

## **MINUTES OF THE 53<sup>rd</sup> EAC (THERMAL & COAL MINING PROJECTS) MEETING HELD ON 17<sup>th</sup> - 18<sup>th</sup> MARCH, 2016.**

**A.** The 53<sup>rd</sup> EAC (Thermal & Coal mining projects) meeting was held on 17<sup>th</sup> - 18<sup>th</sup> March, 2016 in New Delhi to consider the proposals in coal mining sector. The list of participants of EAC and the proponents are at Annexure-1 & 2 respectively.

### **B. Confirmation of Minutes:**

The Committee confirmed the minutes of the 51<sup>st</sup> EAC meeting held on 5<sup>th</sup> February, 2016.

**C.** In line with the EAC's decision taken a few days earlier that agenda items 53.15, 53.16, 53.17, 53.18 and 53.19 proposed for consideration on 18<sup>th</sup> March, 2016 (A/N) would be taken up in the next EAC meeting, the PPs were informed accordingly. (The EAC was however informed that the PP for agenda item 53.19 had withdrawn his item for consideration in this meeting).

### **D. The following proposals were considered.**

#### **Agenda 53.1**

#### **Expansion of New Sethia Opencast Coal Mine from 0.20 MTPA to 0.50 MTPA with increase in mine lease area from 91.503 ha to 144.453 ha located in District Chindwara (Maharashtra) of M/s Western Coalfields Ltd - (EC based on TOR granted on 25.02.2014) - (Further Consideration)**

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

53.1.2 The proposal was considered in 51<sup>st</sup> EAC meeting held on 5<sup>th</sup> February, 2016. During the last meeting, the observations of the Committee were as under:-

- the ambient air quality (even the wind rose diagrams had not been given),
- tables and the flow sheets regarding the water balance given in the EIA report (pg 185) were illegible,
- air quality was shown to be already exceeding the limits in certain locations (Chinda village and colony Chinda).
- with reference to the compliance status of the earlier EC for a capacity of 0.20 MTPA, the November 2015 report of the Regional Office of the MoEF&CC has clearly mentioned that though the mine has been lying closed, ".....most of the conditions are not complied" (Annex IV of EIA report). Accordingly, a fresh report from the RO showing compliance would be required for consideration of the present proposal for enhancement of the capacity to 0.5 MTPA
- contradictory statements were being made about the status of the mine closure plan. In the TOR (at Annexure-I) given in February 2014 for the proposed expansion to 0.5 MTPA, it had been recorded in para 3 that "the mine closure plan has been prepared and being processed for approval". However in the EIA report it has been stated (pg 214) that the plan "...is under preparation and will be processed subsequently for approval of WCL Board".
- at a time when safeguarding the environment is of major importance, more emphasis on

this aspect on the part of the PP is required, as both under “Air and Dust Pollution’ and under “Noise Pollution” the EIA report (pg 211 and 212) states that “Moreover the scale of operation is very small and will last for only 5 year as such there will not be any significant impact on this account”.

- as mentioned above, TOR for this proposed expansion had earlier been issued in February 2014, and in fact, though the present proposal was supposed to be for grant of EC based on the ToR issued by the Ministry in February 2014, the EIA report (pg 215, Conclusion) had actually mentioned it as a proposal for grant of ToR.

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

- (i) The environmental clearance for New Sethia OC was accorded by MoEF vide its letter No. J-11015/452/2007-IA.II (M) dated 19.02.2008 for a production capacity of 0.20 MTPA in mine lease area of 91.503 ha.
- (ii) At present the mine is not in operation but has been planned to re-open with an additional capital investment of Rs. 2.2193 Crores for exploitation of bottom seams. The scheme has been duly approved by Competent Authority.
- (iii) The peak capacity of the mine has been pegged at 0.50 MTPA. At present the mine is having EC for 0.20 MTPA with ML area of 91.503 ha and also CTO (both under Air and Water Act) valid up to 18.02.2017.
- (iv) Presently, the subject mine cannot be reopened because :- The proposal is for working remaining reserves in seams (I, II, III IV, VA & VB2) through opencast method limiting to quarry area of 74.33 ha only in existing New Sethia OC mine, which involves re-handling of 2.14 Mm<sup>3</sup> of OB already dumped in the void over lower seams. This is the first activity for re-opening the mine leading to coal extraction.
- (v) This 2.14 Mm<sup>3</sup> of OB after re-handling is to be dumped taking into consideration the following aspects:-
  1. No generation of external OB dump.
  2. No dumping in the existing area.
  3. Dumping in the already de-coaled void of erstwhile Pench East OC patch which is beyond the EC area (Mine take area).
- (vi) Justification:-Accordingly, OB management has been planned to prevent further land degradation in the following manner:
  - i. No damage to fresh land for accommodation of external OB dumps.
  - ii. OB and Coal winning will be limited to 91.503 ha., which has already been approved in existing EC.
  - iii. Re-use of existing acquired land.
  - iv. No acquisition of land which ensures no issues related to land and house oustees.
  - v. No adverse impact on land.
  - vi. Further this OB management will help in reclamation of already de-coaled land.
- (vii) Proposal:-In view of the above, it is submitted that the land of erstwhile worked out Pench East OC patch to be annexed to the existing EC approved mine take area for accommodating re-handled OB. The additional land to be annexed is 52.950 ha thus making the total land involvement of 144.453 ha.
  1. Mine take Area - 91.503 ha
  2. Additional land to be annexed for OB - 52.950 ha
  3. Total - 144.453 ha

This additional land is already in possession of the company and ensures no issues related R&R.

53.1.4 The Committee after detailed deliberations in the 53<sup>rd</sup> meeting of 17-18 March, 2016 noted the following:-

- (i) The project proponent mentioned that the present request is for:-
- Amendment to EC of 0.20 MTPA. They will come for expansion from 0.20 to 0.50 MTPA after compliance with the earlier EC condition i.e. revised certified EC compliance report from the regional office of MoEFCC, and an approved mine plan for a capacity of 0.50 MTPA.
  - Permission to restart the mine.
  - Re-starting would be done by working the remaining reserves in seams I, II & III and also thereafter going deeper into seams IV, V-A & V-B (II)
  - For the above purpose, permission to re-handle the OB outside the existing mine lease area in the mine void of Pench East OC for which the additional land to be shown/annexed in the existing EC is 52.95 ha (i.e. existing area of 91.503 ha plus new area of 52.95 ha = 144.453 ha).
- (ii) The project proponent however does not have mine plan approval for working the deeper seams i.e. IV, V-A, V-B (II). The PP also stated that there was no proposal to work in mine void of Pench East OC in future.

53.1.5 *In the light of para 53.1.4 above, the EAC was of the view that permission to the project proponent can be recommended only for working the remaining reserves of the existing seams I, II & III for capacity of 0.20 MTPA. However, this recommendation would be made after the PP complies with the following:-*

- *for re-handling and dumping the OB outside the existing area into Pench East OC void, approved revised mine plan would need to be submitted.*
- *The revised mine plan must indicate the present status of Pench East OC void, as also its reclamation plan during the back filling process.*
- *In addition PP should also submit an action plan for complying with the EC conditions which have not yet been complied with even during the present phase of working on the balance reserves of seams I, II & III.*

53.1.6 *The proposal was, therefore, deferred.*

## **Agenda 53.2**

**Expansion of Naheriya underground coal mine from 0.36 MTPA to 0.54 MTPA in the existing ML area of 300 ha located in Tehsil Parasia, District Chhindwara (Madhya Pradesh) of M/s Western Coalfields Ltd - (EC under 7(ii) of Notification, 2006)**

53.2.1 The proposal is for environmental clearance under 7(ii) of Notification, 2006 for expansion of Naheriya underground coal mine from 0.36 MTPA to 0.54 MTPA within the existing EC mine lease area of 300 ha located in Tehsil Parasia, District Chhindwara (Madhya Pradesh) of M/s Western Coalfields Ltd.

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

- (i) The project was accorded EC vide letter J- 11015/35/2001-IA.II(M) dated 15.11.2002 for the production capacity of 0.36 MTPA
- (ii) It is an operating Underground coal mine.

- (iii) The latitude and longitude of the project are 22° 16'32" to 22° 12' 53" N and longitude 78° 57' 58"to 78° 59' 50" E
- (iv) Joint Venture : No
- (v) Coal Linkage :Thermal Power plants of MPPGCL and & Miscellaneous consumers.
- (vi) Employment generated / to be generated: The existing manpower at the project is 1018. Direct Manpower for the proposed expansion is 120 which is to be arranged from internal resources. In addition with the proposed expansion, 100 no's of indirect employment opportunities will also be created.
- (vii) Benefits of the project: The proposed expansion will bridge the gap between demand &availability of Coal to the extent of the mine capacity.
- (viii) The land usage of the project will also be as follows:  
Pre-Mining / Existing

S.No	Particular	Land (Ha)
1.	Forest Land	206.562
2.	Non-Forest Land	93.438
	Total	300.0

The mining will be carried out with due care for protection of surface land so as to maintain it as undisturbed following the statute.

- (ix) The total geological reserve is 34.259 MT. The total mineable reserve is 32.603 MT, The balance extractable reserve as on 01.04.2015 is 8.50 MT. The percentage of extraction would be 38 %.
- (x) The grade of coal is G6. The average Gradient is 1:11 to 1:18. There are five seams in the mine area & the details are as follows:

Description	Thickness Range (m)
V	1.19 - 3.80
Parting	0.77 – 8.85
IV	0.65 - 5.04
Parting	3.51 – 11.47
III	0.18 - 2.34
Parting	0.37 – 6.31
II	0.31 - 3.13
Parting	0.35 – 5.30
I C	0.05 - 3.43
Parting	0.35 – 7.32
I B	0.12 - 0.12

- (xi) The total estimated water requirement is 444 m<sup>3</sup>/day. The level of ground water ranges from 0.70 m to 12.35 m bgl.
- (xii) The method of mining would be underground with LHDs.
- (xiii) The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- (xiv) The balance life of mine is 15 years.
- (xv) Transportation: Coal transportation is being done through Conveyor belt from incline to Coal bunkers and to Stock yard. From stock yard, coal is being transported by tippers to the Railway siding wherein coal is loaded onto wagons by pay loaders.
- (xvi) There is no R & R involved. There are no PAFs.
- (xvii) Cost: The additional Capital cost of the expansion proposal is Rs. 8.62 Crores. CSR cost as per extant CSR Policy 2% of last three years average net profit or Rs.2/ton of

company production, whichever is higher. R & R Cost is Nil. An annual recurring cost of Rs.23.0 Lakhs / year has been provisioned as Environment cost for Environment Protection measures.

