

**MINUTES OF 42nd EAC (THERMAL & COAL MINING PROJECTS) MEETING
HELD ON 31st AUGUST- 1st SEPTEMBER, 2015**

The 42nd EAC (Thermal & Coal mining projects) Meeting was held on **31st August, 2015 - 1st September, 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 39th EAC meeting held on 16th -17th July, 2015.

C. The following proposals were considered.

Agenda 42.1

Khadia Opencast Coal Mine Expansion Project (from 10 MTPA to 14 MTPA in an existing area of 1640 ha) of M/s Northern Coalfields Limited, located in District Sonebhadra (Uttar Pradesh) and in Tehsil Singrauli in District Sidhi (Madhya Pradesh) - EC under 7(ii) of EIA Notification 2006.

42.1.1 The proposal for Khadia Opencast Coal Mine Expansion Project from 10 MTPA to 14 MTPA and lease area from 1460 ha to 1640 ha (Latitude 24° 07' 26" N - 24° 08' 47" N and Longitude 82° 41' 40" E - 82° 44' 47" E) of M/s Northern Coalfields Limited, located in District Sonebhadra (UP) and in Tehsil Singrauli in District Sidhi (Madhya Pradesh) was earlier considered in the 29th EAC meeting held on 15th - 16th January, 2015 and 37th EAC meeting held on 11-12 June, 2015. During the last meeting, the Committee sought following information for further consideration of the project:

- i. No coal transport by road is permitted.
- ii. The reclamation plan should be revisited to ensure that the void will be completely back filled.
- iii. Revised Mine Closure Plan.
- iv. Mine Plan/ Mine Closure Plan approvals for the intended capacity for which EC is being sought.

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

- (i) No coal will be transported by road for the intended capacity. 6 MTPA CHP is under construction and the same will be ready by 2017-18 when the increased production is scheduled to be achieved.
- (ii) Final stage post mining reclamation plan has been prepared by completely back filling the void. Ultimately there will be no time mine void at the end of mining. Mine Closure plan has been revised. As informed by PP no handling of external OBD will be done and only progressive mined out OB will be filled in the mine void. Final mine void will be 39 ha and 45 m deep. No details of schedule of OB handling given. Committee noted huge land degradation due to external OBD and mine void which is avoidable.
- (iii) Mine Plan / mine closure plan has been approved by NCL Board in the 197th Board meeting held on 28.07.2015.

42.1.3 While appraisal of the proposal, the project proponents could not provide adequate data and requisite information sought by the Committee. Also, the Committee members informed that they did not receive the documents (hard copies) related to the project. The project proponent also acknowledged that documents could not be sent to the individual members due to paucity of time. Committee asked the PP to come back with details for further appraisal. The pp later on informed that they require more time for preparation and sought for more time. Therefore, **the Committee deferred the proposal.**

Agenda 42.2

Kusmunda Opencast Expansion Project (Normative 15 MTPA to 50 MTPA & Peak 18.75 MTPA to 62.50 MTPA in an ML area 3510.348 Ha) of M/s South Eastern Coalfields Ltd, located at District Korba (Chhattisgarh)

42.2.1 The proposal is for Kusmunda Opencast Expansion Project (Normative 15 MTPA to 50MTPA & Peak 18.75 MTPA to 62.50 MTPA in an ML area 3510.348 ha (Latitude 22° 15' 18" to 22° 21' 30" North and Longitude 82° 38' 39" to 82° 42' 08" East) of M/s South Eastern Coalfields Ltd, located at District Korba (Chhattisgarh).

42.2.2 The proposal was earlier considered in the 37th EAC meeting held on 11th -12th June, 2015 and 39th EAC meeting held on 16th -17th July, 2015. During the last meeting, the Committee sought following information for further consideration of the project:-

- (i) Cumulative impact assessment of air quality and cumulative water balance to be assessed covering entire area of three mines namely Gevera OC, Dipka OC and Kusmunda.
- (ii) Latest status of forestry clearance shall be submitted to the MoEFCC.
- (iii) Provision of grazing land shall be made in R&R Plan equal to the amount of grazing land in pre-mining land use plan.
- (iv) Water bodies shall be created equal to the area given in the pre-mining land use plan.
- (v) A note on existing capacity of the coal evacuation system.
- (vi) Three tier plantation shall be developed in such a way that the top canopy shall be at least 40 high and shall be developed within 4 to 5 years with fast growing native species.
- (vii) Piezometer should be installed in nearby villages also for monitoring ground water level.

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

- (i) Cumulative impact assessment of three mega mines namely Gevera OC, Dipka OC and Kusmunda shall be submitted within three months.
- (ii) Proposal for Regularization of 324.84 ha of Revenue Forest land: Application submitted in April, 2005. After scrutiny, proposal was forwarded to MoEF in April, 2007. The proposal was placed before FAC in Jan. 2008. FAC desired ATR against the persons identified for violation. SECL represented to the state with all details, that there is no violation of FC Act and no person is responsible as the land was utilized prior to 12.12.1996 (i.e. before the Hon'able Supreme Court's judgment in T.N. Godavarman case (WP 202/1995), when FC Act was not applicable to revenue forest land in light of the letter dated 13-08-1991 of MP Government. On the basis of SECL's representation, C.G. State Forest Deptt. submitted their comments in Sep. 2014 to MOEF. Proposal was again placed before FAC on 28-11-2014, MoM issued on 25-11-2014. MoEFCC sought additional information from State, SECL and RO Bhopal regarding Breaking of land prior to and after Oct 1980 and prior to and after 12-12-1996. MoEFCC issued a letter on 07.01.2015 to R.O. Bhopal to inspect the area and submit a detailed report on forest area broken prior to & after enforcement of FC Act 1980 and up to & after 12.12.1996 on the forest area study along with the recommendation to MoEF& CC.Inspection by RO Nagpur held from 13th July to 17th July 2015. Report is awaited.

Additional forest land required for expansion is 144 Ha. (22 Ha. from 15 MTY PR acquisition and 122 Ha from 50 MTY PR acquisition). Expansion PR of 50 MTY was approved on 03-08-2013. Additional 122 Ha of forest land will be required for which notification u/s 7(i) of CBA is awaited. A composite proposal of 144 Ha will be submitted online soon after Sec 7(i) notification, on getting Collector's NOC for "Non forestry use of forest land". Likely to be submitted in 3rd quarter of 2015-16.

- iii) Provision of grazing land shall be made in R&R Plan equal to the amount of grazing land in pre-mining land use plan.
- (iv) Water bodies shall be created equal to the area given in the pre-mining land use plan.
- (v) Existing capacity of the coal evacuation system: At present, total capacity of coal dispatch arrangement for Kusunda OCP is 26.00 MTPA. Mode wise details are given below.

S. No.	Coal Dispatch Arrangement	Dispatch Capacity
1	Dispatch through Closed Belt Conveyor to TPP (CSPGCL)	7.00 MTPA
2	Dispatch through 3 railway sidings <ul style="list-style-type: none"> • Gevra road railway siding with dispatch capacity of 6.00 MTPA • New Kusunda Wharf wall siding with dispatch capacity of 6.00 MTPA • Kusunda new siding with dispatch capacity of 6.00 MTPA 	18.00 MTPA
3	Dispatched through road mode	1.00 MTPA
Total		26.00 MTPA

Action plan to enhance the coal evacuation system is given below which will be executed in phases. After completion of phase -1 with Construction of CHP & its commissioning on 31.01.17, there is all probability that new unit of CSPGCL will be commissioned and it will be able to receive 10.00 to 11.00 MTPA of coal through belt conveyor, hence the capacity of coal evacuation system will be about 30.00 MTPA on 31.01.2017.

After completion of phase - 2 i.e. commissioning of CHP Including Silo on 30.04.18, coal evacuation system capacity will be 50.00 MTPA.

The transportation of coal within mine boundary will be by tippers that will be replaced by in-pit belt conveyor after Construction of In-pit conveyor & its commissioning on 31.01.19.

The detailed action plan for coal evacuation system installation at Kusunda OCP, 50 MTPA is given below.

- (vi) Three tier plantation shall be developed in such a way that the top canopy shall be at least 40 high and shall be developed within 4 to 5 years with fast growing native species.
- (vii) Piezometer should be installed in some nearby villages also for monitoring ground water level.

42.2.4 The EAC in the first instance took note that the PPs did not send the project documents (hard copies) to the members, and thus they were not prepared for the appraisal with the present status. However, observations of the Committee were as under:-

(i) The PP should consider increasing the production capacity in consonance with the infrastructure being created. PP submitted that the coal evacuation and other allied infrastructure would correspond to capacity expansion up to 26 MTPA only. PP was reminded that the coal dispatched through silo and in-pit conveyor system as per earlier EC no work has been done. The relaxation for 18.5 MTPA production on this was given only to help PP achieve coal production target and does not cancel the belt transport and silo arrangement which is necessary for controlling air pollution.

(ii) The instant project would be the largest coal mining project in India. As such, details on strengthening of the environment management system including human resources and infrastructure are to be spelled out at the planning stage itself.

(iii) The mining project should serve as a model for rest of the coal mining projects in the country.

42.2.5 The EAC found the proposal deficient vis-a-vis their observations in the last meeting. The Committee desired for fulfillment/information in respect of the following:-

- (i) Cumulative impact Assessment Study for the three mines namely; Gevra OC, Dipka OC and Kasmunda OC has not been carried out. Since the project site is located in one of the identified 'Critically Polluted Areas', modeling studies are essentially required to ascertain the environmental impact of the proposed expansion especially in terms of ambient air quality.
- (ii) Air quality modeling studies to be carried out with long term baseline data and incremental data using online monitoring system already in place.
- (iii) Water balance of the study area.
- (iv) The number of piezometers, and their locations in the entire study area (500 sqm).
- (iv) The detailed action plan for the development of the green belt around mine lease area and the details of the species proposed to be planted.
- (v) Clear commitment and action plan as per initial Environmental Clearances on:
 - a. External OBD height and area.
 - b. Internal transport and dispatch.

Agenda 42.3

Kusmunda Washery project (Capacity 25.00 MTPA in an area of 41.23 Ha) of M/s South Eastern Coalfields Limited located in Village: Durpa & Jarhajel Tahsil: Katghora District: Korba (Chhatisgarh)- TOR.

42.3.1 The proposal is for Kusmunda Washery project (Capacity 25.00 MTPA in an area of 41.23 Ha; Latitude 22° 20' 15" to 22° 20' 42" North and longitude 82° 40' 06" to 82° 40' 43" East of M/s South Eastern Coalfields Limited located in Village: Durpa & Jarhajel Tahsil: Katghora District Korba (Chhatisgarh).

42.3.2 The Committee members informed that they did not receive the documents (hard copies) related to Kusmunda Washery project proposed in Village Durpa and Jarhajel, Tehsil Katghora in District Korba (Chhatisgarh). The project proponent also acknowledged that documents could not be sent to the individual members due to paucity of time. **As such, the Committee deferred the proposal.**

Agenda 42.4

Expansion of Amera OC project from 1.0 MTPA to 2.0 MTPA in an ML area of 664.184 Ha of M/s South Eastern Coalfields Limited located at village Amera, Tahsil Lakhanpur in District Sarguja (Chhatisgarh) – (Expansion under 7(ii) of EIA Notification, 2006).

42.4.1 The proposal is for expansion of Amera OC project from 1.0 MTPA to 2.0 MTPA in an ML area of 664.184 Ha; Latitude- 23° 02' 50" to 23° 04' 34" N and Longitude 83° 01' 34" to 83° 03' 38" E of M/s South Eastern Coalfields Limited located at village Amera, Tahsil Lakhanpur in District Sarguja (Chhatisgarh). The proposal was considered in the 37th EAC meeting held on 11th -12th June, 2015. During the meeting, the Committee sought following information for further consideration of the project:

- i. Detailed note on management of OBD. It was noted that details as per papers sent by post and details as per presentation were not matching.
- ii. Updated action plan for implementation of conditions stipulated by MOEF in the earlier EC.
- iii. Revised Basic information submitted by PP w.r.t. embankment of river on the eastern and western side of the ML area.
- iv. Mine Plan/ Mine Closure Plan approvals for the intended capacity for which EC is being sought.
- v. Feasibility of reducing transportation by Road to reduce the distance from 53.8 km to approximately to 12 km to Jayanagar Railway Siding needs to be studied.
- vi. Feasibility of railway siding in the Amera area where large no. of other coal mines/BLOCKS are located needs to be assessed.
- vii. Crushing arrangements at the pit head site needs to be implemented as provided in the EC as presently unsized coal is being transported.
- viii. Note on phased plantation programme for dump reclamation.
- ix. Surface water quality w.r.t. BOD.
- x. Schedule of employment for remaining 478 persons and revised R&R table.

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

i. Waste Management:

- a) In the initial years, OB quantities were placed in external dump. Presently, internal dumping is going on. The parting OB in case of older seams is planned to be transported through central haul road, while mining in the multi seam zone. Initially, the soil/alluvium from top bench of OB will be stacked and stored.

To the extent possible, top soil will be removed and stored separately. This soil will be directly spread over the leveled graded backfilled spoil for reclamation of the quarried out land.

