

Minutes of the 31st EAC (THERMAL & COAL MINING PROJECTS) MEETING
Held on 16th -17th February, 2015.

The 31st EAC (Thermal & Coal mining projects) Meeting was held on **16th -17th February, 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 29th EAC meeting held on 15th - 16th January, 2015.

C. The following proposals were considered.

31.1 Hingula-II OC Expn. Project (Phase-III) (12 MTPA TO 15 MTPA and expansion of ML area From 544.40 ha to 1870 ha (1741.95 ha of ML area + 128.05 ha ancillary activates; Latitude 20°56'00" to 20°58'22" N and Longitude 85°00'58" to 85°02'49" E) of M/s Mahanadi Coalfields Limited, in Tehsil Jharsuguda, Dist. Jharsuguda, Odisha - EC based on TOR dated 11.07.2008 –Further Consideration.

31.1.1 The proposal is for Environmental Clearance to Hingula-II OC Expn. Project (Phase-III) (from 12 MTPA to 15 MTPA and expansion of ML area 1870 Ha (1741.95 Ha of ML area + 128.05 Ha ancillary activates; Latitude 20°56'00" to 20°58'22" N and Longitude 85°00'58" to 85°02'49" E) of M/s Mahanadi Coalfields Limited in Tehsil Jharsuguda, Dist. Jharsuguda, Odisha. The proposal was last considered in 15th EAC meeting held on 27th -28th June, 2014 and 17th meeting held on 23rd- 24th& 25th July, 2014. The Committee sought following information for further consideration of the project:

- i. This being a violation case, MoEF may take appropriate action accordingly. Details of credible action taken by the State Government on Violation as well as the Board's to be submitted Resolution.
- ii. Proponent to take clearance from the Wild Life Board.
- iii. The internal OB, dumped earlier in certain portions, should be properly reclaimed and planted.
- iv. Project should also take up plantation on the inactive internal OB dumps which require to be reclaimed in the de-coaled area of the mine and should be properly terraced and planted.
- v. Mechanical sweepers should be deployed for clearing dust.
- vi. Piezometers should be installed for monitoring of ground water.
- vii. Project should increase the capacity of the ETP to cater to the requirement of the increased capacity of production of the mine for the expansion project.
- viii. The final mine closure plan should be submitted to the Ministry.
- ix. Action Plan for Capital CSR to be submitted.

31.1.2 The proponent made the presentation and informed that:

- i. The production exceeded EC capacity during the years 2003-04 to 2006-07, which is very old case and process of obtaining EC for 12 MTPA capacity was going on including holding of PH etc. As the production exceeded for uninterrupted supply of coal to the power plants, in the interest of the Nation and not intentional and being a very old case much prior to OMs for the dealing of violation of exceeding the production beyond EC capacity. Boards Resolution submitted vide letter no. MCL/SBP/CS/BD-157/Exct/2014/7591 dated 15.05.2014 for not repeating violation.
- ii. This project involves forest land of 440.53 ha for which Wild Life Conservation Plan has been prepared and submitted to DFO, Angul for approved by Chief Wild Life Warden/PCCF (Wild Life) Odisha. Stage-I FC proposal has been recommended by State Govt. as well as MoEF, Regional Office and send to MoEF, New Delhi on 24.07.2014. Prior to Stage-II FC, Wild Life Conservation Plan shall be approved and will be sent as compliance of Stage-I FC.

- iii. Internal OB, dumped earlier in the backfilled area is to be re-handled because there are coal seams below the internal dumps, which are to be taken during the course of the expansion project. However as advised by RO, MoEF, Bhubaneswar we have properly reclaimed the area and grass plantation has been done. This year plantation of the short life species is being taken up over 4 ha area with 10,000 nos of plants. Total plantation in the mine has been done to the tune of 70,392 nos
- iv. Properly reclaimed/terraced the internal OB dump area and grass plantation has been done. This year plantation of the short life species is being taken up over 4 ha area with 10,000 nos of plants.
- v. There are three nos. of Mechanical Road Sweepers at Talcher Coalfield for which MCL has incurred approximately 1.5 Crores. Regular clearing the dust on the pucca coal transportation roads are being done through these Mechanical Road Sweepers.
- vi. For ground water monitoring designated well network are being used presently and for adding new Piezometers to this Network, Work has already been awarded to CMPDI. Location for construction of Piezometers have been finalized. Open tender invited for outsourcing the construction activity of 23 Nos of piezometers covering all the projects of MCL in Talcher Coalfield area at an estimated cost of 1.13 Crores on 29/12/2014 and Financial Bid has been opened on 15/01/2015 and the tender is under finalization for award of work
- vii. The Project is having on ETP as per the requirement for 12 MTPA capacity. After getting EC for the expansion area, new Workshop along with ETP commensurate with the requirement of 15 MTPA project has been envisaged in the expansion area for a capacity of 300 KLD.
- viii. The Final Mine Closure Plan has been approved by MCL Board. This has been submitted to MoC and after its approval the same shall be submitted to MoEF, RO, Bhubaneswar.
- ix. Action Plan for Capital CSR/ t as per the new CSR policy of Coal India Limited is submitted. As per the revised Policy the fund to be allocated should be 2% of the av. Net profit of the company for the three immediate preceding year of Rs.2.0 per ton of coal whichever is higher.

31.1.3 The proponent further submitted that:

- i. EC for 12 MTPA was obtained on 31/10/2007 for operating within the same ML area of 544.40 ha. Application is for expansion in ML area from 544.40 ha to 1741.95 ha and expansion in coal production from 12 MTPA to 15 MTPA and envisaging extraction of all seams vertically downwards was submitted on 29/05/2008. TOR was granted on 11/07/2008 and PH was held on 10/9/2009.
- ii. The Expansion Proposal [Expansion from 12 MTPA(544.40 ha) to 15 MTPA (1741.95 ha)] was considered in EAC(T&C) meeting held on 22/2/2012 ,17/12/2012, 28/06/2014 & 25/7/2014 and further to be considered on 16/02/2015 in view of grant of Stage-I FC for the entire forest land involved in the project to the tune of 440.53 ha and compliance of observations of EAC in its meeting held on 28/6/2014.
- iii. As the ML area of 1741.95 ha involved forest land of 440.53 ha and Stage-I FC was under consideration, EAC recommended the expansion proposal and asked to come back with proposal for mining in west quarry without involving forest land and also sought some additional clarification.
- iv. Accordingly, the proposal was considered in the EAC Meeting held on 28/06/2014 to work in 61 ha patch in the West Quarry containing 23.03 Mte of coal and having no forest land, till stage-I forest clearance for 440.53 ha forest land involved in the entire lease area of the project is obtained. EAC recommended the proposal, which was reflected in the MoM of the EAC Meeting held on 23, 24 & 25 July 2014, and also asked for submission of some additional information.
- v. MCL vide letter no. 4912 Dtd. 09/01/2015, submitted the desired Board Resolution and confirmed that after 2006-07, MCL has never exceeded the EC Production Capacity. It was also represented to MoEF that as the coal production had exceeded to ensure un-interrupted supply of coal to the Power Plants in the interest of the nation and was not intentional and as the application for expansion up to 12 MTPA from 4 MTPA was made quite earlier and because the appraisal was delayed due to changeover from EIA Notification 1994 to EIA Notification 2006 and EC was finally granted in the year, 2007 and as the violation of exceeding coal production beyond EC capacity took place during

the period 2003-04 to 2006-07, which was prior to the issuance of the EC letter in 2007, and much prior to the issuance of the OMs for dealing such violations (2010 & 2012), it was kindly requested to exempt this Project from the provision of submitting the evidence of legal credible action.

- vi. Mean time Stage-I FC was obtained vide letter no. 8-69/2014-FC on 6/01/2015 for diversion of 440.53 Ha of forest land including 3.80 Ha safety zone. Therefore the proponent has requested for the EC for the forest patch.
- vii. Land Uses Of Mining Lease Area:

Sl. No.	Type of Land	Existing (Area in Ha)	Addl. land for incremental production (Area in Ha)	Total for 15.0 Mty (Area in Ha)
1.	Agricultural	138.98	194.64	333.62
2.	Forest	--	435.15	435.15
3.	Waste land	391.48	548.25	939.73
4.	Grazing	0.00	0.00	0.00
5.	Surface water bodies	5.99	8.38	14.37
6.	Others	7.95	11.13	19.08
Total for mining lease area :		544.40	1197.55	1741.95

- viii. Land Showing Forest & Non-Forest Area:

Sl. No.	Item	For existing 12.0 Mty (Area in Ha)	Addl. land for incremental production (Area in Ha)	Total for 15.0 Mty (Area in Ha)
1.	Forest	--	435.15	435.15*
2.	Non-forest	544.40	762.40	1306.80
	Within mining lease area	544.40	1197.55	1741.95
3.	Forest	--	--	--
4.	Non-forest	65.60	62.45	128.05
	Total :	610.00	1260.00	1870.00

The total mining lease area is 1741.95 ha out of which 1409.54 ha is excavation or quarry area.

* Stage-I Forest Clearance granted for 440.53 ha (including safety zone)

- ix. Land for coal mining in the existing ML area of 544.40 ha has almost exhausted and rate of production has been decelerated and machineries and human resources are facing idleness.
- x. All other required clearances like Mining Plan Approval, PR Approval, Public Consultation, Permission of Sinia Nala Diversion etc have been obtained for continuing mining in the expansion area. Certified Monitoring Report of RO, MoEF, Bhubaneswar obtained.
- xi. Extraction of coal is by blast- less method Surface Miner. Transportation of coal from mine pit head to washery (approx 4 km) is proposed by tube conveyor and from Washery to Silo (approx 500 m) by conveyor. Silo to load coal in the rail wagons.
- xii. The approved working mine was planned in the northern portion of the geological block to extract only thick upper seam-VIII & seam-IX at a very low stripping ratio, this in crop area will be exhausted very soon and mine will be liable to closure unless remaining portion of block area is not made available for mining.

31.1.4 The EAC received a representation from one of the NGOs requesting Ministry to address issues with regards to seven years old ToR and six years old Public Hearing; Supplementary EIA; Compliance report; present capacity of the project etc. The proponent responded to the issues and submitted the following:

- i. **TOR was granted to the project on 11/07/2008** and PH was held on 10/9/2009. The Proposal for Expansion from 12 MTPA (544.40 ha) to 15 MTPA (1741.95 ha)] was considered in EAC (T&C) meeting held on 22/2/2012, 17/12/2012, 28/06/2014 & 25/7/2014. As the ML area of 1741.95 Ha involved forest land of 440.53 ha and Stage-I FC was under consideration, EAC recommended for the expansion proposal and asked to come back with proposal for mining in West Quarry without involving forest land and also sought some additional clarification. Accordingly, the proposal was considered in the EAC Meeting held on 28/06/2014 to work in 61 Ha patch in the West Quarry containing 23.03 Mte of coal and having no forest land, till stage-I forest clearance for 440.53 Ha forest land involved in the entire lease area of the project, is obtained. EAC recommended the proposal in its Meeting held on 23 - 25 July 2014, and also asked for submission of some additional information.
- ii. MCL vide letter no. 4912 Dtd. 09/01/2015, submitted the desired Board Resolution and confirmed that after 2006-07, MCL has never exceeded the EC Production Capacity. It was also represented to MoEF that as the coal production had exceeded to ensure un-interrupted supply of coal to the Power Plants in the interest of the Nation and was not intentional and as the application for expansion up to 12 MTPA from 4 MTPA was made earlier and because the appraisal was delayed due to change over from EIA Notification 1994 to EIA Notification 2006 and EC was granted in the year, 2007 and as the violation of exceeding coal production beyond EC capacity took place during the period 2003-04 to 2006-07, which was prior to the issuance of the EC letter in 2007, and much prior to the issuance of the OMs for dealing such violations (2010 & 2012), it was kindly requested to exempt this Project from the provision of submitting the evidence of legal credible action. Mean time Stage-I FC was obtained vide letter no. 8-69/2014-FC on 6/01/2015 for diversion of 440.53 Ha of forest land including 3.80 Ha safety zone.
- iii. The proponent has requested for EC for the forest land within the ML area for which they have received the forest clearance vide letter no. 8-69/2014-FC on 6/01/2015 for diversion of 440.53 Ha of forest land including 3.80 Ha safety zone. Since, EIA has been done for the entire Mine Lease area, no additional EIA is required.
- iv. The R.O. Compliance report was deliberated in the 15th EAC meeting held on 27th – 28th June, 2014.