- (xviii) Water body: River Gunor, Dhankasa nallah flows adjacent to mine.
- (xix) Approvals: Ground water clearance is not applicable as it is not falling in critical area as per CGWA. The approval of competent authority for the expansion proposal has been obtained on 12.01.2016. Mine Closure plan was approved by WCL Board on 28.01.2013, Escrow Account has been opened and is in operation.
- (xx) Wildlife issues: There are no national parks, wildlife sanctuary, biosphere reserves found in the 10km buffer zone.
- (xxi) Forestry issues: Forest Clearance has been obtained for 206.562 ha vide letter no 8-37/2000 - FC dated 11.04.2001.
- (xxii) Total afforestation plan shall be implemented covering an area of 9 ha at the end of the mining, out of which Green belt covers an area of 2 ha. Density of tree plantation 2500/ha of plants.
- (xxiii) There are no court cases / violation pending.
- (xxiv) Public Hearing is not applicable since the proposal is for consideration under u/s 7(ii) of the EIA Notification, 2006.
- (xxv) The Regional office of MoEF&CC has inspected the coal mine on 28<sup>th</sup> October, 2015, and the certification has been issued on 18<sup>th</sup> November, 2015. As per the report, eco-development measures have been undertaken, in addition to subsidence monitoring and routine monitoring of environmental attributes as well as ground water levels

53.2.3 The Committee, after detailed deliberations (in the 53<sup>rd</sup> meeting on 17<sup>th</sup>-18<sup>th</sup> March, 2016) noted the following:

(i) The project proponent has mentioned that they have approval of a scheme from the competent authority. The PP stated that the two documents i.e. scheme and mine plan are same. The other issues are related to mine water discharge with low pH which is ranging between 2.13 and 4.04 on many occasions which is a clear indication of non-compliance of discharge standards. This is also a violation of the EC condition (Sl. ix of the compliance report submitted by the Regional Office). The other issue  $\text{€}$  relates to air quality in respect of PM 10 which is much above the ambient air quality standards – it is as high as 241  $\text{ug/m}^3$  as against standard  $\text{€}$  of 100  $\text{ug/m}^3$ . The value in village Naheria indicated is 211  $\text{mg/m}^3$  which is also high. In view of above the pp is required to take measures immediately to neutralise the mine discharge water by establishing appropriate functional treatment system as well as control emissions which are causing higher values in ambient air.

(ii) There is a serious issue regarding subsidence and the consultants for the same have indicated specific measures to be taken for safeguard near the village and under the river and streams. It was further noted that the study on subsidence which has been put up in the report is for 0.36 MTPA production and specific studies have been made for 13<sup>th</sup> and 36<sup>th</sup> years of operation. Now with the proposed increase in production and reduction of life of mine to 15 years because of change in rate of production there may be further changes in the subsidence pattern. The PP was advised to get the same re-studied along with the recommendations from the consultant.

(iii) The coal transport from the mine is taking place by road to a siding 40 km away. On enquiry about new railway line near the mine, the project proponent informed that they are opening up new mines (Jamunia and Dhankasa) nearby and there is already one mine (Urdhan expansion) operating in the vicinity and they have planned for a new railway line in this area. The committee advised for expeditious action for construction of the line within 5 years.

53.2.4 For the present however, *in view of the acidic nature of mine water, the committee does not recommend continuation of even the existing operations till such time as a functional mine water treatment system is installed. Measures/studies as noted above for air quality improvement and subsidence also need to be completed.*

*The proposal was, therefore, deferred.*

### **Agenda 53.3**

**Expansion of Bhanegaon Opencast Coal mine project from 0.60 MTPA to 1.00 MTPA (Normative)/1.15 MTPA (peak) within the existing area of 347.46 ha in Tehsil Kamptee, District Nagpur, (Maharashtra) of M/s Western Coalfields Ltd- (EC under 7(ii) of Notification, 2006)**

53.3.1 The proposal is for environmental clearance **under 7(ii)** of Notification, 2006 for expansion of Bhanegaon Opencast Coal mine project from 0.60 MTPA to 1.00 MTPA (Normative)/1.15 MTPA (peak) within the existing mine lease area of 347.46 ha in Tehsil Kamptee, District Nagpur, (Maharashtra) of M/s Western Coalfields Ltd.

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

- i. The project was accorded EC vide letter No.J-11015/43/2004-IA.II(M) dated 20<sup>th</sup> June, 2005 for the production capacity of 0.60 MTPA in a mine lease area of 348.13 ha.
- ii. The mine is an operating mine.
- iii. The latitude and longitude of the project are 21° 16' 37" N to 21° 15' 36" N and 79° 10' 12" E to 79° 8' 41" E respectively.
- iv. Joint Venture: there are no joint venture.
- v. Coal Linkage: Thermal Power Plants of MAHAGENCO & Miscellaneous consumers.
- vi. Employment generated/to be generated: Direct Manpower for the proposal of expansion is 117. In addition with the proposed expansion, 200 indirect employment opportunities will be created.
- vii. Benefits of the project: The Proposed expansion will bridge the gap between demand and supply of coal to the extent of peak capacity.
- viii. The land usage of the project is as under:

**Pre-Mining:**

<b>S. N.</b>	<b>Particular</b>	<b>Land (ha)</b>
1.	Agricultural land	317.80
2.	Waste Land	29.66
	<b>Total</b>	<b>347.46</b>

**Post-Mining:**

<b>S. N.</b>	<b>Land use</b>	<b>Land (ha)</b>
1.	Plantation	171.45
2.	Water body	70.15
3.	Public Use	7.00
4.	Undisturbed/Reclaimed	98.86
	<b>Total</b>	<b>347.46</b>

- ix. The total geological reserve is 20.70 MT. The mineable reserve is 14.11 MT and extractable reserve is 14.11 MT. The per cent of extraction would be 68.16%.
- x. The coal grade is G8. The stripping ratio is 4.75 Cum/Tonne. The average Gradient is 1 in 4.5 to 1 in 6. There are seven seams with thickness ranging as detailed below:-

<b>Description</b>	<b>Thickness Range (m)</b>
Seam V	6.47 - 11.17
Parting	20.84 - 31.11
Seam IV Top	1.05 - 2.59
Parting	2.17 - 7.70
Seam IV Middle	1.90 - 3.41
Parting	3.79 - 8.20
Seam IV Bottom	2.24 - 3.75
Parting	18.65 - 24.20
Seam III	2.00 - 6.15
Parting	9.60 - 23.74
Seam II Top	1.60 - 3.55
Parting	0.58 - 3.90
Seam II Bottom	1.60 - 3.66
Parting	8.65 - 12.30

- xi. The total estimated water requirement is 338 KL/day. The level of ground water ranges from 0.30 m to 17.45 m bgl.
- xii. The Method of mining is Opencast with Shovel-Dumper Combination.
- xiii. There would be one external OB dump and one top soil dump with Quantity of 57.80 Mm<sup>3</sup> in an area of 137.20 ha
- xiv. The final mine void would be in 70.15 Ha with depth of 155m against the total quarry area is 88.15 ha. Backfilled quarry area of 18.00 Ha shall be reclaimed with plantation. The mine void of 70.15 ha with depth of 155 m 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 balance life of mine is 18 years.
- xvii. Transportation: In pit transportation is being carried out by Dumpers & also from surface to siding. At siding, coal is being loaded into wagons by pay loaders.
- xviii. There are no house oustees. Rehabilitation involves land oustees only.
- xix. Cost: Total capital cost of the project is Rs. 193.2753 Crores. The fund for the CSR will be allocated based on 2% of the average net profit of the Company for the three immediate preceding financial years or Rs. 2.00 per Tonne of Coal Production of the previous year whichever is higher. R&R Cost is Rs. 24.82 Crores. In the approved project report, environmental management cost of Rs. 97.09 lakhs has been envisaged for environmental protection measures under capital head and Rs. 6/ tonne under revenue head.
- xx. Water body: PENCH and Kanhan River flows at a distance of 50 mtrs from the mine site.
- xxi. Approvals: Ground water clearance is not applicable as it is not falling in critical area as per CGWA, Board's approval has been obtained on 18.02.2015. Mining plan has been approved on 18.02.2015. Mine closure plan is an integral part of mining plan and the same has been approved along with the Mining plan on 18.02.2015.
- xxii. Wildlife issues: There are no National Parks, Wildlife Sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxiii. Forestry issues: No forest area is involved.

- xxiv. Total afforestation plan shall be implemented covering an area of 221.45 ha at the end of mining. Green Belt over an area of 50 ha with a density of tree plantation @ 2500 trees/ ha shall be provided.
- xxv. There are no court cases/violations pending with the project proponent.
- xxvi. The project was accorded EC vide letter no. J-11015/43/2004-IA.II(M) dated 20<sup>th</sup> June, 2005 for the production capacity of 0.60 MTPA in a mine lease area of 348.13 ha.
- xxvii. Public Hearing is not applicable since the application has been made u/s 7(ii) of EIA Notification, 2006.