The spoil dump benches in the internally backfilled OB is planned to be in the form of benches. With the sufficient advance of coal production bench, the backfilled OB will be leveled with dozer. Dumper/Tipper will transport soil/alluvium OB from the top OB bench and will dump the soil directly on the leveled backfilled OB.

b) Details of Quarry:

- i. Total quarry area : 470.00 Ha
- ii. Reclaimed Internal dump : 450.00 Ha
- iii. Reclaimed External dump : 12.00Ha
- iv. Void /Water Body : 20.00Ha with 30m depth
- v. Green Belt : 10.00Ha
- vi. Total reclaimed afforested area : 472.00Ha.

c) Details of External OB dumps:

- i. No of OB dumps : 03
- ii. Area : 12 Ha
- iii. Height : 25 m
- iv. Quantity : 2.00 Mcum
- v. Year of back filling : Started since 2012-13.

d) Details of Internal Dumps :

- i. Number of internal dumps : 02
- ii. Area : 450 ha
- iii. Height : 07 to 08 m above ground level
- iv. Quantity : 140.50 Mcum

- ii. Updated action plan for implementation of conditions stipulated by MOEF in the earlier EC letter :
1. As on 01.06.2015, total quantity of top soil removed is 219000 m³. Out of which about 70000 m³ top soil have been used for plantation during 2011-14. Remaining quantity are stacked with proper slope & 5-7m height in an area of 2.00ha near check post of the mine & will be used for future reclamation.
 2. OB dump sites are earmarked and properly maintained. External OB dump: Total 1.98Mm³ OB has been stacked as External OB dump on rise side of the mine. The maximum height of external dump is 25 m with benches of about 14m each and overall slope of 28°. During 2011 to 2014, 11000 no. of saplings have been planted on external OB dumps. Work of plantation is being done by Chhattisgarh Rajya Van Vikash Nigam (CGRVVN). Internal OB dump: Internal dumping has been started since January 2012 & de-coaled area is backfilled simultaneously. Total quantity of 12.42 Mm³ OB has been dumped internally in the de-coaled area as on dated 01.06.2015. 17500 saplings have been planted in 2014 in internal dumps. Embankments: About 1.40 Mm³ of OB will be used for construction of 02 Nos. embankments on eastern side & western side of the mine to protect the mine from inundation. EIA Compliance Status regularly submitted to RO, MOEFCC, Bhopal.
 3. Garland drain of size 4m at top, 2m at bottom, 1.5m depth & 2.28km length has been constructed around the periphery of the mine to collect surface run off & arrest silt/sediment flows from soil. Total Cost: Rs. 15.97lakhs & work completed on 20th May' 2015. Retaining wall & catch drain at the toe of dump has been constructed to arrest silt and sediment flows from soil & OB dump. Details are as under:

For treatment of mine effluent settling pond exists in the mine. The mine sump capacity is approximately size 15 million Gallon. In the surface, Two nos. of Sedimentation tanks for treatment of mine effluents are under construction & will be completed by Sep.'2015. details are as under:

Primary settling tank size: 20m x 12.3m x 1.60m

Secondary settling tank : size : 24m x 10.0m x 1.60m

Cost Rs. 37,86,365.00

Mine water is used for industrial purpose such as for spraying as well as for plantation also.

4. Retaining wall with catch drain at the toe of dump has been constructed. Details are as under
Length 400 mtr.
5. During the whole life of the mine, Green belt shall be raised in an area of 472.0 Ha. 28500 no. of saplings have been planted on external/internal OB dumps during 2011 to 2014ha with plantation density of 2500 plants/ha. Plantation on back filled OB dump are proposed 10500 nos. in year 2015-2016. Work of plantation is being done by Chhattisgarh Rajya Van Vikash Nigam (CGRVVN).
6. Construction of a ground water reservoir of size 10m x 5m x 1m, capacity: 50,000 Lit, cost : Rs 2.8 Lakhs has been completed. In addition to above for ground water conservation construction of Talab at Puhputra & Chilbil village are proposed under CSR during 2016-17.
7. Regular monitoring of ground water level through network of wells in the nearby villages is being regularly carried out. 02 nos. piezometers have been installed for monitoring of Ground water level. Work completed on 25th May 2015. Cost of piezometer: Rs. 5,16,120.00. Regular monitoring of ground water level through Piezometers has been started.
8. The clearance has been obtained from Central Ground Water Board, Raipur vide letter no. 36.1/NCCR/TS-435 Dtd 26/02/2004.
9. Health checkup of surrounding community persons are being done by routine Medical camp in the villages under CSR. Water requirement of nearby villages are being fulfilled by drilling of 12 boreholes with hand pump / submersible pump under CSR.
10. Arrangements are being made at dispatch end at Kumda railway siding. The work award for installation of mobile crusher will be issued by end of July 15 & will be completed by Dec.'15. Capital Provision for an amount of 23.874 Crores has been kept in the approved RCE of Amera OC for

construction of Coal Handling Plant. CHP will commissioned by Dec.'2017. Fixed sprinklers have been installed for dust suppression at Kumda siding.

11. Vehicular emissions are being monitored regularly. Only those vehicles are being allowed to run having PUC and report showing within the permissible limit.
12. All measures are being taken for implementation of conservation plan. Work of Plantation is being done in consultation with State Forest Department & Chhattisgarh Rajya Van Vikas Nigam Limited. Monitoring of reclamation & restoration is being done through Satellite imagery.
13. Land use and land reclamation status is being monitored once in 3 years through Satellite Imagery. The last report through Satellite imagery for the year 2012 has already been submitted to RO, MoEFCC, Bhopal alongwith EC compliance report, vide General Manager, Bisrampur letter no. SECL/GM BSPR /06/2014/3823 Dtd. 14/19:08:2014.
14. The life of mine calculated about 12 years. A final mine closure plan along with details of corpus fund will be submitted to the MOEF as per instruction although progressive mine closure plan has been prepared and approved in the 221st board meeting of SECL held on date 27th January. Complied.
15. Land outstees and Land losers of Project affected families are compensated as per CIL R&R policy No change will be made in mining technology and scope of work without prior approval of the MOEF.
16. Details of coal and OB production since start of mine are as follows.

YEAR	Coal prod in tones	OB extraction in cum
2010-11	78115	1436680
2011-12	153690	839880
2012-13	600501	1449218
2013-14	852602	3745043
2014-15	1000000	4520000

17. Four ambient air quality monitoring stations have been established in the core zone as well as the buffer zone for SPM, RPM, SO₂, CO, NO_x and CO monitoring report enclosed. Data is submitted regularly RO, MoEFCC, Bhopal & CECB Raipur. Results are within permissible limits.
18. Water spraying is being done on the haul road & coal transportation road through Water tankers (03 nos-10KL each). Water spraying arrangements have been provided at loading/ unloading points & at railway siding. NIT has been issued through e-tender for installation of fixed sprinkler along coal transportation road. Work will be completed within 04 months. Total no. of post for fixed sprinklers: 50 distance 1875 mtr. Cost : Rs.28,72,267.00
19. All precautionary measures are being taken to control of noise level. Earmuffs have been provided to the workers engaged in drilling, blasting and HEMM operations.
20. For treatment of mine effluent settling pond exists in the mine. The mine sump capacity is approximately size 15 million Gallon. In the surface, Two nos. of Sedimentation tanks for treatment of mine effluents are under construction & will be completed by Sep.'2015. details are as under: Primary settling tank; size: 20m x 12.3m x 1.60m; Secondary settling tank : size : 24m x 10.0m x 1.60m; Cost Rs.37,86,365.00. Mine water is used for industrial purpose such as for spraying as well as for plantation also. For treatment of workshop effluent Oil & Grease Trap are under construction & will be completed by Aug.2015. size : 6.0m x 3.0 m x 2.0 m; Cost : Rs.4,.35lakhs.
21. Mine water is not acidic.
22. Protective respiratory devices / dust masks have been provided to the personnel working in dusty areas. Training and information on safety and health aspects provided to 70 contractor workers in year 2013-14 & 73 in the year 2014-15. Periodical medical examination for 70 nos. contractor's workers have been done in the years 2014-15.
23. Central Mine Planning & Design Institute (CMPDIL) as ISO9001 Certified & NABL Accredited Company has environmental labs of its own equipment with adequate number and type of pollution monitoring and analysis equipment. CMPDIL-RI V is doing the work of environmental monitoring.

24. A Separate environmental management cell established at Area level consisting of General Manager; General Manager(operation); Nodal officer(ENV); At Sub-Area level: Project Officer/Sub Area Manager; Colliery Manager; Nodal Officer (ENV).
25. The funds earmarked for environmental protection measures are kept in separate account heads and never diverted for other purpose.
26. Year wise expenditure alongwith EC compliance is regularly submitted to RO, MOEFCC, Bhopal.

- iii. Basic information revised w.r.t. embankment of river on the eastern and western side of the ML area. Details are as under:

Ghunghuta river flows on the Eastern side of the mine and Chandanai nalla flows on the Western side of mine boundary. Embankments are planned along the nalla /river. Structure includes the stone pitching 200mm thick on river / nalla side. Details are a under:

Nalla /River	Direction w.r.t. mine	HFL in mtrs	Embankment Dimensions					
			Length (km)	Height (m)	Top Width (m)	Bottom Width (m)	Area (Ha)	Total Quantity (M cum)
Ghungata River	East	535	3.20	7.00	22.50	38.00	12.5	1.09
ChandanaiNalla	West	537	3.00	4.00	20.50	28.50	8.00	0.32

- iv. Proposals for Mine Plan & Mine Closure Plan for 2.00MTPA are in process & will be submitted within a month.
- v. & vi. In SECL, a proposal for Construction of New Railway Siding namely Pendrakhi Siding is under Administrative Approval, to serve Lakhanpur Coalfields taking off from Birsampur Railway Station in Bilaspur Division. The proposed Pendrakhi Railway Siding would be very useful as it would cater a number of mines located in Lakhanpur Coalfields i.e. existing Rehar UG, Gayatri UG, Ketki UG, Amera OC & Amagaon OC. It would also cate the future projects such as Jamdai UG & Ghumghara UG & Binkara UG. The proposed Pendrakhi Railway Siding would be useful in:
 - o Reducing the distance for road transport of coal from present running mines as well as for future projects.
 - o Reducing the cost of transportation.
 - o Improving the environmental condition.
 After construction of Pendrakhi Railway Siding distance for road transport of coal from Amera OC will be reduce from present 53.8km to 12.5km. Total Rs.148.96Crores is required to meet requirement of Capital for construction of Pendrakhi Railway Siding. The Capital provision of Rs. 56.71Crores has been kept in already approved RCE of Amera OC for construction of Railway siding along with 4.0km long railway line for connectivity. For balance amount of Rs. 92.25Crores been kept in RCE of Amgaon OC for construction of Railway siding along with 6.50km long railway line for connectivity. It is expected Pendrakhi Railway Siding will come in operation within 05years.
- vii.
 - a. Crushing arrangements at Kumda railway siding: Arrangements are being made at dispatch end at Kumda railway siding. The work award for installation of mobile crusher will be issued by end of July15 & will be completed by Dec.'15.
 - b. Crushing arrangements at the pit head site : Crushing arrangements at the pit head site will be provided very shortly. For construction of Coal Handling Plant Capital Provision for an amount of

23.874 Crores has been kept in the approved RCE of Amera OC. CHP will be commissioned by Dec.'2017.

viii. Total quarry area will be 470.00Ha in Amera OCP. Total Backfilled area of 450.00 Ha shall be reclaimed with plantation and 20Ha void shall be left for water body. Total afforested area will be 472.00Ha. The details of land reclamation program are as under:

1. Reclaimed External dump area : 12Ha.
2. Reclaimed internal dump area : 450 Ha.
3. Green belt around infrastructure & embankment: 10Ha

ix. Monitoring of Surface water quality w.r.t. BOD has been started since May'2015. Although Monitoring w.r.t. BOD has already been done on annual basis (as per MoEF Notification-G.S.R. 742 (E) dated 25th September'2000.

x. Schedule of employment for remaining 478 persons and revised R&R status submitted.

42.4.3 While appraisal of the proposal, the observations of the Committee were as under:-

(i) The EC for Amera Opencast Coal Mine Project of 1 MTPA in mine lease area of ha, was earlier granted by this Ministry vide letter No.J-11015/14/2004-IA.II (M) dated 22nd February, 2005.

(ii) The present proposal seeks EC for expansion of Amera Opencast Coal Mine Project with its production capacity from 1 MTPA to 2 MTPA in a mine lease area of 664.184 ha, which includes 51.989 ha of forest land, 548.359 ha of agricultural land and 63.836 ha of Government land. The mine plan and mine closure plan approvals for 2.0 MTPA is still awaited.

(iii) The project report of Amera OCP was approved by SECL Board on 25th July, 2002. The mine closure plan was approved on 27th January, 2014. Instead of Kumda railway siding, a new centralized siding to be constructed at Pendrakhi, which will be constructed between 3 to 4 years and CHP will be constructed by Amera mine. After construction of Pendrakhi railway siding, the distance for coal transportation will be reduced from 53.8 km to 12 km. Since, the mine life is 12 years and coal will be transported from new railway siding in future the CHP /Crushing arrangement be put up at the Amera mine Premises only to avoid duplicity and cost reduction.

(iv) The Coal Mine is sandwiched between Ghunghuta river on the Eastern side and Chandanai Nallah on the Western side. The project proponent has planned to make embankments along these water bodies only on one side to prevent inundation of the mine by flood waters. The committee decided that the project proponent should submit a detailed note on possible flooding of the nearby areas due to the proposed embankments. The action plan is to be duly authenticated by the Irrigation/Flood Control Department of the concerned State.

(v) A settling pond should be constructed for mine water before its discharging to the national stream, and its details to be provided.

(vi) Results of the pre-project health surveys in the vicinity of the project area should be provided in an appropriate format for assessment of the status of health of the community.

(vii) Internal dumps (2 Nos) proposed in an area of 450 ha with a height of 7-8 m above ground level be filled into mine void and brought to near the original ground level to minimize land degradation.

42.4.4 The EAC, after deliberations, deferred the proposal for want of additional information as per para 42.4.3 above.

Agenda 42.5

Expansion of Amelia (North) Coal Mine Project (from 2.8 MTPA to 4.2 MTPA) in an ML area of 728.75 Ha by M/s Jaiprakash Power Venture Limited located in village Majhauri, Tehsil Deosar, District Sidhi (Madhya Pradesh) – TOR

42.5.1 The proposal is for Expansion of Amelia (North) Coal Mine Project (from 2.8 MTPA to 4.2 MTPA) in an ML area of 728.75 Ha (Latitude 24° 07' 32" To 24° 08' 37" N and Longitude 82° 24' 25" To 82° 26' 45" E) by M/s Jaiprakash Power Venture Limited located in village Majhauri, Tehsil Deosar, District Sidhi (Madhya Pradesh).