31.1.5 The Committee after deliberation recommended the proposal for granting EC subject to following specific conditions:

- i. Coal transportation to consumers be made by rail mode so as to reduce the dust pollution. Coal transport from mine to washery and siding will be by pipe conveyor and conveyor and wagon loading through silo, as proposed by the PP. This arrangement will be ready within 3 (three) yrs and no road transport of coal after this period.
- ii. Fog Cannons / Atomizers be adopted to minimise dust pollution.
- iii. Use of dust extractor in drill machines/Wet Drilling be resorted to.
- iv. Sufficient Green Belt be provided.
- v. Exclusive Road Corridor for coal transportation from Hingula to NH23 be provided.
- vi. All internal CT road be constructed.
- vii. There shall be no external OBD. internal dump will be brought to ground level and final mine void will of be within 40 m depth.

31.2 Kuju Open Cast Coal Mining project (production capacity 1.30 MTPA (Normative) and 1.50 (Peak) in an area of 189.6 ha; Latitude 23⁰ 44' 24" N to 23⁰ 45' 17" and Longitude 85⁰ 29' 36" E to 85⁰ 31' 32") of M/s Central Coalfields Ltd., Village. Kuju Dist, Ramgarh, Jharkhand - EC based on TOR granted on 31.01.2013.

31.2.1 The proposal is for Kuju Open Cast Coal Mining project (production capacity 1.30 MTPA (Normative) and 1.50 MTPA (Peak) in an area of 189.6 ha of M/s Central Coalfields Ltd., vill. Kuju, Dist. Ramgarh, Jharkhand. The proponent made the presentation and informed that:

- i. The project was accorded TOR vide letter no. J-11015/290/2012-IA II (M) dated 31.01.2013.
- ii. The latitude and longitude of the project are 23° 44' 24" N to 23° 45' 17" and 85° 29' 36" E to 85° 31' 32" respectively.
- iii. Joint Venture: no Joint Venture.
- iv. Coal Linkage : Power houses and other miscellaneous consumers
- v. The land usage of the project will be as follows:

Pre-Mining: (as per revised mine plan)

Forest (Ha)	Non Forest (Ha)
Nil	140.48

Post- Mining: (as per revised mine plan)

S.NO	Land use during Mining	Land Use (ha)				
		Plantation/ vegetation	Water Body	Public / Industrial use	Undisturbed	Total
1	External OB Dump	24.02				24.02
2	Quarry / Void		23.14			23.14
3	Roads			0.67		0.67
4	Built up Area/Infrastructure			4.67		4.67
5	Green Belt/ safety zone	29.05				29.05
6	Undisturbed Area (future dump)				58.93	58.93
	Total	53.07	23.14	5.34	58.93	140.48

Core area : (as per revised mine plan)

SN	Particulars	Non- forest land Requirement (Ha)
1	Quarry	23.14
2	External OB dump	24.02
3	Infrastructure	4.67
4	Road	0.67
5	Safety zone/ Green Belt	29.05
6	Future use of external dump	58.93
Total Area Required		140.48

- vi. The total geological reserve is 156.553 MT. The mineable reserve 9.60 MT, extractable reserve is 9.60 MT. The per cent of extraction would be 100%.
- vii. The coal grade is C .The stripping ratio is 3.43. The average Gradient is 10-19 deg. There will be 5 seams with thickness ranging

Name of seam	Thickness variation (m)
XIII	2.05-3.09

XII	2.83-4.38
XI	6.32-12.75
X A	0.50-1.66
X	9.92-12.39

- viii. The total estimated water requirement is 1593 m³/day. The level of ground water ranges from 3.47 m to 10.40 m.
- ix. The Method of mining would be opencast method of mining with shovel-dumper combination.
- x. There is one external OB dump with Quantity of 8.38 Mbcm (As per revised plan), 32.95 (As per PR). Mbcm in an area of 24.02 ha with height of 75 meter above the surface level and no internal dump.
- xi. The final mine void would be in 23.14 Ha with depth of 70 m and the total quarry area is 23.14 Ha. A void of 23.14 ha with depth of 70 m which is proposed to be converted into a water body.
- xii. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xiii. The **life of mine** is 8 years (03 years as per revised mine plan).
- xiv. **Transportation:** Coal transportation in pit by Dumpers, Surface to Siding by trucks and loading at siding by pay loader.
- xv. There is **R & R** involved. There are 145 PAFs.
- xvi. **Cost:** Total capital cost of the project is Rs. 193.16 Crores. CSR Cost As per new Company's Act 2013. R&R Cost Rs 442.25 lakh. Environmental Management Cost Rs 20.95 Crores.
- xvii. **Water body:** The drainage of the block is controlled by easterly flowing Chowtha nala. The tributary Bander Chua nala, Banwar and Mourpa nala flowing from south to north joins Chowtha nala.
- xviii. **Approvals:** Ground water clearance Applied, Board's approval obtained on 24.02.2012 & 10.02.2015 (revised). Mining plan has been approved on 10.02.2015. Mine Closure Plan approval on 29.01.2014.
- xix. **Wildlife issues:** There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xx. **Forestry issues:** No forest land as per revised mine plan.
- xxi. Total **afforestation** plan shall be implemented covering an area of 53.07 ha at the end of mining. Green Belt over an area of 29.05 ha. Density of tree plantation 2500 trees/ha of plants. Only grass species will be raised.
- xxii. There are no **court cases/violation** pending with the project proponent.
- xxiii. **Public Hearing** was held on 13.09.2014. The issues raised in the PH includes employments; blasting, water, electricity & plantation etc.,
- xxiv. Title correction "The ML area may be read as 140.48 Ha instead of 189.6 Ha".

31.2.2 The Committee, after detailed deliberations, deferred the project based on the following observations:

The Committee is of the view that the proponent has not brought out complete information & has not presented the EIA as per the TOR granted. Keeping in view the Committee was of the view that proponent should submit the EIA/EMP as per the TOR granted. Further, the Competent Authority i.e. The CMD, CCL be informed in this regard. The Committee also taken by surprise that the proponent could notice underground fire after the portion of road collapsed around the mining area. The proponent has informed that the fire issues were not taken into consideration in the mining plan. TOR was applied and granted including forest area. The EC application has been submitted without mention of involvement of forest area, possible fire etc. The Committee has observed that the PP needs to come back with the revision in TOR and revised mine plan etc. The Committee also directed that proper mechanism be developed for fires detection and mitigation measures.

31.3 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.

31.3.1 The proposal is for 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. The proponent made the presentation and informed that:

- i. The application is for fresh TOR. Presently Pichri OCP is proposed as a new mine in East Bokaro Coalfield in Bokaro district of Jharkhand.
- ii. Earlier the Project Report of Pichri OCP was approved by CCL Board on 27.11.2010. Accordingly, Form-I was submitted in January, 2011. The EAC considered the project for TOR in meetings held on 28.03.2011 & 30.08.2011. TOR was granted to the project on 30.09.2011. Based on TOR Environmental Baseline data generated in Mar-Jun, 2012, draft EMP submitted in January 2013. Public Hearing as a part of public consultation was held on 04.10.2013. However, the EIA/EMP report has not been submitted to the MOEFCC.
- iii. The revised Form-I submitted on 18.12.2014 with revised non-forest area for new TOR. Revised mine plan approved by CCL Board on 21.12.2014. Earlier TOR granted 30.09.2011 has been withdrawn.
- iv. This project is envisaged to produce Washery Grade-IV coal to meet the demand of medium coking coal in the country.
- v. The latitude and longitude of the project are 23° 45' 00'' to 23° 45' 50''N and 86° 01' 00'' to 86° 02' 30''E respectively.
- vi. Joint Venture: There is no Joint venture
- vii. Coal Linkage : Coking Coal and other miscellaneous consumers
- viii. The land usage of the project will be as follows:

SN	Particulars	Land in Part-I (Ha)		
		Forest	Non Forest	Total
1	Quarry	0.00	38.78	38.78
2	Ext. OB dump	0.00	70.26	70.26
3	Infrastructure	0.00	6.00	6.00
4	Embankment	0.00	1.73	1.73
5	Green Belt	0.00	1.68	1.68
6	Colony	0.00	6.00	6.00
7	Safety zone	0.00	27.02	27.02
8	Total Area	0.00	151.47	151.47

Pre-Mining:

SN	Particulars	Land in Part-I (Ha)		
		Forest	Non Forest	Total
1	Quarry	0.00	38.78	38.78
2	Ext. OB dump	0.00	70.26	70.26
3	Infrastructure	0.00	6.00	6.00
4	Embankment	0.00	1.73	1.73
5	Green Belt	0.00	1.68	1.68
6	Colony	0.00	6.00	6.00
7	Safety zone	0.00	27.02	27.02
8	Total Area	0.00	151.47	151.47

Post- Mining: To be given in EIA & EMP

Core area :

SN	Particulars	Land in Part-I (Ha)		
		Forest	Non Forest	Total
1	Quarry	0.00	38.78	38.78
2	Ext. OB dump	0.00	70.26	70.26
3	Infrastructure	0.00	6.00	6.00
4	Embankment	0.00	1.73	1.73
5	Green Belt	0.00	1.68	1.68
6	Colony	0.00	6.00	6.00
7	Safety zone	0.00	27.02	27.02
8	Total Area	0.00	151.47	151.47

- ix. The total geological reserve is 55.28 MT. The mineable reserve 18.99 MT, extractable reserve is 18.99 MT. The per cent of extraction would be 100.00 %.
- x. The coal grade is W-IV. The stripping ratio is 1.92. The average Gradient is 15-20 deg.
- xi. There will be 4 seams.

Sl.	Thickness of Coal Seams	Unit (m)
1	Upper Kathara	-
2	Kathara	-
3	Kargali	8-10
4	Bermo	7-10
5	Karo VIII/IX/X	21-32
6	Karo VI/VII	29-35

- xii. The total estimated water requirement is 1455 m³/day. The level of ground water ranges from 3.98 m to 5.54m.
- xiii. The Method of mining would be opencast method of mining with shovel-dumper combination.
- xiv. There is One external OB dump with Quantity of 31.84 Mbcm in an area of 70.26 ha with height of 80-90 meter above the surface level and one internal dump with Quantity of 4.7 Mbcm in an area of 3.5 ha.
- xv. The final mine void would be in 38.78 Ha with depth of 30 m. and the Total quarry area is 38.78 Ha. Backfilled quarry area of 38.78 Ha shall be reclaimed with plantation. A void of 38.78 ha with depth of 30 m which is proposed to be converted into a water body.
- xvi. The **life of mine** is 19 Years.
- xvii. **Transportation:** Coal transportation in pit by Dumpers, Surface to Siding by trucks and loading at siding by pay loader.
- xviii. There is **R & R** involved. There are 200 PAFs.
- xix. **Cost:** Total capital cost of the project is Rs. 228.90 Crores. CSR Cost as per CSR policy & Companies Act, 2013. R&R Cost Rs. 6.00 Crores Environmental Management Cost Rs 31.2147 crores.
- xx. Employment generated/to be generated: Approximately 407.
- xxi. **Water body:** Damodar River is flowing in the north of the project. It lies 100m away from the mine edge.
- xxii. **Approvals:** Board's approval obtained on 27.11.2010. Original Project Report & 21.12.2014 (revised mine plan of Pichri OCP). Mining plan has been approved on 27.11.2010 original PR & 21.12.2014 (revised mine plan of Pichri OCP). Mine Closure Plan approval on 29.01.2014.
- 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 in the mine for the present ML area applied for.
- xxv. Total **afforestation** plan shall be implemented covering an area of 70.26 ha at the end of mining. Green Belt over an area of 1.68 ha. Density of tree plantation 2500 trees/ ha of plants.
- xxvi. There is no **court cases/violation** pending with the project proponent.

31.3.2 The Committee, after detailed deliberations observed that although TOR was granted in 2011 and PH was conducted in 2013, the proponent did not even apply for Forest Clearance, which indicated that was proponent are not serious in getting the Environmental Clearance and other clearances. EAC as such observed that MOEFCC may like to take up this matter with appropriate authorities and the proponent was directed to furnish the following:

- 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.

31.4 Expansion of Jharkhand OCP (from 2 MTPA Normative to 2.70 MTPA Peak in an ML area 278.88 Ha; Latitude 23° 46' 53'' to 23° 48' 29''N and Longitude 85° 36' 23'' to 85° 37' 23''E) of M/s Central Coalfields Limited, in District Ramgarh Jharkhand- TOR.