53.3.3 The Committee, after detailed deliberations (in the 53<sup>rd</sup> meeting on 17<sup>th</sup>-18<sup>th</sup> March, 2016) noted the following:

(i) The Regional Office of MoEF&CC at Bhopal has carried out the inspection on 6<sup>th</sup> November, 2015 and the certification has been issued vide letter No. 3-32/2005 (Env)/1296 dated 23/26-11-2015. As per the report, mining has recently started. Top soil is being stored separately over 3.50 ha, catch drains of about 1100 m has been constructed and routine monitoring of environmental attributes has started. Compliance is however generally unsatisfactory.

(ii) The post mining land use is as under:-

- Quarry area - 88.15 ha
- External OBD - 137.20 ha, 90 m high AGL
- Back filling - 18 ha up to ground level
- Final mine void - 70.15 ha 155 m deep
- The Committee advised that for reducing land degradation mine void should be filled up to ground level with OB from the external OB dump.
- Project proponent informed that presently coal is dispatched by road but later will be done by aerial ropeway. The Committee advised that in order to reduce dust pollution the ropeway connectivity must be done on an urgent basis.

(iii) The PP stated that his proposed plan for increased production of 1 MTPA normative, and 1.15 MTPA peak would take place within the existing area, and his proposal for additional land of about 105 ha would actually be required only after 13-14 years.

53.3.4 *Based on the presentation made by the PP:-*

(a) *The Committee recommends expansion only up to 0.70 MTPA for one year i.e. till 2016-17 (which is in line with the production plan shown by the PP), as against the proposed expansion of 1 MTPA normative / 1.15 MTPA peak.*

(b) *In the interim, the Committee is of the view that 3 months data of ambient air quality monitoring is required to be seen even at the capacity of the existing EC (0.6 MTPA), so as to observe the effect of mitigative measures (such as dust suppression, green belt around village, CHP and mist water spraying) promised to be immediately taken by the PP. This data should be brought up before the EAC by the PP at the end of 3 months.*

(c) *Further increase in capacity (up to 1 MTPA normative, & 1.15 MTPA peak) can be considered after one year after the air quality shows improvement on desired lines, and a fresh compliance report from the RO office showing satisfactory compliance of the existing EC conditions is obtained.*



## **Agenda 53.4**

### **Coal Washery of 10 MTPA capacity in an area of 39.35 ha located at IB Valley in Lakhanpur area, village Chharla, District Jharsuguda (Odisha) of M/s Mahanadi Coalfields Limited - (EC based on TOR granted on 13.08.2015)**

53.4.1 The proposal is for environmental clearance to Coal Washery of 10 MTPA capacity in an area of 39.35 ha located at IB Valley in Lakhanpur area village Chharla, in district Jharsuguda (Odisha) of M/s Mahanadi Coalfields Ltd.

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

- (i) It is a two stage washery having close circuit technology.
- (ii) IB Valley Washery will be located in the mine leasehold of Belpahar OCP in Lakhanpur Area of IB Valley Coalfield in Jharsuguda District, Odisha. The total raw coal requirement of 10.0 MTPA for the proposed washery will be met from Proposed Lakhanpur-Belpahar-Lilari Integrated OCP (30 MTPA), however presently Lakhanpur OCP (18.75 MTPA), Belpahar OC Expn. (9.00 MTPA) and Lilari OCP (0.8 MTPA) is in operation where from coal will be supplied till linked OCP starts operation. IB Valley Washery has been proposed to be set up on BOM basis for beneficiation of raw coal (non-coking coal of grade-G-12 & average ash content 41.5%.) of Proposed Lakhanpur-Belpahar-Lilari Integrated OCP.
- (iii) The project was accorded ToR vide letter No. J-11015/171/2015-IA-II (M) dated 25<sup>th</sup> June, 2015.
- (iv) The latitude and longitude of the project are 21° 42' 12" N to 21° 47' 20" (N) and 83° 48' 00" E to 83° 52' 41" (E) respectively.
- (v) Joint Venture: No joint venture.
- (vi) Coal Linkage: Proposed Lakhanpur-Belpahar-Lilari Integrated OCP (30 MTPA), however presently Lakhanpur OCP (18.75 MTPA), Belpahar OC Expn. (9.00 MTPA) and Lilari OCP (0.8 MTPA) is in operation where from coal will be supplied till linked OCP starts operation. All the above three OCPs has EC from MoEF&CC.
- (vii) Employment generated / to be generated: Washery will be constructed on BOM concept; hence employment will be generated by BOM operator.
- (viii) 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.
- (ix) The land usage of the project will be as follows: Total land involved for washery is 39.35 Ha. which is already acquired by MCL and is in possession of MCL (20.61 Ha. for washery construction & associated activities + 15.95 Ha. for temporary reject storage + 1.78 Ha. for clean coal conveyer corridor + 1.01 Ha. for SILO). Details of land acquired by MCL is as follows:  
Govt. Forest land - Nil  
Govt. Non-forest land - 7.28 Ha  
Tenancy Land - 32.07 Ha  
Total: 39.35 Ha.
- (x) The coal grade is G12.
- (xi) The total estimated water requirement is 2724 Cu. M/ day and the source of water supply is Quarry No. 5 of Belpahar OCP at a distance of 1-2 Km from Washery.
- (xii) The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.

- (xiii) 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.
- (xiv) Transportation: Mode of transportation of Raw Coal from linked mine to washery shall be by covered Belt conveyors, Washed Coal transportation from washery to SILO near railway siding will be done by twin covered belt conveyors(2X2000 TPH) for dispatch to consumers by Rail.Rejects will be transported by belt conveyor from washery to the temporary reject storage site where from reject will be finally disposed off to the prospective buyers either through e-auction or MOU Route in environment friendly manner.
- (xv) The life of Washery is 18 years for computation of economics.
- (xvi) There is no R & R involved. There are no PAFs.
- (xvii) Cost: Total capital cost of the project is Rs. 336.90 Crores as per Revised Conceptual Report(RCR) and Rs. 396.1713 Crores as per lowest bidder offer. R&R Cost: Nil. Environmental Management Cost (capital cost Rs 948.38 Lakhs and Operational Cost Rs. 654.60 Lakhs.
- (xviii) Water body: Ib River flows at a distance of 11.46 km east, Lilari Nullah flows at 1.5 Km (NE) and Pandren Nullah flows at 6.00 Km (NE).
- (xix) Approvals: Approval of Revised Conceptual Report of said washery on BOM concept was obtained from Board of Directors of MCL in its 162nd meeting held on 05.11.2014.
- (xx) Wildlife issues: There are no national Parks, Eco-sensitive Zones, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xxi) Forestry issues: No forest area involved.
- (xxii) Green Belt over an area of 8 Ha. in and around washery premises shall be developed. Density of tree plantation shall be 1600 trees/ ha of plants.
- (xxiii) There are no court cases/violation pending with the project proponent.
- (xxiv) Public Hearing was held on 15.02.2016 at Indradhanush Club of Belpahar Integrated Township of Bandhabahal, District Jharsuguda. The issues raised during the public hearing include environmental problems and their adverse effect on health, water pollution to Lilari Nala, wastewater treatment plant, employment, proper utilisation of CSR Fund, laying of foundation stone of the proposed washery prior to conduction of public hearing.

53.4.3 The Committee, after detailed deliberations (in the 53<sup>rd</sup> meeting on 17<sup>th</sup>-18<sup>th</sup> March, 2016) noted the following:

- (i) Public hearing for the washery was on 15<sup>th</sup> February, 2016 at village Chharla under Kushraloi, G.P under Lakhanpur block of Jharsuguda district. From the details of the public hearing forwarded to the Ministry it appears that public hearing was incomplete as almost everybody had gone out of the public hearing in protest. As per the documents sent to the Ministry, the views expressed by nine speakers in the meeting were as follows.
  - (a) Shri Raghmani Pradhan, Sarpanch, Kushraloi expressed his displeasure over:-
    - Laying the foundation stone (Bhumipujan) of proposed washery prior to public hearing and without any information to the local villagers.
    - Washery would pollute the adjoining area. He categorically opposed the project.
  - (b) Shri Bhagbat Sa of Khadam village. He objected to the holding the hearing at Bhandbahal although project is coming at Chharia village. He further raised concern because of air pollution and deforestation of the area.
  - (c) Shri Subrat Pradhan of Khadam village objected on the ground that Khadam village was not mentioned in the report and that no land would be made available to MCL for any purpose from Khadam village.

- (d) Shri Basudev Bhoi of Adhapara village also objected on the ground of:-
- Laying foundation stone of washery before public hearing.
  - Inadequate base line data in executive summary.
  - Inadequate compensation
  - Fear that washery effluent may get directly discharged to Lilari Nallah
  - Final disposal plan of washery rejects not available.
- (e) Shri Ghanshyam Barik of Ubuda village objected on the ground of:-
- Inadequate employment not given in the past.
  - Air pollution due to coal transportation.
- (f) Similarly Smt Snehlata Pradhan, Sarpanch Bandhbahal, and other two Naib Sarpanches of two other villages and even others also strongly objected to the public hearing on the above grounds.

The public hearing report also states that the participants left before the conclusion of the meeting.

(ii) Although expression of interest have been made by certain agencies to the PP for use of rejects but the PP has failed to show any definite MoU with them although this had been specifically stipulated in the TOR.

(iii) The project proponent has also failed to show any base line data beyond core zone. Prediction of emission for buffer zone also needs to be carried out.

*53.4.4 The EAC was of the view that the MoEF&CC may take up the issue of adequacy or otherwise of the public hearing with the State Government Authorities in view of strong objections of the villagers and the participants having left before conclusion of the meeting. Meanwhile, in view of observations as at (ii) & (iii) above, the proposal was deferred.*

### **Agenda 53.5**

**Krishnashila OCP expansion coal mining project from 4 MTPA to 5 MTPA (Peak) in an area of 851.78 ha located in Tehsil Dudhi, District Sonbhadra (UP) of M/s Northern Coalfields Ltd - (EC under 7(ii) of Notification, 2006)**

53.5.1 The proposal is for environmental clearance under 7(ii) of EIA Notification, 2006 for expansion of Krishnashila OCP coal mining from 4 MTPA to 5 MTPA (Peak) in an area of 851.78 ha in Tehsil Dudhi, District Sonbhadra, (Uttar Pradesh) of M/s Northern Coalfields Limited.

