.	Surface water bodies	2.370	-	2.370
6.	Settlements	5.0	-	5.0
7.	Road	6.0	-	6.0
8.	Infrastructure	1.50	-	1.50
9.	Green belt	32.34	-	32.34
	<b>Total</b>	<b>231.63</b>		<b>231.63</b>

Core area: 231.63 Ha

S.No.	LAND USE	Within ML Area(ha)	Outside ML Area (ha)	TOTAL (in ha.)
1.	1. Agricultural land	119.42	-	119.42
2.	2. Forest land	65.0	-	65.0
3.	3. Wasteland	Nil	-	Nil
4.	4. Grazing land	Nil	-	Nil
5.	Surface water bodies	2.370	-	2.370
6.	6. Settlements	5.0	-	5.0
7.	7. Road	6.0	-	6.0
8.	Infrastructure	1.50	-	1.50
9.	Green belt	32.34	-	32.34
	<b>Total</b>	<b>231.63</b>		<b>231.63</b>

- xi. The total geological reserve is 6.855 MT. The mineable reserve 5.864 MT, extractable reserve is 0.80 MT (As on 01.04.2014). The per cent of extraction would be 70%.
- xii. The coal grade is G6. The average Gradient is 1 in 30. There will be 2 seams with thickness ranging from 1.2 m To 6.50 m.
- xiii. The total estimated water requirement is 125 m<sup>3</sup>/day. The level of ground water ranges from 4.2 m to 9.55 m.
- xiv. Method of mining: Board and Pillar (caving with SDLS).
- xv. The life of mine is 04 Years.
- xvi. Transportation: Coal transportation in pit to surface by haulage & Belt conveyor, Surface to Siding by tipper and loading at siding by Rail.
- xvii. There is no R & R involved. There are no PAFs.
- xviii. Cost: Total capital cost of the project is Rs. 8.85 Crores. CSR Cost Rs. 29.29 Lakhs of coal production. R&R Cost Nil. Environmental Management Cost 26.37 lakhs.

- xix. Water body: Baghaiyanallha passing south west to north- east and Nargaranallha passing through western part of the project area.
- xx. Approvals: Ground water clearance is not required as it falls under safe category. Board's approval obtained on 21-01-2015. Scheme approved in 554<sup>th</sup> meet of the Functional Directors held on 21-01-2015. Mine closure plan was approved in 213<sup>th</sup> Board meeting of the SECL held on 18.05.2013.
- xxi. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxii. Forestry issues: Total forest area involved 65.0 ha. Stage-1 Forestry Clearance obtained from Ministry of Environment & Forests-FC division, New Delhi vide F No. 8-48/2010-FC dated 9<sup>th</sup> July, 2014 for 65 Ha.
- xxiii. Total afforestation plan shall be implemented. Green Belt over an area of 32.34 ha. Density of tree plantation 2500 trees/ ha of plants.
- xxiv. There are no court cases/violation pending with the project proponent.

**35.5.2 The Committee, after detailed deliberations recommended the proposal for grant of TOR subject to preparation of EIA/EMP Reports as per the model TOR issued by MOEFCC and posted on the website of the Ministry.**

**35.6 Sayal D Opencast Coal Mine Project (1.0 MTPA Normative and 1.35 MTPA Peak in a project area of 286.98 Ha; Latitude 23° 40' 13" to 23° 40' 20" and Longitude 85° 18' 30" to 85° 20' 00") of M/s Central Coalfields Limited in district Ramgarh, Jharkhand –TOR.**

35.6.1 The proposal is for Sayal D Opencast Coal Mine Project (1.0 MTPA Normative and 1.35 MTPA Peak in a project area of 286.98 Ha; Latitude 23° 40' 13" to 23° 40' 20" and Longitude 85° 18' 30" to 85° 20' 00") of M/s Central Coalfields Limited in Barka Sayal Area, South Karanpura Coalfield, district Ramgarh, Jharkhand. The proponent made the presentation and informed that:

- i. The proposal is for TOR
- ii. Sayal D colliery (UG Mine) was opened by NCDC Ltd. on 01.04.1959. The Colliery is presently producing coal by UG method in Saunda, Sayal & Upper Balkudra seams. However, OC mining in patches was operative during 1980 to 2001. Due to difficult geo-mining conditions, it was decided to convert the existing UG mine to an OC mine considering upper seams (viz. Saunda, Sayal, Balkudra top and Upper Balkudra). Accordingly a PR was prepared for Sayal D OCP with Upper Balkudra seam as base seam (normative/ peak capacity: 1.00 / 1.35 MTPA) and subsequently approved by CCL Board.
- iii. The latitude and longitude of the project are 23° 40' 13" to 23° 40' 20" and Longitude 85° 18' 30" to 85° 20' 00" respectively.
- iv. Joint Venture: There is no Joint Venture.
- v. Coal Linkage are power houses and other miscellaneous consumers
- vi. Employment generated / to be generated: 51
- vii. Benefits of the project: Improvements in Physical Infrastructure; Improvements in Social Infrastructure; Increase in Employment Potential; Contribution to the Exchequer; Meet energy requirement; Post-mining Enhancement of Green Cover
- viii. The land usage of the project will be as follows:

Land-use Details :

S.no	Land use	Within ML Area (Ha)	Outside ML area (Ha)	Total
1	Forest land	149.05	0.00	149.05
2	GMK JJ	37.00	0.00	37.00
3	Non Forest Land (tenancy)	100.93	0.00	100.93
	Total	286.98	0.00	286.98

Pre-mining :

S.no	Land use	Within ML Area (Ha)	Outside ML area (Ha)	Total
1	Forest land	149.05	0.00	149.05
2	GMK JJ	37.00	0.00	37.00
3	Non Forest Land (tenancy)	100.93	0.00	100.93
	Total	286.98	0.00	286.98

Post- Mining: **The post mining land use will be provided in EIA/EMP.**

Core area:

S.no	Land use	Within ML Area (Ha)	Outside ML area (Ha)	Total
1	Forest land	149.05	0.00	149.05
2	GMK JJ	37.00	0.00	37.00
3	Non Forest Land (tenancy)	100.93	0.00	100.93
	Total	286.98	0.00	286.98

- ix. The total geological reserve is 119.52 MT. The mineable reserve 22.68 MT, extractable reserve is 22.68 MT. The per cent of extraction would be 100 %.
- x. The coal grade is Grade E. The stripping ratio is 6.31 cum/ton. The average Gradient is 11-13 deg. there will be 5 seams with thickness ranging upto 10 m.
- xi. The total estimated water requirement is 0.074 MGD. The level of ground water ranges from 0.65-3.18 m.
- xii. The Method of mining: Opencast method of mining with shovel-dumper combination.
- xiii. There is one external OB dump with Quantity of 39.73 Mbcm in an area of 95.01 ha with height of 70 meter above the surface level and one internal dump with Quantity of 103.34 Mbcm in an area of 81.48 ha.
- xiv. The final mine void: Area will be calculated at the time of EIA/EMP formulation. Total quarry area is 190.69 Ha (Approx). Backfilled quarry area of 81.48 Ha (Approx) shall be reclaimed with plantation.

- xv. The life of mine is 24 Years.
- xvi. Transportation: Coal transportation in pit by dumpers; Surface to Siding by truck loading at siding by Rail.
- xvii. There is no R & R involved. There are no PAFs.
- xviii. Cost: Total capital cost of the project is Rs. 336.14 Crores. CSR Cost: As per new Company's Act 2013. R&R Cost Nil. Environmental Management Cost Rs. 2109.77 lakh.
- xix. Water body: The Damodar River flows eastwards. A stream flows at a distance of 4.5 km from North –South from project boundary .Another stream Naikari river flows at a distance of 1.8 km from the project.
- xx. Approvals: Ground water clearance to be applied. **Mine plan approved on 10.10.2013 (PFR for revised project area to be approved). Mine Closure Plan to be approved.**
- xxi. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxii. Forestry issues: The total forest area involved for mining is **149.05** Ha. Stage –II FC for 192.32 ha has been obtained vide letter no. F.No.8-66/2004-FC dt. 17.07.2008. This includes the forest land of 149.05 proposed for Sayal D OCP.
- xxiii. Total afforestation plan: **This will be finalized at the time of EIA & EMP preparation.**
- xxiv. There are no court cases/violation pending with the project proponent.
- xxv. Public Hearing: Public hearing will be held after preparation of draft EIA/EMP report.

**35.6.2 The Committee, after detailed deliberations recommended the proposal for grant of TOR subject to preparation of EIA/EMP Reports as per the model TOR issued by MOEFCC and posted on the website of the Ministry. In addition the EAC recommended additional TOR regarding development of green belt plan in the buffer zone between the mine lease area and the township to take care of fugitive emissions from the mining activities.**

**35.7 Bhengari Coal washery of 5 MTPA capacity in a project area of 17.48 ha; Latitude: 22°08'05.7" - 22°08'19.4" North and Longitude: 83°14'21.2" - 83°14'49.4" East of M/s Mahavir Coal Washeries Private Limited Distt. Raigarh, Chhattisgarh – TOR.**

**35.7.1** The proposal for Bhengari Coal washery of 5 MTPA capacity in a project area of 17.48 ha; Latitude: 22°08'05.7" - 22°08'19.4" North and Longitude: 83°14'21.2" - 83°14'49.4" East of M/s Mahavir Coal Washeries Private Limited Distt. Raigarh, Chhattisgarh. The proponent made the presentation and informed that:

- i. It is a fresh application for TOR.
- ii. 5 MTPA capacity coal beneficiation plant based on Heavy Media Cyclone technology at village Bhengari, Distt. Raigarh, Chhattisgarh of MCWPL was granted TOR vide letter no. J-11015/117/2011-IA.II (M) dated 09.02.2012.
- iii. "Modification of TOR" was first granted correcting some typographical mistakes and asking to examine coal transportation from mines by closed conveyors / rail including clean coal vide letter no J-11015/117/2011-IA.II(M) dated 27th April, 2012