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

- i. Amelia (North) coal mine was allotted to MPSMCL by ministry of coal. MPSMCL decided to develop the block through JV route and selected Jaiprakash Associates Limited (JAL) as JV partner. A joint venture company named MPJML was incorporated. As per the JV agreement, JAL or its associate company was required to commission 2 x 660 mw thermal power plant for captive use of coal of Amelia (North) coal mine.
- ii. The remaining requirement of Jaypee Nigrie Thermal Power Plant (commissioned by JPVL) was to be met from Dongri Tal- II coal block allocated to MPSMCL.
- iii. Mining plan was approved by MOC for peak rated capacity of 2.8 MTPA. All relevant permissions/approvals including environment clearance and permission to open the mine were obtained by MPSMCL (prior allottee) through JV Company (MPJML). The development of the mine was started in 2013-14 and 1.5 mt of coal was produced in 2014-15.
- iv. The coal block was categorized in schedule II by Hon'ble Supreme Court's verdict dated 24th sept, 2014 canceling the allocation of 204 coal blocks including Amelia (North).
- v. Amelia (North) coal mine was vested with Jaiprakash Power Ventures Ltd (JPVL) with transfer of titles of all permissions/approvals for captive use of coal in Jaypee Nigrie Super Thermal Power Plant(2x660 MW) commissioned by JPVL.
- vi. JPVL, project proponent proposes to ramp up peak rated capacity of coal from 2.8 MTPA to 4.2 MTPA to meet the requirement of 2x660 mw thermal power plant till the alternative arrangement of coal is organized. Ramp up production is being planned without changing the following salient parameters-
 - (a) lease area
 - (b) method of mining
 - (c) coal evacuation system
 - (d) mining equipments
- vii. Project proponent requests EAC to consider grant of tor with exemption from public hearing under provisions of MOEF OM. J-11015/30.2004-IA-II(M) dated 07.01.2014.
- viii. **Rated capacity:** Revised mining plan for Amelia (North) coal mine has been prepared for peak rated capacity of 4.2 MTPA. Coal is being mined by surface miner. This will not require drilling & blasting. The coal mined by surface miner is being loaded in to dumpers for transporting it to receiving pit of the coal handling plant. O.B. is being removed by drilling & blasting using explosive. O.B. is being loaded to dumper for transporting it to designated external dump site.
- ix. **Coal evacuation:** a coal handling plant has been provided to handle coal mined from project. Coal is being loaded to railway wagon through coal handling plant and 6000 t capacity silo with rapid loading system. A dedicated railway siding has been provided to transport coal to jaypee nigrie super thermal power plant.
- x. **The project was accorded EC vide letter no.11015/355/2006-IA.II(M) dated 20.07.2007 for 2.8 MTPA.**

- xi. The latitude and longitude of the project are 240 07' 32" To 240 08' 37" N and 820 24' 25" To 820 26' 45" E respectively.
- xii. Joint Venture: no Joint venture.
- xiii. Coal Linkage: Captive Mine for Jaypee Nigrie Super Thermal Power Plant (2x660MW).
- xiv. Employment generated / to be generated: 829 Nos.
- xv. Benefits of the project:
- Coal to support generation of power from JPVL's Nigrie Super Thermal Power Plant.
 - Generate Direct/ Indirect employment opportunity.
 - Create opportunity for income generation for the local people.
 - Contribute to the state exchequer by way of Cess, Royalty & other taxes.
 - Development in socio-economic profile of the area through CSR activities to be undertaken by the project.
- xvi. The land usage of the project will be as follows:

Land Use:

Sl. No.	Particulars of land Use Area	(in ha.)
1.	Mining Area	475.00
2.	Barrier Zone	11.00
3.	Proposed Road on North Side	5.50
4.	Area under Kanchan Nala	7.00
5.	External Dumps	150.18
6.	Top Soil Dump	11.82
7.	Settling Ponds	10.00
8.	Infrastructure & Facility Area	15.00
9.	Space for Underground Incline Entry	4.00
10.	Rationalization Area	39.25
11.	Total Lease Area	728.75

Pre-Mining: 728.75 Ha. Consist of forest land

S.N.	LANDUSE	Within ML Area (ha)	Outside ML Area (ha)	Total
1.	Agricultural land	Nil	Nil	Nil
2.	Forest land	728.75	Nil	728.75

3.	Wasteland	Nil	Nil	Nil
4.	Grazing land	Nil	Nil	Nil
5.	Surface water bodies	Nil	Nil	Nil
6.	Settlements	Nil	Nil	Nil
7.	Others (specify)	Nil	Nil	Nil

Post- Mining:

Sl. No.	Envisaged Land Uses at end of Mine Life		Envisaged Land Uses in post mining Scenario (Area in ha.)			
	Uses	Area in ha.	Plantation	Water Body	For U/G Mine	Total
1.	Excavated Area	475.00	232.00	243.00	-	475.00
2.	Barrier Zone	11.00	11.00	-	5.50	11.0.
3.	Proposed 30m Road	5.50	-	-	-	5.50
4.	Area under Kanchan Nala	7.00	-	7.00	-	7.00
5.	External Dumps	150.18	150.18	-	-	150.18
6.	Top Soil Dump	11.82	11.82	-	-	11.82
7.	Settling Ponds	10.00	5.00	-	5.00	10.00
8.	Infra Areas	15.00	10.00	-	5.00	15.00
9.	Underground Entry	4.00	-	-	4.00	4.00
10.	Rationalisation Area	39.25	39.25	-	-	39.25
	Total	728.75	459.25	250.00	19.50	728.75

Core area : 728.75 Ha.

- xvii. The total geological reserve is 85.39 MT. The mineable reserve 73.98 MT, extractable reserve is 73.48 MT. The per cent of extraction would be 82.3 %.
- xviii. The coal grade is G-11The stripping ratio is 8.44Cum/tonne. The average Gradient is 7°- 8°. There will be 2 Seam (VII & VIII) with thickness ranging 0.55 m to 15.73 m.
- xix. The total estimated water requirement is 477 KLD. The level of ground water ranges from 7m to 20 m.
- xx. The Method of mining would be Opencast with O.B. removal by Shovel-Dumper combination and Coal by Surface Miner.

- xxi. There is 2 external OB dump with Quantity of D1- 46.39 Mm³, D2- 47.73 Mm³ in an area of D1- 73.97 Ha., D2-76.21 Ha with height of 100 meter above the surface level and 1 internal dump with Quantity of 497.23 MM³ in an area of 392.40 Ha.
- xxii. The final mine void would be in 243 Ha with depth 145 m. and the total quarry area is 475 Ha. Backfilled quarry area of 232 Ha shall be reclaimed with plantation. A void of 243 ha with depth 145 m which is proposed to be converted into a water body.
- xxiii. The life of mine is 25 Years.
- xxiv. Transportation: Coal transportation in pit by Dumper, Surface to Siding by Dumper and loading at siding by Coal Handling Plant & Silo.
- xxv. There is R & R involved. There are 22 PAF's/110 PAP's.
- xxvi. Cost: Total capital cost of the project is Rs. 760 Crores. CSR Cost Rs. 5/- per Tonne of coal production. R&R Cost Rs. 77 Lakhs. Environmental Management Cost Rs. 25 Crores.
- xxvii. Water body: There is a seasonal nalha (Kanchan Nallha) flows on eastern side of the project area.
- xxviii. Approvals: Ground water clearance applied on 27.03.2015. Board's approval obtained on 30.05.2015. Revised Mining plan approved on 10.08.2015. Mine closure plan is an integral part of mining plan.
- xxix. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxx. Forestry issues: Total forest area involved 728.75 ha. Approval granted (Ref No. 8-08/2007-FC dated 30.11.2012).
- xxxi. Afforestation plan shall be implemented covering an area of Reclaimed external OB dump 150.18 ha; internal dump 232 Ha, Green Belt 459.25 ha. Density of tree plantation 1500 trees/ ha of plants.
- xxxii. There are no court cases/violation pending with the project proponent.
- xxxiii. Public Hearing was held on 14.09.2006.

42.5.3 The committee after detailed deliberations recommended the project for grant of TOR without Public Hearing, and subject to following specific conditions:

- (i) Details of reservoir /water body to be incorporated in the EIA/EMP report.
- (ii) Details of water quality and sedimentation load of the reservoir to be incorporated in the EIA/EMP report.
- (iii) Mine plan and mine closure plan approval for intended capacity.

Agenda 42.6

Dalla Coal Beneficiation Plant of (1.0 MTPA in an ML area of 2.1781 ha) of M/s Jaiprakash Associates Ltd., Village Kota, Distt. Sonebhadra (Uttar Pradesh)

42.6.1 The proposal is for consideration of EC for Dalla Coal Beneficiation Plant of (1.0 MTPA in an ML area of 2.1781 ha); Latitude 24° 27' 6.59" N and Longitude 83° 02' 18.44" E of M/s Jaiprakash Associates Ltd., Village Kota, Distt. Sonebhadra (Uttar Pradesh).

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

- i. Jaiprakash Associates Limited (JAL) proposes to set up a coal beneficiation plant at village-Kota, tehsil-Robertsganj, District Sonebhadra (U.P.) of 1.0 MTPA capacity.
- ii. Coal beneficiation plant is proposed in the existing premises of Dalla Cement Factory (DCF). DCF comprises of an integrated cement plant having two clinker manufacturing plants, Cement Grinding Unit, limestone mines and captive power plant .

- iii. It is proposed to install coal washery for processing 1.0 million tonnes of raw coal per year to get optimum recovery of clean coal which would be used in Dalla cement plant. The remaining rejects (low calorific value) coal shall be used in CPP.
- iv. Environmental Clearance for above Integrated Cement Plant was granted by MoEF vide Ref No.J11011/560/2007-IA.II (I) dated 29th September, 2008.
- v. The project was accorded ToR vide letter no. J-11015/30/2013.IA.II (M), dated 09.09.2013.
- vi. Latitude and longitude of the project are 24° 27' 6.59" N and 83° 02' 18.44" E respectively.
- vii. Joint Venture: no Joint Venture.
- viii. Coal Linkage: The coal requirement for the proposed coal washery will be about 1.0 MTPA which will be sourced from NCL/E-auction.
- ix. Employment generated/to be generated: Construction phase–60 persons; Operation phase–40 persons.
- x. Benefits of the project: This project has beneficial impacts /effects in terms of growth in regional economy, transform the region's economy from vacant land to significantly industrial, increase Government earnings and revenues and accelerate the pace of industrial development in the region. The proposed project will provide direct employment to about 40 No. of people. This project will also generate indirect employment to a considerable number of families, who will render their services for employees of the project.
- xi. The land usage of the project will be as follows:

S. No	Particulars of Land use	0-3 km	3-7 km	7-10 km	0-10 km	Area %
1	Forest Land	720	14768	23343	38831	73.47
2	Land under Cultivation					
	a) Irrigation Land	97	0	62	159	0.30
	b) Un Irrigated Land	138	750	5193	6081	11.51
3	Cultivable Waste Land	0	431	1643	2075	3.93
4	Area not Available for Cultivation	750	1452	3503	5705	10.79
	Total Area	1705	17401	33744	52851	100.00

Source: District Census Hand Book – 2001

- xii. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xiii. Cost: Total capital cost of the project is Rs. 30 Crores. CSR Cost Rs. 21 lakhs. R&R Cost Nil. Environmental Management Cost Rs 30 Lakhs.
- xiv. Water body: Son river flows at a distance from 2.7 km in NE direction; Rihand River flows at a distance from 6.7 km in W direction.
- xv. Approvals: Water sanction of Dalla cement plant of 6000 m³/day from redial bore well (Son River) by Ground Water Board, Mirzapur dated 19.7.2007.
- xvi. Wildlife issues: Kaimur Wild life sanctuary is located at distance of 3.5 km in NE direction. Many species of conservation importance occur within the Kaimur Wildlife Sanctuary. The Kaimur Wildlife Sanctuary as well as other Reserved Forest out of sanctuary have rich vegetation and major type of forest are 5B/C-2 (Northern Dry Mixed Deciduous Forest) 5B/C1(C) Species Specific Wildlife Conservation Plan has prepared and submitted to principal chief conservator (wild life), Lucknow vide reference no. JAL/Dalla/2014 dated 1st Dec, 2014 The budgetary provision for Species Specific Wildlife Conservation Plan is about Rs. 24,97,500 per annum.
- xvii. Green belt was developed all around the plant in the area of 25 ha (37.3%) of total area of 67 ha and 0.72 ha (33%) of total land of 2.17 ha for proposed beneficiation plant.
- xviii. There are no court cases/violation pending with the project proponent.

- xix. Environmental Clearance for the existing Dalla Cement Factory was granted by MoEF vide Ref No.J11011/560/2007-IA.II (I) dated 29th September, 2008. The Certified Compliance Report received from RO-MOEF vide letter no. IV/ENV/UP/ND-113/294/2008/776 dated 25th August' 2015
- xx. Public Hearing was held at Collectorate Conference Hall Lodhi, Block-Sonebhadra on 19.09.2014. The issues raised in the PH includes employment to local people; pollution Control; Corporate Social Responsibility and Plantation etc.

43.6.3 EC compliance report: The compliance report of the, Regional Office, MoEFCC at Lucknow monitored on dated 13.05.2014 was deliberated in the EAC meeting.

42.6.4 The Committee noted that Kaimur Wild Life Sanctuary is at a distance of 3-5 km from the coal washery site proposed within the existing premises of Dalla Cement Factory. The EAC members desired to know about the status of Wild Life clearance of Dalla Cement Facotry itself, to which EC was granted vide letter dated 29.09.2008. The PP was asked to submit the details of ESZ around the Kaimur Wildlife Sanctuary if notified and status of Wildlife clearance for Dalla Cement Factory. **The proposal was, therefore, deferred.**

Agenda 42.7

Niljai Expansion (Deep) OC Coal Mine Project (expansion in ML area from 1346.63 ha to 1761.22 ha at the existing prod. Capacity of 3.5 MTPA) of M/s Western Coalfields Ltd., District Yavatmal (Maharashtra) – (EC based on TOR granted dated 23.05.2012).