*53.5.2 The EAC noted that the EIA/EMP reports and the related documents had not been received by the members. As such, the Committee was not in a position to consider the case and the proposal was, therefore, deferred.*

### **Agenda 53.6**

**Pit Head Coking Coal Washery of 3.5 MTPA in an area of 20 ha of Tasra Coal Block located in Jharia Coalfields, District Dhanbad, (Jharkhand) of M/s Steel Authority of India Ltd**

53.6.1 The proposal is for environmental clearance for Pit Head Coking Coal Washery of 3.5

MTPA in an area of 20 ha Tasra Coal Block located in Jharia Coalfields, District Dhanbad, (Jharkhand) of M/s Steel Authority of India Ltd.

53.6.2 *The EAC noted that the EIA/EMP reports and the related documents had not been received by the members. As such, the Committee was not in a position to consider the case. In addition, no senior level representative of the PP was present. The proposal was, therefore, deferred.*

### **Agenda 53.7**

#### **Expansion of Amelia (North) Opencast Coal Mine Project from 2.8 MTPA to 4.2 MTPA in ML area of 728.75 ha located in village Majhauri, Tehsil Deosar, District Sidhi (Madhya Pradesh) of M/s Jaiprakash Power Venture Limited - (EC based on TOR granted on 13.11.2015)**

53.7.1 The proposal is for environmental clearance for expansion of Amelia (North) Opencast Coal Mine Project from 2.8 MTPA to 4.2 MTPA in ML area of 728.75 ha located in village Majhauri, Tehsil Deosar, District Sidhi (MP) of M/s Jaiprakash Power Venture Limited.

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

- i. The project was accorded EC vide letter No.11015/355/2006-IA.II (M) dated 20.07.2007 for 2.8 MTPA capacity.
- ii. 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.
- iii. 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.
- iv. 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.
- v. The coal block was categorized in schedule II by Hon'ble Supreme Court's verdict dated 24th September, 2014 canceling the allocation of 204 coal blocks including Amelia (North).
- vi. 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.
- vii. 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
- viii. The project was accorded TOR vide letter No.11015/225/2015/IA (Coal Mining) dated 13.11.2015 exempting public hearing.

- ix. The latitude and longitude of the project are 24° 07' 32" to 24° 08' 37" N and 82° 24' 25" to 82° 26' 45" E respectively.
- x. Joint Venture: Not applicable since JPVL is a Public Limited Company
- xi. Coal Linkage: Captive Mine for Jaypee Nigrie Super Thermal Power Plant (2x660MW).
- xii. Employment generated / to be generated: 829 Nos.
- xiii. Benefits of the project: Rs. 770 Crores (including Rs. 30 Crores for expansion).
- xiv. The land usage of the project will be as follows:

Pre-Mining: 728.75 ha, consist of forest land.

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
	<b>Total</b>	<b>728.75</b>	<b>459.25</b>	<b>250.00</b>	<b>19.50</b>	<b>728.75</b>

Core area : 728.75 ha

- xv. The total geological reserve is 728.75 MT. The mineable reserve 77.9 MT, extractable reserve is 75.56 MT. The per cent of extraction would be 84.6 %.
- xvi. The coal grade is G-11The stripping ratio is 7.85 Cum/tonne. The average Gradient 7° - 8° . There will be 2 seams with thickness ranging upto 15.73 m.
- xvii. The total estimated water requirement is 477 m3/day. The level of ground water ranges from 7 m to 20 m.
- xviii. The Method of mining would be Opencast with O.B. removal by Shovel-Dumper combination and Coal by Surface Miner.
- xix. There are 2 external OB dumps 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 Mbcm in an area of 392.40 ha.
- xx. 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. consisting of 160.4 ha partially filled up to a depth of 145 m and 82.6 ha having a depth of 265 m proposed to be converted into a water body.

- xxi. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xxii. The life of mine is 23 Years.
- xxiii. Transportation: Coal transportation in pit by Dumper from in pit to pit head coal handling plant, Surface to Siding by Dumper to Pre-weigh Bin and loading at siding by Coal Handling Plant & Silo.
- xxiv. There is R & R involved. There are 64 PAFs.
- xxv. Cost: Total capital cost of the project is Rs. 770 Crores. CSR Cost Rs. 5/ Tonnes of coal production. R&R Cost Rs. 77 Lakhs. Environmental Management Cost Rs. 25 Crores.
- xxvi. Water body: A seasonal nullha called Kanchanmunda flows on eastern side of the block.
- xxvii. Approvals: Ground water clearance has been granted by CGWA vide their letter No. 21-4/300/MP/MIN/2015-41 on 01.01.2016, Board's approval obtained on 30.05.2015. Mining plan has been approved on Feb' 2016, Mine closure plan is an integral part of mining plan.
- xxviii. Wildlife issues: There is no wildlife sanctuary within radius of 10 KM. However wildlife conservation plan was prepared in line with the condition 16 of stage-I forest clearance. A budgetary provision of Rs. 14 Crore was made for conservation of the wildlife. This wildlife conservation plan has been approved.
- xxix. Forestry issues: Total forest area involved for mining is 728.75 Ha, Forest clearance obtained vide letter No. 8-08/2007-FC dated 30.11.2012. for total forest area.
- xxx. Total afforestation plan shall be implemented covering an area of 150.18 ha at the end of mining. Green Belt over an area of 459.25 ha. Density of tree plantation 1500 trees/ha of plants.
- xxxi. There are no court cases/violation pending with the project proponent.
- xxxii. Public Hearing was exempted while granting TOR.

53.7.3 The Committee, after detailed deliberations (in the 53<sup>rd</sup> meeting on 17<sup>th</sup>-18<sup>th</sup> March, 2016) noted the following:

(i) The earlier EC was for a combined maximum capacity of 2.8 MTPA comprising of open cast and underground mining (limited to open cast of 2.10 MTPA with a maximum underground production of 0.6 MTPA). The present proposal has been brought for increase in production from 2.8 MTPA to 4.2 MTPA peak through open cast mine only. On enquiry the PP stated that the underground mine will be started from the 19<sup>th</sup> year of operation of open cast mine (life 23 years). The PP also intimated that they have not taken mine plan approval for underground mine.

(ii) Mine lease area is not clearly defined. Two figures are quoted 500 ha and 728.75 ha. 500 ha is being shown as block allotment whereas 728.75 ha is shown as mine plan approved. Taking 728.75 ha as a final mine lease area, the break-up shows mining area as 475 ha and other areas for different activities add up to 728.75. So the exact mine area should be clarified whether it is 475 or 500 ha.

(iii) During presentation, the PP mentioned about settling pond, the details of which in terms of drawing (dimensions and levels) and locations however could not be provided by the PP. The settling pond is stated to be receiving surface run off of the precipitation falling within the mine area as well as mine water. The PP has been asked to provided details of the settling pond that has been constructed.

(iv) The mining activity is being carried out next to the reservoir which meets the water needs of 25 villages. It was observed during the presentation that a network of surface

drainage channels of 2<sup>nd</sup> and 3<sup>rd</sup> order join to form streams/nalas within the mine lease area. It was informed by the PP that one external OBD is being constructed next to the reservoir - it spreads over 70 ha and will reach a height of 100 m; the first bench of 30 m has already been made but is not yet vegetated. In other words, it is clear that the OBD is being eroded during the monsoons, and it is not clear how the drainage of the OBD and mine lease area is channelized. Regarding mine water discharge, the PP informed that there was no mine water discharge, although the water table in the areas is 3m-5m, and the project proponent showed a table showing mine water drainage. The PP proposes one more external dump, with this one also spreading 70 ha with a height of 100 m; it was noted that there is a nala passing through the area which will be buried under the OBD. The PP also informed that the height of backfilled areas have reached a height of 60 m. At the end of mining, there will be a void of 243 ha, of which 160.4 ha will have a depth of 145 m after back filling, and 82.6 ha will have a depth of 265 m. The Committee advised the PP to re-examine the mine closure plan in the light of the fact that the area is a catchment for the reservoir.

(v) It was also noted that there was a deviation from the 2007 EC condition, which had stipulated that “.....out of 475 ha of excavated area, 461 ha was to be backfilled, with 380.88 completely, and 94.12 ha partially.” The EAC advised that land degradation could be reduced by backfilling the void with the external OBD.

(vi) Another deviation noted was with regard to the coal transportation mode. In the 2007 EC, transportation of 2.8 MTPA had been indicated through 50 ton vehicles, whereas it was now being proposed through 35 ton vehicles. The EAC advised that in case of change, a study should be carried out for the additional dust mitigative measures that would be required, as the number of road trips would go up substantially both on account of more vehicles required for the same quantity of 2.8 MTPA, as well as the now proposed enhanced production of 4.2 MTPA.

(vii) The EAC desired that the present status of the railway siding in the mine premises as per the 2007 EC be provided. Completion of the siding should be expedited if not already completed. Furthermore, if road transport is done to Majhauri railway station 4.5 km away, then a traffic load study is required, and the rly stn should be in position to handle about 13000 tons everyday.

(viii) On the air quality data, the PP was asked to provide actual monitored values throughout the operations in accordance with notified ambient air quality standards. The locations would include both in core zone and buffer zones. This will be in addition to the base line data collected for the expansion.