- iv. Second “Modification of TOR” was granted permitting coal transportation in mechanically covered trucks over a period not more than 5 years or till railway siding comes up whichever is earlier vide letter no. J-11015/117/2011-IA.II(M) dated 16th December, 2013
- v. Submitted request for public hearing along with draft EIA / EMP report to the Chhattisgarh Environment Conservation Board (CECB), Raipur on 31.01.14
- vi. CECB on 22.02.2014 directed MCWPL to provide Hindi version of the entire draft EIA / EMP report and kept decision on public consultation date pending.
- vii. As there is no such provision in the EIA Notification of 2006 and its subsequent amendments to translate & provide the entire EIA/EMP report in the regional language, CECB was again requested on 05.03.14 to reconsider its decision and conduct public hearing. CECB reiterated its stand on 01.04.14 asking for draft EIA report in Hindi. Submitted 10 copies of copies of draft EIA report in Hindi on 23.05.2014 and requested them to conduct public hearing at the earliest
- viii. Public hearing for the project got further delayed due to the Assembly elections in the State and then for the local Municipal elections
- ix. Baseline data collected for the preparation of the EIA report was of Dec 2011- Feb 2012 (Winter Season).
- x. MCWPL submitted a proposal for extension of TOR validity by one year to MoEFCC in November, 2014. The Ministry advised MCWPL to obtain fresh TOR as its validity was for 2 years w. e. f. 09.02.2012 and not from the date of the second “Modification of TOR”.
- xi. The latitude and longitude of the project are 22° 08’ 05.7” - 22° 08’ 19.4” North and 83° 14’ 21.2” - 83° 14’ 49.4” East respectively.
- xii. Joint Venture: There is no joint venture
- xiii. Coal Linkage: Raw coal for beneficiation will be sourced from SECL mines on behalf of the clients as well as own purchase through e-auction; Letters of interest from the parties have been obtained.
- xiv. Employment generated: 70 persons during Operation phase.
- xv. Benefits of the project: Locals will get employment opportunities during construction activities. Besides direct employment, indirect employment opportunities will also open up; Health care facilities to be develop for the project employees will be extended to surrounding villages; Under CSR initiatives under Social-Welfare measures, project proponent will take up various education, health & sanitation, infrastructure development, women empowerment programmes; Additional revenue to the State and Central exchequers in the form of taxes etc.
- xvi. The land usage of the project: Land area required for the coal washery is 17.48 ha.
- xvii. Total water requirement will be 59 m3/hr which will be met from ground water. Prior approval of the Central Ground Water Board shall be taken.
- xviii. Process and Technology: Wet process - comprising crushing, screening, washing and handling; Heavy Media Cyclone; Washed coal – 2.2 MTPA (yield 44%), Middling – 2.35 MTPA (yield 47%) and Rejects – 0.45 MTPA (yield 9%).
- xix. Transport: Railway siding is envisaged. ROM coal will be brought by road from the SECL mines [Chhal, Baroud, Jampali]. Clean coal and middling will be transported by road till the proposed railway siding is established.
- xx. There is no R & R involved. There are no PAFs.

- xxi. Cost: Total capital cost of the project is Rs. 56.78 crores excluding Rs. 15 Crores for Railway Siding. CSR Cost Rs. 25 lakhs /annum. R&R Cost Nil. Environmental Management Cost (Capital cost Rs. 80 lakhs and recurring annual cost Rs. 9.6 lakhs).
- xxii. Water body: Kurketriver flows at a distance of 3.6 km, ESE from the project.
- xxiii. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxiv. Forestry issues: There is no forest area involved for washery.
- xxv. Afforestation plan: This will be finalized at the time of EIA & EMP preparation.
- xxvi. There are no court cases/violation pending with the project proponent.
- xxvii. Requested to grant of TOR for the 5 MTPA Coal Washery and approval for use of baseline environmental data generated during March – May 2015 in preparation of EIA/EMP report for the project.

**35.7.2 During the deliberation the Committee noted that the plant boundary of the proposed washery is in proximity to the existing railway line (less than 500 m) and advised that the exact distance should be made available in writing. The Committee also requested that the earlier TOR regarding coal transportation also needs to be checked. Accordingly, decision on the above project was deferred until submission of the above information.**

**35.8 Govinda UG Collery – Meera Incline (0.25 MTPA Normative and 0.375 MTPA Peak in a project area of 308.280 ha; Latitude 23<sup>0</sup> 10' 21" to 23<sup>0</sup> 11' 56" Longitude 81<sup>0</sup>58'19" to 81<sup>0</sup> 59' 45") by M/s South Eastern Coalfields Limited in District Anuppur, Madhya Pradesh – TOR.**

**35.8.1** The proposal for Govinda UG Collery – Meera Incline (0.25 MTPA Normative and 0.375 MTPA Peak in a project area of 308.28 ha; Latitude 23<sup>0</sup> 10' 21" to 23<sup>0</sup> 11' 56" Longitude 81<sup>0</sup> 58' 19" to 81<sup>0</sup> 59' 45") by M/s South Eastern Coalfields Limited in District Anuppur, Madhya Pradesh. The proponent made the presentation and informed that:

- i. The proposal is for TOR.
- ii. Govinda UG Colliery – Meera Incline was previously under western coalfields limited whose title and rights were transferred to SECL in 1985. Accordingly, the lease of Govinda UG Colliery - Meera Incline became a fresh lease valid from 1985 and valid up to 2015. The above lease is expiring on 28.11.2015. The lease renewal requires prior environmental clearance as per EIA Notification, 2006.
- iii. Govinda UG Colliery – Meera Incline is situated in the eastern part of Sohagpur Coalfield.
- iv. The latitude and longitude of the project are 10' 21" to 23<sup>0</sup> 11' 56" and 81<sup>0</sup>58' 19" to 81<sup>0</sup> 59' 45" respectively.
- v. Joint venture: There is no joint venture
- vi. Coal Linkage: Different thermal power PSEB ROPAR PH, RVUN Kota P.H, GSECL WKB PH, SOG PH, KRPH PH, BRS PH.
- vii. Employment generated / to be generated: 729 numbers
- viii. Benefits of the project: Coal production 0.25 MTPA ( Normative), 0.375 MTPA ( Peak)

The land usage of the project will be as follows:

<i>Details of Land usage</i>					
<b>ii- Per- Mining LANDUSE DETAILS</b>					
1.		Forest Land			Nil
2.		Tenancy Land			176.847 Ha
3.		Government Land			131.433 Ha
<b>Total</b>		<b>308.28 Ha</b>			<b>308.28 Ha</b>
<b>ii During-Mining LANDUSE DETAILS</b>					
S.No.	LAND USE	Within ML Area(ha)	Outside ML Area (ha)	TOTAL (in ha.)	
1.	Agricultural land	176.847	-	176.847	
2.	Forest land	Nil	-	Nil	
3.	Wasteland	76.373	-	76.373	
4.	Grazing land	Nil	-	Nil	
5.	Surface water bodies	8.15	-	8.15	
6.	Settlements	28.21		28.21	
7.	Road	7.60	-	7.60	
8.	Infrastructure	1.50	-	1.50	
9.	Green belt	9.60	-	9.60	
<b>Total</b>		<b>308.28</b>		<b>308.28</b>	
<b>iii Post Mining LANDUSE DETAILS</b>					
S.No.	LAND USE	Within ML Area(ha)	Outside ML Area (ha)	TOTAL (in ha.)	
1.	Agricultural land	176.847	-	176.847	
2.	Forest land	Nil	-	Nil	
3.	Wasteland	76.373	-	76.373	

4.	Grazing land	Nil	-	Nil
5.	Surface water bodies	8.15	-	8.15
6.	Settlements	28.21		28.21
7.	Road	7.60	-	7.60
8.	Infrastructure	1.50	-	1.50
9.	Green belt	9.60	-	9.60
	<b>Total</b>	<b>308.28</b>		<b>308.28</b>

Core area 308.28 Ha

S.No.	LAND USE	Within ML Area(ha)	Outside ML Area (ha)	TOTAL (in ha.)
1.	Agricultural land	176.847	-	176.847
2.	Forest land	Nil	-	Nil
3.	Wasteland	76.373	-	76.373
4.	Grazing land	Nil	-	Nil
5.	Surface water bodies	8.15	-	8.15
6.	Settlements	28.21		28.21
7.	Road	7.60	-	7.60
8.	Infrastructure	1.50	-	1.50
9.	Green belt	9.60	-	9.60
	<b>Total</b>	<b>308.28</b>	<b>308.28</b>	

- x. The total geological reserve is 4.865 MT. The mineable reserve 4.865 MT, extractable reserve is 2.93MT (Balance as on 01.04.2014). The per cent of extraction would be 70%.
- xi. The coal grade is G6. The stripping ratio is not applicable. The average Gradient is 1 in 28. There will be 0.3 (UK Top, Bottom & MK Seam) with thickness ranging upto 1.3m to 3.2m.
- xii. The total estimated water requirement is 100 m<sup>3</sup>/day. The level of ground water ranges from 4.1m to 6.12m.
- xiii. The Method of mining would be Bord and Pillar.
- xiv. The details of external OB dump and internal OB dump will be submitted during EIA/EMP.
- xv. The final mine void and the total quarry area will be submitted during EIA/EMP.

- xvi. The life of mine is 12 Years. (as on 01.04.2014)
- xvii. Transport: Coal transport in pit from U.G face to surface by haulage & Belt conveyor; Surface to Siding by tipper; Pre-weigh Bin and loading at siding by Rail.
- xviii. There is no R & R involved. There are no PAFs.
- xix. Cost: Total capital cost of the project is Rs. 12.848 Crores. CSR Cost Rs. Nil. R&R Cost Nil. Environmental Management Cost Rs 26.37 lakhs.
- xx. Water body: Kewai River flows outside of eastern side of the project area; Harful Nallah flows & meets to Kewai River outside of lease area.
- xxi. Approvals: Ground water clearance is not required as it is under safe category. Board's approval obtained on 8th June'1982, Mine closure plan was approved in 218th Board meeting of the SECL held on 18.11.2013.
- 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 for mining.
- xxiv. Total afforestation plan: Will be finalized at the time of EIA & EMP preparation. Green Belt over an area of 9.60 ha. Density of tree plantation is 18640 trees/ ha of plants.
- xxv. There are no court cases/violation pending with the project proponent.
- xxvi. Public Hearing: Public hearing will be held after preparation of draft EIA/EMP report.