31.4.1 The proposal is for Expansion of Jharkhand OCP (from 2 MTPA Normative to 2.70 MTPA Peak in an ML area 278.88 Ha; Latitude 23° 46' 53'' to 23° 48' 29''N and Longitude 85° 36' 23'' to 85° 37' 23''E) of M/s Central Coalfields Limited, in District Ramgarh Jharkhand. The proponent made the presentation and informed that:

- i. The project was accorded EC vide letter no. J-11015/12/89-IA.II(M) dated 30.01.1995 for 1.00 MTPA capacity.
- ii. The latitude and longitude of the project are 23° 46' 53'' to 23° 48' 29''N and 85° 36' 23'' to 85° 37' 23''E respectively.
- iii. Joint Venture: There are no joint venture.
- iv. Coal Linkage : Coking coal, power and other miscellaneous consumers
- v. The land usage of the project will be as follows:

Pre-Mining:

Land Use	Land Area (Ha)		
	Forest	Non-Forest	Total
Quarry	89.47	33.1	122.57
External OB Dump	31.37	2.63	34
Haul Road	1.82	1.32	3.14
Safety Zone	38.15	81.02	119.17
Total	160.81	118.07	278.88

Post- Mining: To be given in EIA & EMP

Core area:

Land Use	Land Area (Ha)		
	Forest	Non-Forest	Total
Quarry	89.47	33.1	122.57
External OB Dump	31.37	2.63	34
Haul Road	1.82	1.32	3.14
Safety Zone	38.15	81.02	119.17
Total	160.81	118.07	278.88

- vi. The total geological reserve is 126.643 MT. The mineable reserve 21.53 MT, extractable reserve is 21.53 MT. The per cent of extraction would be 100 %.
- vii. The coal grade is W-IV .The stripping ratio is 2.19 (Cum/Tonne). The average Gradient is 1 in 6-10. There will be 4 seams with thickness ranging

Sl. No.	Particulars	Unit	Thickness Range
1.	Seam Thickness		
A	Seam VA	M	4.96-7.63
B	Seam V	-do-	6.99-8.82
C	Seam IV	-do-	3.34-5.20
D	Seam III (T)	-do-	3.90-4.89
E	Seam III (B)	-do-	1.48-2.33
F	Seam III (Merged)	-do-	4.79-7.53

- viii. The total estimated water requirement is 790 m³/day. The level of ground water ranges from 1.0 m to 8.0 m.
- ix. The Method of mining would be opencast method of mining with Shovel-Dumper combination.
- x. There is one external OB dump with Quantity of 35.75 Mbcm in an area of 34 ha with height of 60 meter above the surface level and One internal dump with Quantity of 11.25 Mbcm in an area of 58.40 ha.
- xi. The final mine void would be in 64.17 Ha with depth of 70 m. and the total quarry area is 122.57 Ha. Backfilled quarry area of 58.40 Ha shall be reclaimed with plantation. A void of 64.17 ha with depth of 70 m which is proposed to be converted into a water body.
- xii. The **life of mine** is 7 years balance.
- xiii. **Transportation:** Coal transportation in pit by Dumpers, Surface to Siding by trucks and loading at siding by pay loader.
- xiv. There is **R & R** involved. There are 23 PAFs.
- xv. **Cost:** Total capital cost of the project is Rs. 44.28 Crores. CSR Cost As per CSR policy & Companies Act, 2013. R&R Cost Rs 25.10 Lakh. Environmental Management Cost Rs. 34.7027 crores).
- xvi. **Water body:** Chutua River is flowing in the north of the project. It lies 100m away from the mine edge.
- xvii. **Approvals:** Board's approval obtained on 20.10.1998 original PR. Mining plan has been approved on 20.10.1998 original PR. Mine Closure Plan approval on 01.10.2012
- xviii. **Wildlife issues:** There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xix. **Forestry issues:** Total forest area involved 160.81 ha for mining. Applied for forest clearance FC-II granted (Diverted).
- xx. Total **afforestation** plan shall be implemented covering an area of 278.88 ha at the end of mining. Green belt (in ha) will be given in EIA & EMP. Density of tree plantation 2500 trees/ ha of plants.
- xxi. There are no **court cases/violation** pending with the project proponent.

31.4.2 EC Compliance Report: The compliance report of the, Regional Office, MoEFCC at Bhubneshwar has inspected the project on 22.08.2014 was deliberated in the EAC meeting. The Committee has noted the Action taken for compliance by the Project which, inter alia, are as follows:

- i. Levels of SPM concentration are well within the limit at all sampling station during the period Apr-14 to Sep-14. 28 kl two sprinklers: 1 addl. in 2013-14. Trips increased from 3 to 6 per day (2 times in each shift). 680 dust masks are provided to workers.
- ii. ETP has been cleaned and the treated water is being recycled for washing of HEMM. No

- overflow is directly allowed to natural water course. It is proposed to regularly clean settling ponds by AMC
- iii. External OB dump has been made as per the norms made in E.C. and volume of external O.B dump is 4.08 MM³ and it has been reclaimed properly. Patches which are left will be planted in monsoon 2015.
 - iv. The present working area is as per the approved PR. The external OB has been dumped at the proposed OB site. The area of external dump is 26.325 Ha and is reclaimed. The total backfilled area is 131.29 Ha out of which 67.54 Ha is active. 53.985 Ha of backfilled area has already been reclaimed.
 - v. 23 families resettled. No additional resettlement involved. Total amount of Rs. 25.06 Lakh has already been paid.
 - vi. The mining operation is being done in stages as per plan in PR. There is no change in the calendar plan including excavation of coal/OB dumps.
 - vii. Green belts have been developed around mine & colony. The plant species are selected by State forest deptt. The species are mixed with fruit, fodder & fuel wood value.

31.4.3 The Committee, after detailed deliberations, recommended for granting TOR with standard TORS and the following specific TORs:

- i. EC compliance report from the RO, MOEFCC be submitted along with EIA/EMP reports.
- ii. PP should workout an integrated mine plan and submitted along with the EIA/EMP report.
- iii. To explore the possibility of Railway siding in the mining area.
- iv. Explore for own Rly siding and also dispatch arrangement from TISCO mines to Jamshedpur.

31.5 Kamptee Deep OC coal mine project of (Normative 1.5 MTPA to Peak 2 MTPA in an ML area of 667.65 ha; Latitude N 21° 02' to N 21° 15' and Longitude E 79°13' to E 79°14') M/s Western Coalfields Limited, located at dist. Nagpur, Maharashtra –EC based on TOR granted dated 03.12.2010. –Further Consideration

31.5.1 The proposal is for Environmental Clearance of Kamptee Deep OC coal mine project (Normative 1.5 MTPA to Peak 2.0MTPA in an ML area of 667.65 Ha) M/s Western Coalfields Limited, located at dist. Nagpur, Maharashtra. The proposal was last considered in the 23th EAC meeting held on 16th -17th October, 2014. The Committee sought following information for further consideration of the project:

- i. Equivalent amount of land must be provided/developed as grazing land.
- ii. There shall be no OB dumps at the end of mining.
- iii. Detailed status of backfilling of all the three mines namely Gondegaon; Kamptee & Inder be provided.
- iv. Source apportionment of air pollution in the mine and its cumulative impact be submitted.
- v. Detailed report on traffic density for coal transportation from coal mine be submitted.
- xiv. Details of rain water harvesting and other facilities should be created for ground water recharge.
- vi. Surface run off must pass through the settling tank.
- vii. Detailed Action Plan on the commitment made during Public Hearing alongwith budgetary provision made be submitted in a tabular form.

31.5.2 The proponent made the presentation and informed that:

- i. Presently all the three open cast mine Kamptee OC, Inder OC, and Gondegaon OC are under operation and due to steep gradient, simultaneously internal dumping in Kamptee OC and Inder OC is difficult. Due to this, no simultaneous dumping is proposed in Inder OC.
 - a) In Inder OC the seam gradient is in the range of 1 in 3 - 1 in 3.5 with strike length of only

1250 m. Due to steep gradient of seams (1 in 3.5), no internal dumping is proposed in the quarry. Total Overburden of 61.99 Mm³ will be dumped externally in the north-eastern side of the quarry except 0.32 Mm³ of OB dumped for flood protection embankment around dip side of the quarry. The two dump benches would be of 30 m height and final angle of overall slope is kept about 28°. Maximum height of proposed dump is planned as 60 m.

- b) As proposed in Gondegaon Extension OC, about 62.5 ha of land will be saved due to merger of dump B & C after rehabilitation of Gondegaon village. This in turn would result into reduction of land proposed to be acquired for Inder UG to OC project for purpose of OB dumping. The proposed external dump would move further west and reduce towards south by about 600m.
- c) In case of Kamptee Deep OC, a meager quantity (9.096 Mm³) of OB is proposed for simultaneous Backfilling/ internal dumping.
 - i) Total OB to be excavated – 140.485 Mm³
 - ii) OB in external dump – 131.389 Mm³
 - iii) OB in internal dump/ Backfilling – 9.096 Mm³

The proposed Kamptee Deep OC mine has been planned upto 200m depth at the floor of bottom most seam- I (B) in Phase-I. Thereafter, the mine will be further deepened in Phase-II upto safe distance from Kanhan river depending upon the economical viability at that time. Since, the quarry will be further deepened; the simultaneous internal dumping has been planned leaving about 100m distance from the dip side coal face. Because of this as well as steep gradient of coal seam (1 in 3.5 to 1 in 4.5), the total volume of OB in simultaneous dumping is only 9.096 Mm³. Rest entire OB (140.485 – 9.096 = 131.389 Mm³) will be dumped externally. The simultaneous internal dumping will start in 10th year of quarry operation (14th year of mine life). In existing Kamptee, presently backfilling is done on the erstwhile void of Kamptee OC, the details are as follows:-

S. No.	Name of mine	Back filled Area		Remark
		Area in Ha	QTY inMm3	
1	Kamptee Open Cast Mine	40	25	

- d) In Gondegaon OC, in order to maximize the backfilling and considering the pit geometry with available strike length of 3000 m, the quarry has been further sub – divided into two sub – quarries viz. Gondegaon Sub – Quarry & Ghatrohan Sub Quarry. Although the seam gradient is in the range of 1in 3.5 to 1in 5.0 and with the aforesaid planning simultaneous internal dumping has been proposed in this mine. As planned, out of the total OB excavation of 183.85 million cubic metre, 94.21 million cubic metre i.e. 51.25 % is proposed to be accommodated simultaneously in the decoaled void. However the about 48.75% of OB i.e. 89.64 million cubic metre is proposed to be dumped externally.
 - i. Total OB to be excavated – 153.91 Mm³
 - ii. OB in external dump – 83.92 Mm³
 - iii. OB in internal dump/ Backfilling – 69.99 Mm³

- e) Further in Gondegaon OCP, in order to minimize the degradation of land (to the extent possible), the internal/backfilling dump & external OB dumping has been planned in such a way so that, backfilled dump after reaching the ground level, will get merged with the adjacent external OB dump and the height of external OB dump thus formed will be of maximum of 45 m in two stages of 30 m & 15 m. In addition, as directed by the EAC during

deliberation, the possibility of future extension (towards dip side) was also examined and submitted to the EAC subsequently. As submitted, the proposed extension beyond the present limit upto 200 m will release about 16.00 Million tones of coal after an excavation of 88.67 Mm³ of OB at an average stripping ratio of 5.54 m³/te. The conceptual plan for distribution of 88.67 Mm³ of OB will be as follows:-

- i. Total OB to be excavated – 88.67 Mm³
- ii. OB in external dump – 69.26 Mm³
- iii. OB in internal dump/ Backfilling – 19.41 Mm³