*53.7.4 Keeping in view the sensitivity of the area, particularly the hydrological system, and in the absence of any clarity on the protection of nalas passing through the OBD and measures taken to prevent silting of the reservoir (which is the lifeline of 28 villages) from eroded materials from the OBD, the Committee decided that a small sub-committee consisting of four members should visit the site to examine all the above mentioned issues and submit its report at the earliest for further consideration of the project. A copy of the representation dated 15<sup>th</sup> March, 2016 received from the ERC was also handed over to the project proponent to enable them to respond to the issues raised therein. The proposal was, therefore, deferred.*

### **Agenda 53.8**

**Expansion of Pauni-II OC (with amalgamation of Pauni -III OC) mine for a capacity of 3.25 MTPA within ML area of 1152.66 ha located in Tehsil Rajura, District Chandrapur (Maharashtra) of M/s Western Coalfields Ltd - (TOR)**

53.8.1 The proposal is for TOR for Expansion of Pauni-II OC with amalgamation of Pauni -III OC mine for a capacity of 3.25 MTPA) within ML area of 1152.66 ha), Tehsil Rajura, District Chandrapur (Maharashtra) of M/s Western Coalfields Ltd.

53.8.2 *There being no senior officer present during the meeting on behalf of the project proponent as required, the Committee was unable to consider the proposal and it was, therefore, deferred.*

### **Agenda 53.9**

**Expansion and amalgamation of Yekona-I & Yekona-II Opencast Coal Mine from 1.00 MTPA to 2.75 MTPA (3.44 MTPA Peak) with increase in mining lease area from 680.06 ha to 1701.32 ha of M/s Western Coalfields Ltd in Wardha Valley Coalfield in District Chandrapur (Maharashtra)**

53.9.1 The proposal is for TOR for Expansion and amalgamation of Yekona-I & Yekona-II Opencast Coal Mine from 1.00 MTPA to 2.75 MTPA (3.44 MTPA Peak) with increase in mining lease area from 680.06 ha to 1701.32 ha in Wardha Valley Coalfield in District Chandrapur (Maharashtra) of M/s Western Coalfields Ltd.

53.9.2 *There being no senior officer present during the meeting on behalf of the project proponent as required, the Committee was unable to consider the proposal and it was, therefore, deferred..*

### **Agenda 53.10**

**Jagannathpur Opencast project for production capacity of 3.00 MTPA (Normative) and 3.50 MTPA (Peak) in an ML area of 686.151ha in tehsil Surajpur, District Surajpur (Chhattisgarh) of M/s South Eastern Coalfields Limited**

53.10.1 The proposal is for consideration of TOR for Jagannathpur Opencast project for production capacity of 3.00 MTPA (Normative)/3.50 MTPA (Peak) in ML area of 686.151 ha in tehsil Surajpur, District Surajpur (Chhattisgarh) of M/s South Eastern Coalfields Limited.

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

- (i) Jagannathpur Opencast is a green field project situated in Jagannathpur Sub-Block of Bisrampur Coalfields. The project falls in Bhatgaon Area of SECL.
- (ii) It is a green field project for TOR.
- (iii) The latitude and longitude of the project are 23<sup>0</sup> 21' 22" to 23<sup>0</sup> 23' 05" N and 83<sup>0</sup> 11' 44" to 83<sup>0</sup> 14' 04" E respectively.
- (iv) Joint Venture: there is no joint venture.
- (v) Coal Linkage: Various thermal power plants.
- (vi) Employment generated / to be generated: 232 persons
- (vii) Benefits of the project: Project will considerably improve the socio-economic status of



the adjoining areas. This will result in following benefits:

- Improvements in Physical Infrastructure
- Improvements in Social Infrastructure
- Increase in Employment Potential
- Meet energy requirement
- Post-mining Enhancement of Green Cover

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

Pre-Mining:

Sr. No	Land use	Within ML Area(ha)	Outside ML Area(ha)	Total (Ha)
1	Agriculture land	497.659	24.00	521.659
2	Forest land	126.431	0	126.431
3	Waste land	0	0	0
4	Grazing land	0	0	0
5	Surface water bodies	29.760	0	29.760
6	Settlements	8.301	0	8.301
7	Others(specify)	0	0	0
	Total	662.151	24.00	686.151

Post- Mining:

S No	Pattern of utilization	Area (ha)
1.	Reclaimed External and Internal dumps	541.030
2.	Green belt	10.000
3.	Final void /Water body	20.000
4.	Built up area (Infrastructure, colony, roads, R & R site)	22.200
5.	Safety zone: Undisturbed area	92.921
	Total	686.151

Core area :

S N	Particulars	Forest Land	Tenancy Land	Government Land					Grand Total
				Grazing land	Waste land	Water body	others	Total	
1	*Quarry Area	96.512	400.782	-	-	15.435	8.301	23.736	521.030
2	External OB Dump	5.479	34.521						40.00
3	Infrastructure, roads	-	8.200						8.200
4	Safety Zone	24.44	54.156			14.325		14.325	92.921
	Total land to be Acquired	126.431	497.659	-	-	29.760	8.301	38.061	662.151

(i) The total geological reserve is 73.18 MT. The mineable reserve 55.89 MT, extractable reserve is 55.89 MT. The per cent of extraction would be 100%.

(ii) The coal grade is E/G10. The stripping ratio is 6.31 cum/tonne. The average

- Gradient is 2 degree. There will be 09 seams with thickness ranging 0.32- 5.00 m.
- (iii) The total estimated water requirement is 420 m<sup>3</sup>/day. The level of ground water ranges 1.90 m to 10.25 m.
  - (iv) The Method of mining will be Opencast.
  - (v) There is one external OB dump with Quantity of 21 Mbcm in an area of 40 ha with height of 60 meter above the surface level and two internal dump with Quantity of 331.58 Mbcm in an area of 501.03 ha.
  - (vi) The final mine void would be in 20 ha with depth 60m. and the Total quarry area is 521.03 ha.
  - (vii) The life of mine is 22 Years.
  - (viii) Transportation: By Trucks from in pit to pit head coal handling plant, Surface to Siding by Trucks and Siding to Consumer by Rail.
  - (ix) There is R & R involved. There are 390 PAFs.
  - (x) Cost: Total capital cost of the project is Rs. 152.43 Crores. CSR Cost Rs. 2.00/- per Tonne of coal production. R&R Cost Rs.3056.80 Lakhs. Environmental Management Rs. 1272.98 Lakhs.
  - (xi) Water body: There is a reservoir situated just outside the North-Western part of the Block. A seasonal Nallah flows along the eastern boundary of the project and discharges its water into the Mahan River. Gohangar nallah flows in the Southern part of the leasehold area.
  - (xii) Approvals: Board's approval obtained on 09.09.2008. Mining plan has been approved on 09.09.2008. Mine closure plan is an integral part of mining plan.
  - (xiii) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone. However, Wild life Conservation Plan is under preparation at State Forest Research Institute (SFRI) Jabalpur.
  - (xiv) Forestry issues: Total forest area involved 126.431 Ha in the project area. Forest clearance in process. FC Application registration No. is 2014/036
  - (xv) Total afforestation plan shall be implemented progressively and completed at the end of mining. Green Belt over an area of 10 ha. Density of tree plantation 2500 trees/ ha of plants.
  - (xvi) There is no court cases/violation pending with the project proponent.

53.10.3 *The Committee, after detailed deliberations (in the 53<sup>rd</sup> meeting on 17<sup>th</sup>-18<sup>th</sup> March, 2016) recommended for TOR with the additional scope of study as under:-*

*(i) For ensuring the flow of water in Mahan river, it is essential to protect the water sheds of Gohargan and Jagannath nallas, both of which receive water from their respective catchments and discharge their contents into Mahan river. The Gohargan nala passes through the mine lease area; and the downstream of Jagannath nala from the reservoir, which is located next to mine lease area, also passes through the mine lease area. Both the nallas join before meeting the Mahan river. To ensure the protection of hydrology of the area, particularly the flow of water in Mahan river, the Committee advised the PP to examine the following options, which should be examined in detail in the EIA:*

*(a) Underground mining instead of open cast mining.*

*(b) In case of open cast mining, to exclude from mining, the areas through which the nallas pass.*

*(c) In case options (a) and (b) are not feasible because of technical problems and loss of substantial amount of coal, the nallas may be diverted in a way that the natural contours and flows are maintained.*

(ii) It was noted that railway siding work has been allotted to M/s RITES. The Committee desires that it should be expedited for completion within 5 years.

(iii) The average value of PM10 at different locations from the area is on the higher side. A cumulative study is necessary to ascertain the various sources contributing to such levels.

### **Agenda 53.11**

#### **Ashok OCP expansion from 10 MTPA to 14 MTPA in ML area of 793.14 ha located in Tehsil Tandwa District Chatra (Jharkhand) – (EC under 7(ii) of EIA Notification, 2006) of M/s Central Coalfields Limited – Further Consideration**

53.11.1 The proposal is for environmental clearance for expansion of Ashok OCP from 10 MTPA to 14.00 MTPA in ML area of 793.14 ha in Tehsil Tandwa District Chatra (Jharkhand) of M/s Central Coalfields Limited. Earlier, the project for its capacity of 10 MTPA was accorded EC on 17<sup>th</sup> April, 2008.

53.11.2 The proposal was last considered in its 51<sup>st</sup> EAC meeting held on 5<sup>th</sup> February, 2016. During the meeting, the observations of the committee were as under

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

53.11.3 In response to the observations of EAC, the details submitted by the PP and/or as informed during the 53<sup>rd</sup> meeting on 17<sup>th</sup>-18<sup>th</sup> March, 2016, are as under:-

(i) Ashok Expansion OCP is an existing Project of 10.0 MTPA capacity, which was expanded from 6.50 MTPA to 10.00 MTPA in 2007-08. The mine came into operation in 1991-92 with an initial production of 0.02 MTPA. Project Report of Ashok Exp OCP(10 MTPA) was approved by CCL board in its 344<sup>th</sup> meeting held on 31/12/2007 at a total initial capital investment of Rs. 341.63 Crs. The environmental clearance was granted vide letter No.J-11015/610/2007- IA. II (M) dated 17.04.2008 for expansion of production capacity of Ashok OCP from 6.5 MTPA to 10.0 MTPA. This is a proposal for one time capacity expansion of Ashok OCP from 10.0 MTPA to 14.0 MTPA as per MoEF guidelines dated 19.12.2012 with subsequent amendments. As per the demand & supply scenario in CCL, there will be a deficit of 7.28 Million Tonne of coal upto 2016-17 which takes into consideration the proposed expansion of Ashok OCP also. As such, the present proposal is of vital importance to CCL.