**35.8.2 The Committee, after detailed deliberations recommended the proposal for grant of TOR subject to preparation of EIA/EMP Reports as per the model TOR issued by MOEFCC and posted on the website of the Ministry.**

**35.9 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; Latitude 18° 26 '41" to 18° 28' 7" and Longitude 79° 50'17" to 79° 52'36" of M/s The Singareni Collieries Company Limited- in District Warangal Telangana –TOR**

35.9.1 The proposal is for 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; Latitude 18° 26 '41" to 18° 28' 7" and Longitude 79° 50'17" to 79° 52'36" of M/s The Singareni Collieries Company Limited- in District Warangal Telangana. The proponent made the presentation and informed that:

- i. The proposal is for TOR.
- ii. SCCL is operating 5 underground mines namely KTK-1&1A Incline, KTK-2&2A Incline, KTK-5 Incline, KTK-6 Incline, KTK Longwall Project and one opencast project KTK OC Sector - I in Bhoopalpalli Area in Warangal District of Telangana State.
- iii. KTK OC Sector-I is a dedicated project to Kakatiya Thermal Power Plant (KTPP) of Telangana State Generation Corporation (TSGENCO) located near Chelpur Village which is about 10 Km from the project).
- iv. The coal reserves of this OC Project will exhaust in another 2 years and coal reserves envisaged by underground method from KTK 2&2A Inclines will also exhaust in two years.
- v. In order to sustain the coal production from the area and fulfil the committed supply to 500 MW KTPP of TSGENCO beyond 2017-18, it is proposed to convert a part of existing KTK 2&2A

Incline underground mine into opencast mine up to 250 m depth of floor of III seam under the name of Kakatiyakhani Opencast - 2 Project (KTK OC - 2 Project) as a relay Project to KTK OC Sector-I Project.

- vi. The proposed KTK OC - 2 Project is a part of the KTK 2&2A OCP Geological Block and is carved out of the existing KTK 2&2A Incline underground mine up to 250 m depth of III seam floor.
- vii. The proposed project is located in the north central part of Mulug Coal Belt of Godavari Valley Coal Field (GVCF).
- viii. The latitude and longitude of the project are 18° 26 '41" to 18° 28' 7" and 79° 50'17" to 79° 52'36" respectively.
- ix. There is no joint venture
- x. Coal Linkage : TSGENCO
- xi. Employment generated: Permanent: 220, Contractual: 300
- xii. Benefits of the project: Generation of direct and indirect employment; meeting the demand of coal in the region; Improvement in social infrastructure: conservation of remnant coal locked in underground mine(s)
- xiii. The land usage of the project will be as follows:

Details of Land usage																																								
i. Pre-mining	Project Area:																																							
	<table border="1"> <thead> <tr> <th>Sl.No</th> <th>Present Land use</th> <th>Area in (Ha)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>KTK OC - I Quarry Area</td> <td>133.38</td> </tr> <tr> <td>2.</td> <td>KTK OC - I External Dump Area</td> <td>105.96</td> </tr> <tr> <td>3.</td> <td>Plantation</td> <td>87.94</td> </tr> <tr> <td>4.</td> <td>Built up area</td> <td>13.83</td> </tr> <tr> <td>5.</td> <td>Roads</td> <td>24.00</td> </tr> <tr> <td>6.</td> <td>Nallah</td> <td>0.36</td> </tr> <tr> <td>7.</td> <td>Surface water</td> <td>1.56</td> </tr> <tr> <td>8.</td> <td>Single crop</td> <td>72.32</td> </tr> <tr> <td>9.</td> <td>Land with scrubs</td> <td>188.65</td> </tr> <tr> <td>10.</td> <td>Fallow land</td> <td>36.94</td> </tr> <tr> <td></td> <td>Total within the ML area</td> <td>664.94</td> </tr> <tr> <td>11.</td> <td>Built up area outside ML area</td> <td>3.29</td> </tr> </tbody> </table>	Sl.No	Present 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		Total within the ML area	664.94	11.	Built up area outside ML area	3.29
	Sl.No	Present Land use	Area in (Ha)																																					
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	Total Area	668.23
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ii. Post- Mining

Sl No.	Description	Land Use Details (Ha.)			
		Plantation	Water body	Public use	Total
1	Quarry Area (Including drain, bund etc.,)	267.17	0.00	9.44	276.61
2	External Dump Area ( Including Drain, Bund etc.,)	349.51	0.00	14.86	364.37
3	Service Buildings	4.00	0.00	4.70	8.70
4	Diversion of Road	2.01	0.00	3.32	5.33
5	Diversion of Nallah	5.84	4.09	0.00	9.93
	<b>Land within ML area</b>	<b>628.53</b>	<b>4.09</b>	<b>32.32</b>	<b>664.94</b>
6	Land Outside ML area	0.00	0.00	3.29	3.29
	<b>TOTAL</b>	<b>628.53</b>	<b>4.09</b>	<b>35.61</b>	<b>668.23</b>

iii. Core Area		Sl. No.	Particulars	Area in Ha
		1.	Quarry Area	276.61
		2.	External Dump	
			(a)KTK OC Sector - I Dump	143.54
			(b)Voids of KTK OC Sector - I	156.40
			(c)KTK OC - 2 Dump	64.43
		3.	Service Buildings	8.70
		4.	Diversion of Road	5.33
		5.	Diversion of Nallah	9.93
			Total within the ML area	664.94

		Built up area outside ML area	3.29	
		<b>Total Area</b>	<b>668.23</b>	

- xiv. The total geological reserve is 25.68 MT. the mineable reserve is 18.65 MT; extractable reserve is 17.00 MT. the per cent of extraction would be 72.62%.
- xv. The coal grade is G 9. The stripping ratio is 13.41 Cum/tone. The average Gradient is 1.0 in 3.0. There are 15 seams present of which 11 seams are workable with the thickness ranging upto 16.45 m
- xvi. The total estimated water requirement is 1430 m<sup>3</sup>/day. The level of ground water ranges from 0.030 m to 14 m.
- xvii. Method of mining: Opencast with shovel-dumper combination.
- xviii. There is one external OB dump with Quantity of 258.97 M. Cu.m in an area of 364.37 Ha with height of 120 m above the surface level and one internal dump with the Quantity of 67.17 M.Cu.m in an area of 130.54 Ha.
- xix. The final mine void: Area is 224.98 Ha with depth of Ground level and the total quarry area is 224.98 Ha. Backfilled quarry area of 224.98 Ha shall be reclaimed with plantation.
- xx. The life of mine is 15 years
- xxi. Transportation: coal transport in pit by dumpers; surface to sliding by truck; sliding to loading by truck.
- xxii. R&R is involved and there are 200 PAFs.
- xxiii. Cost: Total capital cost of the project is 397.09 Crores, 3% of average net profits of the company made during last three years were allocated for CSR at company level. R & R cost is 157.98 Crore, Environmental Management Cost is Rs 4.80 Crores.
- xxiv. Water body : One seasonal Nallah No. 1 is passing over the mine lease area and the same will be diverted along the boundary of the project, over a length of 3.25 Km
- xxv. Approvals: Ground water clearance to be applied. Mine plan is under preparation Mine closure plan is an integral part of Mining plan.
- xxvi. Wildlife issues: there is no national park, wildlife sanctuary, biosphere reserves found in the 10km buffer zone.
- xxvii. Forestry issues: There is no forest area involved for mining.
- xxviii. Total afforestation plan: 628.53 Ha, Green belt is 11.85Ha, Density of tree plantation is 2500plants/Ha
- xxix. There are no court cases/violation pending with the project proponent.
- xxx. Public hearing: Public hearing will be held after preparation of Draft EIA/EMP report.
- xxxi. Project specific Impact: One road belongs to SCCL leading to KTK 1 & 1A mine from Jangedu to Bhoopalpalli road is passing over the proposed quarry area and the same will be diverted along the boundary (3.00 Km) and connected to existing road. Gadiganipalli Village falling in the proposed quarry needs to be relocated. PDFs: 922 and PAFs 125 involved in the R&R of proposed project. One Seasonal Nallah No. 1 is passing over the quarry area and the same will be diverted along the boundary of the quarry over a length of 3.25 Km. Two tanks namely NallaCheruvu tank and Errakunta tank present in core area (already breached for KTK 2 & 2A Underground operations).
- xxxii. Base Line Data was collected during winter season (December 2014 to February 2015) for early

preparation of EIA/EMP.

**35.9.2 The Committee, after detailed deliberations recommended the proposal for grant of TOR subject to preparation of EIA/EMP Reports as per the model TOR issued by MOEFCC and posted on the website of the Ministry. In addition, the Committee recommended the following specific TORs:**

- i. As the surface water bodies feeds the Nalags / tanks, impact of mining activities on the drainage channels needs to be assessed. Measures should be taken to divert the drainage channel in such a manner that the current scenario can be replicated in the non-bearing area so as to benefit the local community.
- ii. Feasible and time bound plan for rehabilitation of Project affected people.

**35.10 Pichri OCP (1.20 MTPA Normative to 1.50 MTPA Peak in a project Area 151.47 Ha; Latitude 23° 45' 00'' to 23° 45' 50''N and Longitude 86° 01' 00'' to 86° 02' 30''E) of M/s Central Coalfields Limited, Dist. Bokaro, Jharkhand- TOR -further consideration.**

35.10.1 The proposal is for Pichri OCP (1.20 MTPA Normative to 1.50 MTPA Peak in a project Area 151.47 Ha; Latitude 23° 45' 00'' to 23° 45' 50''N and Longitude 86° 01' 00'' to 86° 02' 30''E) of M/s Central Coalfields Limited, Dist. Bokaro, Jharkhand. The proposal was last considered in the 31<sup>st</sup> EAC meeting held on **16<sup>th</sup> -17<sup>th</sup> February, 2015. The Committee, sought following information for further consideration of the project:**

- i. Reasons for not applying earlier for Forest Clearance.
- ii. Why land details were made available in last quarter of 2014?
- iii. Chronology of events from inception.
- iv. Reasons for the delay in its activity w.r.t. environment and forest clearance.