- f) The total external dumping quantity of 69.26 Mm³ (future extension portion only) will be dumped over the already created dump (during the life of present project) by raising its height from 60 m to 90 m thereby saving considerable land from fresh degradation. It has been further planned that about 19.30 Mm³ OB from adjacent Inder OC can be accommodated in the merged dump of Gondegaon OC by raising its height from 45 m to 60 m, thereby saving about 62.5 ha of land from fresh degradation due to OB dumping. It may be mentioned here that during future expansion of these mines, care will be taken to extend one of the mines first and then OB of the other expansion projects will be accommodated in already extended mine. Later the rise side external OB will be back filled in these above mines by utilizing mine closure fund to ensure no OB dump in rise side at the end of mining.
- ii. The ambient air quantity is influenced due to various activities like drilling, blasting and handling related to the project. The concentration of pollutants may vary depending upon the various micro-meteorological parameters. In order to assess the latest quality of ambient air in the surrounding when all the three mines are running simultaneously, the baseline data on environmental quality for Pre Monsoon Season are collected for 91 days during the period from 1st April to 30th June 2013. Ambient air quality parameters viz., PM₁₀, PM_{2.5}, SO₂, NO_x, and all heavy metals are well within the NAAQ standards 2009 prescribed by CPCB. The cumulative impact has already been assessed and modeling has been done which shows insignificant impact due to proposed expansion of capacity.
 - iii. Total 6060 TPD coal (considering Peak Capacity at 2.00 MTPA) is transported through 600 trucks per day each having capacity of 20 tonne (Empty & loaded). Coal from mine pit is transported to Dumri Siding- about 16 km., thereafter from siding coal is dispatched to Power Plants through rail only.
 - iv. At present firstly about 12.20 ha of void at 50.00 m depth filled with water is available which is acting as a source of water recharge and it is last for next – 2 to 3 years. Secondly, balance treated mine pumped out water, before reaching confluence at the river, is allowed to accumulate in a low lying area of about 9.00 ha. This accumulation is a continuous state of affair which helps in recharging of ground water. These two structures are acting as source of ground water recharge at present. However, the monitoring report shows that there is no adverse impact on ground water table. Moreover as directed, check – dams for recharge structures shall also be constructed.
 - v. The Public Hearing for the proposed Kamptee Deep Opencast Project, WCL, Nagpur Area, Tal. Parseoni, Dist. Nagpur, conducted on **12/09/2012** at Black Diamond Stadium, Tekadi, Tal. Parseoni, Dist. Nagpur. The detailed action plan for issues raised during the Public Hearing are as follows:
 - i) Land use pattern and land under acquisition: EIA has been prepared as per the TOR accorded by MOEF. The environmental impact has been assessed for the proposed project and mitigative measures have been incorporated. The core Zone land includes agricultural land of Tekadi village, Pipri village, Juni Kamptee Village and Kanhan village. The total project area of proposed Kamptee Deep OC mine is 661.650 ha. Total 239.10 ha land has already been acquired and 96.70 ha land is under process of acquisition. In addition to this, out of total 92.603 ha land

proposed to be transferred from Inder OC to Kamptee Deep OC mine, 3.19 ha has already been acquired and balance 89.413 ha land is under process of acquisition.

- ii) The details of land acquisition under the specific provisions of respective Land acquisition act has been detailed out in the EIA/EMP.
- iii) The land acquisition is totally a separate and independent activity which will be carried out under the specific provision of the respective Coal Bearing (Acquisition & Development) Act, 1957 and/or Land Acquisition Act.
- iv) Every year WCL undertakes various welfare activities for surrounding villages under CSR. The activities/expenditure undertaken since last three years i.e. 2010-11, 2011-12, 2012-13 has been submitted.
- v) Employment and monetary compensation in lieu of employment is given to land outstee as per R& R Policy, 2012 of CIL observing all formalities. About 301 nos. of people have been provided employment from Gondgaon village.
- vi) Source Apportionment: The main source of dust in the surrounding area is due to transportation of coal. In order to control the dust, various measures as discussed and presented during the meeting will be operated and maintained. Further, the measures will be augmented depending on the analysis results.
- vii) Alternate mode of Transport: The mines viz. Gondgaon OC, Inder OC and Kamptee OC are all operating and will continue to operate. At present entire coal from these mines are dispatched to MAHAGENCO through Rail mode after bringing coal from Pithead to siding by road (10 – 15 km). It is now being proposed to develop the aerial ropeway mode and the issue has been taken up with MAHAGENCO to take the entire coal from these three mines (about 3.5 – 4.00 Million tones) through aerial ropeway system.
- viii) Quality of Mine discharge: In this regard it is submitted that analysis of the mine discharge from Kamptee has been done and found that all the parameters are well within the permissible limits

31.5.3 The Committee, after detailed deliberations, recommended for granting EC with the following specific conditions:

- i. There shall be zero mine void at the end of the mine
- ii. The issue of transportation of entire coal from three mines i.e. Gondgaon OC, Inder OC and Kamptee OC by aerial ropeway with MAHAGENCO need to be expedited.

31.6 Expansion of Juna-Kunada Open Cast Coal Mine project (from 1.20 MTPA to 1.50 MTPA production capacity in an ML area from 325.87 ha; Latitude 20° 03' 05" N to 20° 04' 57" N and Longitude 79° 02' 47" E to 79° 03' 42 E) M/s Western of Coalfields Ltd., Dist. Yavatmal, Maharashtra - EC under 7(ii) of EIA Notification 2006.

31.6.1 The proposal is for expansion under 7(ii) of EIA Notification 2006 of Juna-Kunada Open Cast Coal Mine project (from 1.20 MTPA to 1.50 MTPA production capacity in an ML area from 325.87 ha; Latitude 20° 03' 05" N to 20° 04' 57" N and Longitude 79° 02' 47" E to 79° 03' 42 E) Western of Coalfields Ltd., Dist. Yavatmal, Maharashtra. The proponent made the presentation and informed that:

- i. The Original EC was granted to the project vide letter no. J-11015/16/2003-IA.II (M) dated 10.01.2005 for 0.60 MTPA in an area of 184.87 Ha land. Another EC was granted vide letter no. J – 11015/20/2012–IA.II (M) dated 07.02. 2014 for 1.20 MTPA in an area of 325.87 Ha. Now, the present request is for enhancement in capacity from 1.20 MTPA to 1.50 MTPA capacity in the same area of 325.87 Ha.
- ii. The latitude and longitude of the project are 20° 03' 05" N to 20° 04' 57" N and 79° 02' 47" E to 79° 03' 42 E respectively.
- iii. **Joint Venture:** There is no joint Venture.
- iv. **Coal Linkage :** Thermal Power Station of MAHAGENCO

- v. The **land usage** of the project will be as follows:

Pre-Mining:

Type of land	Area in (Ha)
Agricultural land	170.25 ha
Govt. Land	14.62 ha
Mining area	141.00 ha
Total	325.87 ha

Post- Mining:

Land use details	Area in (Ha)
Plantation on Plain Land	13.00 ha
Embankment	30.50 ha(20.40 ha Plantation area)
Void	60.00 (at Juna – Kunada OC)
Public Use	3.00 ha
Afforested OB dump and other Afforested area of Chargaon OC	71.02 Ha
Chargaon OC	69.98 Ha (backfilled area approx. 55 ha from Juna kunada OC ,with plantation over 14.80 ha)
Undisturbed	81.37 ha
Total	325.87 ha

- vi. The total geological reserve is 11.99 MT. The mineable reserve 5.70 MT, extractable reserve is 5.70 MT. The per cent of extraction would be 47.54%.
- vii. The coal grade is E. The stripping ratio is 1:6.76 . The average Gradient is 1 in 1.9 to 1 in 3.5. There will be one seams with thickness ranging 14 m to 17.5 m.
- viii. The total estimated water requirement is 180m³/day. The level of ground water ranges from 2.73 m to 17.90 m.
- ix. The Method of mining would be Opencast with Shovel – Dumper Combination.
- x. No external OB One internal dump with Quantity of 35.538 Mbcm in an area of 69.98 ha.
- xi. The final mine void would be in 60.00 Ha with depth of 150 m. The total Void of Chargaon OC of 69.98 ha, approx. 55.00 ha from Juna Kunada OC is to be backfilled(part of which will be up to G.L. & part will be above G.L. by 60.0 m) Out of this, 20.80 ha is planned to be afforested/ biologically reclaimed
- xii. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xiii. The **life of mine** is 8 years (Balance Life 4 Years).
- xiv. **Transportation:** Coal transportation in pit by Dumpers, Surface to Siding by Tippers and loading at siding by Pay loaders.
- xv. There is no **R & R** involved.
- xvi. **Cost:** Total capital cost of the project is Rs. 23.757 Crores. CSR Cost Rs 2.00 per tonne. R&R Cost 2.18 Crores. Environmental Management Cost (capital cost Rs 0.33crores, annual recurring cost Rs 3.00 per tonne).
- xvii. **Water body:** Wardha River flowing adjacent to the proposed mine
- xviii. **Approvals:** Board's approval obtained on 29.11.2014. Mining plan has been approved on 29.11.2014. Mine Closure Plan approval on Final Mine Closure Plan as per MOC guidelines with a provision of @ Rs. 6.00 lakhs per ha has been approved as per Original EC of 184.87 ha. The MCP as per EC obtained in for 325.87 ha is being prepared.
- xix. **Wildlife issues:** There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10

- km buffer zone.
- xx. **Forestry issues:** There is no forest area involved.
 - xxi. Total **afforestation** plan shall be implemented covering an area of 119.22 ha at the end of mining. Green Belt over an area of 13.00 ha. Density of tree plantation 2500trees/ ha of plants.
 - xxii. There are no **court cases/violation** pending with the project proponent.
 - xxiii. **Public Hearing** was held on 13.07.2012.
 - xxiv. Title correction :The word “expansion” in ML area may be deleted
 - xxv. Calendar Plan:

Year	Coal Production in Million Tonnes
2014-15	1.50
2015-16	1.50
2016-17	0.90
Total	3.90

31.6.2 EC compliance report: The compliance report of the, Regional Office, MoEFCC at Bhopal vide letter no. 3-13/2014(ENV)/111 dated 27.01.2015 was deliberated in the EAC meeting. The Committee has noted the Action Taken for compliance by the Project which, inter alia, are as follows:

- i. Ministry has accorded 1st Clearance vide letter no. J-11015/16/2003-IA-II(M) dated 10.01.2005 for capacity 0.6 MTPA. Subsequently, compliance certification report for the same was submitted to the Ministry vide letter no. 3-3/2005/1342 dated 22.08.2013 in connection with proposed expansion of the capacity from 0.6 MTPA to 1.20 MTPA covering an area of 325.87 Ha and in accordance with Ministry Circular dated 30.05.2012. An action taken report (ATR) on “Not Complied/partly complied” was submitted to MOEFCC, NEW Delhi.
- ii. Ministry has accorded 2nd EC vide letter no. -11015/20/2012-IA-II(M) dated 07.02.2014.
- iii. As per RO, MOEFCC, PA has improved the reporting system since last inspection and therefore, further visit may not be required.
- iv. Now, PP applied for second expansion by 25 %.

31.6.3 The Committee, after detailed deliberations, recommended for granting EC with the same conditions as in the earlier EC.

31.7 Chirimiri OCP (2 MTPA (normative) and 2.70 MTPA peak in 544.046 ha; Latitude 23^o 09' 31" N to 23^o 11' 24" North and Longitude 82^o 19' 51" E to 82^o 21' 17" East) of M/s South Eastern Coalfields Limited, located in Tehsil Mahendragarh, dist. Korea, Chhattisgarh - EC based on TOR granted on 06.05.2011 - Further Consideration

31.7.1 The proposal is for Chirimiri OCP (2 MTPA (normative) and 2.70 MTPA peak in 544.046 ha; Latitude 23^o 09' 31" N to 23^o 11' 24" North and Longitude 82^o 19' 51" E to 82^o 21' 17" East) of M/s South Eastern Coalfields Limited, located in Tehsil Mahendragarh, dist. Korea, Chhattisgarh. The proposal was last considered in the 27th EAC meeting held on 18th -19th December, 2014. The Committee sought following information for further consideration of the project:

- i. Issues raised in the Public Hearing and the commitments made by the PP including the Action Plan alongwith the budgetary provisions be submitted in tabular form.
- ii. Date of Mine Plan and Mine Closure Plan.
- iii. Traffic density, transportation details, mitigative measure.
- iv. Action plan for shifting of about 2500 families required for phase –II mining to be submitted.
 - v. The rational of 500 mtr. distance from habitation to the mine.
 - vi. Detailed land use pattern of 544.046 Ha ML area alongwith the FC.

- vii. Backfilling of mine voids shall be upto ground level and with no additional OB dumps.
- viii. The feasibility of on-line monitoring of air quality system.
- ix. Confirmation that excess mine water would be treated before discharge.
 - x. Exposed coal need to be protected from fire.
 - xi. Piezometers shall be installed upto the depth of the mine.
 - xii. Rain water harvesting and check dams shall be provided.
- xiii. Native species shall be planted and the land be brought back to original vegetation composition as far as feasible.
- xiv. Coal transportation shall be by rail to the destination of the consumers.
- xv. Feasibility of deploying tippers of 30 T for coal transportation within mine.