(ii) The Project Report of Ashok Exp.OCP for 10MTPA capacity was approved by CCL board in its 344<sup>th</sup> meeting held on 31.12.2007. The Pre-feasibility Report (for expansion from 10 MTPA to 14 MTPA) was approved by CCL Board in its 420<sup>th</sup> meeting held on 30.12.2015. The approved Pre-feasibility report includes a Mine Plan for expansion of production from 10 MTPA to 14 MTPA and other details like broad financial analysis and mine closure corpus. The Mine Closure Plan was approved separately by CCL Board on 24.02.2012 for a corpus of Rs 138.4967 crore and the same has also been included in approved PFR of Ashok OCP of 14 MTPA.

(iii) The application for ground water clearance was submitted to CGWA, New Delhi on 29.11.2013, with a copy to Ranchi Office of CGWB. The Ranchi Office of CGWB desired additional information on 21.02.2014 and 5.11.2014, which were submitted on 30.10.2014 & 25.11.2014 respectively. Further instruction/communication is awaited.

(iv) In CCL, a project is implemented based on Project Report approved by Company Board. The Project Report includes all requirements of a mining Plan like.

- a. Location, topography & communication
- b. Exploration, Geology, Seam sequence, Coal quality and reserves
- c. Mining Method
- d. Infrastructure Facilities proposed and their location
- e. Coal Handling, Washing & Mode of Despatch
- f. Land Requirement
- g. Manpower, Safety & Supervision etc.

In addition to broad features mentioned above, Project Report also includes detailed financial analysis and investment plan. The mine closure plan of a project is prepared as per mine closure guidelines of Ministry of Coal. The corpus fund for mine closure is calculated based upon these guidelines and depends upon the area of project only. Pre-feasibility report, as mentioned in EIA Notification, 2006, is required for Environmental Clearance of Projects.

(v) The last compliance report from the RO's office was issued in May, 2013. Another inspection has already been done by RO, Ranchi, MoEF&CC on 26.02.2016 and certified report of inspection has been sent to this Ministry vide their letter dated 16<sup>th</sup> March, 2016. A copy of the same was presented before the EAC in the meeting.

(vi) The Mine Plan and Mine Closure Plan for the proposed expansion of Ashoka OCP from 10-14 MTPA was approved by the Board of Directors in its meeting held on 15<sup>th</sup> March, 2016.

(vii) The project has the consent to operate from Jharkhand State Pollution Control Board with its validity up to 30<sup>th</sup> September, 2015. The request for its renewal has been made to the JSPCB.

53.11.4 From the data presented by the project proponent for ambient air quality for PM<sub>10</sub>, it was noted that the values are exceeding in the month of October in all the four stations beyond the standard of 100 ug/m<sup>3</sup>. It requires measures to be taken by the PP for reduction of PM<sub>10</sub> in ambient air. The PP stated that mist water tankers of 28 kl capacity are being procured in first stage for control of emission, and 3 nos will be deployed by July 2016. In addition, the coal transportation will be done through railways by June, 2016 through railway line to Piperwar which will bring down emissions considerably.

53.11.5 *The Committee, after detailed deliberations (in the 53<sup>rd</sup> meeting on 17<sup>th</sup>-18<sup>th</sup> March, MOM of 53<sup>rd</sup> EAC 17<sup>th</sup>-18<sup>th</sup> March, 2016\_Coal*

2016) recommended for grant of Environmental Clearance to the project with the specific conditions as under:-

- (i) As against the proposal for 14 MTPA, the project proponent will not exceed 12 MTPA, and this production permission is limited to the forthcoming year 2016-17 only.
- (ii) The PP will immediately undertake adequate dust mitigative measures, including the deployment of at least six number of mist water sprayers.
- (iii) To observe the reduction in  $PM_{10}$  value in ambient air on account of the dust mitigative measures introduced, the project proponent should provide to the EAC monitoring data up to June, 2016.
- (iv) Thereafter (since the PP has indicated that coal transportation will commence through railways by June, 2016) data on air quality is to be provided to the EAC for the next three months period till September 2016 so as to observe the reduction in  $PM_{10}$  on account of rail movement.
- (v) Production enhancement beyond 12 MTPA would depend on appreciable improvement in the ambient air quality data.
- (vi) 73 Project Affected Families (PAFs) have been shifted as on date but 127 number PAFs have yet to be shifted. It has been agreed by the PP that the balance number of 127 PAFs would be definitely shifted by 30<sup>th</sup> September, 2016.

### **Agenda 53.12**

#### **Dugda Non linked washed (NLW) Washery of 2.5 MTPA in an ML area of 21 ha located in District Bokaro (Jharkhand) of M/s Bharat Coking Coal Limited (EC based on TOR granted on 25.09.2014)**

53.12.1 The proposal is for environmental clearance for Dugda Non linked washed (NLW) Washery of 2.5 MTPA in an ML area of 21 ha located in District Bokaro (Jharkhand) of M/s Bharat Coking Coal Limited.

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

- i. The project was accorded TOR vide letter No.J-11015/114/2014-IA.II (M), Dated: 25<sup>th</sup> September, 2014.
- ii. The latitude and longitude of the project are  $23^{\circ} 44' 0''$  &  $23^{\circ} 44' 30''$  N and  $86^{\circ} 9' 30''$  &  $86^{\circ} 10' 30''$  E respectively.
- iii. Joint Venture: No.
- iv. Coal Linkage : AKWMC OCP (1.5 MTPA), Block IV OCP (0.5 MTPA), Tetulmari OCP (0.5 MTPA)
- v. Employment generated / to be generated: 165 Nos.
- vi. Benefits of the project: The Washery will produce environmental friendly clean coal to minimize the pollution levels. Reduce volume of coal transportation which will reduce pollution. The rejects will be utilized for power generation in Fluidized Bed Combustion plants. The project will create employment opportunities both for skilled and semiskilled persons in the area. Business opportunity in Secondary & Tertiary sectors will increase. The Washery will produce metallurgical grade coal to be used in steel plants thus

resulting in savings to the national exchequer. CSR activities will improve social infrastructure in the area

- iv. The total estimated water requirement is 800 m<sup>3</sup>/day.
- v. Technology: Heavy Media Cyclone technology.
- vi. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- vii. The life of washery: 18 Years.
- viii. Transportation: Raw coal intake and product dispatch will be through conveyor at railway siding existing besides the proposed washery.
- ix. There is no R & R involved. There are no PAFs.
- x. Cost: Total capital cost of the project is Rs. 148.38 Crores. CSR Cost Rs. 2 /- per Tonne of coal production. R&R Cost Nil. Environmental Management Cost (capital cost Rs **84** Lakhs and **revenue** cost Rs. **35** Lakhs).
- xi. Water body: Damodar River flows at a distance of 2.5 Km from the project site.
- xii. Approvals: Board's approval obtained on 30.08.2008.
- xiii. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xiv. Forestry issues: There is no forest area involved in the washery area
- xv. There are no court cases/violation pending with the project proponent.
- xvi. Public Hearing was held on 27<sup>th</sup> January, 2016. The issues raised in the PH include employment, fundamental facilities like electricity, water, education, hospital facilities, supply of potable water etc.

53.12.3 The Committee, after detailed deliberations (in the 53<sup>rd</sup> meeting on 17<sup>th</sup>-18<sup>th</sup> March, 2016) noted the following:

(i) The data presented by PP in EIA report reveals that air quality is severely polluted at the proposed site i.e. PM<sub>10</sub> values are ranging between 471 and 492 µg/Nm<sup>3</sup> at Station 1 and between 371 and 392 µg/Nm<sup>3</sup> at Station 2 during the period - November 2010 to January 2011, as compared to standard of 100 µg/Nm<sup>3</sup>. In the buffer zone, the values of PM<sub>10</sub> are also high, but are much higher (ranging between 513 and 562 µg/Nm<sup>3</sup>) at Dugda Basti 1, which is 1.5 Km away from existing Dugda washery. The air quality at CISF camp in buffer zone, which is 7 km away from existing Dugda washery and 500 meters away from Madhuban washery, is still higher ranging between 416 and 585 µg/Nm<sup>3</sup> during the period - April to June 2010. The PM<sub>10</sub> values at the reference station at ISM indicated is in the range of 60 to 80 µg/Nm<sup>3</sup>, which is well within the standard of 100 µg/Nm<sup>3</sup>.

(ii) The predicted incremental value of PM<sub>10</sub> at Station No. 2 in the proposed site has been indicated as 3704 µg/Nm<sup>3</sup> without control, and 60 µg/Nm<sup>3</sup> after control. If correct, this means that the situation will further worsen. However, the incremental value 3704 µg/Nm<sup>3</sup> is abnormally high and its reduction to 60 µg/Nm<sup>3</sup> as reported with controls, also seems incorrect. Both values need to be confirmed.

(iii) During presentation, PP has shown air quality data for the period November 2015 to February 2016 for only one location i.e. at existing Dugda washery, which indicates that PM<sub>10</sub> value exceeded standard of 100µg/Nm<sup>3</sup> and majority of the time values were above 200 µg/Nm<sup>3</sup>. The data at the proposed site for this period and other stations in buffer zone were not provided in presentation. During the presentation it was also mentioned that there are various units responsible for contribution of high level of PM including power plant in the area and they have initiated study on sources apportionment to identify the contributor of emission.

(iv) Regarding issues related to public hearing held on 27.01.2016, one person indicated about damage occurred to land by entering of dirty water of washery and sought inquiry. To this, the PP responded by stating “This should be solved by the discussion with local management ...” and the present status in this regard was not provided during the public hearing.