35.10.2 The proponent made the presentation and informed that :

- i. **Chronology of events since inception:** PR of Pichri OCP approved by CCL Board on 27.11.2010; Form-I submitted in January, 2011; EAC meeting held on 28.03.11 & 30.08.11; for formulation of FC application of 23.02 Ha of forest land in the project boundary, Divisional Office, Bokaro was contacted on 12<sup>th</sup> September, 2011 wherein it was found that there is no Protected/ Reserve forest land in Pichri OCP; TOR prescribed on 30.09.2011. Environmental Baseline data generated in Mar-Jun, 2012; While preparing EMP, the land schedule of the Project was collected from L&R Department, which indicated that there may be presence of GMK (JJ) over 23.02 Ha in Project Boundary; Draft EMP submitted in June 2013; PH held on 04.10.13. Minutes of PH received on 31.10.13; The state revenue authorities were requested to verify if the area of 23.02 Ha falling in Pichri OCP land is revenue forest/ GMK (Jungle Jhari) or not. The details are yet to be received; Accordingly EMP submission held up for want of FC (23.02 Ha forest land); Form-I submitted on 18.12.2014 with revised non-forest area for fresh TOR; Revised mine plan approved by CCL Board on 21.12.2014; EAC meeting held on 16.02.2015, in which members desired clarification; Reply submitted on 27.04.2015.

- ii. **Reasons for not applying for forest clearance:** The matter was taken up with state government officials in September, 2011 for forest land details so that application for FC can be initiated. For formulation of FC application of 23.02 Ha of forest land in the project boundary, Divisional Office, Bokaro were contacted on 12<sup>th</sup> September, 2011, wherein it was found that there is no forest (PF/RF) land in Pichri OCP. The state revenue authorities were requested to verify if the area of 23.02 Ha falling in Pichri OCP land is revenueforest/GMK (jungle Jhari) or not. Based upon forest land details, as per the revised working plan of Bokaro Forest Division, received at the end of 2014 there is no PF / RF in Pichri OCP. The state revenue authorities were again requested to verify if the area of 23.02 Ha falling in Pichri OCP land is revenueforest/GMK (jungle Jhari) or not. The details are yet to be received.
  - iii. **Why land details were made available in last quarter of 2014?:** Based upon forest land details of BokaroForestDivision received at the end of 2014, there is no Protected Forest/ Revenue Forest land in Pichri OCP. The state revenue authorities were again requested to verify if the area of 23.02 Ha falling in Pichri OCP land is revenueforest/GMK (jungle Jhari) or not. The details are yet to be received.
  - iv. **Reasons for the delay in its activity w.r.t. EC and FC:** While finalising EMP, 23.02 Ha of forest land became an issue in view of MOEF's OM No J-11015/200/2008-IA.II (M) dated 31.03.11 and related OMs. The matter was taken up with state government officials for land details so that application for FC can be initiated. Due to delay in confirmation of presence of 23.02 Ha forest land in Pichri OCP, the submission of Final EIA & EMP was held up. In view of uncertainty of category of land marked as forest (PF/ RF or GMK Jungle Jhari) the revised mine plan / prefeasibility report was prepared after excluding the forest land and some non-forest land in immediate vicinity. The revised mine plan was approved and revised form-I, without forest land, was submitted to MoEF&CC online in December 2014.
- 35.10.3 The proponent has also mentioned that they have collected baseline data from March to June, 2012 and have gone ahead with PH held on 04.10.2013. On issuance of the TOR they would like to submit the revised EIA/EMP report to the Ministry.
- 35.10.4 The Committee after detailed deliberation recommend the project for granting sstandard TOR without another Public Hearing for submission of revised EIA/EMP report.**
- 35.11 Bijari OCP of (1.5 MTPA normative and 2.25 MTPA peak in an ML area of 269.025 ha; latitude 20<sup>0</sup> 15' 28" to 20<sup>0</sup> 15' 49" North and longitude 83<sup>0</sup> 20' 59" to 83<sup>0</sup> 22' 37" East) M/s South Eastern Coalfields Limited, Dist., Raigarh, Chhattisgarh – (EC based on TOR granted on 18.11.2008) - Further Consideration.**
- 35.11.1 The proposal is for Bijari OCP of (1.5 MTPA normative and 2.25 MTPA peak in an ML area of 269.025 ha; latitude 20<sup>0</sup> 15' 28" to 20<sup>0</sup> 15' 49" North and longitude 83<sup>0</sup> 20' 59" to 83<sup>0</sup> 22' 37" East) M/s South Eastern Coalfields Limited, Dist., Raigarh, Chhattisgarh. The proposal was last considered in the 19<sup>th</sup> EAC meeting held on 13<sup>th</sup> -14<sup>th</sup> August, 2014 and 29<sup>th</sup> EAC meeting held on 15<sup>th</sup> -16<sup>th</sup> January, 2015. The Committee, sought following information for further consideration of the project:

- i. The drainage pattern from Hilly area to the ground area be studied and report submitted.
- ii. The major channels all around the site be presented and should generally not be altered.
- iii. Details are submitted with regards to OBD.
- iv. Reasons for the Baseline data being close to the limit specified.
- v. The modelling details for dispersion of pollutants viz. PM<sub>10</sub>& PM<sub>2.5</sub> be furnished
- vi. All Roads shall be Black Topped. The Railway corridor shall be functional in 3 years as stated by the Proponent.
- vii. The AAQ monitoring be repeated so as validate earlier results. Action plan, with technological intervention, for reducing AAQ be framed as presented.
- viii. Mechanically covered trucks deployment status for coal transportation.
- ix. Wild life Conservation Plan be prepared.
- x. All Statutory permissions / MoU from Sate Govt. shall be obtained for transportation of coal by road.
- xi. Construction of wider road with a separate lane for the light vehicles will be made which will reduce the possibility of the road accident
- xii. Necessary arrangements for water spraying will be done on the road of affected area by tanker mounted sprinklers.
- xiii. Due precautions shall be taken as per Director General of Mine Safety (DGMS) Circulars/guidelines. Latest blasting techniques will be adopted to keep Peak Particle Velocity (PPV) within permissible limit to avoid any damage to the house. In case there is any complaint regarding damage to any houses due to blasting, matter shall settled down in consultation with State Government Authorities.
- xiv. Check dams / water tanks (Talab) shall be provided for rain water harvesting under Community development in the surrounding villages. Budgetary provision of an amount of Rs. 50.00 Lakhs has been agreed to be kept for this purpose.
- xv. Coal transportation by trucks of higher capacity shall be deployed to reduce vehicular pollution.
- xvi. SECL shall take up widening and strengthening of 18 Km public roads, in consultation with State administration. Avenue plantation and road side plantation shall be done wherever feasible.
- xvii. Fixed sprinklers in addition to mobile sprinklers shall be provided for suppression of dust.

35.11.2 The proponent made the presentation and informed that :

- i. The drainage pattern from Hilly area to the ground area of Bijari OC project has been studied by CMPDIL. A drainage pattern existing in the core and the buffer zone of the proposed Bijari Opencast Project along with the demarcation of hilly and ground area is shown in Plate No. 1 of EIA/EMP report. (Enclosed as Annex 2). Plan clearly shows that the northern part of the study area is dominated by Hilly area. The Hilly area is situated about 1.5 Km away from the mine boundary in the north, north-eastern and north-western side. Undulated ground area is present from the basement of the hill area and extends towards south. The overall slope of the ground area is towards south-west direction. The drainage is mainly dendritic in nature. Mostly the 1<sup>st</sup> order streams have been generated from the hill top, which merge to become 2<sup>nd</sup> order streams and flow along the hill slope and finally reaches to the ground area. In the ground area the 2<sup>nd</sup> order streams meet with each other and form higher order streams and finally merge with Kurket River. The drainage pattern

in the area is controlled by Kurket River which starts beyond the hilly area in the north and flows through a valley, cut in the hill ranges. The river flows from North to South-West. The river is perennial in nature and joins with Mand River, the master drainage in the area. Mand river flows far beyond (>50kms) from the mine boundary. The Kurket River drains close to the mine block around 03 Kms west from the mine boundary. JobnarNala is flowing along the eastern boundary of the mine. Bhalumaranala, a tributary of Kurket river drains close to the western boundary of the proposed mine area.

ii. Proponent will not alter the major channels all around the site.

iii. **OB Management has been revised. Details are as follows:**

SECL in consultation with CMPDIL, RI-V re-exercised the matter of OB dump management. The options have been given below:

1. It is submitted that ZERO VOID is not feasible; however it will be kept at the minimum possible.
2. As per approved Project report of Bijari Opencast mine, total volume of OB has been estimated as 47.80 Mcum. The OB removed during initial years will be placed beyond the incrop of seam XI (bottom). The total volume of external dump has been estimated as 2.60 Mcum. Rest of the OB will be placed in internal dumps. The internal dumping (as has been estimated as 45.20 Mcum) will start when about 200 m working space is available on quarry floor. By adopting the proposed sequence of mining, as the quarry advances, the height of external dump will be restricted to 25.00 m as against earlier proposed 45.00 m. Similarly internal dump height will also be restricted to 25.00 m.