31.7.2 The proponent made the presentation and informed that:

1. Issues raised in the Public Hearing and the commitments made by the PP including the Action Plan alongwith the budgetary provisions are as follows:
 - i. Presently, the production of coal is 1.00 MTY. After obtaining permission for expansion from 1.00 to 2.7 MTY, the production will increase and hence possibility of people getting business and employment will also increase.
 - ii. Dubchhola is connected to Chirimiri Town ship by blacktopped road.
 - iii. Bartunga has been connected with main roads. Because of the commencement of the mining activities, the labors of the surrounding villages have been engaged and the migration has stopped.
 - iv. Chirimiri Area is a hilly terrain. Water is supplied to this region through pipeline which draws water from PHE dam. A network of pipeline around entire Chirimiri region for water supply arrangement was constructed by SECL. This infrastructure has been handed over to PHE for ensuring supply to SECL as well as private colonies including Keradol village.
 - v. There will be enhancement in employment and business opportunities after project expansion.
 - vi. Keradol village is at a distance of approximately 11 KMs (By road) from the project under consideration. General Manger office and colony (GM Complex) is in Keradol village. A school is run by SECL in this complex. In addition to this another school constructed by SECL, is available in Nawapara which is part of Keradol village.
 - vii. Production is being undertaken as per the guidelines and standards of DGMS and CECB. A committee has been constituted for resolving the problems of local people.
 - viii. After Backfilling and leveling, plantation of native species shall be undertaken in consultation with C.G. Rajya Van Vikas Nigam.
 - ix. Many activities have been undertaken for community development under CSR. Rs. 342.24 lakhs have been spent for the same in the year 2013-14 and expenditures of Rs. 340.00lakhs have been approved for 2014-15. There will be more employment opportunities after project expansion and thus there will be reduced migration from the area.
 - x. Business and employment opportunities are being provided to the local people. There will be further enhancement in employment opportunities after project expansion.
 - xi. Continuous efforts are being made for production enhancement and development of the area.
 - xii. There will be enhancement in employment and business opportunities after project expansion. There will be increased awareness about education, health and overall development in the area.
 - xiii. Coal below Tikrapara is proposed to be extracted through open cast mining after boundary adjustment of Chirimiri opencast and Kurasia opencast mine. Rehabilitation and resettlement of the project affected families of Tikrapara shall be as per R & R policy of Coal India or CG State, whichever is acceptable to the PAPs.

- xiv. Proper reclamation is being practiced and shall be continued in future too.
 - xv. The coal reserves of Chirimiri Opencast Mine are being mined out with an aim of complete extraction.
 - xvi. Water sprinkling in the mine and nearby areas is being done with the help of four water sprinklers of 28 KL capacity. 6 nos. of 28 KL mobile water sprinkler with budgetary provision of Rs. 468.77 Lakhs have been provided for expansion.
 - xvii. Coal is transported by tarpaulin covered trucks. Water sprinklers are provided at transfer points, loading points etc. In addition to this Water sprinkling in the mine and nearby areas is being done with the help of four water sprinklers of 28 KL capacity. 6 nos. of 28 KL mobile water sprinkler with budgetary provision of Rs. 468.77 Lakhs have been provided for expansion.
2. Mine Plan approval obtained on 09.06.2007 and Mine closure Plan approved on 28.11.2013.
 3. Traffic density, Transportation details, mitigative measures: 125000 trips (by 16 Te Dumpers); as the terrain is hilly and highly undulating under such circumstances it is not feasible to increase the capacity of transport machinery; Black topped coal transport road is being strengthened and maintained in proper condition; 6 nos. of 28 KL mobile water sprinkler with budgetary provision of Rs 468.77 Lacks have been provided for expansion ; Plantation will be strengthened along the coal transport road, safety zone etc. for which budgetary provision of Rs 155.74 Lacks have been provided; Dust suppression arrangement at the CHP will be strengthened for which budgetary provision of Rs 20.00 Lacks have been provided.
 4. In phase-I there is no R&R involved, however in RPR financial provision of Rs. 9630.00lakhs for 2530 PAPs have been provided under R&R head. The R&R will be completed before starting of phase-II operations for which fresh Environmental Clearance will be obtained.
 5. Coal mining workings are governed by CMR (Coal Mining Regulation) 1957. DGMS (Director General of Mines Safety) is the regulatory authority to ensure safe workings of coal mines. Apart from the provisions of CMR the regulator can impose site specific conditions deemed fit for further ensuring the same. As per permission under Regulation 100(1) of Coal Mines Regulations, 1957 granted by DMS, Bilaspur Region, in its condition No. 14 Precaution during Shot-firing says that “A distance of 500 metres, herein after called Danger zone in any direction from the place of firing. The danger zone shall be distinctly demarcated by means of red flags properly arranged and supported at least 30 minutes before firing of holes is to commence. The existing workings of the mine are far away from the habitants (Chhota Bazar &Bada Bazar) nearest distance is about 1 KM to 1.2 KM and the same will be increased while mining in phase I.
 6. Detailed Land use pattern (Reconciled) along with the FC are as follows:

Purpose	Mining Lease Area (in Ha)				Total
	Government		Private		
	Forest	Others	Agri.	Others	
Area to be excavated	105.742	54.910	2.380	0.000	163.032
Storage for top soil	0.000	0.000	0.400	0.000	0.400
Overburden Dumps-External	0.000	0.000	0.000	0.000	0.000
Overburden Dumps-Internal	37.290	10.000	0.000	0.000	47.290
Mineral storage	2.570	3.000	0.000	0.000	5.570
Infrastructure (Workshop, administrative building etc.)	17.050	8.000	0.000	0.000	25.050
Roads	1.410	0.300	0.000	0.000	1.710
Green Belt/plantation	0.000	18.320	0.000	0.000	18.320
Effluent treatment plant	0.007	0.000	0.000	0.000	0.007
Coal handling plant	0.000	0.000	0.000	0.000	0.000

Township area (outside mine)/ Inhabited area/ R& R site	3.642	48.500	0.000	0.000	52.142
Other (Specify): Safety zone and allied purposes	79.579	39.188	0.000	0.000	118.767
TOTAL	247.290	182.218	2.780	0.000	432.288
Forest land for underground mining purpose & other land. This land will not be used for OC mining	*85.696	20.560	5.502	0.000	111.758
TOTAL	332.986	202.778	8.282	0.000	544.046

Note:-Stage-II FC of consolidated proposal for diversion of 989.400 Ha. Forest land for Chirimiri Colliery included 247.290 Ha. for OC & 742.110 Ha. for UG.

*85.696 ha. Is included in 742.11 Ha. for UG & will not be used for opencast mining.

7. Agreed to comply for Backfilling of mine wide up to ground level and with no additional OB dump.
8. Continuous Ambient Air Quality Monitoring station shall be installed in Chirimiri Opencast mines.
9. Agreed to comply that excess mine water shall be treated before discharge.
10. Proper firefighting arrangements have been provided for exposed coal to protect from the fire.
11. Agree to install Piezometers up to the depth of the mine.
12. SECL has already deposited Rs. 116.18 lakhs to the State Forest Department in CAMPAA account for construction of Check dams/ stop dams & underground water conservation on Korea Nalla, Saudam& other seasonal nallas flowing in the close proximity of the mine.
13. Native species shall be planted and the land be brought back to original vegetation composition as for as possible.
14. Coal transportation shall be by rail to the destination of the consumers.
15. Within the mine 60 T capacity dumpers are deployed for transportation of coal from face to coal stock yard. As the terrain is hilly and highly undulating under such circumstances it is not feasible to increase the capacity of transport machinery from stock yard to Railway siding.
16. The total ML area may be corrected to 544.46 Ha instead of 544.06 Ha.

31.7.3 The Committee, after detailed deliberations, recommended for granting EC with the following specific conditions:

- i. Measures be taken for de-congestion of the traffic.
- ii. The road connected between Dubchhola to Chirimiri Town be blacktopped.
- iii. Native species shall be planted.
- iv. Some business opportunities and adequate employment opportunities shall be provided to the local people.
- v. Coal below Tikrapara shall be extracted through open cast mining after boundary adjustment of Chirimiri opencast and Kurasia opencast mine.
- vi. Rehabilitation and Resettlement of the project affected families of Tikrapara shall be as per R & R policy of Coal India or CG State, whichever is beneficial as acceptable to the PAPs.
- vii. Proper reclamation shall be practiced and shall be continued in future too.
- viii. Water sprinkling in the mine and nearby areas shall be carried out with adequate number of mobile water sprinklers.
- ix. Coal shall be transported by mechanically covered trucks.
- x. Water sprinklers shall also be provided at transfer points, loading points etc.
- xi. A thorough study be made by Geological Survey of India to close the mine once it is exhausted.
- xii. A long-term study through Thermal imagery to identify and to locate the fire be commissioned early.

- xiii. Transportation of coal to Dhuman Hill siding be avoided as far as possible as it passes through habituated area. It shall be resorted only in extreme emergency and that too with due care and due diligence.
- xiv. The gap area of Phase –II and Mine front which is of 5 km stretch should be developed with a thick Green Belt.
- xv. Coal Transportation from Railway siding to the destination shall be by rail.
- xvi. All internal dumps, in future expansion shall be brought to the ground level by back filling and no further external OB dumps shall be created under any circumstances whatsoever.
- xvii. Efforts shall be made to reduce the depth of void as far as possible.
- xviii. Coal transportation to be carried out in pit by tippers, Surface to Siding by tippers and loading at siding by Rail. All coal will be sent to Chirimri siding only. Dhuman siding may be kept only as a backup.

31.8 Ramagundam Opencast-III Expansion Phase-II Project of (Expansion 4.30 MTPA to 6.30 MTPA Normative and 5 MTPA to 6.80 MTPA and expansion in an ML area from 1393.81 Ha to 2070.10 Ha.) M/s The Singareni Collieries Co. Ltd., Dist. Karimnagar, Telangana–EC based TOR Granted on 09.09.2013.

31.8.1 The proposal is for Environmental Clearance for Ramagundam Opencast-III Expansion Phase-II Project of (Expansion 4.30 MTPA to 6.30 MTPA Normative and 5 MTPA to 6.80 MTPA and expansion in an ML Area from 1393.81 Ha to 2070.10 Ha.) M/s The Singareni Collieries Co. Ltd., Dist. Karimnagar, Telangana. The proponent made the presentation and informed that:

- i. Earlier EC was granted vide letter no. J-11015/267/2007-IA-II(M) dated 31.07.2008 for the production capacity of 4.30 MTPA (Normative and 5.00 MTPA (Peak) in an ML area of 1393.81 Ha.
- ii. The project was accorded TOR vide letter no. No J-11015/178/2010-IA.II (M) dated 28.05.2010 and revised ToR No J-11015/43/2013-IA.II (M) dated 09.09.2013.
- iii. The latitude and longitude of the project are 18° 40’ 57” to 18° 44’ 09” (North) and 79° 28’ 58” to 79° 34’ 15” (East) respectively.
- iv. Joint Venture: No Joint Venture
- v. Coal Linkage : Basket linkage
- vi. The land usage of the project will be as follows:

Pre-Mining:

Sl. No	Present Land use	Area in (Ha)
1	Forest	Nil
2	Single crop land	176.56
3	Double crop land	2.70
4	Land with or without scrub	410.19
5	Sand dump	114.47
6	Plantations	479.09
7	Mining Area	795.96
8	Water body	26.07
TOTAL		2070.10
* Based on corticated issued by Tahasildar, Kamanpur Mandal		

Post- Mining:

Sl No.	Description	LAND USE DETAILS (Ha.)				
		Plantation	Water body	Public use	Other uses	Total
1	Quarry Area	365.98	747.72	0.00	0.00	1113.70

2	External Dump	414.80	0.00	0.00	0.00	414.80
3	Service buildings,	96.58	0.00	0.00	10.84	107.42
4	CHP	12.37	0.00	0.00	6.10	18.47
5	Safety clearance	370.98	22.40	0.00	22.33	415.71
	TOTAL	1260.71	770.12	0.00	39.27	2070.10

Core area :

Land Requirement					
Purpose	Land use of RG OC - III Ext.	Land required for RG OC -III Ext. Phase - II area			Total
		SCCL Land	Private	Total	
	(1)	(2)	(3)	(4)=(2)+(3)	(5)=(1)+(4)
Quarry Area	756.71	356.99	0.00	356.99	1113.70
OB Dump Area	315.75	99.05	29.35	128.40	444.15
Service Buildings	42.70	36.40	28.32	64.72	107.42
Coal Handling Plant	8.01	10.46	0.00	10.46	18.47
Safety Clearance, Bund, Road	115.58	248.64	22.14	270.78	386.36
TOTAL	1238.75	751.54	79.81	831.35	2070.10

vii. The total geological reserve is 196.88 MT. The extractable reserve is 130.24 MT. The per cent of extraction would be 66.15%.

viii. The coal grade is

Seam	Grade
1A Seam (Top)	G-12
1A Seam (bottom)	G-6
1 Seam	G-9
2 Seam (Top)	G-8
2 Seam (Bottom)	G-8
3B Seam	G-11
3A Seam	G-7
3 Seam (Top)	G-7
3 Seam (Bottom)	G-7
4 Seam	G-5
Total	G-11 and G-8

ix. The stripping ratio is 6.11. The average Gradient is 1 in 4.5 to 1 in 12.0. There will be 10 seams with thickness ranging.