42.7.1 The proposal is for Niljai Expansion (Deep) OC Coal Mine Project (expansion in ML area from 1346.63 ha to 1761.22 ha at the existing production capacity of 3.5 MTPA of M/s Western Coalfields Ltd., Dist. Yavatmal (Maharashtra). The proposal was earlier considered in the 19th EAC meeting held on 13th - 14th August, 2015. During the last meeting, the Committee sought following information for further consideration of the project:

- i. Certified compliance report to the earlier EC conditions be submitted.
- ii. Details of integration of mines in the area be submitted.
- iii. The Committee has noted that the mine has not only expanding in area but also expanding in depth as well thereby which will disturb/divert the water bodies. The Proponent therefore, has to seek appropriate clearance for diversion of Nalla/River/Water bodies.
- iv. Details of OBDs and voids including the quantum back filled, distance and area between the OB dumps be submitted.
- v. No extra land shall be used for OB dumps.
- vi. The frequency of air quality monitoring shall be as per the CPCB prescribed practices and procedures.
- vii. PP should re-work on the handling of depth and voids so as to bring back the mined out area for agricultural purposes.
- viii. The OBs of three adjacent mines shall be handled together so as to prevent loss of prime agricultural lands.

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

- (i) Certified compliance report to the earlier EC conditions obtained on 30.06.2015.
 - i. The top soil excavated till date has been spread over external OB dump for biological reclamation. OB dump biologically reclaimed (Afforested) 151.22 ha. At present there is no top soil dump as the same is being used simultaneously for carpeting over external OB dump. The

top soil proposed to be excavated in future years will be dumped at earmarked site and will be spread over the external OB dump and backfilled area before reclamation is taken up.

- ii. The reclamation of dead dumps is being done through plantation of mix of native species and report will be submitted as directed.
 - iii. The desilting of drains is carried out before on-set of every monsoon.
 - iv. The peak rainfall data recorded in the site for last 5 years.
- (ii) There are three mines operating in the vicinity viz. Ukni Opencast, Niljai Opencast and Naigaon Opencast which are proposed for integration. At present all the three mines are contributing coal within their EC capacity i.e. 2.20 MTPA, 3.50 MTPA & 1.25 MTPA respectively. It may be noted that all the three mines are planned up to 100 m depth and are being proposed for further expansion up to 200 m depth based on the viability. The Environmental Clearance for Ukni Deep OC (3.50 MTPA) has been obtained and similarly the EC for Bellora – Naigaon Deep OC (1.25 MTPA). In the subject case, the EC for Niljai Deep OC is being solicited.
- (iii) The subject proposal is for extension of the existing mine both in Strike as well as dip direction. However, there is no such diversion of water body/ natural water course proposed in the subject proposal. Hence no such clearance is required.
- (iv) The calendar programme of excavation of the three mines together (considering the deep extension projects upto 250 m) have been submitted. It is seen that, out of the three mines Ukni OCP is getting finished at the earliest, whereas Niljai will be continuing for the longest period and Bellora – Naigaon is getting finished in between. Therefore, at the end of 250 m depth working, Ukni may be the only mine which can accommodate excavated OB from Niljai. Bellora – Naigaon OC will not be able to accommodate OB from Niljai because, during that period only internal dumping will continue in both Niljai and Bellora Naigaon. These conditions will be applicable only if there is no proposal for extension of Ukni beyond 250 m. Further, in the existing proposal of all the three mines, the integration of planning has been applied to optimise the external OB Dumps (merger of Dumps) so that land area required under External OB Dump is minimised
- (v) As already indicated above in the existing proposal of all the three mines, the integration of planning has been applied to optimise the external OB Dumps (merger of Dumps) so that land area required under External OB Dump is minimised. Further, the backfilled area has also been proposed to be raised above G.L. to merge with the External OB dumps. This has been achieved in the following way:-
- The backfilled Area of Ukni Deep OC has been proposed to be raised above G.L. Up to a height of 60 m and is proposed to be merged with External OB Dump. By this it is proposed to accommodate 34.14 Mm³ of OB. This OB if accommodated on surface land would have degraded about 90.00 ha.
 - External OB dump of Ukni Deep OCP has been merged with External Dump of Niljai OCP accommodating thereby 59.68 Mm³. This OB if dumped separately would have covered 140 ha of land at 60 m height. Thus, by integrating Ukni Deep & Niljai Deep OC, degradation of 140 ha of land has been avoided because of external OB Dumping.
 - Similarly, by integrating Niljai Deep OCP & Bellora – Naigaon Deep OCP, 17.92 Mm³ of OB has been merged in one dump saving about 40 ha of land. In addition, by raising the height of B/F area of Bellora – Naigaon Deep OC up to 60 m above G.L. About 80.00 ha of land has been saved from degradation due to external OB
 - In Niljai Deep OCP, the internal dump has also been merged with external Dump thereby accommodating 52.42 Mm³ of OB and because of this 112 ha of land has been saved from degradation due to External OB dump
 - Thus by integrating and optimised planning in all the three mines degradation of 462 (90.00+140.00+40.00+80.00+112.00) ha of land has been avoided because of external OB Dumping
 - Thus it can be concluded that dumping plan has been worked in such a way that requirement of land under OB dumping remains at bare minimum.

- (vi) The frequency of ambient air quality monitoring is as per the Environment (Protection) Amendment Rule, September, 2000.
- (vii) The mined out at all these three mines are being filled up in part (balance will remain as void). It is also proposed that the backfilled in all these three mines would be raised above the ground level and the same would be merged with the adjacent external OB dump.
- (viii) Degradation of 282.00 ha of agricultural land and also equivalent area locked up due to degradation (in mining area). Thus Present degradation would be 564.00 ha. However, out of this, 282.00 ha can be theoretically recovered after almost 30-40 years.

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

- i. At the time of Mine Closure the void should be filled up with the OB in the internal dump and internal dump brought near to the original ground level.

Agenda 42.8

Expansion of Chotia-II Captive Coal Mine Project from 0.25 MTPA to 1.0 MTPA in an ML area 411.0 ha of M/s Bharat Aluminium Company Limited (BALCO), located in Salaigot Village, Tehsil Podiuprodha District Korba (Chhattisgarh) - TOR

42.8.1 The proposal is for expansion of Chotia-II Captive Coal Mine Project from 0.25 MTPA to 1.0 MTPA in an ML area 411.0 ha of M/s Bharat Aluminium Company Limited (BALCO) located in Salaigot Village, Tehsil Podiuprodha, District Korba (Chhattisgarh).

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

- i. The earlier EC was accorded vide letter no. J-11015/2004-IA.II (M) dated 10th November, 2005.
- ii. The is for fresh TOR.
- iii. The latitude and longitude of the project are.

CHOTIA-II Co ordinates				CHOTIA-II Co ordinates			
S	NAM			SN	NAME		
N	E	NORTHING	EASTING			NORTHING	EASTING
1	BP-1	22° 50' 32.2" N	82° 32' 51.6" E	9	BP-3	22° 51' 58.6" N	82° 31' 57.9" E
2	BP-2	22° 50' 40.6" N	82° 33' 01.2" E	10	BP-4	22° 51' 57.2" N	82° 31' 41.2" E
3	BP-2A	22° 51' 02.5" N	82° 32' 41.6" E	11	BP-4D	22° 51' 36.8" N	82° 31' 24.7" E
4	BP-2B	22° 51' 06.2" N	82° 32' 45.1" E	12	BP-5	22° 51' 33.4" N	82° 31' 26.9" E
5	BP-2L	22° 51' 37.0" N	82° 32' 17.4" E	13	BP-6	22° 51' 01.3" N	82° 31' 47.7" E
6	BP-18	22° 51' 33.7" N	82° 32' 06.1" E	14	BP-7	22° 51' 07.1" N	82° 31' 53.7" E
7	BP-19	22° 51' 42.4" N	82° 32' 00.7" E	15	BP-8	22° 50' 59.1" N	82° 32' 05.7" E
8	BP-20	22° 51' 53.2" N	82° 32' 02.8" E	16	BP-9	22° 50' 41.7" N	82° 32' 16.5" E

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- iv. Joint Venture: No Joint Venture
- v. Coal Linkage : No Linkage Available
- vi. Employment generated/to be generated: Existing 200; to be employed 605.
- vii. Benefits of the project: To supply coal to 600 MW captive Power Plant at Korba for manufacturing of Aluminium. After expansion of mine another around 600 direct employments will be generated. Due to creation of direct and indirect employment by the project there has been considerable upliftment in socio-economic status of local community and same will be continued in future as well.
- viii. The land usage of the project will be as follows:

Pre-Mining:

SN	LANDUSE	Within ML Area	Outside	TOTAL (Ha)
1	Agricultural land	NIL	NIL	NIL
2	Forest land	316.826	NIL	316.826
3	Wasteland	NIL	NIL	NIL
4	Grazing land	NIL	NIL	NIL
5	Surface water	NIL	NIL	NIL
6	Settlements	NIL	NIL	NIL
7	Others (specify)	NIL	NIL	NIL
	TOTAL	316.826	NIL	316.826

Post- Mining:

SN	Land use during Mining	Land use (Ha)				
		Plantation	Water Body	Public Use	Un disturbed	Total
1	External OB	3.0				3.0
2	Top Soil Dump					
3	Excavation	70.50	8.9			79.40
4	Roads					
5	Built Up Area	6.826				6.826
6	Green Belt Area	6.702				6.702
7	Un disturbed				220.898	220.898
	TOTAL	87.028	8.9		220.898	316.826

- ix. The total geological reserve is 10.832 MT. The mineable reserve 10.17 MT, extractable reserve is 7.68 MT. The per cent of extraction would be 70%.
- x. The coal grade is E-D. The stripping ratio is 4.82 Cum/tonne. The average Gradient is 2° to 6°. There will be 3 seams with thickness ranging from 0.06 to 08-4.08 m
- xi. About 250 KLD of mine discharge water will be utilized to meet the industrial water demand such as dust suppression and plantation. The level of ground water ranges from 45 m to 50 m.
- xii. The Method of mining would be OC: Shovel-Dumper combination with drilling and blasting; UG: Bord & Pillar using SDL/LHD.
- xiii. There is 1 external OB dump with Quantity of 0.80 Mbcm in an area of 3.0 ha with height of 15.0 m. above the surface level and 1 internal dump with Quantity of 23.21 Mbcm in an area of 70.50 ha.
- xiv. The final mine void would be in 8.9 Ha with depth 45 m. and the Total quarry area is 79.40 Ha. Backfilled quarry area of 70.50 Ha shall be reclaimed with plantation. A void of 8.9 ha with depth 45 m which is proposed to be converted into a water body.
- xv. The life of mine is 20 Years.
- xvi. Transportation: Coal transportation in pit by 30 tonne rear dumping Trucks from in pit to pit head

coal handling plant.

- xvii. There is no R & R involved. There are no PAFs.
- xviii. Cost: Total capital cost of the project is Rs. 100.00 Crores. CSR Cost Rs. 5/tonne of coal production. R&R Cost Nil. Environmental Management Cost Rs. 10/tonne.
- xix. Water body: Hasdeo River flows at a distance from 1 Km in East from the Mine.
- xx. Approvals: Mine Plan 3rd Revision Submitted to MOC on 17th July, 2015. Mine closure plan is an integral part of mining plan.
- xxi. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxii. Forestry issues: Total forest area involved (in ha) for mining is 316.826. Stage I FC for 6.826 ha obtained vide letter no. 8-64/2005-FC dated 10th Nov, 2005; stage I for 267.08 obtained vide letter no 8-64/2005-FC dated 4th Nov, 2011. Stage -I for 42.92 Ha area is not having workable seams hence it is not planned for mining.
- xxiii. Total afforestation includes Reclaimed external OB dump 3.0 ha; Internal dump 70.50 ha;
- xxiv. Void 8.9 of ha at a depth of 45 m which is proposed to be converted into water body.
- xxv. Green Belt over an area of 6.702 ha. Density of tree plantation 2500/ha of plants.
- xxvi. There are no court cases/violation pending with the project proponent.
- xxvii. Public Hearing was held on 04.09.2004.

42.8.3 While appraisal of the proposal, the EAC observed the following:-

- (i) The EC for Chotia II was transferred from M/s Prakash Industries Ltd to M/s BALCO vide orders dated 17th June, 2015.
- (ii) The mine lease area has not yet been transferred to M/s BALCO and the same is under process.
- (iii) The EC has been given for mine area 411 ha and for underground mining only.
- (iv) Mine plan approval was not only for Chotia II but also for Chotia I (combined mining plan approval). Both these mines have been allotted to M/s BALCO in pursuance of the vesting orders dated 23rd March, 2015 of Ministry of Coal..
- (v) For Chotia II, the mine plan is only for underground mining at the rate of 0.25 MTPA whereas, the project proponent has applied for TOR for increase in production from 0.25 MTPA to 1.0 MTPA. From Opencas mining for which no approval exists.
- (vi) The PP informed the Committee that the underground mining was not started in spite of the fact that EC is only for underground mining, but the open cast mining was started and produced at the rate of 0.23 million tonnes between 2014-15 by the earlier allottee. without amendment in the EC.

42.8.4 The EAC after deliberation decided that, In the light of the above mentioned facts, the PP has to submit the revised application in Form-1 for Chotia II sub block only, as the details provided during the presentation are relating to the expansion of both Chotia I and Chotia II. Also there being no underground mining in Chotia II so far, the proposal may not be considered for expansion in terms of production capacity. The Committee also desired for ambiguity to be resolved by the PP vis-a-vis the approved mine plan and the vesting orders issued by MOC. Response to the representation received from one of the NGOs requesting to address issues w. r. t. landuse; biodiversity; water resources; cumulative impacts etc be submitted.

Agenda 42.9

Balaram Open Cast coal mine expansion project from 8 MTPA to 20 MTPA and expansion in ML area from 1329.40 ha to 2507.42 ha of M/s Mahanadi Coalfield Limited in Talcher coalfields in Tehsil Talcher, District Angul (Odisha) – (EC based on TOR granted on 24.05.2013).