**Dump Management:**

<b>Scenario I : Post mining : No re - handling of dumps</b>					
Height of dump above G.L. (mtrs)		Vol. of dump (Mm <sup>3</sup> )		Area of void in Ha	Depth of void (mtrs)
External dump	Internal dump	External dump	Internal dump		
45 m	45 m	2.60	45.20	36.363	61.40m
Three Tier Dumping with 15m each dump height					
<b>Scenario II : Post mining: re - handling of dumps and management of void</b>					
Height of dump above G.L. (mtrs) after filling void		Total Vol. of dump to be re-handled (Mm <sup>3</sup> )	Total cost of re-handling (Rs in Lakhs )	Balance Vol. of void (Mm <sup>3</sup> )	Depth of void (mtrs)
External dump	Internal dump				
25.00	25.00	1.224	538.56	19.086	40m
Two Tier Dumping with 12.50m each dump height					

- iv. Bijari Opencast project is a Greenfield project. Presence of active mine (Baroud OCP), adjacent to its western boundary and hilly area within 1.5 Km of its north & north – eastern boundary, might be contributing pollutants close to the limit. In view of the above, the following long term & short term pollution control have been proposed. Proposed measures are enumerated below:

**Long Term:**

- a) Green belt to be created all around the periphery of the project, as soon as the land for the project is acquired, i.e. plantation for the purpose to be completed latest within three years from commencement of production at this project.
- b) Gas connection to be provided to affected people.
- c) Construction of black topped roads.
- d) A Study shall be initiated by a reputed scientific institution so as to establish the source and the contribution of PM10 to the environment. The recommendations of the study shall be implemented.
- d) Fixed sprinklers shall be made operative within one year and need to be extended with advancement of project.
- e) Financial provision for an amount of Rs. 898.85 lakhs has been kept under the head of Environmental Protection measures for Bijari OCP.

**Short Term:**

- a) Mobile sprinklers to be provided before commencement of production at this project.
  - b) A critical analysis shall be done for nearby project of SECL and compliance of conditions shall be reviewed and further strengthening of mitigative measures shall be ensured.
  - c) Transportation of coal by tarpaulin covered trucks shall be undertaken.
- v. AAQ modeling based on ISCST-3 (AERMOD VIEW version 8.2.1), USEPA has been used for assessment of impact on ambient air quality at 6 monitoring stations termed as receptors, namely, A1, A2, A3, A4, A5 & A6 and 7 additional receptor locations, namely R7 – R13 due to peak production of 2.25 MTY for Bijari OCP, Raigarh area, SECL. Refer supplemented AQIM Input-Output data of EIA/EMP report.
- vi. All Roads shall be Black Topped. The Railway corridor shall be functional in 3 years as stated by the Proponent.
- vii. AAQ monitoring on the same stations have been carried out in January 2015 and March 2015 found within limit. In addition to the protective measures against air pollution proposed in EIA/EMP, formation of green belt is proposed by plantation around the excavation area.
- viii. Efforts shall be made to explore the availability of mechanically covered trucks. The concerned departments of SECL have been requested to explore the possibility.
- ix. A Comprehensive plan for Conservation of flora & fauna for Bijari OC has been prepared & submitted to PCCF (Wild life), Chhattisgarh vide General Manager, Raigarh area letter no. SECL/GM/2014/332 dated 22/23.08.2014 for approval (copy enclosed as annexure-2). Approval awaited. Copy of the Comprehensive plan for Conservation of flora & fauna for Bijari OC has been submitted to the MoEFCC vide our letter no. SECL/BSP/Env/Bijari OC/14/5635 dated 21/22.10.2014.

- x. All Statutory permissions / MoU from State Govt. shall be obtained for transportation of coal by road.
- xi. Construction of wider road with a separate lane for the light vehicles will be made which will reduce the possibility of the road accident.
- xii. Necessary arrangements for water spraying will be done on the road of affected area by tanker mounted sprinklers. Financial provision for an amount of Rs. 50.00 lakhs has been kept under the head of Community development under CSR in surrounding villages & Rs. 23.00 lakhs for Dust suppression arrangement.
- xiii. Due precaution shall be taken as per Director General of Mine Safety (DGMS) Circulars / guidelines. Latest blasting techniques will be adopted to keep Peak Particle Velocity (PPV) within permissible limit to avoid any damage to the houses. In case there is any complaint regarding damage to any house's due to blasting, matter shall be settled down in consultation with State Government Authorities.
- xiv. Check dams / water tanks (Talab) will be provided for rain water harvesting under Community development / CSR in the surrounding villages. Financial provision of an amount of Rs.50.00 lakhs has been kept for this purpose.
- xv. Presently, there is no railway siding available for Bijari OCP. However, the proposed **East Rail Corridor** (dedicated for coal transportation) would cater to this project in the near future. The work for this corridor has already started and the proposed year of commissioning of this corridor is 2017-18. After commissioning of this rail corridor 100% coal production of Bijari OCP would be transported by rail only. However till the commissioning of the proposed East rail corridor, the coal would be transported to the nearest railway siding i.e Robertson siding, situated at a distance of 50Km from Bijari OC, by tarpaulin covered trucks.

**Scheme for widening and strengthening of transportation road (State highway)**

At present, in the area two mines namely Baroud OCP (3.5MTPA) & Jampali OCP (3MTPA) are operating mines. Coal transportation route plan is enclosed as Plate no.-3. The part of road connecting Bijari OCP & Robertson Railway Siding is a state highway (about 10km) and the remaining is SECL road (Chhal, kharsia road). At present, coal of nearby mines is being transported to Robertson railway siding using 25 ton. Capacity trucks. The gross vehicle weight of these trucks is around 40 tons. Considering the above capacity it appears that further increase of truck capacity may not be suitable to the existing road conditions. However to increase of truck capacity upto 40tons for coal transportation **“A scheme has been prepared for widening and strengthening of transportation road”**. Details are as follows:

1. Name of State highway- Gharghoda bypass to Kosamghat. Approx dist. 18.6 kms (shown as AB in plan)
  - a) Proposed widening of road from 5.5 to 7.0 meters and strengthening/ widening of culvert.
  - b) Total financial involvement Rs. 35.00 crores (approx)
  - c) Present status- Construction of road will be accounted under CCDA. NOC from state PWD is in process
2. Under CCDA, the following roads of 7.0 meters has already been constructed:
  - a) Gharghoda bypass to Robertson siding- 40 kms (shown as BCDEF in plan).
  - b) Chhalchowk to chorha- 20 Kms. (shown as FEH in plan)

3. Chhalchowk (in between Dharamjaygarh and Chhal) to Hati- 22kms (shown as FG in plan)
  - a) NOC obtained from PWD. Proposal is processed under CCDA for an amount of Rs.23.00 crore (Approx).

**Calculation of traffic load (number of truck for Bijari coal transportation):**

- Peak production capacity of Bijari OCP was approved as 2.25Mty.
  - No. of working days considered in PR/per year = 330days.
  - Expected peak Coal production per day= $2250000/330 = 6819$  TPD.
  - Single truck capacity considered as = 25 tons.
  - Cycle time for 50kms distance was considered as = 3hours 30minutes/truck (75+75+30+30 minutes=3.5 hours).
  - Considering only day time transportation, working hours per truck was taken as 10 hours.
  - Considering the above working hours and cycle time trips per truck in 10hours will be =  $10/3.5 = 2.9$  say 3 trips/truck.
  - That means one truck transportation capacity in 3 trips =  $3 \times 25 = 75$  tons.  
Therefore number of trucks required to handle per day peak production =  $6819/75 = 90.92$  say 91 trucks/day.
- xvi. A scheme has been prepared for widening and strengthening of transportation road.
- xvii. Agreed, fixed sprinklers in addition to 06 nos. of mobile sprinklers shall be provided for suppression of dust. Financial provision for an amount of Rs. 898.85 lakhs has been kept under the head of Environmental Protection measures for Bijari OCP.

**35.11.3** EAC received a representation from one of the NGOs requesting Ministry to address issues which were sent in the month of January, 2015. Those issues were considered in the last EAC.

**35.11.4 The Committee after detailed deliberation recommended the project for granting EC subject to the following specific conditions:**

- i. An institute of repute should be engaged to assess impact of AAQ in the area both short & long term measures and evolve strategies to minimize dust pollution. Remedial measures recommended through the study should be implemented within six months.
- ii. The conservation plan for preserving flora and fauna prepared by the PP should be reviewed by Wildlife Institute Dehradun and PCCF within three months.
- iii. Green belt should be developed all along the approach road on either side in consultation with the district authorities.
- iv. Coal should be dispatched by rail by 2017 through the Eastern Corridor which is under construction.
- v. As more than 5 MT of coal is envisaged to move from the mine through the rail wagons, Committee also recommended loading through silos.

**35.12 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, West Bengal - (EC based on TOR granted 13.01.2012& TOR Extn. on 11.03.2014)-further consideration.**

35.12.1 The proposal is for 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, West Bengal. The proposal was last considered in the 27<sup>th</sup> EAC meeting held on **18<sup>th</sup> -19<sup>th</sup> December, 2014**. **The Committee recommended the project for granting EC** without the New Kenda OC Patch. And suggested proponent to revert back for this patch after the study on Socio-economic on New Kenda OC Patch is completed. The proponent carried out the Socio-economic study on New Kenda OC Patch and requested Ministry to consider the project as a whole. The proponent made the presentation and informed that:

- i. **Reassessment** done to reduce the total land requirement. Long term impact on mining pattern, conservation of coal, safety, as well as Socio economic pattern was studied. Accordingly production capacity life and other technical parameters was readjusted .Impact on agricultural land was also studied. Socio economic pattern in the core and buffer zone was studied. Social Cost and Benefit Analysis was made.
- ii. **Land requirement** for mining reduced from 240 Ha to 169.5 Ha. Agricultural land requirement reduced from 110 Ha to 73 Ha Most of the land to be used are already acquired by ECL and partially degraded. Extraction of 13.6 MT of coal by OC method as proposed will further facilitate the safe extraction of 25.80 MT of virgin coal blocked in the lower seams. Hence the total reserve to be mined out will be 39.40 MT. With the above consideration, the specific coal reserve per Ha of land requirement increased from 0.80 LT to 2.30 LT.The quality of coal (G4/G5) is much superior to the average Indian O/C mining projects. The project will provide employment to 150 land losers. About 500 families will also be rehabilitated. The cost benefit analysis comes to about 1:34
- iii. Re-assessment has been made as given under-