Seam	Usual Thickness(m)
1A Seam (Top)	1.50 m
1A Seam (bottom)	1.50 m
1 Seam	5.00 m
2 Seam (Top)	1.20 m
2 Seam (Bottom)	3.00 m
3B Seam	1.20 m
3A Seam	2.00 m
3 Seam (Top)	3.00 m
3 Seam (Bottom)	6.00 m
4 Seam	4.00 m
Total	29.40

x. The total estimated water requirement is 3046m³/day. The level of ground water ranges from 1.38 m

- to 9.85 m.
- xi. The Method of mining would be Opencast.
 - xii. There is one external OB dump with Quantity of 172.34 Mbcm in an area of 444.15 ha with height of 120 meter above the surface level and one internal dump with Quantity of 608.96 Mbcm in an area of 365.98 ha.
 - xiii. The final mine void would be in 749.13 Ha with depth of 35 m. and the Total quarry area is 1113.30 Ha. Backfilled quarry area of 365.98 Ha shall be reclaimed with plantation. A void of 747.72 ha with depth of 35 m which is proposed to be converted into a water body.
 - xiv. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
 - xv. The **life of mine** is 19 years (from 2015).
 - xvi. **Transportation:** Coal transportation Up to in pit crusher by Dumpers; In pit crusher to surface Bunker by belt conveyor , Surface to Siding by Rail up to pit head CHP and loading at siding by EOL railway loading system with Silo.
 - xvii. There is **R & R** involved. There are 1854 PAFs.
 - xviii. **Cost:** Total capital cost of the project is Rs. 365.01 Crores. CSR Cost Rs. 5/- per tonne of coal. R&R Cost Rs. 94.89 Crore. Environmental Management Cost (capital cost (Direct - Rs. 113.00 Lakhs, R&R -Rs. 9489.53 Lakhs, Indirect - Rs. 2040.88 Lakhs)., Annual recurring cost Rs. 132.80 Lakh/annum @ Rs. 66.41 per Tonne (Phase-II area).
 - xix. **Water body:** Jallaram Vagu. NoC from the Government of Telangana was accorded vide I&CAD Lr. No. EE/ID/PDPL/DB/D3/94/M/1, dated 03.06.2014 for diversion of Jallaram Vagu proposal.
 - xx. **Approvals:** Ground water clearance applied on 20.11.2014, Board's approval obtained on 29.06.2012. Mining plan has been approved on 19.11.2014. 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:** There is no forest area involved.
 - xxiii. Total **afforestation** plan shall be implemented covering an area of 1260.71ha at the end of mining. Green Belt over an area of 166.29 ha. Density of tree plantation 2500 trees/ ha of plants.
 - xxiv. There are no **court cases/violation** pending with the project proponent.
 - xxv. **Public Hearing** was held on 06.08.2014. The issues raised in the PH includes R&R to KK Nagar and Lambadi Thanda; employments; dump yard; dust problem from the CHP and Quarry; enhancement of the financial powers to the Area GMs for CSR activities; laying of roads, drinking water supply, school buildings, etc.,
 - xxvi. Title of the project may be corrected with regard to ML area i.e. expansion of ML area from 1393.81 Ha. to 2070.10 Ha.

31.8.2 EC compliance report: The compliance report of the, Regional Office, MoEFCC at Bangalore monitored on dated 28.02.2014 was deliberated in the EAC meeting. The Committee has noted the Action taken for compliance by the Project which, inter alia, are as follows:

- i. Most of the EC conditions have been complied.
- ii. The Conditions which are being complied i.e. Monitoring of the stability of OB dumps; Dimension of the retaining wall; Crushers at the CHP be operated with water sprinkling arrangement; Mechanical sweeping of haul roads; Drills should be wet operated; Controlled blasting; Afforestation; Progressive Mine Closure Plan; Regular monitoring of groundwater level and quality; artificial groundwater recharge measures; Periodic health check up of their workers & other etc ; R&R of 2 villages namely Magalpalli & Peddampet involving 924 families.

31.8.3 The Committee, after detailed deliberations, recommended for granting EC with the following specific conditions:

- i. Explore the possibility to reduce the SPM from other mines in the vicinity. The PP should adopt the mechanized loading system / closed transportation.
- ii. To initiate a study with regard to damage to bones of the villagers and to take adequate remedial measures.
- iii. Medical facilities be provided to the villagers.
- iv. Special care must be taken w.r.t. fire hazards/subsidence.

31.9 Kakatiya Long Wall underground coal mine expansion project (from 2.15 MTPA to 2.747 MTPA normative and 2.28 MTPA to 3.13 MTPA peak in ML area of 601.20 Ha) of M/S The Singareni Collieries Company Ltd., Village Basvarajupalli, Dist. Warangal, Telangana - EC based on TOR granted on 05.06.2013 – Further Consideration

31.9.1 The proposal is of Kakatiya Long Wall underground coal mine expansion project (from 2.15 MTPA to 2.747 MTPA normative and 2.28 MTPA to 3.13 MTPA peak in ML area of 601.20 Ha) of M/s The Singareni Collieries Company Ltd., Village Basvaraju palli, Dist. Warangal, Telangana. The proposal was last considered in the 2nd EAC meeting held on **3rd-4th October, 2013**. where in the Committee recommended the project subject to submission of Mine plan approval.

31.9.2 The proponent made the presentation and informed that Mine plan approval has been obtained vide letter no. 13016/2/2006-CA.II –II dated 17.10.2014 and submitted to the ministry on 16.01.2015.

31.9.3 The Committee recommended the project for granting Environmental Clearance reiterating its decision taken in the 2nd EAC meeting held on 3-4th October, 2013.

31.10 Kasipet-2 Incline (production capacity of 0.47 MTPA in an ML area of 206 ha) of M/s The Singareni Collieries co. Ltd., located in Kasipet Mandal, dist. Adilabad, Telangana - EC based on TOR granted on 29.02.2012 –Further Consideration.

31.10.1 The proposal is of Kasipet-2 Incline (production capacity of 0.47 MTPA in an ML area of 206 ha) of M/s The Singareni Collieries co. Ltd located in Kasipet Mandal, dist. Adilabad, Telangana. The proposal was last considered in the 2nd EAC meeting held on **3rd-4th October, 2013** where in the Committee recommended the project subject to submission of Mine plan approval.

31.10.2 The proponent made the presentation and informed that Mine plan approval has been obtained vide letter no. 13016/12/2009-CA.II –II/Pt.II dated 27.11.2014 and submitted to the ministry on 08.01.2015.

31.10.3 The Committee recommended the project for granting Environmental Clearance reiterating its decision taken in the 2nd EAC meeting held on 3-4th October, 2013.

31.11 Coal washing plant of (3.5 MTPA in an area of 7.55 Ha; Latitude 19°46'6.44" N and Longitude 79°19'52.65" E) by M/s N.N. Global Mercantile Pvt. Limited, Dist. Chandrapur, Maharashtra –TOR

31.11.1 The proposal is for Coal washing plant of (3.5 MTPA) in an area of 7.55 Ha; Latitude 19° 46' 6.44" N and Longitude 79° 19' 52.65" E of M/s N.N. Global Mercantile Pvt. Limited, Dist. Chandrapur, Maharashtra. The proponent made the presentation and informed that:

- i. It is a fresh proposal of Coal washing plant of (3.5 MTPA) by wet process in an area of 7.55 Ha.
- ii. The latitude and longitude of the project are 19° 46' 6.44" N and 79° 19' 52.65" E respectively.
- iii. **Joint Venture:** There is no Joint Venture.
- iv. **Coal Linkage:** Coal will be sourced from Mines of Western Coalfields Limited located in

Chandrapur, Ballarpur and Wani areas.

- v. Employment generated/to be generated: 78 nos. of Skilled & Unskilled Employment will be required during the operation of project.
- vi. **Benefits of the project:** Consistent quality of the washed results in higher efficiencies; hence End Use Plants will be benefitted as less coal will be required. Reduced ash, reduces environmental pollution. Cost of carrying washed coal over long distance is cheaper than carrying raw coal. Hence there will be saving in cost. National transport system will be less burdened to that extent. Moreover, Generation of new employment both primary and secondary; upliftment in the quality of life of as their earnings will go up; CSR will also benefit the surrounding villages etc.
- vii. The **land usage** details:

S.No.	Particular	Area (Ha)
1	Construction Area	1.62
2	Green Belt	2.40
3	Open area/Stack Yard	3.53
Total Plot Area		7.55

- viii. **Methodology:** The Run of Mine (ROM) Coal will be sourced from the Mines of Western Coalfields Limited located in Chandrapur, Ballarpur and Wani areas. The ROM Coal generally ranges in size from 0- 1000 mm and sometimes even more. However, the consumers require only sized coal. The ROM Coal contains several impurities/ extraneous matter associated with the mining of coal like Stones, Shale and mud pieces. The ROM will be unloaded on the Grizzeley of a 2x 100 ton Ground Hopper (GH). The opening of the Grizzeley will be 250x 200 mm. The coal from the ground Hopper will be reclaimed by two reciprocating feeders on to a 1200 mm wide belt conveyor(C-1). This conveyor will carry the Coal to a Vibratory Screen (S-1) where it will get separated into two sizes i.e. +50 mm and (-) 50 mm. The +50mm fraction will be taken by another conveyor (C-2) to a slow moving belt conveyor of 1600 mm width. A suspended magnate will separate out iron pieces if any. After removal of the iron pieces, the +50 mm coal shall be fed to a Double Roll Crusher (Cr-1) of 450 TPH capacity which will crush the coal to (-) 50 mm. The natural (-) 50 mm coal from the underflow of vibratory screen S-1 and underflow of crusher will be taken to another double deck vibratory screen (S-2) through a conveyor (C-3). The screen will separate the coal into desired fractions of 0-13mm and 13-50 mm. The underflow of the Screen (0-13 mm) shall be stored in an overhead bunker of 100 Tonnes capacity. from where it will be loaded into trucks for onward dispatch. The overflow of the screen from the Middle and bottom deck shall be discharged on another conveyor C-5 which will take it to a desliming screen. The overflow of this screen will be fed to the HM Bath. The underflow (0-1 mm) will go to the slurry sump. The washed coal from the HM Bath shall be dewatered on dewatering screens and shall be stored in an over head bunker of suitable capacity for onward dispatch. The under flow of the dewatering screen from the first portion will be go the concentrated media sump and from the second portion to the dilute media sump from where it will be pumped to the Magnetic Separator. All underflows containing 0-1 mm coal shall be discharged in the Slurry sump from where it will be pumped to Hydro cyclones for separation of coarse and fine fractions. The overflow of the Hydro Cyclone will go to the thickener and the under flow will be taken to a high frequency dewatering screen and the dewatered product will be sent to the 13-0 mm mixed coal hopper for onward disposal. The entire water circuit will form a closed circuit and no water will be allowed to escape the system.
- ix. **Water requirement:** Fresh water requirement 517.5 Cubic meter/day, sourced from Bund over Nearby Nallah + Storage pond for process water. Existing two wells for domestic use. Coal will be washed in a heavy media Bath.
- x. **Power requirement:** 800 KW which shall be sourced from MSEDCL.