42.9.1 The proposal is for Balaram Open Cast coal mine expansion project from 8 MTPA to 20 MTPA and expansion in ML area from 1329.40 ha to 2507.42 ha (Latitude 20° 56' 02" & 20° 59' 05" N and Longitude 85° 02' 52" & 85° 06' 57" E) of M/s Mahanadi Coalfield Limited in Talcher coalfields in Tehsil Talcher, District Angul (Odisha).

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

- i. Balram OCP is a running mine in Talcher Coalfield under Hingula Area of MCL. EC was granted for Production Capacity of 8.0 MTPA on 24th October, 1990. Expansion in EC Capacity is proposed from 8.0 MTPA to 20 MTPA in an ML Area of 2507.42 ha, involving 1178.02 ha as an additional area.
- ii. The project was accorded EC vide letter no. J-11015/09/2013-IA.II (M), dated 24.05.2013.
- iii. The latitude and longitude of the project are 20° 56' 02" & 20° 59' 05" N and 85° 02' 52" & 85° 06' 57" E respectively.
- iv. Joint Venture: There is no Joint Venture.
- v. Coal Linkage : APGENCO, Hingula Washery and Basket Linkage
- vi. Employment generated / to be generated: Already provided to 962 persons & 200 persons (approx) will be provided under Balram 15 MTY Expansion project.
- vii. Benefits of the project: Additional supply of 12 MTPA coal to power plants which can provide coal to 2,400 MW power plant and will result in 12,000 M units of electricity approximately; Improvement in Physical Infrastructure in the area; Improvement in Physical Infrastructure in the area; Improvement in Social Infrastructure; Increase in Employment Potential; Contribution of Direct tax, sales tax , Royalty etc to the National Exchequer; Post-mining Enhancement of Green Cover.
- viii. The land usage of the project will be as follows:

Pre-Mining:

Particulars for land requirement	Existing project (8.0 Mty)		Expansion Project (12.0 Mty)		Total (20.0 Mty) project		Total
	Forest	Non-forest	Forest	Non-forest	Total Forest	Total Non-forest	
Quarry excavation area	58.33	609.67	179.80	1018.72	238.13	1628.39	1866.62 **
Safety zone for blasting around the quarry (300m)	26.68	343.32	(\$)-14.2	14.50	12.48	357.82	370.30
Main magazine, service magazine & approach road	--	224.00	--	--	--	224.00	224.00

Space for external OB dumps (outside the safety zone)	--	32.20	--	(\$\$)20.8	--	11.40	11.40
Service building, stores, workshop and CHP	--	14.80	--	--	--	14.80	14.80
Approach road for project site & colony	--	6.40	--	--	--	6.40	6.40
Rehabilitation site	--	18.60	--	--	--	18.60	18.60
Colony	--	32.00	--	--	--	32.00	32.00
Rationalization of project boundary	--	14.00	--	--	--	14.00	14.00
Total :	85.01	1294.99	179.80	1033.22	250.61	2307.41	2558.02

\$ 14.2 ha of forest land in the safety zone of existing project has been taken in the excavation area of Expn. Project.

\$\$ 20.8 ha of non-forest land of external OB dump area of existing project has fallen in the area of Expn. Project.

** 22.99ha of excavation area of existing project towards rise side will be used for infrastructure purpose.

Post Mining:

S. N.	Land Use during Mining	Left out water body	Afforestation/ Arboriculture	Land to be converted to agriculture	Undisturbed/ built up area	Total
1	Quarry excavation	699.67	250.61	916.24	---	1866.52
2	Blasting danger		139.33	--	230.97	370.30
3	External OB dump		11.40	--	--	11.40
4	Infrastructure		47.76	191.04		238.80
5	Rationalization of Project Boundary		14.00	--	--	14.00

6	Diversion of road		1.28	--	5.12	6.40
7	Residential colony		6.40	--	25.60	32.00
8	Resettlement Site		3.72	--	14.88	18.60
	Total	699.67	474.50	1107.28	276.57	2558.02

Core area:

Sl. No.	Type of Land	For 8.0 Mty project	Total Area for 20 Mty project
1.	Agricultural	680.93	1234.93
2.	Forest	85.01	250.61
3.	Waste land	170.11	308.50
4.	Grazing		
5.	Surface water bodies	6.60	11.96
6.	Settlements	386.76	701.42
6.	Others		
Total for mining lease area :		1329.40	2507.42

- ix. The total geological reserve is 783.80 MT. The mineable reserve 756.37 MT, extractable reserve is 756.37 MT. The per cent of extraction would be 96.5 %.
- x. The coal grade is G9 to G12 The stripping ratio is 2.08 Cum/tonne. The average Gradient is 2.75⁰ - 8⁰ There will be 19 seams .
- xi. The total estimated water requirement is 4.21 MLD. (Potable:0.68 MLD, Industrial: 3.53 MLD) . The level of ground water ranges from 3.03 m to 6.30 m.
- xii. The Method of mining would be Opencast by Shovel – Dumper in OB; surface miner, pay loader & tipper in coal.
- xiii. There are three external OB dumps (one existing + two temp. Addl) with quantity of 10.28 Mm3 in an area of 50.82 Ha with height of 18 m (Max.) above the surface level and one internal dump with quantity of 1572.39 Mm3 (For the proposed expansion project) in an area of 1166.85 Ha.
- xiv. The final mine void would be in 699.67 ha (partially filled) with maximum depth around 30 m and the total quarry area is 1866.62 Ha. Backfilled quarry area of 1166.85 ha shall be reclaimed with plantation. A void of 699.67 ha with depth varying up-to the depth of 30 m which is proposed to be converted into a water body.
- xv. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xvi. The life of mine is 45 Years.
- xvii. Transportation: Presently coal is consumed by APGENCO/ Basket linkage. 11.0 MT is proposed to be fed to APGENCO Washery & 2.0 Mty to Hingula Washery, MCL & remaining coal shall go to the basket linkage through Railway Siding No.9. Washed coal will be loaded into wagons through SILO. Thus additional coal production through Surface Miner and its transportation by Rail Mode will be made in eco-friendly manner. Pit head Siding & SILO available.
- xviii. There are R & R involved. The PAFs. For existing project is 2155 and 1074 for expansion project.
- xix. Cost: Total capital cost of the expansion project is Rs. 1486.09 Crore. CSR Cost Rs. 147.212 Crore for incremental coal production. R&R Cost Rs 13.80 Crore (for existing project) and Rs.137.57 Crore. (additional cost for the expansion project. Total cost comes to be Rs 151.37 Crore). Environmental Management Cost Rs.67.63 Crore (for expansion project.).
- xx. Water body : Bangaru Jhar Nala flowing from North East Boundary of Balram OCP. Singhda Jhor Nala flowing in North West at distance of 3 km from the existing mine boundary. Brahmani River flowing at a

- distance of 14 km in the East of the Project. There is no diversion proposal of any water stream
- xxi. Approvals: Board's approval obtained on 31.03.2012. Approved Mining plan to be obtained.
 - xxii. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
 - xxiii. Forestry issues: total forest area involve is 250.61 ha. Forest clearance has been obtained for 85.01 ha of forest land for the existing 8 MTY in 28.9.1990 and for proposed (expansion) application to be submitted for diversion of 165.60 Ha forest land.
 - xxiv. Total afforestation plan shall be implemented covering an area of 32.20 ha at the end of mining. Green Belt over an area of 139.33 ha and 52.36 ha. Density of tree plantation 2500 trees/ ha of plants.
 - xxv. There are no court cases/violation pending with the project proponent.
 - xxvi. Public Hearing was held on 12.05.2015 at Jagannath Kala Kendra Jagannath colony South Balanda, Talcher. The issues raised in the PH includes Control & mitigation measures of air, water and noise pollution in Talcher area, Coal Transportation corridor facility development, Waste water treatment system, Development of Health care facility at nearby villages & Dera to Handidhua road development, Employment opportunity for local youth/affected family etc.

42.9.3 EC compliance report: The compliance report of the, Regional Office, MoEFCC at Bhubaneshwar for 8.0 MTPA monitored was deliberated in the EAC meeting. The observations are as follows:

- (i) At CHP area the sprinkling is being made through fixed sprinklers. Supervisors who are deployed in CHP have been trained in the Monthly Safety meetings not to over-wet and to adhere to adequate water sprinkling & now there is no over wetting.
- (ii) Gap plantation has been undertaken to fill up the gap on the slope in the year 2012 & 2014, 2,500 saplings with an expenditure of Rs. 5,50,000 has been made for plantation and maintenance for a period of 5 years by Chhatisgarh Rajya Van Vikas Nigam Ltd. Soil water conservation measures have been taken on slopes. 5 nos. of check dams with expenditure 7.5 lakhs have been provided
- (iii) Balram is a working mine. Though the coal production started from 1991-92, the mine could not advance as per the PR. because of land acquisition problems, so the backfilling up to surface has been delayed. However, the back filling is being done continuously. After excavation filling of land up to ground level takes sufficient time, so as this is a continuous process, the technical as well as biological reclamation of land will be done simultaneously. The details of biological reclamation are being reported to Regional office in six monthly compliance report.
- (iv) Due to spontaneous heating of coal there is a chance of fire in coal face, stock yard but to handle this we are having one fire tender and 1 no. of 28 KL water tanker. The said fire has been tackled with trained manpower, so they are capable enough to tackle the fire if occur.
- (v) All the coal stocks have been compacted by dozer and it has made into dome shaped. At present there is no fire in the mine or in the stock yard. However one fire tender and one 28 KL water tanker has been kept stand by to deal in exigency. Coal stock has been reduced to 1.5 lakh tonne as on 1st Sept 2015 by fast evacuation.
- (vi) Environment Management Cell (EMC) has been created at head quarters level, area level as well as project level with adequate qualified manpower.

42.9.4 While appraisal of the proposal, the committee observed as under:-

- (i) There is no proper linkage/connectivity between the name of the Coal Mine project, its capacity and the present proposal. As per record no EC has been granted to any Balram mine. It is noted that PP today informed the internal change of name from Kalinga to Balram.
- (ii) The project proponent has to first apply for change in the name of Balram OCP from Kalinga OCP with its capacity of 8 MTPA, and then apply for amendment in TOR issued on 24th May, 2013.
- (iii) The Mine Plan/Mine Closure plan approval for the intended capacity of 20 MTPA was in process –

which is a pre-requisite.

(iv) Response to the representation from one of the NGOs requesting to address issues w.r.t. water reservoir, school and hospitals, information about fauna and non compliance for the existing project to be submitted.

42.9.5 In view of the above discrepancies/anomalies, the EAC deferred the project.

Agenda 42.10

Hingula Washery of 10 MTPA capacity in an area of 27 ha of M/s Mahanadi Coalfields Limited District Angul (Odisha) - (EC based on TOR granted 31.01.2014).

42.10.1 The proposal is for Hingula Washery of (10 MTPA in an area of 27 ha; latitude 20° 56' 02" N to 20° 58' 28" N and longitude 85° 02' 52" E to 85° 06' 57" E) of M/s Mahanadi Coalfields Limited District Angul (Odisha)

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

- i. It is a two stage washery having close circuit technology.
- ii. Equipment will be imported from South Africa.
- iii. Hingula Washery will be located in the mine leasehold of Balram OCP in Hingula Area of Talcher Coalfield in Angul District, Odisha. The total raw coal requirement of 10.0 Mty for the proposed washery will be met from Hingula-II OC Expn. Project (Phase-III) (15 MTPA) (EC under consideration of MoEF) of Talcher area. Hingula Washery has been proposed to be set up on BOM basis for beneficiation of raw coal (non-coking coal of grade-G-11 & ash content ranging between (34.5-42.5%) of Hingula-II Expansion OCP.
- iv. The project was accorded ToR vide letter no. J-11015/67/2013-IA.II(M) dated. 31.01. 2014.
- v. The latitude and longitude of the project are 20° 56' 02" N to 20° 58' 28" N and 85° 02' 52" E to 85° 06' 57" E respectively.
- vi. Joint Venture: No joint venture.
- vii. Coal Linkage: Hingula-II OC Expn. Project (Phase-III) (15 MTPA) (EC under consideration of MoEF & CC)
- viii. Employment generated / to be generated: Washery will be constructed on BOM concept; hence employment will be generated by BOM operator. Around 173 (for operation of Washery).
- ix. Benefits of the project: The beneficiation/washing of coal will lead to improvement in performance of power plant, reduction in particulate emission, reduction in load on Railway Network and reduction in handling and transportation cost of coal and solid waste.
- x. The land usage of the project will be as follows: 17 Ha land is required for proposed Hingula Washery. 10 Ha land is required for temporary storage of Reject. 17 + 10 =27 Ha land required for Washery & Reject storage has already been acquired and is in possession of MCL. All the 27 Ha land falls within the mine leasehold of Balram OCP which is a running mine. The entire land for washery is non-forest, barren/scrubland and is non coal bearing
- xi. The coal grade is G11.
- xii. The total estimated water requirement is 1273 m³/hr at 0.09 m³/tonne of Raw Coal.
- xiii. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xiv. Method of Washing: Washing technology is based on Heavy Media Separation (HM Cyclone) and the washing circuit is a closed circuit with zero water discharge.
- xv. Transportation: Mode of Washed Coal transportation will be by Rail.