(v) Due to severe air pollution in the area, Committee is of the view that proposed project cannot be considered at proposed site. The situation in fact calls for preparation of action plan for control of pollution in the area and therefore matter may be taken up by the Ministry with the concerned bodies (CPCB and SPCB) to initiate a study comprising inventory of polluting sources with pollution control measures – both existing & required - and the cumulative impact on environment, so as to draw up an action plan for implementation in a time bound manner. The matter may also be brought by MoEFCC to the knowledge of Ministry of Coal for doing the needful.

53.12.4 *The proposal was, therefore, deferred.*

### **Agenda 53.13**

**Cluster 11 comprising of 11 mixed mines with combined production capacity of 8.20 MTPA (peak) ML area of 4218 ha located in Raniganj Coalfields, District Burdwan (West Bengal)– (Amendment in EC) of M/s Eastern Coalfields Limited -Further Consideration**

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

53.13.2 *There being no senior officer present during the meeting on behalf of the project proponent as required, the Committee was unable to consider the proposal and it was, therefore, deferred.*

### **Agenda 53.14**

**Cluster no. 2 group of Mixed mines project (0.36 MTPA with a peak prod. of 0.45 MTPA in a combined ML area of 1018 ha) located at district Burdwan (West Bengal) of M/s Eastern Coalfield Limited – (EC under 7(ii) of Notification, 2006)- Further consideration.**

53.14.1 The proposal is environmental clearance under 7 (ii) of EIA notification, 2006 for expansion of Cluster No. 2 group of mixed mines (Kumardhubi UG, Barmuri OC and Rajpura OC) from 0.45 MTPA to 1.10 MTPA (peak) in ML area of 1018 ha, located in District Burdwan (West Bengal) of M/s Eastern Coalfields Limited.

53.14.2 *There being no senior officer present during the meeting on behalf of the project proponent as required, the Committee was unable to consider the proposal and it was, therefore, deferred.*

### **Agenda 53.15**

**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) located in Salaigot Village, Tehsil Podiuprodha, Korba District (Chhattisgarh) – (TOR) - further**

## **Consideration**

53.15.1 The proposal is for Terms of reference for Expansion of Chotia-II Captive coal mining Project from 0.25 MTPA to 1.0 MTPA in an ML area 411 ha of M/s Bharat Aluminium Company Limited (BALCO), located in Salaigot village, Tehsil Podiuprodha, District Korba (Chhattisgarh).

53.15.2 As noted in para C in the opening paragraphs of these Minutes.

### **Agenda 53.16**

**Shivkar Lignite Coal Mine project 1.0 MTPA In an ML area 1855.45 ha) of M/s Rajasthan State Mines & Minerals Limited (RSMML), located in Tehsil & District Barmer (Rajasthan)- (TOR)**

53.16.1 The proposal is for seeking TORs for Shivkar Lignite Coal Mine 1.0 MTPA capacity in an ML area of 1855.45 ha of M/s Rajasthan State Mines & Minerals Limited (RSMML), located in Tehsil & District Barmer (Rajasthan)- (TOR).

53.16.2 As noted in para C in the opening paragraphs of these Minutes.

### **Agenda 53.17**

**Coal Washery (capacity of 2.5 MTPA In an ML area 12.14 ha) of M/s Chhattisgarh Power And Coal Beneficiation Ltd. Tahsil, Masturi, District: Bilaspur (Chhattisgarh)- (TOR)**

53.17.1 The proposal is for seeking TORs for Coal Washery (capacity of 2.5 MTPA In an ML area 12.14 ha) of M/s Chhattisgarh Power And Coal Beneficiation Ltd. Tahsil, Masturi, District: Bilaspur (Chhattisgarh)

53.17.2 As noted in para C in the opening paragraphs of these Minutes.

### **Agenda 53.18**

**Coal Washery of 5.0 MTPA capacity In an ML area 12.65 ha of M/s Aryan Ispat & Power Pvt. Ltd., Tehsil Rengali, Distt. Sambalpu (Odisha )-(TOR)**

53.18.1 The proposal is for seeking TORs for Coal Washery of 5.0 MTPA capacity In an ML area 12.65 ha of M/s Aryan Ispat & Power Pvt. Ltd, Tehsil Rengali, Distt. Sambalpu (Odisha)

53.18.2 As noted in para C in the opening paragraphs of these Minutes.

### **Agenda 53.19**

**Coal Washery of 0.95 MTPA capacity in an ML area of 4.74 ha of M/s Mahavir Coal Resources Pvt. Ltd, located at Noudiha, Tehsil- Chitrangi, District Singrauli (Madhya Pradesh) - (TOR)**

53.19.1 Project Proponent vide letter no.MCRPL/2016/EC-Singraulli/dated 08.03.2016 informed not to take action to the above mentioned project as they have inadvertently sent to the MOEFCC instead of SEIAA (Madhya Pradesh). Therefore, deferred.



53.19.2 As noted in para C in the opening paragraphs of these Minutes.

## **Agenda 53.20**

### **Discussion under any other item:**

#### 53.20.1 Immediate need for studies

53.20.1.1 During consideration of agenda item 53.10 (Jagannathpur OC project) above, the EAC noted that:-

(a) unfortunately, the EAC is given only a fragmented picture of the environmental and other impacts of a particular project (in this case item 53.10) as and when it is placed before the EAC for consideration, and the larger overall view of the cumulative environmental and other changes taking place in the surrounding areas is not brought before the EAC.

(b) Since Coal India Ltd (CIL) has been operating several open cast mines in the catchment area of Mahan river, it is important to understand: (i) the ecological impacts of open cast mining on the water flows in the Mahan river, (ii) the impacts on the natural drainage and hydrology of the area and (iii) impacts on the downstream ecology of Mahan river and availability of water to the villages located in the downstream of Mahan river.

(c) The EAC was of the view that a long term study should be urgently initiated by CIL to ensure the protection of hydrological regimes of Mahan river and its catchments.

(d) In the interim, as an immediate measure, CIL is requested to provide a perspective plan for mining in the area so that the EAC is aware of at least the present and future mines being developed in the catchment of Mahan river.

53.20.1.2 A similar exercise should also be initiated for other rivers/river basins where more than one project is planned.

53.20.1.3 In case washeries are also planned in the same areas, the impact of washeries should also be included in the long term study as well as the perspective plan referred to in (c) & (d) above.

#### 53.20.2 Clarity required regarding Mine Plan, Project Report etc.:-

53.20.2.1 The various MoEFCC formats that are being filled up and submitted by the PPs require the PP to respond to a query as to whether or not the PP has received approval for a "mine plan" (of which the "mine closure plan" is an integral part since the year 2010). However, it is noticed that there is lack of clarity on the part of the PPs regarding the distinction between mine plan documents, mine closure documents, project report documents, pre-feasibility report documents, and "schemes". These terms are surprisingly being used interchangeably while responding to the query regarding approval of a mine plan. Reference has been made to this issue in the above minutes under various agenda items, as recorded in para 53.1.3 (ii) New Sethia OC Project; in para 53.2.3 (i) Nahariya UG project; and in paras 53.11.2 (d), 53.11.3 (ii) & 53.11.3 (iv) Ashok OC Expansion.

53.20.2.2 Mine Plans are approved by the Ministry of Coal. MoEFCC is therefore requested to seek a clarification from that Ministry as to whether approval to any document other than a "mine plan" (of which the "mine closure plan" is an integral part since the year 2010) can be

accepted by the MoEFCC and the EAC while considering proposals from the PPs.

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**PARTICIPANTS IN 53<sup>rd</sup> EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 17<sup>th</sup> - 18<sup>th</sup> March, 2016 ON COAL SECTOR PROJECTS.**

Sl. No.	List Of Participants Expert Appraisal Committee (Coal Mining)	
1.	Shri Anil Kumar	Chairman
2.	Prof C. R. Babu	Member
3.	Shri J. L. Mehta	Member
4.	Shri T. K. Dhar	Member
5.	Shri A. K. Bansal	Member
6.	Shri N. K. Verma	Member
7.	Shri G. S. Dang	Member
8.	Shri S. K. Srivastava	Member Secretary

**PARTICIPANTS IN 53<sup>rd</sup> EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 17<sup>th</sup> – 18<sup>th</sup> March 2016 ON COAL SECTOR PROJECTS.**

53.1 Expansion of New Sethia Opencast of M/s Western Coalfields Ltd.

1. Shri Sandeep Sharma
2. Md. Noor Uddin
3. Shri S C Shankar
4. Shri K Chakraborty
5. Shri B K Mishra
6. Shri R M wanare
7. Vijay Krishna Nagda
8. Shri Pawan Kumar

53.2 Expansion of Naheriya underground coal mine of M/s Western Coalfields Ltd.

1. Shri Sandeep Sharma
2. Md. Noor Uddin
3. Shri S C Shankar
4. Shri K Chakraborty
5. Shri B K Mishra
6. Shri R M wanare
7. Vijay Krishna Nagda
8. Shri Pawan Kumar

53.3 Expansion of Bhanegaon Opencast Coal mine project of M/s Western Coalfields Ltd.

1. Shri Sandeep Sharma
2. Md. Noor Uddin
3. Shri S C Shankar
4. Shri K Chakraborty
5. Shri B K Mishra
6. Shri R M wanare
7. Vijay Krishna Nagda
8. Shri Pawan Kumar

53.4 Coal Washery of 10 MTPA capacity in an area of 39.35 Ha by M/s Mahanadi Coalfields Limited

1. Shri D K Singh
2. Shri G K Vaishnav
3. Shri R P Gupta
4. Shri V Arora
5. Shri B N Panda
6. Shri C Jayadev

7. Shri A Kumar
8. Dr. A K Samantaray
9. Shri M G Brahmaurkar
10. Shri P K Mishra
11. Shri R.K. Srivastava

53.5 Krishnashila OCP expansion coal mining of M/s Northern Coalfields Limited.

53.6 Pit Head Coking Coal Washery (3.5 MTPA) in Tasra Coal Block of M/s Steel Authority of India Ltd.

1. Shri R K Prasad
2. Dr. R. K. Tiwary
3. Dr. T B Singh
4. Dr. Abhay Kumar Singh

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

1. Shri M N Jha
2. Shri S N Chawla
3. Shri R K Mohan
4. Shri D Prisne
5. Shri M S Sandhu
6. Shri S Kumar
7. Shri U S Dangi