- xi. **Washery Rejects:** The only solid waste is the rejects generated during the washing process. These contain carbonaceous material and are suitable for brick burning. These will be sold to the surrounding brick kilns. Any surplus rejects will be used for filling low lying area. The washing process is a wet process. All products will carry surface moisture. So there will not be any fugitive emission of dust from these products.
- xii. The storm water drainage system is designed to handle any leachate and carry it to a guard pond from where it will be pumped to tailings thickener and recycled. Coal Rejects @ 200 tons/day will be sold to brick kilns.
- xiii. **Transportation:** Coal will be transported from the Mines in tipping trucks/ Dumpers duly covered with Tarpaulin.
- xiv. There is no **R & R** involved. There are no PAFs.
- xv. **CSR Activities:** In the first year itself, Medical health checkup Camps will be organized in all surrounding villages. An ambulance shall be purchased and shall be available on call for serious patients of the five surrounding villages. Toilets for Girls will be provided in the schools of 5 surrounding Villages. Swatch Bharat Abhiyan will be promoted in ten surrounding villages. Solar lights will be provided to needy 5 surrounding villages. Repairing and maintenance of School Building will be taken up during the construction phase of the Washery.
- xvi. **Cost:** Total capital cost of the project is Rs. 19.00 Crores. CSR Cost Rs. 28.5 Lakhs. Environmental Management Cost Rs 18 Lakhs /annum.
- xvii. **Water body :** Seasonal Nalah flows near the Western Boundary of the Project site
- xviii. **Wildlife issues:** There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xix. **Forestry issues:** No forest area involved.
- xx. Green Belt over an area of 2.40 Ha Acres.
- xxi. There are no **court cases/violation** pending with the project proponent.

31.11.2 The EAC received a representation from one of the NGOs requesting Ministry to address issues with regards to CEPI Index in Chandrapur vis-a-vis Air Pollution; Water Pollution etc.

31.11.3 The Committee, after detailed deliberations, sought the following information for further consideration:

- i. Detailed note be submitted on the impact from the project vis-a-vis CEPI Index in Chandrapur; Air Pollution; Water Pollution etc.
- ii. Original Topo-sheet covering the project area be made available during the presentation.
- iii. MOUs with the consumers for washed coal be submitted.
- iv. Comments of CPCB & MPCB with respect to whether the project site is within the CEPI area need to be furnished.
- v. Representative of the project not below the rank of Director should be present during the presentation for the firm commitments.

31.12 The Committee discussed on the draft standard TORs for Opencast, Underground and Mixed mines and finalized the standard TORs (Annexure 4-6)

PARTICIPANTS IN 31st EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 16th - 17th February 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.	Shri. 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. Manoranjan Hota	Member Secretary
11.	Shri P. R. Sakhare	Scientist – 'C'

PARTICIPANTS IN 31st EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 16th - 17th February 2015 ON COAL SECTOR PROJECTS.

31.1 Hingula-II OC of M/s Mahanadi Coalfields Limited.

1. Shri J. P. Singh
2. Shri D. Bhattacharya
3. Shri C. Jayadev
4. Shri S. N. Sinha
5. Shri Jitendra Singh
6. Dr. A. K. Samantaray
7. Shri U. K. Mohanti
8. Md. M. Rabbani
9. Shri S. K. Bhar
10. Shri K. S. Ganapathy

31.2 Kuju Open Cast Coal of M/s Central Coalfields Limited;

31.3 Pichri OCP of M/s Central Coalfields Limited;

31.4 Expansion of Jharkhand OCP of M/s Central Coalfields Limited.

1. Shri P. K. Tiwari
2. Shri P. K. Guin
3. Dr. A. Sinha
4. Shri Pushkar
5. Shri Alok Kumar
6. Shri S. Singh
7. Shri J. Chakravorty
8. Shri Prabhu Prasad
9. Shri Vikas Kumar. Singh

31.5 Kamptee Deep OC coal mine project of M/s Western Coalfields Limited;

31.6 Expansion of Juna-Kunada Open Cast of M/s Western Coalfields Limited.

1. Shri S. S. Malli
2. Shri S. K. Sinha
3. Shri A. C. Singh
4. Shri U. S. Shah
5. Shri Gaurav Kumar
6. Shri K. Chakraborty

31.7 Chirimiri OCP of M/s South Eastern Coalfields Limited.

1. Shri R. P. Thakur
2. Shri Manoj Kumar
3. Shri U. T. Kanzaokar
4. Shri N. R. Holkar
5. Shri R. N. Sonwanshi
6. Shri S. R. Tripathi
7. Shri A. S. Bapat

8. Shri A. K. Gupta
9. Shri Amit Saxena
10. Shri Ankur Kumar
11. Md. Afzal

31.8 Ramagundam Opencast-III Expansion Phase-II M/s The Singareni Collieries Co. Ltd;

31.9 Kakatiya Long Wall underground of M/S The Singareni Collieries Co. Ltd;

31.10 Kasipet-2 Incline of M/s The Singareni Collieries co. Ltd.

1. Shri D. Manohar Rao
2. Shri Vasanth Kumar
3. Shri P. Shanth Kumar
4. Shri S. Sreence
5. Shri N. Bhaskar

31.11 Coal washing plant of (3.5 MTPA) M/s N.N. Global Mercentile Pvt. Limited,

1. Shri Pradeep Joshi
2. Shri A. K. Shrivastav
3. Shri R. R. Gajbhiye
4. Shri Ujwal Kapoor

Generic ToR for coal washery

- i. Siting of washery is critical considering to its environmental impacts. Preference should be given to the site located at pit head; in case such a site is not available, the site should be as close to the pit head as possible and coal should be transported from mine to the washery preferably through closed conveyer belt to avoid air pollution.
- ii. The washery shall not be located in eco-sensitive zones areas.
- iii. The washery should have a closed system and zero discharge. The storm drainage should be treated in settling ponds before discharging into rivers/streams/water bodies.
- iv. A thick Green belt of about 50 m width should be developed surrounding the washery.
- v. A brief description of the plant alongwith a layout, the specific technology used and the source of coal should be provided.
- vi. The EIA-EMP Repot should cover the impacts and management plan for the project of the capacity for which EC is sought and the impacts of specific activities, including the technology used and coal used, on the environment of the area (within 10km radius), and the environmental quality of air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts for the rated capacity. Cumulative impacts for air and water should be a part of EIA in case coal mine, TPP and other washeries are located within 10km radius. The EIA should also include mitigative measures needed to minimize adverse environmental impacts.
- vii. A Study Area Map of the core zone as well as the 10km area of buffer zone showing major industries/mines and other polluting sources should be submitted. These maps shall also indicate the migratory corridors of fauna, if any and areas of endangered fauna; plants of medicinal and economic importance; any ecologically sensitive areas within the 10 km buffer zone; the shortest distance from the National Park/WL Sanctuary Tiger Reserve, etc. alongwith the comments of the Chief Wildlife Warden of the State Government.
- viii. Data of one-season (non-monsoon) primary- base-line data on environmental quality of air (PM₁₀, PM_{2.5}, SO_x and NO_x, noise, water (surface and groundwater), soil be submitted.
- ix. The wet washery should generally utilize mine water only. In case mine water is not available, the option of storage of rain water and its use should be examined. Use of surface water and ground water should be avoided.
- x. Detailed water balance should be provided. The break-up of water requirement as per different activities in the mining operations vis-a-vis washery should be given. If the source of water is from surface water and/or ground water, the same may be justified besides obtaining approval of the Competent Authority for its drawl.
- xi. The entire sequence of mineral production, transportation, handling, transfer and storage of mineral and waste, if any, and their impacts on air quality should be shown in a flow chart with specific points where fugitive emissions can arise and specific pollution control/mitigative measures proposed to be put in place. The washed coal and rejects should be transport by train as far as possible. Road transport of washed coal and rejects should generally be avoided. In case, the TPP is within 10km radius, it should be through conveyer belt. If transport by rail is not feasible because of the topography of the area, the option for transport by road be examined in detail and its impacts along with the mitigation measures should be clearly brought out in EIA/EMP report.
- xii. Details of various facilities proposed to be provided in terms of parking, rest areas, canteen etc.to the personnel involved in mineral transportation, workshop and effluents/pollution load from these activities should be provided.
- xiii. Impacts of CHP, if any, on air and water quality should also be spelt out alongwith Action Plan.
- xiv. O.M. no. J-IIOI3/25/2014-IA.I dated 11th August, 2014 to be followed with regard to CSR activities.
- xv. Details of Public Hearing, Notice(s) issued in newspapers, proceedings/minutes of Public Hearing, points raised by the general public and response/commitments made by the proponent along with the

Action Plan and budgetary provisions be submitted in tabular form. If the Public Hearing is in the regional language, an authenticated English translation of the same should be provided. Status of any litigations/ court cases filed/pending, if any, against the project should be mentioned in EIA.

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

GENERIC TOR FOR AN OPENCAST COALMINE PROJECT for EC

- (i) An EIA-EMP Report shall be prepared for..... **MTPA** rated capacity in an ML/project area of.....ha based on the generic structure specified in **Appendix III of the EIA Notification, 2006**.
- (ii) An EIA-EMP Report would be prepared for..... **MTPA** rated capacity to cover the impacts and 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 except monsoon.
- (iii) A map specifying locations of the State, District and Project location should be provided.
- (iv) A Study area map of the core zone 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.
- (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)			
	TOTAL			

- (xii) Break-up of lease/project area as per mining operations should be provided.
- (xiii) Impact of changes in the land use due to the project, if much of the land being acquired is predominantly agricultural land/forestland/grazing land.
- (xiii) **One-season (non-monsoon) primary baseline data** on environmental quality - air (PM₁₀, PM_{2.5}, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season **met data** coinciding with the same season for AAQ collection period should be provided.
- (xiv) Map of the study area (1: 50, 000 scale) (core and buffer zone clearly delineating 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 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. Values should be provided based on desirable limits.
- (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 fauna, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a **Comprehensive Conservation Plan** should be prepared and submitted with EIA-EMP Report; and comments 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.
- (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 should be given.
- (xxi) Impact of mining and water abstraction use in 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, management plan for maintenance of HEMM, 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 entirely wagons and into 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 from mining operations and whether the land can be restored to agriculture use post mining.
- (xxviii) Progressive Green belt and ecological restoration /afforestation plan (both in text, figures and in the tabular form as per the format of MOEF given below) and selection of species (native) based on original survey/landuse should be given.

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

S.N.	Land use Category	Present (1 st Year)	5 th Year	10 th Year	20 th year	24 th Year (end of Mine life)*
1.	Backfilled Area(Reclaimed with plantation)					
2.	Excavated Area (not reclaimed)/void					
3.	External OB dump Reclaimed with plantation)					
4.	Reclaimed Top soil dump					
5.	Green Built Area					
6.	Undisturbed area (brought under plantation)					
7.	Roads (avenue plantation)					
8.	Area around buildings and Infrastructure					
	TOTAL	110*	110*	110*	110*	110*

* 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	Area (ha)	No. of Trees	Area (ha)	No. of Trees	Area (ha)	No. of Trees	Area (ha)	No. of Trees
1.	1 st year										
2.	3 rd year										
3.	5 th year										
4.	10 th year										
5.	15 th year										
6.	20 th year										

7.	25 th year										
8.	30 th year										
9.	34 th year (end of mine life)										
10.	34-37 th Year (Post-mining)										

* As a representative example

(xxviii) Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the status pre- mining 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 rehandling (wherever applicable) and backfilling and progressive mine closure and reclamation should be detailed.

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					
	TOTAL					110

- (xxix) 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 accorded ?.
- (xxx) Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given.
- (xxxii) Risk Assessment and Disaster Preparedness and Management Plan should be provided.
- (xxxiii) Integration of the Env. Management Plan with measures for minimising use of natural resources - water, land, energy, etc. should be carried out.
- (xxxiiii) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxxiv) 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.
- (xxxv) 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.
- (xxxvi) 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.

(xxxvii) 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.

(xxxviii) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.

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

(xl) 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.

(xli) 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.