- xvi. The life of Washery is 30 years.
- xvii. There is no R & R involved. There are no PAFs.
- xviii. Cost: Total capital cost of the project is Rs. 321.96 Crores. R&R Cost: Nil. Environmental Management Cost (capital cost Rs 948.38 Lakhs and Operational Cost Rs. 654.60 Lakhs).
- xix. Water body: Bangaru Jhor flows at a distance of 2.5 km and Singhara Jhor flows at a distance of 5 km.
- xx. Approvals: Board's approval obtained on 13.01.2011. Mining plan has been approved on 13.01.2011. 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: No forest area involved.
- xxiii. Green Belt over an area of Approx.3 Ha. Around washery premises. Density of tree plantation 1600 trees/ ha of plants.
- xxiv. There are no court cases/violation pending with the project proponent.
- xxv. Public Hearing was held on 28.04.2015 at Jagannath Kalakendra, at Jagannath Colony, Post-South Balanda, Talcher, District Angul. The issues raised during the public hearing includes Control & mitigation measures of Air/water pollution in Talcher Area; wastewater treatment plant; construction of coal transportation road.; blasting causing crack of houses and dust emission; noise pollution due to drilling and blasting and control measures; ground water depletion by deep bore well; Frequent water sprinkling on roads etc.,

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

- (i) Proponent should adopt zero liquid discharge
- (ii) Transportation of raw coal transportation to be done through pipe conveyor 3.76 km long and clean coal through silo into railway wagon from the start of the 1st day, for which advance action is already in tendering stage.
- (iii) Detailed note to be provided on utilization of rejects if it is more than 80 % ash content.
- (iv) Thick green belt 45 m width to be provided around the washery. Plantation should be started from this monsoon.
- (v) Minimum 20 m. three tier plantation should be developed around the villages too.

Agenda 42.11

Lingraj OCP Expansion project from 13 MTPA to 20 MTPA within the total area of 1493.20 ha (1410.01 ha + Outside ML area 83.19 ha) of M/s Mahanadi Coalfields Ltd., located in Talcher Coalfields, District Angul (Odisha) - (EC based on TOR granted on 21.03.2012).

42.11.1 The proposal is for Lingraj OCP Expansion project from 13 MTPA to 20 MTPA within the total area of 1493.20 Ha (1410.01 Ha + Outside ML area 83.19 Ha; Latitude 20° 57' 39" to 20° 58' 18" North and Longitude 85° 09' 33" to 85° 12' 12" East) of M/s Mahanadi Coalfields Ltd., located in Talcher Coalfields, District Angul (Odisha)

41.11.2 The proposal was considered in the 33rd EAC meeting held on 9th -10th April, 2015. During the meeting, the Committee sought following information for further consideration of the project:

- i. Action Plan for the transport of coal from mine to the siding, loading arrangement at siding and construction of the railway siding in accordance with the EC provision & present status of implementation. Comparative chart for transportation of coal from the existing 13 MTPA vis –a – vis the proposed expansion should also be submitted.
- ii. A revised statement on the queries raised in the Public Hearing and the Action Plan for fulfillment of the commitments given in the Public Hearing be submitted.
- iii. Response to the issues raised by the NGO w.r.t. flora and fauna; Cumulative Impact Assessment ; Ground Water ; Issues with Public Hearing etc. be submitted

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

(i) In 13 MTPA EC only, Railway Siding Provision was provided, Ground Bunker at Pit head and SILOs were planned and implemented subsequently. Action Plan for Transport of Coal and the Comparative Chart for transportation of Coal, Existing vis a vis the Proposed Expansion are given in Tabular form.

Action Plan for Transport of Coal

S. No.	Work Element	Action Plan	Present Status of Implementation
(i)	Transport of coal from Mine Pit head to the Siding	By Conveyor from Pit Head Ground Bunker (15,000 Te capacity) to SILOs located at Siding up to Dec, 2016	Work awarded to M/s L&T Ltd. for construction of Ground Bunker-Conveyor-SILO on Turnkey Contract at a Total cost of Rs. 230.83 Cr. vide Ref. No. MCL/ SAMB/ E&M/ Lingaraj SILO/ 2014-15/ loa-76 dtd. 12.06.2014. Work started on: 14.07.2014 40% work completed.
(ii)	Loading Arrangement at Siding	Two SILOs each of 4,000 tonnes capacity to load coal in the Railway Wagon. Scheduled date of completion: Dec, 2016	
(iii)	Construction of the Railway Siding	Already completed and in operation.	Operational.

Comparative chart for transportation of coal from the existing 13 MTPA vis –a – vis the proposed expansion

Sl. No.	Lingaraj OC Expn. 13.0 Mty (Existing Arrangement)	Lingaraj OC Expn. 20.0 Mty (Proposed Arrangement)
(i)	Transport of coal from Mine to siding by Tippers	Transport of coal from Mine to ground bunker at pit head by tipper. From ground bunker to SILO at Railway Siding by conveyor.

(ii)	Coal is loaded from siding into Railway Wagons by Pay-loaders.	Coal will be loaded into Railway Wagons through SILOs
(iii)	Dispatch of Coal a) By Rail – 10.25 MT (90.03%) b) By Road – 1.13 MT (9.97%)	Dispatch of Coal a) By Rail – 18.87 MT (94.35%) b) By Road – 1.13 MT (5.65%)

(ii) Public Consultation/Hearing was conducted on 09.09.2014 at Jagannath Kala Kendra Jagannath colony South Balanda, Talcher. Public Hearing details with specific questions asked by the villagers, commitment/reply made by Project Proponent & Action plan with status of implementation. Questions/ Issues raised by namely Sri Rangadhara Nayak, Sarpanch, Kandhal G.P ; Sri Chaitanya Pradhan, Samitisabhya, Kandhal G.P. ; Sri Bauribandhu Bej, Lawyer, Environmental Activist, Talcher; Sri Srikant Sahu, villager; Sri Shyama Pradhan The details of our demands & suggestions are as under:-

1. Proper Reclamation of mine void is being done on regular basis.
2. At Mine Closure Stage, all the external OB dumps spread over total 256.03 ha area containing 40.11 M Cum of OB will be re-handled for filling up the de-coaled void and hence there will be no external OB dump left on the ground surface.
3. There is no such plan of fly ash dumping in this mine in future.
4. Water management will be done as per existing practice, with minimum discharge principle from the mines area to outside.
5. Surface Miners are in operation which will automatically eliminate drilling & blasting for coal extraction; thereby reducing noise & vibration.
6. Full fledged arrangement to deal with spontaneous heating and fire shall be in place. Surface Miner production shall be further increased beyond 90% to reduce chances of fire. Better Rail Infrastructure will ensure in maximizing the dispatch of coal and thus coal stock shall be kept to minimum. Already there is improvement of more than 15% in supply of Rakes at Talcher Coalfield within a period of 3 years.
7. The same policy will be continued. Employment for balance 79 persons is under process. It is expected to be completed by June, 2016.
8. There is no such plan of fly ash dumping in this mine in future.
9. Water management will be done as per existing practice, with minimum discharge principle from the mines area to outside.
10. Mine sump will be de-silted and regular cleaning of sedimentation pond shall be ensured to increase the settling capacity of the system.
11. CSR works as per CSR policy is being and will be carried out every year.

(iii) A revised flora & fauna study report 10 km radius of the proposed project in response to the questions raised by NGO, has been submitted by the PP, which may be summarized as under.

- i. However, an Environmental Management Study of Anugul-Talcher-Miramandali area was done by Odisha State Pollution Control Board through ISM, Dhanbad, jointly funded by the industries. MCL had contributed Rs. 8.0 lakhs towards the study. The report is in the public domain.
- ii. The data about ground water availability is not false and distorted and they are true and factual. The sampling locations are not chosen based on our convenience, totally 18 village dug-wells were selected on the basis of actively used domestic hand bailing Govt. owned wells and also representing the influence of various mining projects in the Talcher coalfields.
- iii. The data employed for depiction of ground water availability for Natedi and Deulbera villages are observed values and taken from routine Environmental Monitoring Cell of CMPDIL. The methodology adopted by CMPDI is in accordance with standard method for Groundwater level

monitoring as practised by other nodal agencies like Central Groundwater Board (CGWB) in the country. Groundwater level is measured four times yearly and data is submitted to SPCB regularly.

42.11.4 The Committee sought following additional information for further consideration:-

- (i) Grassing needs to be done for top soil.
- (ii) CSR Audit report to be submitted.
- (iii) Wild Life Conservation Plan with budgetary allocation be submitted.
- (iv) The total project area 1493.20 ha consist of 1410.01 ha of ML area (includes 186.311ha of forest area) and 83.19 ha outside ML area. The proposed expansion involves quarry extraction in an additional area of 28 ha (total quarry area becomes 538.851 ha) and reduction in blasting danger /safety zone of the same areal extent. As such, no additional area is required for the proposed expansion and effect of safety zone reduction on DGMS requirement and safety of nearby habitation if any.
- (v) Detailed action plan for water harvesting with appropriate budget.
- (vi) Action plan to reduce road transportation and pay loader loading to minimize dust emission as Talcher is being Critically Polluted area.
- (vii) Action plan for the proposed measures of SPCB for mitigation of Cumulative impact of Coal mining project and other industries operating in buffer zone of the project site.
- (viii) Revised basic information w.r.t. OB and Void management.
- (ix) The Committee noted inconsistency in the details in respect of land use (post-mining), external OB dumps and void management given in the basic information sheet and that in presentation/discussed during the meeting.

42.11.5 In view of the above additional information required, the proposal was deferred by EAC.

Agenda 42.12

Expansion of Karo OCP for increase in production capacity from 1.5 MTPA to 15 MTPA and integrated Karo Washery (7.0 MTPA) in an ML area of 575.36 ha of M/s Central Coalfields limited located in village, Karo, Amlo, Kargali & Baid Karo, District Bokaro (Jharkhand)

42.12.1 The proposal is for expansion of Karo OCP of 11 MTPA normative and 15 MTPA peak capacity and integrated Karo Washery of 7 MTPA in an ML area of 575.36 ha (Latitude 23^o 47' 02" N to 23^o 48' 38" N and Longitude 85^o 57' 27" E to 85^o 58' 38" E)of M/s Central Coalfields limited. Located in village, Karo, Amlo, Kargali & Baid Karo, District Bokaro (Jharkhand).

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

- i. EC for Karo OCP was granted for 1.50 MTPA capacity vide letter No. J-11015/ 544/2009-IA.II(M) dated 24.12.2014. Expansion of Karo OCP (11 MTPA normative /15 MTPA peak) is planned by combining Karo & Kaveri geological blocks (7 MTPA non-coking & 4 MTPA coking coal). Integrated Karo non-coking coal washery of 7 MTPA is planned. Coking coal of 4 MTPA is proposed to be linked to Kargali washery.
- ii. This is the fresh proposal for ToR.
- iii. The latitude and longitude of the project are 23^o 47' 02" N to 23^o 48' 38" N and 85^o 57' 27" E to 85^o 58' 38" E respectively.
- iv. Joint Venture: There is no Joint venture.
- v. Coal Linkage : Steel, power and other miscellaneous consumers Karo Washery (7 MTPA capacity) linked to Karo Expansion OCP (Nominal Capacity: 11 MTPA, Peak Capacity : 15 MTPA).

- vi. Employment generated/to be generated: Approx. 133 employment will be provided.
- vii. Benefits of the project: Improvements in Physical Infrastructure, Improvements in Social Infrastructure, Increase in Employment Potential, Contribution to the Exchequer, Meet energy and steel sector requirement, The beneficiation/washing of coal will lead to improvement in performance of power plant, Reduction in particulate emission and fly ash at user end / power house, Reduction in load on Railway Network, Reduction in handling and transportation cost of coal and solid waste
- viii. The land usage of the project will be as follows:

Sl . no	Particulars of land (Area Ha)	Forest	Non- Forest	Total
1	Quarry	185.07	110.68	295.75
2	External OB dump-1	24.73	13.27	38.00
	External OB dump-2	5.00	52.24	57.24
3	Infrastructures	36.77	8.31	45.08
4	Road, nala diversion, green belt/vacant land & Safety zone	75.05	32.72	107.77
5	Res. colony*	0.00	5.00	5.00
6	Conveyer to Kargali Washery/ siding *	7.50	19.02	26.52
Total Land Required		334.12	241.24	575.36

*outside core zone

Note : Land for washery - Total 26.87 Ha. Land (22 Ha. for Washery infrastructure & 4.87 Ha. for Reject/ High ash fuel storage) is earmarked for coal washery within the project area of Karo Expansion OCP.

Pre-mining:

Sl . no	Particulars of land (Area Ha)	Forest	Non- Forest	Total
1	Quarry	185.07	110.68	295.75
2	External OB dump-1	24.73	13.27	38.00
	External OB dump-2	5.00	52.24	57.24
3	Infrastructures	36.77	8.31	45.08
4	Road, nala diversion, green belt/vacant land	75.05	32.72	107.77
5	Res. colony*	0.00	5.00	5.00
6	Conveyer to Kargali Washery/ siding *	7.50	19.02	26.52
Total Land Required		334.12	241.24	575.36

*outside core zone

Note: Land for washery - Total 26.87 Ha. Land (22 Ha. for Washery infrastructure & 4.87 Ha. for Reject/ High ash fuel storage) is earmarked for coal washery within the project area of Karo Expansion OCP.

Post-Mining: Will be finalized in Draft EIA/EMP

Core Area:

Sl. no	Particulars of land (Area Ha)	Forest	Non- Forest	Total
1	Quarry	185.07	110.68	295.75
2	External OB dump-1	24.73	13.27	38.00
	External OB dump-2	5.00	52.24	57.24
3	Infrastructures	36.77	8.31	45.08
5	Road, nala diversion, green belt/vacant land	75.05	32.72	107.77
6	Res. colony*	0.00	5.00	5.00
7	Conveyer to Kargali Washery/ siding *	7.50	19.02	26.52
Total Land Required		334.12	241.24	575.36

*outside core zone .