Sl.No.	Particulars	As per original proposal	Re-assessed
1	Quarry area	240 Ha	169.5 Ha
2	Land available with ECL	91.28 Ha	47.32 Ha
3	Land to be acquired	148.72 Ha	122.18 Ha
4	Reserves available for mining	22 MT	13.6 MT
5	OB to be generated	211 MCum	105.8 MCum
6	Capacity	3.9 MTY	1.2 MTY
7	Life	8 Years	12 Years

- iv. **Justification of the project from the point of view of Conservation of Coal** : 13.6 MT of B to D Grade coal blocked in pillars of R-V and R-VI seams since long from underground mining carried out in the past . Both the seams are extensively developed & standing on pillars and at some places it has been depillared also by caving method. Possibility of fire is high due to illegal mining. Underground mining (depillaring of the standing pillars) is not feasible due to safety concerns. Another virgin R-VIIB seam cannot be worked in isolation due to low thickness by UG Method. As per the proposed revision in the project parameters, the total land requirement for quarry is now 169.5 ha as against 240 Ha proposed earlier.
- v. **Impact due to loss of agricultural land:** The total agricultural land falling within the proposed project is 73.10 Ha (180.5 acres). Paddy is sown once in a year and the yield ranges from 12 to 18 quintals per acre. Thus, a maximum of (180.5 x 18) 3248 quintals of paddy can be produced per year which will fetch a price of about 40 lakh / annum at current market price. Considering an input cost of 30 Lakh per annum, the total income generated from paddy cultivation is Rs 10 lakh per annum.
- vi. **Observations & Conclusion:** It is observed that social benefit incurred from the project exceeds the social cost by a ratio of about 1 : 34. The employment generation for land oustees along with proper compensation and R&R will go a long way in improving the overall standard of living of the locals. Along with this, the efforts put in through CSR in areas such as education, health care, infrastructure which is an inherent policy of the company, will have a positive impact on the socio-economic status thereby leading to improvement of living standards. Several underground mines are being proposed to reduce impact on land. However, with respect to the current project proposal, it is essential to adopt opencast method to enable future underground mining in the area. Complete reclamation and converting the entire 169.5 Ha of backfilled quarry area to grass land will have a positive impact on the environment.
- vii. **CSR Initiatives in the Area:** IIT Agrarian project and Vocational Training. Agrarian Skill Development initiatives are being taken by establishment of such centres at villages falling in the buffer zone of the project with the help of IIT Kharagpur.

**35.12.2** EAC received a representation from one of the NGOs requesting Ministry to address issues which was sent in the month of December, 2014. It was noted that issues raised in the representation were considered in the last EAC.

**35.12.3 The Committee after detailed deliberations recommended the project including New Kenda OC Patch for granting EC subject to following specific conditions:**

- i. The Socio-economic study conducted by PP did not appear to be adequate. The committee was of the considered view that the same needs to be authenticated by an institute of repute such as Indian Institute of Forest Management / XLRI, Jamshedpur.

**35.13 Expansion of Mangrol Valia Opencast Lignite Mine Project (from 4.2 MTPA to 7.4 MTPA and expansion in ML area from 2080 ha to 3019 ha; Latitude 21° 26'03'' N - 21° 31'10'' N and Longitude 73°06'58'' E - 73°13'44 '' E) of M/s Gujarat Industries Power Company Ltd., located in Tehsil Mangrol and Valia in districts Surat and Bharuch, Gujarat- (EC based on TOR granted on 11.01.2012 /TOR Extn 21.05.2014).**

35.13.1 Project proponent informed the Ministry to postpone the presentation for next EAC meeting. The project was therefore deferred.

**35.14 Coal Beneficiation Plant of 1 MTPA capacity in a project area of 3.5 Ha; Latitude 21°21'33.12"N and Longitude 81°39'22.02"E)of M/s Shree NakodaIspatLimited, located in Plot No. 109 and 75 in Siltara Industrial Growth Centre, district Raipur, Chhattisgarh – (EC amendment)– further consideration.**

35.14.1 The proposal is for amendment to EC for Coal Beneficiation Plant of 1 MTPA capacity in a project area of 3.5 Ha; (Latitude 21°21'33.12"N and Longitude 81°39'22.02"E) of M/s Shree NakodaIspat Limited, located in Plot No. 109 and 75 in Siltara Industrial Growth Centre, district Raipur, Chhattisgarh. Background to the proposal is as follows:

- a. M/s Shree Nakoda Ispat Ltd. Is operating a Sponge iron plant at Siltara Industrial Area, Raipur and applied for EC for 1 MTPA Coal Beneficiation Plant within the sponge iron plant premises.
- b. Environmental Clearance for the Cola Beneficiation Plant (1 MTPA) at Siltara Industrial Growth Center, Raipur, Chhattisgarh was granted by MoEF vide letter No. J-11015/473/2008-IA.II (M) dated 10<sup>th</sup> February, 2010.
- c. As per EC Specific Conditions : Specific Condition No.2 (A) (ii) : “The Circulating Fluidized Bed Combustion (CFBC) based Thermal Power Plant (TPP), which would entirely use the coal rejects from washery, shall be established within one year of commissioning of the washery and with prior environmental clearance”.
- d. Specific Condition No: 2 (A) (x): “The entire coal waste rejects shall be utilized in the linked CFBC based TPP located at within their plot and transported from the washery to TPP by closed conveyors”.
- e. Department of Industry and Commerce, Government of Chhattisgarh, Raipur (C.G)) has imposed a ban on setting up of new sponge iron and coal based thermal power plants in Uria, Sitara and Borzara industrial areas in Raipur vide its letter No.783/203/07/11/- dated 16.03.2007 and subsequent letter vide lette NO. 3529/205/11/- dated 12.12.2007.
- f. As a result, it is not possible to establish a Circulating Fluidized Bed Combustion (CFBC) based Thermal Power Plant (TPP) in the Coal Beneficiation Plant Premises for in-house utilization of the coal rejects generated from the coal beneficiation plant.
- g. Chhattisgarh Environment Conservation Board (CECB), Raipur, has sought to obtain necessary amendment in the environmental clearance issued by MoEF regarding use of reject coal vide Condition No. (10) of the Consent to Operate under Air (P&CP) Act, 1981.

- h. For this reason, we have applied to MoEF for deletion of the Specific Condition No. 2(A) (ii) & 2 (A) (X) in Environmental Clearance for the Project.
- i. The Coal Beneficiation Plant is already constructed and is yet to commence operation for want of amendment in EC.

**35.14.2** The proposal was last considered in the 27<sup>th</sup> EAC meeting held during **18<sup>th</sup> -19<sup>th</sup> December, 2014. The Committee sought following information for further consideration:**

- i. Details of disposal of rejects including the end users with the MoUs to be submitted.
- ii. Details of transportation of coal and rejects, the traffic density vis-à-vis increase; in the pollution load and pollution control measures to be submitted.

35.14.3 The proponent made the presentation and informed that :

- i. M/s SNIL has made MoUs for utilisation of coal washery rejects with various industries operating in Siltara and Urla Industrial Estates located in the vicinity of the project.

<b>Sr. No.</b>	<b>User Industry</b>	<b>Agreement Quantity for coal rejects</b>
1	M/s Alok Ferro Alloys Ltd., Urla Industrial Complex, Raipur (8 MW TPP)	2938 Tonnes/Month = 35,256 TPA
2	M/s Godavari Power & Ispat Ltd., Siltara Industrial Area, Raipur (18 MW TPP)	6129 Tonnes/Month = 73,548 TPA
3	M/s Hira Ferro alloys Ltd., Urla Industrial Complex, Raipur (20 MW TPP)	7345 Tonnes/Month = 88,140 TPA
4	M/s Hira Power & Steels Ltd., Urla Industrial Complex, Raipur (20 MW TPP)	7345 Tonnes/Month = 88,140 TPA
5.	M/s Jagdamba Power & Alloys Ltd., Phase II, Siltara Raipur Chhattisgarh (25 MW TPP)	9188 Tonnes/Month = 1,10,256 TPA
	<b>Total MoU capacity</b>	<b>3,95,340 TPA</b>
	<b>Expected Amount of Coal reject Generation</b>	<b>~3,00,000 TPA</b>

ii. Details of the transportation route and corresponding traffic load is given below:

Sr. No.	Name of Industry	Road type with Length	No. of trips required per day*
1.	M/s Alok Ferro Alloys Ltd., Urla Industrial Complex, Raipur	Siltara Ind. Estate Road : 1.55 km, NH-200: 4.10 km, Urla Industrial Estate Road: 5.90 km <b>Total : 11.55 Km</b>	4 trips / day
2	M/s Godavari Power &Ispat Ltd., Siltara Industrial Area, Raipur	Siltara Industrial Estate Road : 4.80 km <b>Total: 4.80 Km</b>	8 trips / day
3	M/s Hira Ferro alloys Ltd., Urla Industrial Complex, Raipur (20 MW TPP)	Siltara Industrial Estate Road : 1.55 km NH-200: 4.10 km, Urla Industrial Estate Road: 5.80 km, <b>Total: 11.45 km</b>	8 trips / day
4	M/s Hira Power & Steels Ltd., Urla Industrial Complex, Raipur (20 MW TPP)	Siltara Industrial Estate Road : 1.55 km NH-200: 4.10 km, Urla Industrial Estate Road: 5.10 km, <b>Total: 10.75 km</b>	8 trips / day
5	M/s Jagdamba Power & Alloys Ltd., Phase II, Siltara Raipur Chhattisgarh (25 MW TPP)	Siltara Industrial Estate Road : 2.7 km <b>Total: 2.7 km</b>	12 trips/day
	<b>Total</b>		<b>40 trips/day*</b>

\* No. of trips calculated based on MoU capacity

Effect on Overall Traffic Load due to Reject Coal Transport: At present, the industries, with which M/s SNIL has made MoU for utilisation of washery rejects, are utilizing ROM coal from the SECL mines transported upto Siliyari Railway siding and from there by Road (NH-200) upto the plant covering a distance of about 25 km. The use of washery rejects from coal washery will reduce the ROM coal requirement in these industries and consequently will reduce the traffic load required for transportation of the ROM coal from various places which will have to cover more than 100 km distance (Rail + road) to reach the plant site. This will be reduced by supplying washery rejects covering less than 12 km distance to the plants.