FORESTRY 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			

GENERIC TORs FOR AN UNDERGROUND COALMINE PROJECT

- (i) An EIA-EMP Report shall be prepared for a peak capacity of.....MTPA over an area of..... ha addressing the impacts of the underground coalmine project including the aspects of mineral transportation and issues of impacts on hydrogeology, plan for conservation of flora and fauna and afforestation/plantation programme based on the generic structure specified in Appendix III of the EIA Notification 2006. Baseline data collection can be for any season except monsoon.
- (ii) The EIA-EMP report should also cover the impacts and management plan for the project specific activities on the environment of the region, and the environmental quality with respect to air, water, land, biotic community, etc. through collection of baseline data and information generation of baseline data on impacts for..... MTPA of coal production based on approved project/Mining Plan.
- (iii) A Study area map of the core zone and 10 km area of the buffer zone (15 km of the buffer zone in case of ecologically sensitive areas) delineating the major landscape features such as the land use, drainage, locations of habitats, major construction including railways, roads, pipelines, major industries/mines and other polluting sources;and shall also indicate the migratory corridors of fauna, if any and the areas where endangered fauna and plants of medicinal and economic importance are found in the area.
- (iv) Map showing the core zone along with 3-5 km of the buffer zoneshowing thedelineationof the agricultural land (irrigated and unirrigated, uncultivable land (as defined in the revenue records), forest areas (as per records) and grazing land and wasteland and water bodies should be provided.
- (v) Contour map at 3 m interval along with Site plan of the mine (lease/project area with about 3-5 km of the study area) showing the various surface structures such as buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within/adjacent to the ML), green belt and undisturbed area and if any existing roads, drains/natural water bodies that are to be left undisturbed and details of natural drainage adjoining the lease/project and modification of thereof in terms of construction of embankments/bunds, proposed diversion/re-channeling of the water courses, etc. and highways passing through the lease/project area should be given.
- (vi) 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	

- (vii) Study on the existing flora and fauna in the study area carried out by an institution of relevant discipline and the list of flora and fauna duly authenticated separately for the core and buffer zones and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. The report and the list should be authenticated by the concerned institution carrying out the study and the names of the species (scientific and common names) along with the status of species as per the classification of the Wild Life Protection Act, 1972 should be furnished.
- (viii) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working plan/scheme until the end of mine life should be reflected on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan should be provided. Geological maps should also be included.
- (ix) Impact of mining on hydrology, modification of natural drainage, diversion and channelling 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 should be provided.
- (x) Collection of one-season (non-monsoon) primary baseline data on environmental quality - air (PM₁₀, PM_{2.5}, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, AS, etc), noise, water (surface and groundwater), soil along with one-season met data should be provided.
- (xi) Map of the study area (core and buffer zone) clearly delineating the location of various sampling stations for air/water/soil and noise (each shown separately) superimposed with location of habitats, wind roses, other industries/mines, polluting sources should be given. The number and location of the stations should be selected on the basis of the proposed impacts in the downwind/downstream/groundwater regime. One station should be in the upwind/upstream/non-impact non-polluting area as a control station. Wind roses to determine air pollutant dispersion and impacts thereof shall be determined. Monitoring should be as per CPCB guidelines and standards for air, water, noise notified under Environment Protection Rules. Parameters for water testing for both ground and surface waters should be as per ISI standards and CPCB classification of surface water wherever applicable.
- (xii) Impact of mining and water abstraction and mine water discharge from the mine on the hydrogeology and groundwater regime within the core zone and 10km buffer zone including studies on the impact of mining on the groundwater regime. Details of rainwater harvesting and measures for recharge of groundwater should be reflected wherever the areas are declared dark/grey from groundwater development.
- (xiii) Study on subsidence, continuous monitoring measures for mitigation/prevention of subsidence, modelling subsidence prediction and its use during mine operation, safety issues should be done.
- (xiv) 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.
- (xv) 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.
- (xvi) Impacts of mineral transportation inside and outside the lease/project should be provided. The entire sequence of mineral production, transportation, handling, transfer and storage of mineral and waste, and their impacts on air quality should be shown in a flow chart with the specific points where fugitive emissions can arise with the specific pollution control/mitigative measures proposed to be put in place. The carrying capacity of existing roads in the area and if new roads are proposed, the impact of their construction and particularly if it involves use forest land. Efforts be made to reduce coal dust generation by truck loading through CHP and wagon loading through CHP/SILO to reduce air pollution
- (xvii) 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.
- (xviii) 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.
- (xix) 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.
- (xx) Conceptual Final Mine Closure Plan along with the fund requirement for the detailed activities proposed there under should be given. Impacts of change in land use for mining operations and details of post mining land use, including the feasibility of using the land for agriculture should be provided.
 - (xxi) 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.
 - (xxii) Details of cost of EMP (capital and recurring) in the project cost and for final mine closure plan and these include the specific costs (capital and recurring) of each pollution control/mitigative measures proposed in the project until the end of mine life and a statement that this is included in the project cost should be given.
 - (xxiii) The Env. Management Plan should be integrated with measures for minimizing the use of natural resources - water, land, energy, raw materials/mineral, etc.
 - (xxiv) Detailed project specific R&R Plan with data on the existing socio-economic status (including tribals, SC/ST) of the population 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 provided.
 - (xxv) 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.
 - (xxvi) 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.
 - (xxvii) 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.
 - (xxviii) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated
 - (xxix) Status of any litigations/ court cases filed/pending in any Court/Tribunal on the project should be provided.
 - (xxx) Details on sample test analysis of:
 - Characteristics of coal: This should include details on grade and other characteristics such as ash content, and heavy metals including levels of Hg, As, Pb, Cr etc. should be given.
 - (xxxi) Copies of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval, NOC from Flood and Irrigation Dept. (if req.), etc. should be provided wherever applicable.

FORESTRY CLEARANCE: Details on the forest clearance the details should be given as per format.

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			

GENERIC TORs FOR AN OPENCAST-CUM-UNDERGROUND COALMINE PROJECT

- (i) An EIA-EMP Report would be prepared for a combined rated capacity ofMTPA for OC-cum-UG project which consists of MTPA 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 cover the impacts and 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 approval of project/Mining Plan for MTPA. Baseline data collection can be for any season except monsoon.
- (iii) The ToRs prescribed for both opencast and underground mining are applicable for opencast – cum-underground mining.
- (iv) Information on the following aspects of the corporate Environment Responsibility should also be provided for opencast, underground and opencast-cum-underground Mine
- (v) Corporate Environment Responsibility:
 - e) The Company must have a well laid down Environment Policy approved by the Board of Directors.
 - f) 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.
 - g) 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.
 - h) 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.

GENERAL CONDITIONS AND ADDITIONAL POINTS OF TORs for EC

The following general points should be noted:

- (i) All documents should be properly indexed, page numbered.
- (ii) Period/date of data collection should be clearly indicated.
- (iii) Authenticated English translation of all material in Regional languages should be provided.
- (iv) After the preparation of the draft EIA-EMP Report as per the aforesaid TORs, the proponent shall get the Public Hearing conducted as prescribed in the EIA Notification 2006 and its subsequent amendments and take necessary action for obtaining environmental clearance under the provisions of the EIA Notification 2006 and its subsequent amendments.
- (v) The letter/application for EC should quote the MOEF file No. and also attach a copy of the letter prescribing the TORs.
- (vi) The copy of the letter received from the Ministry on the TORs prescribed for the project should be attached as an annexure to the final EIA-EMP Report.
- (vii) The final EIA-EMP report submitted to the Ministry must incorporate the issues in TORs and that raised in Public Hearing. The index of the final EIA-EMP report, must indicate the specific chapter and page no. of the EIA-EMP Report where the specific TORs prescribed by Ministry and the issue raised in the P.H. have been incorporated. Mining Questionnaire (posted on MOEF website) with all sections duly filled in shall also be submitted at the time of applying for EC.
- (viii) General Instructions for the preparation and presentation before the EAC of EC for projects of Coal Sector should be incorporated/followed.

The following additional points are also to be noted:

- (i) Grant of TORs does not necessarily mean grant of EC.
 - (ii) Grant of TORs/EC to the present project does not necessarily mean grant of EC to the captive/linked project.
 - (iii) Grant of TOR/EC to the present project does not necessarily mean grant of approvals in other regulations such as the Forest (Conservation) Act 1980 or the Wildlife (Protection) Act, 1972.
 - (iv) Grant of EC is also subject to Circulars issued under the EIA Notification 2006 from time to time, which are available on the MOEF website: www.envfor.nic.in
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31st EAC (THERMAL & COAL MINING PROJECTS) MEETING
SCHEDULED FOR 16th -17th February, 2015

AGENDA

Venue: Teesta Conference Hall, Ground 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" as by-mail, per in word "check format and also a signed & scanned copy, to the Member-Secretary at hota@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 2nd December, 2009.

COAL MINING PROJECTS

Monday, 16th February, 2015

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

31.1 10:15 AM –11:45 AM: Hingula-II OC Expn. Project (Phase-III) (12 MTPA TO 15 MTPA and expansion of ML area From 544.40 ha to 1870 ha (1741.95 ha of ML area + 128.05 ha ancillary activates; Latitude 20^o56'00" to 20^o58'22" N and Longitude 85^o00'58" to 85^o02'49" E) of M/s Mahanadi Coalfields Limited, in Tehsil Jharsuguda, Dist. Jharsuguda, Odisha - EC based on TOR dated 11.07.2008 –Further Consideration.

31.2 11:45 AM –1:00 PM: Kujju Open Cast Coal Mining project (production capacity 1.30 MTPA (Normative) and 1.50 (Peak) in an area of 189.6 ha of M/s Central Coalfields Ltd., Vill. Kujju Dist, Ramgarh, Jharkhand - EC based on TOR granted on 31.01.2013.

LUNCH

31.5 2:00 PM - 3:00 PM: Pichri OCP (1.20 MTPA Normative to 1.50 MTPA Peak in an ML Area 151.47 Ha) of M/s Central Coalfields Limited, Dist. Bokaro, Jharkhand- TOR.

31.6 3:00 PM –4:00 PM: Expansion of Jharkhand OCP (from 2 MTPA Normative to 2.70 MTPA Peak in an ML area 278.88 Ha) of M/s Central Coalfields Limited, Jharkhand - TOR.

- 31.7 4:00 PM –5:00 PM:** Kamptee Deep OC coal mine project of (Normative 1.5 MTPA to Peak 2 MTPA in an ML area of 667.65 ha) **M/s Western Coalfields Limited**, located at dist. Nagpur, Maharashtra –**EC based on TOR granted dated 03.12.2010. –Further Consideration**
- 31.7 5:00 PM –6:00 PM:** Expansion of Juna-Kunada Open Cast Coal Mine project (from 1.20 MTPA to 1.50 MTPA production capacity and Expansion in ML area from 325.87 ha **Latitude 20° 03' 05" N to 20° 04' 57" N and Longitude 79° 02' 47" E to 79° 03' 42 E**) **M/s Western Coalfields Ltd.**, Dist. Yavatmal, Maharashtra - **EC under 7(ii) of EIA Notification 2006.**

Tuesday, 17th February, 2015

- 31.8 10:00 AM –11:15 AM:** Chirimiri OCP (2 MTPA (normative) and 2.70 MTPA peak in ha; Latitude 23°09'31"N to 23°11'24"North and Longitude 82°19'51"E to 82°21'17"East) of **M/s South Eastern Coalfields Limited**, located in Tehsil Mahendragarh, dist. Korea, Chhattisgarh - **EC based on TOR granted on 06.05.2011- Further Consideration**
- 31.9 11:15 AM –12:30 PM:** Ramagundam Opencast-III Expansion Phase-II Project of (Expansion 4.30 MTPA to 6.30 MTPA Normative and 5 MTPA to 6.80 MTPA in an ML Area of 1393.81 Ha) **M/s The Singareni Collieries Co. Ltd.**, Dist. Karimnagar, Andhra Pradesh –**EC based Tor Granted Dated On 09.09.2013.**
- 31.9 12:30 PM –1:00 PM:** Kakatiya Long Wall underground coal mine expansion project (from 2.15 MTPA to 2.747 MTPA normative and 2.28 MTPA to 3.13 MTPA peak in ML area of 601.20 Ha) of **M/S The Singareni Collieries Company Ltd., Village Basvarajupalli, Dist. Warangal, Andhra Pradesh - EC based on TOR granted on 05.06.2013–Further Consideration**

LUNCH

- 31.13 2:00 PM - 2:30 PM:** Kasipet-2 Incline (production capacity of 0.47 MTPA in an ML area of 206 ha) of **M/s The Singareni Collieries co. Ltd.**, located in Kasipet Mandal, dist. Adilabad, Telangana - **EC based on TOR granted on 29.02.2012 –Further Consideration.**
- 31.14 2:30 PM - 3:30 PM:** Coal washing plant of (3.5 MTPA) **M/s N.N. Global Mercantile Pvt. Limited**, Dist. Chandrapur, Maharashtra –**TOR**
- 31.15 4:00 PM onwards -** Discussion on finalization of standard TORs & any other matters with the permission of the Chair.