- ix. The coal grade W-IV in upper seams and E-F in lower seams. There will be six seams with thickness ranging from 9.40 to 36.25 m.
- x. The total estimated water requirement is 2038.00 kl per day & 0.35 MGD for washery.
- xi. The total project life (mine + washery) is 15 years including 3 years washery development period.
- xii. Transportation: Inpit by rear dumper, surface to siding by belt conveyer , siding at loading by Rear dumpers. Washed coal & Reject transportation by covered belt Conveyer to railway siding.
- xiii. Cost: Rs. 1626.92 Crore for OCP & Rs 269.88 Crores for coal washery. R & R Cost: Rs 1274.4 lakhs. Environmental management cost: Rs 11576.96 lakh.
- xiv. Water body : The drainage of the block is controlled by Karo and Gati Nala flowing towards south which is at 1km distance..
- xv. Approvals: Applied for ground water clearance. Board's approval obtained on 21.05.2013. Mine plan approval is awaited. Mine closure plan of washery along with Karo Expansion OCP (11/15 MTPA) to be approved by CCL Board.
- xvi. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xvii. Forestry issues: Forest land- 326.62 ha in core zone and 7.50 ha for conveyer layout outside core zone. 23.39 ha forest land required for washery is included in the forest land in core zone of Karo OCP. FC granted for 77.43 ha forest land in core zone diverted vide letter number: F.No.8-22/2003-FC Dated 31st March 2004. Applied for FC for 226.67 ha forest land in core zone on 09.03.2006. Advance CAMPA fund of Rs 18.20 crore deposited on 31.03.2015. Enumeration of trees completed and its report has been submitted to DFO, Bokaro on 02.07.2015. Proposal forwarded to MoEFCC by state govt. for stage-I clearance. For coal washery 1.43 ha released as part of 77.43 ha of forest land vide letter number: F.No.8-22/2003-FC Dated 31st March 2004.
- xviii. Green Belt area included in the plan of Karo Expansion OCP shall be finalized in draft EIA/EMP . Density of tree plantation 2500 trees/ ha of plants.
- xix. There are no court cases/violation pending with the project proponent.

42.12.3 The EAC observed that the Karo Opencast Coal Mine is surrounded by large number of mine blocks, some of which are abandoned, some active and some of them are on the verge of closure. All these mines are located within 2-3 km radius. Before considering for TOR for expansion of Karo OCP from 1.5 MTPA to 15 MTPA, the Committee noted that this was the fit case to assess the environmental degradation due to mining. Since, some of the mines were operated before nationalization of coal mines, it is important to prepare an integrated mining plan, which allows sustainable mining and a fit case for considering as a cluster as done in M/s BCCL and M/s ECL **For this purpose, the Committee decided to defer the project till the subgroup of EAC undertakes a site visit and submits report.**

Agenda 42.13

Pichri OCP (1.20 MTPA Normative to 1.50 MTPA Peak in a project Area 151.47 Ha; Latitude 23° 45' 00" to 23° 45' 50"N and Longitude 86° 01' 00" to 86° 02' 30"E) of M/s Central Coalfields Limited, Dist. Bokaro (Jharkhand) - (EC based on TOR granted on 18.06.2015)

42.13.1 The proposal for grant of Environmental Clearance to Pichri Opencast Coal Mine Project of 1.50 MTPA (Peak) in a project area of 151.47 ha of M/s Central Coalfields Ltd in District Bokaro (Jharkhand) was recommended by the EAC in its meeting held in July, 2015.

42.13.2 The case was considered by the Committee based on the terms and conditions stipulated in the revised ToR granted for the project in June, 2015 with waiver of fresh Public Hearing (PH). The Competent Authority desired for the fresh public hearing to be conducted due to Mining plan revised after the PH held in October, 2013. However, the same could not be communicated to the Project proponent. In the meantime, based on the EIA/EMP reports for the project, the EAC recommended the project for grant of EC.

42.13.3 The matter was again taken to EAC in its present meeting for reconsideration of their earlier decision for wavier of fresh PH. The Committee was of the view that the decision was taken duly considering the revised Mine Plan excluding forest area from the earlier envisaged project area of 185.44 ha. It was also clarified that no mining in forest areas would be initiated. Further, the PP should put on the website stating that the life of the mine is reduced to 3 years due to non-inclusion of forest land in the present project area and the same be published in two local news papers for public awareness.

Keeping in view, the EAC reiterated its earlier decision for wavier of fresh PH, and to reconsider the case for grant of EC to the project.

Agenda 42.14

Parsa East and Kanta Basan Opencast Coal Mine Project (10 MTPA) and Pit Head Coal Washery (10 MTPA) of M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd., located in Hasdeo-Arand Coalfields, in villages Parsa, Kente, Basan, Salhi, Hariharpur, Ghatbara, Parogiya, Tehsil Udaypur, District Sarguja (Chhattisgarh) - Environmental clearance granted on 21.12.2011 (EC Amendment).

42.14.1 The proposal is for Parsa East and Kanta Basan Opencast Coal Mine Project (10 MTPA) and Pit Head Coal Washery (10 MTPA) of M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd., located in Hasdeo-Arand Coalfields, in villages Parsa, Kente, Basan, Salhi, Hariharpur, Ghatbara, Parogiya, Tehsil Udaypur District. Sarguja (Chhattisgarh). The PP requested for amendment in the EC conditions.

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

(i) The Parsa East & Kanta Basan Opencast Coal Mine Project (10 MTPA) and Pit Head Coal Washery (10 MTPA) located in Hasdeo-Arand Coalfields in Tehsil Udaypur District Sarguja (Chattisgarh) was granted Environmental Clearance by the Ministry vide letter dated 21st December, 2013 in favour of M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd.

(ii) Total project area is 2711.034 ha which includes mining lease area of 2388.525 ha and 322.509 ha outside the ML area for infrastructure and external OB dumps. Of the project area, 1898.32 ha is forest land, 702.163 ha is agriculture land 110.543 ha is Government waste land.

(iii) Subsequent to cancellation of coal blocks by Hon'ble Supreme Court and fresh allocation of the above coal mine again in favour of M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd, the EC was revalidated vide letter dated 25th June, 2015 in pursuance to the vesting orders of Ministry of Coal. The revalidation of EC was subject to certain conditions including that '*All conditions stipulated in the EC/corrigendum/amendment letter No.J-11015/03/2008-IA.II (M) dated 21st December, 2011, 22nd June, 2012 and 4th March, 2013 shall remain unchanged*'

(iv) Owing to delays due to legal interventions, the PP has requested for amendment in specific conditions contained in 2A (iii) & (v) of the EC dated 21st December, 2011. These are read as under:-

2 A (iii) The estimated 2.25 MTPA of coal rejects shall be fully utilised for power generation in an FBC based Thermal Power Plant being established within the ML Coal rejects shall be dispatched to the FBC based TPP through a closed belt conveyor. The linked 135MW FBC Power Plant shall be commissioned in 2-3 years. Until an FBC based TPP is established, the coal rejects shall be sold during the initial 2-3 years, to users of coal rejects for which an Agreement shall be entered into. There shall be no storage of coal rejects within the project area beyond 2-3 months of its generation.

2 A (v) A Railway siding to be established adjoining the mine shall be commissioned within 24 months. Until the railway Siding is constructed and commissioned, transportation of clean coal and middling to the linked TPPs at Rajasthan shall be by high capacity trucks (30-T or more) only. Clean coal and middling from the pit head coal washery shall be loaded by rapid (silo) loading system and transported by rail only after the commissioning of the railway siding and establishment of rail network to Surajpur TPS located at a distance of 78 km.

(v) The PP has informed that the coal production and operation of pit head coal washery was started in February, 2013. But, due to the NGT order dated 24th March, 2014 in Appeal No.73 of 2012 setting aside the forest clearance dated 23rd June, 2011, subsequent filing of Civil Appeal by them in Hon'ble Supreme Court, followed by cancellation/re-allocation of coal blocks, the mining activities were severely affected. Accordingly, they have requested for deferring completion of certain activities FBC power plant and railway siding and thus sought amendment in specific conditions explained above.

42.14.3 The Committee, after deliberations, recommended both the amendments as proposed by PP subject to the outcome of the judgment of Hon'ble Supreme Court and the decision of Forest Advisory Committee.

Agenda 42.15

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

42.15.1 With the permission of the Chair, the proposal for modification in minutes of the 39th EAC meeting held in July, 2015 (*Agenda 39.15*) regarding EC amendment of Coal Beneficiation Plant of 1 MTPA capacity of M/s Shree Nakoda Ispat Ltd was deliberated by the EAC.

42.15.2 The proposal for amendment in the EC granted to the above project vide letter No.J-11015/18/98-IA II (M) dated 1st March, 1999, was placed before the 39th EAC meeting held in July, 2015. The Committee after detailed deliberations, and considering the submissions as above recommended the project for amendment in EC, in respect of the following:-

- a. The Specific Condition No. 2(A) (ii) & 2(A) (X) in Environmental Clearance granted vide letter may be read as deleted.
- b. The rejects now will be supplied to the MOU having operating CFBC Boiler.
- c. The rejects from the washery will be loaded all to the trucks by bunkers. The rejects to the TPP shall be transported by 20 Tonner trucks covered with tarpaulin.
- d. All other conditions stipulated in the EC shall remain unchanged.

42.15.3 The project proponent has requested for modification/amendment in minutes of the EAC meeting in the following manner:-

S. No.	Clause No.	Correction requested	Remarks/Submissions
1.	(b) of Para 39.15.3	The reject will be supplied to TPP having operating CFBC Boiler	Only the word MOU is to be replaced by TPP. The committee members were agreed and given their consent in the said EaC meeting,
2.	(c) of Para 39.15.3	The reject from the washery will be loaded to the trucks by bunkers. The rejects to the TPP shall be transported by trucks covered with tarpaulin	Only the word 20 tonners is to be deleted because in the market 9/16/21/27 tonners trucks are generally available.

42.15.4 The EAC agreed for modification in the minutes in respect of clause (b) as requested by the PP. But in case of clause (c), it was decided to revise it as *'the reject from the washery will be loaded all to the trucks by bunkers. The rejects to the TPP shall be transported by the trucks more than 20 tonners covered with tarpaulin'*

42.15.5 *The Committee decided for the modification in the minutes as explained in para 4 above.*

**PARTICIPANTS IN 42nd EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING)
MEETING HELD ON 31ST AUGUST – 1ST SEPTEMBER, 2015 ON COAL SECTOR PROJECTS.**

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

PARTICIPANTS IN 42nd EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 31ST AUGUST – 1ST SEPTEMBER, 2015 ON COAL SECTOR PROJECTS.

42.1 Khadia Opencast Coal Mine Expansion Project of M/s Northern Coalfields Limited.

1. Shri B. K. Sharma
2. Shri U. C. Dumka
3. Shri S. Chandra
4. Shri Sunil Kumar
5. Shri Pawan Kumar

42.2 Kusmunda Opencast Expansion Project of M/s South Eastern Coalfields Ltd.

1. Shri R. P Thakur
2. Shri Manoj Kumar
3. Shri U. T. Kanzaokar
4. Shri U. K. Singh
5. Shri N. P Saha
6. Shri Amit Saxena
7. Shri A. S. Bapat
8. Shri S. R. Tripathi
9. Dr. A. Tiwari
10. Shri S. R. Talankar
11. Shri A. Sinha
12. Shri Ratan Basu
13. Shri D. C. Kundu
14. Shri Siddhartha Sharma
15. Shri Abhishek Kumar
16. Shri Rambabu singh
17. Shri Ashutosh Kumar
18. Shri S. Kumar
19. Shri U. S. Bajaj
20. Shri M. N. Jha
21. Shri S. N. Chawla
22. Shri Manoj Kumar Jha

42.3 Kusmunda Washery project of M/s South Eastern Coalfields Limited.

1. Shri R. P Thakur
2. Shri Manoj Kumar
3. Shri U. T. Kanzaokar
4. Shri U. K. Singh
5. Shri N. P Saha
6. Shri Amit Saxena
7. Shri A. S. Bapat
8. Shri S. R. Tripathi
9. Dr. A. Tiwari
10. Shri S. R. Talankar
11. Shri A. Sinha

12. Shri Ratan Basu
13. Shri D. C. Kundu
14. Shri Siddhartha Sharma
15. Shri Abhishek Kumar
16. Shri Rambabu singh
17. Shri Ashutosh Kumar
18. Shri S. Kumar
19. Shri U. S. Bajaj
20. Shri M. N. Jha
21. Shri S. N. Chawla
22. Shri Manoj Kumar Jha

42.4 Expansion of Amera OC project of M/s South Eastern Coalfields Limited.

1. Shri R. P Thakur
2. Shri Manoj Kumar
3. Shri U. T. Kanzaokar
4. Shri U. K. Singh
5. Shri N. P Saha
6. Shri Amit Saxena
7. Shri A. S. Bapat
8. Shri S. R. Tripathi
9. Dr. A. Tiwari
10. Shri S. R. Talankar
11. Shri A. Sinha
12. Shri Ratan Basu
13. Shri D. C. Kundu
14. Shri Siddhartha Sharma
15. Shri Abhishek Kumar
16. Shri Rambabu singh
17. Shri Ashutosh Kumar
18. Shri S. Kumar
19. Shri U. S. Bajaj
20. Shri M. N. Jha
21. Shri S. N. Chawla
22. Shri Manoj Kumar Jha

42.5 Expansion of Amelia (North) Coal Mine Project of M/s Jaiprakash Power Venture Limited.

1. Shri V. S. Bajaj
2. Shri M. N. Jha
3. Shri P. K. Goel
4. Shri S. Dubey
5. Shri Rajeshwvar Tummala

42.6 Dalla Coal Beneficiation Plant of M/s Jaiprakash Associates Ltd.

1. Shri V. S. Bajaj
2. Shri M. N. Jha
3. Shri P. K. Goel
4. Shri S. Dubey
5. Shri Rajeshwvar Tummala

42.7 Niljai Expansion (Deep) OC Coal Mine Project of M/s Western Coalfields Ltd.

1. Shri K. Chakraborty
2. Shri R. M. Wanare
3. Md. Noor Uddin
4. Shri S. K. Sinha
5. Shri V. K. Nagda

42.8 Expansion of Chotia-II Captive coal mining Project of M/s Bharat Aluminium Company Limited (BALCO)

1. Shri Ajay Kumar Dutt
2. Shri Afroz
3. Dr. B. chahal
4. Shri Pankaj Saha
5. Shri Ravi Kumar
6. Shri Tushar Sainger
7. Shri R. K. Narang
8. Shri M. Janardhan
9. Shri J. Sunil Kumar

42.9 Balaram Open Cast coal mine expansion project of M/s Mahanadi Coalfield Limited.

1. Shri J. P. Singh
2. Shri S.K. Srivastav
3. Shri S. Jha
4. Shri S. K. Sahoo
5. Shri U. K. Mohanty
6. Shri Sahid Ghulrm
7. Shri Abhishekh Kumar
8. Shri K. S. Ganapathy
9. Shri R. C. Sahoo
10. Shri Neeraj Kumar
11. Shri Pawan Kumar

42.10 Hingula Washery of M/s Mahanadi Coalfields Limited.

1. Shri J. P. Singh
2. Shri S.K. Srivastav
3. Shri S. Jha
4. Shri S. K. Sahoo
5. Shri U. K. Mohanty
6. Shri Sahid Ghulrm
7. Shri Abhishekh Kumar
8. Shri K. S. Ganapathy
9. Shri R. C. Sahoo
10. Shri Neeraj Kumar
11. Shri Pawan Kumar

42.11 Lingraj OCP Expansion project of M/s Mahanadi Coalfields Ltd.

1. Shri J. P. Singh
2. Shri S.K. Srivastav
3. Shri S. Jha
4. Shri S. K. Sahoo
5. Shri U. K. Mohanty
6. Shri Sahid Ghulrm
7. Shri Abhishekh Kumar
8. Shri K. S. Ganapathy
9. Shri R. C. Sahoo
10. Shri Neeraj Kumar
11. Shri Pawan Kumar

42.12 Expansion of Karo OCP of M/s Central Coalfields limited.

1. Shri B. K. Singh
2. Dr. A. Sinha
3. Shri Alok Kumar
4. Shri J. Charkraborty
5. Shri Pushkar
6. Shri Soumitra Sinha

42.13 Pichri OCP of M/s Central Coalfields limited.

1. Shri B. K. Singh
2. Dr. A. Sinha
3. Shri Alok Kumar
4. Shri J. Charkraborty
5. Shri Pushkar
6. Shri Soumitra Sinha

42.14 Parsa East and Kanta Basan Opencast Coal Mine Project (10 MTPA) and Pit Head Coal Washery (10 MTPA) of M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd.