### Calculations for Net Incremental Traffic Load

Sr. No.	Name of Industry	No. of Trips for rejects transport	No. of trips reduction for raw coal transport	Net incremental traffic load
1	M/s Alok Ferro Alloys Ltd., Urla Industrial Complex, Raipur	4 trips / day	2 trips/day	2 trips/day
2	M/s Godavari Power & Ispat Ltd., Siltara Industrial Area, Raipur	8 trips / day	5 trips/day	3 trips/day
3	M/s Hira Ferro alloys Ltd., Urla Industrial Complex, Raipur	8 trips / day	5 trips/day	3 trips/day
4	M/s Hira Power & Steels Ltd., Urla Industrial Complex, Raipur	8 trips / day	5 trips/day	3 trips/day
5	M/s Jagdamba Power & Alloys Ltd., Phase II, Siltara Raipur	12 trips/day	7 trips/day	5 trips/day
	<b>Total</b>	<b>40 trips/day</b>	<b>24 trips/day</b>	<b>16 trips/day</b>

The net increase in traffic load for rejects transport is estimated to be 16 trips/day, which will be about 1-2 trips/hour.

**Air Pollution Control Measures for Additional Traffic Volume:** Transportation of washery rejects in trucks covered with tarpaulin. Overloading of trucks will be strictly prohibited. Trucks shall be maintained spillage proof. Periodic maintenance of transport trucks to control emissions. Speed of the transport trucks will be regulated. Reject transport will be carried out during non-peak hours. Periodic maintenance of internal roads within industrial estate in association with CSIDC. Plantation along internal road side within industrial estate in association with CSIDC.

**35.14.2 The Committee noted during the discussion, that such rejects can be utilized in only specialized boilers such as CFBC. After detailed deliberations, the Committee sought the following additional information for further consideration:**

- i. Confirmation from units with whom MoU has been signed for taking the rejects from Coal Washery that they have a CFBC boiler.
- ii. Confirmation that the units are operating with a valid consent to operate from Chhattisgarh SPCB and valid EC under EIA Notification, 2006.

**35.15 Amlohri Opencast Expansion Project of (Normative 10 MTPA to Peak 14 MTPA in an ML area 2175 Ha; latitudes 24<sup>0</sup> 07' 30" to 24<sup>0</sup> 09' 30" North and Longitudes 82<sup>0</sup> 34' 30" to 82<sup>0</sup> 36' 30" EAST) M/s Northern Coalfields Limited, located at dist. Sidhi, Madhya Pradesh – (EC under 7 (ii) of EIA Notification, 2006)- further consideration.**

35.15.1 The proposal is for Amlohri Opencast Expansion Project of (Normative 10 MTPA to Peak 14 MTPA in an ML area 2175 Ha; latitudes 24<sup>0</sup> 07' 30" to 24<sup>0</sup> 09' 30" North and Longitudes 82<sup>0</sup> 34' 30" to 82<sup>0</sup> 36' 30" EAST) M/s Northern Coalfields Limited, located at dist. Sidhi, Madhya Pradesh The proposal was last considered in the 23<sup>rd</sup> EAC meeting held on **16<sup>th</sup> -17<sup>th</sup> October, 2014. The Committee sought the compliance report of the RO, MoEFCC for further consideration.**

35.15.2 **EC Compliance Report** issued vide letter no. 3-11/2006(ENV)/241 dated 05.05.2015 of the, Regional Office, MoEFCC at Bhopal was deliberated in the EAC meeting. The Committee has noted the Action taken for compliance by the PP which, inter alia, is as follows:

- i. Proponent has submitted Ground water monitoring report.
- ii. The digital processing of the entire lease area using remote sensing techniques has been submitted to the RO, MOEFCC
- iii. Regular AAQ monitoring of RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub> was being carried out by CMPDIL at four stations. Submitted Environmental monitoring report to RO, MOEFCC, Bhopal.
- iv. Industrial wastewater (workshop and waste water from the mine) was being collected & treated in the ETP. Two oil and grease traps (one at workshop & one at ETP) have been provided for removing oil & grease from water.
- v. A well-established laboratory of CMPDI is dedicated to NCL mines and the project is within 5 km distance. Two small labs has been working at STP and ETP, moreover MPPCB, Waidhan is also monitoring samples in its lab.
- vi. A separate Environment Management Cell with suitable qualified personnel has been set-up at head quarter level. The team is headed by G.M. (Env.) who is assisted by Civil Engineers, Chief Chemists etc. who report to Director (Tech). Such setup has also been made at project level in consultation with civil dept.
- vii. Consent Order (CCA) No. AW44217 granted by MPPCB on 17.04.2015 valid up to March, 2017.has been submitted.

35.15.3 The proponent made the presentation and informed that :

- i. There is potential to increase the production to meet the coal requirement of the power plants.
- ii. The installed capacity of NTPCs Rihand power plants has increased.
- iii. The proposed expansion from 10 MTY to 14 MTY is to meet the demand of Rihand Thermal Power Station having generation capacity up to 3000 MW. The average daily demand is 45,000 tonnes/day & peak demand is 60,000 tonnes/day. Presently, the supply from Amlohri OCP is about 30,000 tonnes/day.
- iv. Last year ie in March 2015 the project had achieved the EC capacity of 10 MTY although there was potential to produce more in this project.

**35.15.4 The Committee after detailed deliberation sought the following additional information for further considerations:**

- i. Discrepancy in the basic information and presentation made before EAC with respect to external and internal dumps should get reconciled by the PP and resubmitted.
- ii. Final dump reclamation plan for Amlohri Opencase Expansion Project
- iii. Mine Closure plan proposed vis-à-vis proposed modification / expansion
- iv. The Satellite map is indicating that the PP is dumping extra OBD on the already existing vegetated and stabilized OBD thereby reducing the green cover. The OB dumps without any vegetative cover are being eroded in the forest are and the PP should submit an action plan to mitigate the same and timelines for implementation should not exceed six months.
- v. Distance from the critically polluted area
- vi. The proposed EMP should also include the following:
  - The surface water from nearby villages should be diverted to a pond to be created in the villages for the benefit of local community
  - Piezometers should be installed for monitoring of water quality.
  - Laboratories should be adequately strengthened with qualified ecologists and wildlife biologists in addition to existing engineers and scientists.
  - Clarification on the September, 2000 data with respect to AAQ.

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

**PARTICIPANTS IN 35<sup>th</sup> EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 14<sup>th</sup> - 15<sup>th</sup> May 2015 ON COAL SECTOR PROJECTS.**

Sl. No.	LIST OF PARTICIPANTS Expert Appraisal Committee (Coal Mining)	
1.	Prof. C.R. Babu	Member
2.	Shri Jawahar Lal Mehta	Member
3.	Dr. T. K .Dhar	Member
4.	Shri A. K. Bansal	Member
5.	Shri N. K. Verma	Member
6.	Shri S. S. Bala	Member
7.	Shri. P. D. Siwal	Member
8.	Shri G. S. Dang	Member
9.	Shri N. S. Mondal	Member
10.	Dr. R. Warriar	Member Secretary
11.	Shri P. R. Sakhare	Deputy Director

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**PARTICIPANTS IN 35<sup>th</sup> EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 14<sup>th</sup> - 15<sup>th</sup> May 2015 ON COAL SECTOR PROJECTS.**

- 35.1 Restructuring of Mine-1 Lignite Mine of M/s Neyveli Lignite Corp. Ltd.  
35.2 Expansion of Mine-1 A of M/s Neyveli Lignite Corp. Ltd.

1. Shri C. Senthamil Selvan
2. Shri M. Rangunathan
3. Shri M. Krishnan
4. Md. Shakil Ahmad
5. Ms. Rashmi Gupta
6. Shri Daksha Gupta
7. Ms. Marisha Sharma
8. Md. F. Ahmad

- 35.3 Patherdih NLW Coal Washery of M/s Bharat Coking Coal Ltd.

1. Shri A. Sarkar
2. Shri C. S. Prasad
3. Dr. E.V.R. Raju
4. Shri V. K. Sinha
5. Shri Gautam Dutta
6. Shri V. B. Sahay
7. Shri Kumar Ranjeev
8. Shri Amit Roy

- 35.4 Garjanbahal OCP coal block Of M/s Mahanadi Coalfields Limited.

1. Shri K. S. Ganapathy
2. Shri S. K. Bhar
3. Shri C. Jayadev
4. Shri D. Bhattcharya
5. Shri M. S. Tenurnikar
6. Shri R. K. Shrivastawa.
7. Shri Pawan Kumar
8. Shri D. Srivastava

- 35.5 Dhanpuri Under Ground Coal Mine project of M/s South Eastern Coalfields Limited.