53.8 Expansion of Pauni-II OC (with amalgamation of Pauni -III OC) mine of M/s Western Coalfields Ltd

53.9 Amalgamated Yekona - I & II OCP of M/s Western Coalfields Limited.

53.10 Jagannathpur Opencast project of M/s South Eastern Coalfields Limited.

1. Shri Kuldeep Prasad
2. Shri O P Singh
3. Shri U T Kanzarkar
4. Shri I D Narayan
5. Shri S Mahapatra
6. Shri T Chakraborty
7. Shri Samir Kumar Das
8. Shri S R Tripathi
9. Shri A K Gupta
10. Shri Ankur Kumar
11. Shri Pawan Kumar

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

1. Shri Gopal Singh
2. Shri S. Chandra
3. Dr. A Sinha

4. Shri. J. Chakravarty
5. Shri S. Singh
6. Shri Pushkar
7. Shri P K Sinha
8. Dr. Manoj Kumar
9. Shri Pawan Kumar
10. Shri Soumitra Singh
11. Shri Subir Chandra

53.12 Dugda NLW Coal Washery of M/s Bharat Coking Coal Limited.

1. Shri D Srivastava
2. Shri D C Jha
3. Shri C S Prasad
4. Shri Kumar Rajeev
5. Shri B K singh
6. Shri V K Sinha
7. Shri Amit Roy
8. Dr. EVR Raju

53.13 Cluster 11 of M/s Eastern Coalfield Limited.

1. Shri N Jha
2. Shri G. Prasad
3. Shri J. N. Biswal
4. Shri Anand Shekhar
5. Shri A K Diwakar
6. Shri P Banerjee
7. Shri S Chakraborty

53.14 Cluster no. 2 of M/s Eastern Coalfield Limited.

1. Shri N Jha
2. Shri G. Prasad
3. Shri J. N. Biswal
4. Shri Anand Shekhar
5. Shri A K Diwakar
6. Shri P Banerjee
7. Shri S Chakraborty

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

53.16 Shivkar Lignite Coal Mine of M/s Rajasthan State Mines & Minerals Limited.

53.17 Coal Washery of M/s Chhattisgarh Power and Coal Beneficiation Limited.

53.18 Coal Washery of M/s Aryan Ispat & Power Pvt. Limited.

53.19 Coal Washery of M/s Mahavir Coal Resources Pvt. Limited.

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**Generic ToR for coal washery**

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

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



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

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

Department of the concerned state.

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

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

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

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

separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a **Comprehensive Conservation Plan** along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.

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

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

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

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

	Infrastructure					
	TOTAL					

\* As a representative example

**Table 2 : Stage Wise Cumulative Plantation**

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

\* As a representative example

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

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

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

7.	Undisturbed Area					
	TOTAL					110

- (xxx) Flow chart of water balance should be provided. Treatment of effluents from workshop, township, domestic wastewater, mine water discharge, etc. should be provided. Details of STP in colony and ETP in mine should be given. Recycling of water to the max. possible extent should be done.
- (xxxii) Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given.
- (xxxiii) Risk Assessment and Disaster Preparedness and Management Plan should be provided.
- (xxxiiii) Integration of the Env. Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.
- (xxxv) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxxvi) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
- (xxxvii) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
- (xxxviii) Corporate Environment Responsibility:
- a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
  - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
  - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
  - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- (xxxix) Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.
- (xl) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
- (xli) Status of any litigations/ court cases filed/pending on the project should be provided.

- (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:**

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

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**GENERIC TORs FOR AN UNDERGROUND COALMINE PROJECT**

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



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

#### Area under Surface Rights

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

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

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

should be provided.

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

- (xxx) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
- (xxxii) Status of any litigations/ court cases filed/pending on the project should be provided.
- (xxxiii) 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.
- (xxxiiii) 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			

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

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

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53<sup>rd</sup> EAC (THERMAL & COAL MINING PROJECTS) MEETING  
SCHEDULED FOR 17<sup>th</sup> – 18<sup>th</sup> March 2016

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](mailto:sk.smree66@nic.in) at least one week prior to the EAC meeting.
- ii. Please send hard copies of the documents indicating agenda items to all the EAC members, at least one week prior to the meeting.
- iii. Without this information, EAC has discretion to invite the proponent for the meeting.
- iv. Please also provide a hard copy of presentation 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.

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COAL MINING PROJECTS

Thursday, 17<sup>th</sup> March, 2016

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

- 53.1** Expansion of New Sethia Opencast Coal Mine (from 0.20 MTPA to 0.50 MTPA with the expansion in mining lease area from 91.503 ha to 144.453 ha) of **M/s Western Coalfields Ltd.**, Dist. Chindwara (**Maharashtra**)- (**EC based on TOR granted on 25.02.2014**)- (**Further Consideration**)
- 53.2** Expansion of Naheriya underground coal mine (from 0.36 MTPA to 0.54 MTPA within the existing EC ML area of 300.0 ha) of **M/s Western Coalfields Ltd**, Tehsil Parasia, District Chhindwara (**Madhya Pradesh**)-(**Consideration of EC under 7(ii) of Notification, 2006**)
- 53.3** Expansion of Bhanegaon Opencast Coal mine project (from 0.60MTPA to 1.00 MTPA at Peak capacity of 1.15 MTPA within the existing area of 347.46 Ha) of **M/s Western Coalfields Ltd**, Tehsil Kamptee, District Nagpur, (**Maharashtra**)- (**EC under 7(ii) of Notification, 2006**)
- 53.4** Coal Washery of 10 MTPA capacity in an area of 39.35 Ha by **M/s Mahanadi Coalfields**

**Limited** located at IB Valley in Lakhanpur area village Chharla, in district Jharsuguda (Odisha) –(EC based on TOR granted on 13.08.2015)

- 53.5 Krishnashila OCP expansion coal mining project (4 MTPA to 5 MTPA (Peak) in an area of 851.78 ha) of **M/s Northern Coalfields Limited** in Tehsil Dudhi, District Sonbhadra, (Uttar Pradesh)- **(EC under 7(ii) of Notification, 2006)**

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- 53.6 Pit Head Coking Coal Washery (3.5 MTPA) in Tasra Coal Block of M/s Steel Authority of India Ltd. located in Jharia Coalfields, District Dhanbad, (Jharkhand)- **(EC based on TOR granted on 25.02.2013)**
- 53.7 Expansion of Amelia (North) Opencast 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)- (EC based on TOR granted on 13.11.2015)**
- 53.8 Expansion of Pauni-II OC (with amalgamation of Pauni -III OC) mine for a capacity of 3.25 MTPA) within ML area of 1152.66 ha) of **M/s Western Coalfields Ltd**, Tehsil Rajura, District Chandrapur **(Maharashtra)- (TOR)**
- 53.9 Amalgamated Yekona - I & II OCP in 2.75 MTPA (Normative) and 3.44 MTPA (Peak) in an area of 1701.32 ha of **M/s Western Coalfields Limited** in Marda Village, District Chandrapur **(Maharashtra)- (TOR)**

#### **Friday 18<sup>th</sup> March, 2016**

- 53.10 Jagannathpur Opencast project for production capacity of 3.00 MTPA (Normative) and 3.50 MTPA (Peak) in an ML area of 679.79 ha of **M/s South Eastern Coalfields Limited** in tehsil Surajpur, District Surajpur **(Chhattisgarh) - (TOR)**
- 53.11 Ashok OCP expansion project from 10 MTPA to 14.00 MTPA in ML area of 793.14 ha of **M/s Central Coalfields Limited** in Tehsil Tandwa district Chatra **(Jharkhand) – (EC under 7(ii) of EIA Notification, 2006 ) – Further Consideration**
- 53.12 Dugda NLW Coal Washery (2.5 MTPA in an ML area of 21 ha) of **M/s Bharat Coking Coal Limited**, located in district Bokaro **(Jharkhand) (EC based on TOR granted on 25.09.2014)**
- 53.13 Cluster 11 comprising of 11 mixed mines with combined production capacity of 8.20 MTPA (peak) ML area of 4218 ha of **M/s Eastern Coalfields Limited** located in Raniganj Coalfields, District Burdwan **(West Bengal)– (Amendment in EC) -Further Consideration**
- 53.14 **Cluster no. 2** group of Mixed mines project (0.36 MTPA with a peak prod. of 0.45 MTPA in a combined ML area of 1018 ha) of **M/s Eastern Coalfield Limited**, located at district Burdwan **(West Bengal) – (EC under 7(ii) of Notification, 2006)- Further**

consideration.

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- 53.15** 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)** located in Salaigot Village, Tehsil Podiuprodha, Korba District (**Chhattisgarh**) – (TOR) - **further Consideration**
- 53.16** Shivkar Lignite Coal Mine (capacity of 1.0 MTPA In an ML area 1855.45 ha) of **M/s Rajasthan State Mines & Minerals Limited**, located in Tehsil & District Barmer (**Rajasthan**)- (TOR)
- 53.17** Coal Washery (capacity of 2.5 MTPA In an ML area 12.14 ha) of **M/s Chhattisgarh Power And Coal Beneficiation Ltd.** Tahsil, Masturi, District: Bilaspur (**Chhattisgarh**)-(TOR)
- 53.18** Coal Washery (capacity of 5.0 MTPA In an ML area 12.65 ha) of **M/s Aryan Ispat & Power Pvt. Ltd.**, Tehsil Rengali, Distt. Sambalpu (**Odisha**)-(TOR)
- 53.19** Coal Washery (Capacity of 0.95 MTPA in an ML area of 4.74 ha) of **M/s Mahavir Coal Resources Pvt. Ltd**, located at Noudiha, Tehsil- Chitrangi, District Singrauli (**Madhya Pradesh**) - (TOR)
- 53.20** Discussion under any other item:

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