1. Shri J. Sunil Kumar
2. Shri B. B. Cahr
3. Shri Harish Niwas
4. Shri Pramod Kumar
5. Shri Amrendra Kumar
6. Shri Prakash Hirani
7. Shri M. Janardhan
8. Shri S. S. Meena

Generic ToR for coal washery

- i. Siting of washery is critical considering to its environmental impacts. Preference should be given to the site located at pit head; in case such a site is not available, the site should be as close to the pit head as possible and coal should be transported from mine to the washery preferably through closed conveyer belt to avoid air pollution.
- ii. The washery shall not be located in eco-sensitive zones areas.
- iii. The washery should have a closed system and zero discharge. The storm drainage should be treated in settling ponds before discharging into rivers/streams/water bodies.
- iv. A thick Green belt of about 50 m width should be developed surrounding the washery.
- v. A brief description of the plant alongwith a layout, the specific technology used and the source of coal should be provided.
- vi. The EIA-EMP Report should cover the impacts and management plan for the project of the capacity for which EC is sought and the impacts of specific activities, including the technology used and coal used, on the environment of the area (within 10km radius), and the environmental quality of air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts for the rated capacity. Cumulative impacts for air and water should be a part of EIA in case coal mine, TPP and other washeries are located within 10km radius. The EIA should also include mitigative measures needed to minimize adverse environmental impacts.
- vii. A Study Area Map of the core zone as well as the 10km area of buffer zone showing major industries/mines and other polluting sources should be submitted. These maps shall also indicate the migratory corridors of fauna, if any and areas of endangered fauna; plants of medicinal and economic importance; any ecologically sensitive areas within the 10 km buffer zone; the shortest distance from the National Park/WL Sanctuary Tiger Reserve, etc. alongwith the comments of the Chief Wildlife Warden of the State Government.
- viii. Data of one-season (non-monsoon) primary- base-line data on environmental quality of air (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 confirm to the effluent standards as prescribed under Environment (Protection) Act, 1986
- xxiii. Details of washed coal, middling and rejects along with the MoU with the end-users should be submitted.

GENERIC TOR FOR AN OPENCAST COALMINE PROJECT for EC

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

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

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

- (xii) Break-up of lease/project area as per mining plan should be provided.
- (xiii) Impact of changes in the land use due to the project if the land is predominantly agricultural land/forestland/grazing land, should be provided.
- (xiii) **One-season (other than monsoon) primary baseline data** on environmental quality - air (PM₁₀, PM_{2.5}, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season **met data** coinciding with the same season for AAQ collection period should be provided.
- (xiv) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
- (xv) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a **Comprehensive Conservation Plan** along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.
- (xvi) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life

should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.

- (xvii) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xviii) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xix) Detailed water balance should be provided. The break-up of water requirement for the various mine operations should be given separately.
- (xx) Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users in the upstream and downstream of the project site. should be given.
- (xxi) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xxii) Impact of blasting, noise and vibrations should be given.
- (xxiii) Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided.
- (xxiv) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xxv) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xxvi) 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.
- (xxvii) 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.
- (xxviii) Impact of change in land use due to mining operations and plan for restoration of the mined area to its original land use should be provided.
- (xxviii) Progressive Green belt and ecological restoration /afforestation plan (both in text, figures and in the tabular form as per the format of MOEFCC given below) and selection of species (native) based on original survey/land-use should be given.

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

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

* As a representative example

Table 2 : Stage Wise Cumulative Plantation

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

* As a representative example

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

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

S.N.	Land use during Mining	Land Use (ha)				
		Plantation	Water Body	Public Use	Undisturbed	TOTAL
1.	External OB Dump					
2.	Top soil Dump					
3.	Excavation					
4.	Roads					
5.	Built up area					
6.	Green Belt					
7.	Undisturbed Area					
	TOTAL					110

- (xxx) Flow chart of water balance should be provided. Treatment of effluents from workshop, township, domestic wastewater, mine water discharge, etc. should be provided. Details of STP in colony and ETP in mine should be given. Recycling of water to the max. possible extent should be done.
- (xxxii) Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given.
- (xxxiii) Risk Assessment and Disaster Preparedness and Management Plan should be provided.
- (xxxiv) Integration of the Env. Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.
- (xxxv) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxxvi) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
- (xxxvii) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
- (xxxviii) Corporate Environment Responsibility:
 - a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.

- c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
- d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

(xxxviii) Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.

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

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

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

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

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

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

GENERIC TORs FOR AN UNDERGROUND COALMINE PROJECT

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

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

Area under Surface Rights

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

- (viii) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a **Comprehensive Conservation Plan** along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.
- (ix) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
- (x) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xi) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xii) One-season (other than monsoon) primary baseline data on environmental quality - air (PM₁₀, PM_{2.5}, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xiii) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.

- (xiv) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xv) Study on subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
- (xvi) Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.
- (xvii) Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.
- (xviii) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xix) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xx) Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.
- (xxi) The number and efficiency of mobile/static water sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.
- (xxii) Impacts of CHP, if any on air and water quality should be given. A flow chart showing water balance along with the details of zero discharge should be provided.
- (xxiii) Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.
- (xxiv) Greenbelt development should be undertaken particularly around the transport route and CHP. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.
- (xxv) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxvi) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.

(xxvii) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.

(xxviii) Corporate Environment Responsibility:

- a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
- b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
- c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
- d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

(xxix) Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.

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

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

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

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

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

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

GENERIC TORs FOR AN OPENCAST-CUM-UNDERGROUND COALMINE PROJECT

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

**42nd EAC (THERMAL & COAL MINING PROJECTS) MEETING
SCHEDULED FOR 31ST AUGUST – 1ST SEPTEMBER, 2015**

AGENDA

**Venue: Brahmputra Conference Hall, First floor, Vayu Wing, Indira Paryavaran Bhawan, Jorbagh,
New Delhi-110003.**

Pl. check the MoEF website: <http://environmentclearance.nic.in/Report/Default3.aspx>

Important Note:

- i. Please send the information as per Annexure 1 by E-mail in word format and also a signed & scanned copy, to the Member-Secretary at sk.smree66@nic.in at least one week prior to the EAC meeting.**
- ii. Please indicate the agenda number on the document submitted as well as in the e-mail while forwarding the relevant information.**
- iii. Without this information, EAC has discretion to invite the proponent for the meeting.**
- iv. Please also provide a copy to the EAC Members during the meeting.**
- v. No consultant is permitted into the meeting who has no accreditation with quality Council of India (QCI) /National Accreditation Board of Education and Training (NABET) as per the MoEF OM dated 2nd December, 2009.**

COAL MINING PROJECTS

Monday, 31st August, 2015

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

- 42.1 Khadia Opencast Coal Mine Expansion Project (from 10 MTPA to 14 MTPA and lease area from 1460 ha to 1640 ha) of **M/s Northern Coalfields Limited**, located in District Sonbhadra, Uttar Pradesh and in Tehsil Singrauli in District Sidhi, Madhya Pradesh - **EC under 7(ii) of EIA Notification 2006.(Further Consideration).****
- 42.2 Kusmunda Opencast Expansion Project (Normative 15 MTPA to 50MTPA & Peak 18.75 MTPA to 62.50 MTPA in an ML area 3510.348 Ha); Latitude 22^o 15' 18" to 22^o 21' 30" North and Longitude 82^o 38' 39" to 82^o 42' 08" East of **M/s South Eastern Coalfields Ltd.**, located at dist. Korba, Chhattisgarh - **(EC based on TOR granted on 01.12.2014)- (Further Consideration.)****
- 42.3 Kusmunda Washery project (Capacity 25.00 MTPA in an area of 41.23 Ha)of **M/s South Eastern Coalfields Limited** located in Village: Durpa & Jarhajel Tahsil: Katghora Distt: Korba, chhatishgarh-TOR**
- 42.4 Expansion of Amera OC project (from 1.0 MTPA to 2.0 MTPA in an ML area of 664.184 Ha; Latitude- 23^o 02' 50" to 23^o 04' 34" N and Longitude 83^o 01' 34" to 83^o 03' 38" E of **M/s South Eastern Coalfields Limited** located at village Amera, Tahsil Lakhanpur in District Sarguja Chhattisgarh – **(Expansion under 7(ii) of EIA Notification, 2006) (Further Consideration.)****

LUNCH

- 42.5** Expansion of Amelia (North) Coal Mine Project (from 2.8 MTPA to 4.2 MTPA) in an ML area of 728.75 Ha by **M/s Jaiprakash Power Venture Limited** located in village Majhauri, Tehsil Deosar, District Sidhi Madhya Pradesh – **TOR**
- 42.6** Dalla Coal Beneficiation Plant of (1.0 MTPA in an ML area of 2.1781 ha) of **M/s Jaiprakash Associates Ltd.**, Village Kota, Distt. Sonebhadra, Uttar Pradesh - **(EC based on TOR granted dated 09.09.2013)**
- 42.7** Niljai Expansion (Deep) OC Coal Mine Project (expansion in ML area from 1346.63 ha to 1761.22 ha at the existing prod. Capacity of 3.5 MTPA) of **M/s Western Coalfields Ltd.**, Dist. Yavatmal, Maharashtra – **(EC based on TOR granted dated 23.05.2012). (Further Consideration)**

Tuesday, 1st September, 2015

- 42.8** Expansion of Chotia-II Captive coal mining Project(from 0.25 MTPA to 1.0 MTPA in an ML area 411.0 Ha) of **M/s Bharat Aluminium Company Limited (BALCO)**, latitude N 22° 50' 40.6" N- 22° 51' 58.6" N-22° 51' 33.4" N-22° 51' 1.3" N and longitude 82° 33' 1.2" E - 82° 31' 57.9" E-82° 31' 26.9" E-82° 31' 47.7" E, located in salaihot village, tehsil podiuprodha, korba district, Chhattisgarh- **TOR**
- 42.9** Balaram Open Cast coal mine expansion project (from 8 MTPA to 20 MTPA) and expansion in ML area from 1329.40 ha to 2507.42 ha of **M/s Mahanadi Coalfield Limited** in Talcher coalfields in Tehsil Talcher, District Angul, Odisha – **(EC based on TOR granted on 24.05.2013).**
- 42.10** Hingula Washery of (10 MTPA in an area of 27 ha; latitude 20° 56' 02" N to 20° 58' 28" N and longitude 85° 02' 52" E to 85° 06' 57" E) of **M/s Mahanadi Coalfields Limited.**, Dist. Angul, Orissa **(EC based on TOR granted 31.01.2014).**

LUNCH

- 42.11** Lingraj OCP Expansion project from 13 MTPA to 20 MTPA within the total area of 1493.20 Ha (1410.01 Ha + Outside ML area 83.19 Ha; Latitude 20° 57' 39" to 20° 58' 18" North and Longitude 85° 09' 33" to 85° 12' 12" East) of **M/s Mahanadi Coalfields Ltd.**, located in Talcher Coalfields, District. Angul Orissa. **(EC based on TOR granted on 21.03.2012).(Further Consideration).**
- 42.12** Expansion of Karo OCP (11 MTPA normative and 15 MTPA peak capacity) & integrated Karo Washery (7 MTPA) in an ML area of 575.36 Ha of **M/s Central Coalfields limited.** Located in village, Karo, Amlo, Kargali & Baid Karo, Dist- Bokaro, Jharkhand. **TOR**
- 42.13** **Pichri OCP** (1.20 MTPA Normative to 1.50 MTPA Peak in a project Area 151.47 Ha; Latitude 23° 45' 00" to 23° 45' 50"N and Longitude 86° 01' 00" to 86° 02' 30"E) of **M/s Central Coalfields Limited**, Dist. Bokaro, Jharkhand – **(EC based on TOR granted on 18.06.2015) -(clarification)**
- 42.14** Parsa East and Kanta Basan Opencast Coal Mine Project (10 MTPA) and Pit Head Coal Washery (10 MTPA) of **M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd.**, located in Hasdeo-Arand Coalfields, in villages Parsa, Kente, Basan, Salhi, Hariharpur, Ghatbara, Parogiya, Tehsil Udaypur, Dist. Sarguja, Chhattisgarh Environmental clearance granted on 21.12.2011 **(EC Amendment).**
- 42.15** Discussion on any other matters with the permission of the Chair.