1. Shri R. P Thakur
2. Shri U. T. Kanzaokar
3. Shri S. R. Tripathi
4. Shri A. K. Gupta
5. Shri D.K. Raghuwanshi
6. Shri D.K. Badgaiyan
7. Dr. Anurag Tiwari
8. Shri T. Chakraborty
9. Shri Pawan Kumar

10. Shri D. Srivastwa
11. Shri Pradip Kumar

35.6 Sayal D Opencast Coal Mine Project of M/s Central Coalfields Limited.

1. Shri P.K. Guin
2. Shri Alok Kumar
3. Dr. Manoj Kumar
4. Dr. A. Sinha
5. Shri Pushkar
6. Shri J. Charkraborty
7. Shri Pawan Kumar
8. Shri G. V. Bagh
9. Shri D. S. Rajput

35.7 Bhengari Coal washery project of M/s Mahavir Coal Washery Private Limited.

1. Shri Ankur Jain
2. Shri Vishal Jain
3. Shri D. S. Rajput
4. Shri V. P. Ohri
5. Shri K. K. Jain

35.8 Govinda UG Collery – Meera Incline of M/s South Eastern Coalfields Limited.

1. Shri R. P Thakur
2. Shri U. T. Kanzaokar
3. Shri S. R. Tripathi
4. Shri A. K. Gupta
5. Shri D.K. Raghuwanshi
6. Shri D.K. Badgaiyan
7. Dr. Anurag Tiwari
8. Shri T. Chakraborty
9. Shri Pawan Kumar
10. Shri D. Srivastwa
11. Shri Pradip Kumar

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

1. Shri D. Manohar Rao
2. Shri P. Shanth Kumar
3. Shri N. Bhaskar

35.10 Pichri OCP of M/s Central Coalfields Limited.

1. Shri P.K. **Guin**
2. Shri Alok Kumar
3. Dr. Manoj Kumar
4. Dr. A. Sinha
5. Shri Pushkar
6. Shri J. Charkraborty

7. Shri Pawan Kumar
8. Shri G. V. Bagh
9. Shri D. S. Rajput

35.11 Bijari OCP of M/s South Eastern Coalfields Limited.

1. Shri R. P Thakur
2. Shri U. T. Kanzaokar
3. Shri S. R. Tripathi
4. Dr. Anurag Tiwari
5. Shri Amit Saxena
6. Shri A. K. Gupta
7. Shri T. Chakraborty
8. Shri C. V. Krishna

35.12 Cluster No.11 of M/s Eastern Coalfields Ltd.

1. Shri B. R. Reddy
2. Shri J. N. Prasad
3. Shri S. K. Sinha
4. Shri A. Shekhar
5. Shri P. Mondal
6. Shri S. Chakraborty
7. Shri Pawan Kumar

35.13 Expansion of Mangrol Valia Opencast Lignite Mine Project of M/s Gujarat Industries Power Company Ltd.

1. Ms. Sonal Mishra
2. Shri N. K. Purohit
3. Shri Ajay Gupta
4. Shri Shantanu Parank

35.14 Coal Beneficiation Plant of M/s Shree Nakoda Ispat Limited.

1. Shri Arvind Kumar
2. Shri Asif Husain
3. Shri Vikas Panday
4. Shri J. K. Goel

35.15 Amlohri Opencast Expansion Project of M/s Northern Coalfields Limited.

1. Ms. S. Sahu
2. Shri A. K. Choudhary
3. Shri B.K. Sharma
4. Shri U. C. Dumka
5. Shri R. K. Meena
6. Shri Prakash Chansoriya
7. Shri Sunil Kumar
8. Shri D. Srivastava
9. Shri M. R. Munda
10. Shri Pawan Kumar
11. Shri R. B. Sindhur

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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 Government.
- 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-IIOI3/25/2014-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 conform to the effluent standards as prescribed under Environment (Protection) Act, 1986
- xxiii. Details of washed coal, middling and rejects along with the MoU with the end-users should be submitted.

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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:**

S.N.	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)			
	<b>TOTAL</b>			

- (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	Year to the end of mine life  24 <sup>th</sup> 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					
	<b>TOTAL</b>					

- As a representative example.

**Table 2: Stage-wise Cumulative Plantation**

S.N	YEAR*	Green Belt	External Dump	Backfilled Area	Others (Undisturbed Area/etc)	TOTAL
.						

		Area (ha)	No. of trees								
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					
4.	Built up area					
5.	Green Belt					
6.	Undisturbed Area					
	<b>TOTAL</b>					<b>110</b>

- (xxx) Flow chart of water balance should be provided. Treatment of effluents from workshop, township, domestic wastewater, mine water discharge, etc. should be provided. Details of STP in colony and ETP in mine should be given. Recycling of water to the max. possible extent should be done.
- (xxxii) Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given.
- (xxxiii) Risk Assessment and Disaster Preparedness and Management Plan should be provided.
- (xxxiv) Integration of the Env. Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.
- (xxxv) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (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:
- The Company must have a well laid down Environment Policy approved by the Board of Directors.
  - The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
  - The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
  - To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- (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.

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

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

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

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

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

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

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

TOTAL ML/PROJECT AREA (ha)	TOTAL 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 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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35<sup>th</sup> EAC (THERMAL & COAL MINING PROJECTS) MEETING  
SCHEDULED FOR 14<sup>th</sup> -15<sup>th</sup> May, 2015

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-1"asby-mail,perinword"check format and also a signed & scanned copy, to the Member-Secretary at [wARRIER@nic.in](mailto:wARRIER@nic.in) at least one week prior to the EAC meeting.
- ii. Without this information, EAC has discretion to invite the proponent for the meeting.
- iii. Please also provide a copy to the EAC Members during the meeting.
- iv. 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 2<sup>nd</sup> December, 2009.

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COAL MINING PROJECTS

Thursday, 14<sup>th</sup> May, 2015

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

- 35.1 Restructuring of Mine-1 Lignite Mine (reduction from 10.5 MTPA to 8 MTPA and expansion in ML area from 2762 ha to 3219 ha; latitude 11° 33' 00" N to 11° 35' 00" North and longitude 79° 28' 00" E to 79° 32' 00" East) of M/s Neyveli Lignite Corp. Ltd. Dist. Cuddalore, Tamil Nadu- (EC based on TOR granted on 20.05.2014).
- 35.2 Expansion of Mine-1 A (from 3 MTPA to 7 MTPA; latitude 11° 32' 0" N to 11° 36' 0" North and longitude 79° 31' 0" E to 79° 32' 30" East) of M/s Neyveli Lignite Corp. Ltd. Dist. Cuddalore, Tamil Nadu- (EC based on TOR granted on 20.05.2014).
- 35.3 Patherdih NLW Coal Washery (2.5 MTPA in an ML area 17.5 ha; Latitude 23° 40' 30" & 23° 40' 50" N and Longitude 86° 26' 10" & 86° 26' 30" E) of M/s Bharat Coking Coal Ltd., located at dist. Dhanbad, Jharkhand- (EC based on TOR granted on 30.09.2014)
- 35.4 Garjanbahal OCP coal block, 10 MTPA (Normative) and 13.0 MTPA (peak) in ML area of 653.83 Ha; 21° 59' 43" to 22° 01' 35" North and longitudes 83° 44' 29" to 83° 46' 26" East. Of M/s Mahanadi Coalfields Limited in District Sundargarh Odisha- TOR.
- 35.5 Dhanpuri Under Ground Coal Mine project for production capacity of 0.216 MTPA in an ML area of 231.63 ha; Latitude 23° 10' 21" to 23° 10' 49" N and Longitude 81° 31' 51" to 81° 34' 17" E of M/s South Eastern Coalfields Limited in District Shahdol, Madhya Pradesh – TOR.

- 35.6** Sayal D Opencast Coal Mine Project (1.0 MTPA Normative and 1.35 MTPA Peak in a project area of 286.98 Ha; Latitude 23° 40' 13" to 23° 40' 20" and Longitude 85° 18' 30" to 85° 20' 00") of M/s Central Coalfields Limited in district Ramgarh, Jharkhand –TOR.

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- 35.7** Bhengari Coal washery of 5MTPA capacity in a project area of 17.48 ha; Latitude : 22°08'05.7" - 22°08'19.4" North and Longitude: 83°14'21.2" - 83°14'49.4" East of M/s Mahavir Coal Washery Private Limited Distt. Raigarh, Chhattisgarh – TOR.
- 35.8** Govinda UG Collery – Meera Incline (0.25 MTPA Normative and 0.375 MTPA Peak in an ML area of 308.280 ha; Latitude 23° 10' 21" to 23° 11' 56" Longitude 81°05'19" to 81° 59' 45" ) by M/s South Eastern Coalfields Limited in District Anuppur, Madhya Pradesh – TOR.
- 35.9** 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; Latitude 18° 26 '41" to 18° 28' 7" and Longitude 79° 50'17" to 79° 52'36" of M/s The Singareni Collieries Company Limited- in District Warangal Telangana –TOR
- 35.10** Pichri OCP (1.20 MTPA Normative to 1.50 MTPA Peak in an ML Area 151.47 Ha; Latitude 23° 45' 00" to 23° 45' 50"N and Longitude 86° 01' 00" to 86° 02' 30"E) of M/s Central Coalfields Limited, Dist. Bokaro, Jharkhand- TOR -further consideration.

**Friday, 15<sup>th</sup> May, 2015**

- 35.11** Bijari OCP of (1.5 MTPA normative and 2.5 MTPA peak in an ML area of **269.025 ha**; latitude 20° 15' 28" to 20° 15' 49" North and longitude 83° 20' 59" to 83° 22' 37" East) M/s South Eastern Coalfields Limited, Dist., Raigarh, Chhattisgarh –(EC based on TOR granted on 18.11.2008)- Further Consideration.
- 35.12** Cluster No.11 (11 mixed mines of a combined production capacity of 9.1 MTPA normative 9.9 MTPA peak capacity in a combined ML area of 4218 ha) of M/s Eastern Coalfields Ltd., located in Raniganj Coalfields, West Bengal - (EC based on TOR granted 13.01.2012)-further consideration.

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- 35.13** Expansion of Mangrol Valia Opencast Lignite Mine Project (4.2 MTPA to 7.4 MTPA and expansion in ML area from 2080 ha to 3019 ha) of M/s Gujarat Industries Power Company Ltd., located in Tehsil Mangrol and Valia in districts Surat and Bharuch, Gujarat- (EC based on TOR granted on 11.01.2012 /TOR extn 21.05.2014).
- 35.14** Coal Beneficiation Plant (1 MTPA) of M/s Shree Nakoda Ispat Limited, located in Plot No. 109 and 75 in Siltara Industrial Growth Centre, district Raipur, Chhattisgarh – (EC amendment)– further consideration.

- 35.15** Amlohri Opencast Expansion Project of (Normative 10 MTPA to Peak 14 MTPA in an ML area 2175 Ha) M/s Northern Coalfields Limited, located at dist. Sidhi, Madhya Pradesh – (EC under 7 (ii) of EIA Notification, 2006)- further consideration.
- 35.16** Discussion on any other matters with the permission of the Chair.

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