

MINUTES OF THE 55th EAC (THERMAL & COAL MINING PROJECTS) MEETING HELD ON 11-13 May, 2016.

A. The 55th EAC (Thermal & Coal mining projects) meeting was held on 11-13 May, 2016 in New Delhi to consider the proposals in coal mining sector. The list of participants of EAC and the project proponents are at Annexure-I & II respectively.

B. Confirmation of Minutes:

The Committee confirmed minutes of the 53rd EAC meeting held on 17 - 18 March, 2016

C. The following proposals were considered.

Agenda 55.1

Expansion of Krishnashila OCP coal mining project from 5 MTPA to 6.25 MTPA in an area of 851.78 ha in Tehsil Dudhi, District Sonbhadra (Uttar Pradesh) of M/s Northern Coalfields Limited - For further consideration of EC

55.1.1 The proposal is for grant of environmental clearance to the expansion of Krishnashila OCP coal mining project from 5 MTPA to 6.25 MTPA in an area of 851.78 ha in Tehsil Dudhi, District Sonbhadra (Uttar Pradesh) of M/s Northern Coalfields Limited under 7(ii) of the EIA Notification, 2006.

55.1.2 The proposal was earlier listed for consideration in 53rd EAC meeting held on 17th -18th March, 2016. However, the proposal was deferred because the EIA/EMP reports and the related documents were not received by the members in time.

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

- (i) The project was accorded EC vide letter No.J-11015/243/2014-IA.II(M) dated 22nd August, 2014 for a capacity of 5 MTPA.
- (ii) The latitude and longitude of the project are 24° 07' 17" N - 24° 09' 00" N and 82° 44' 11" E - 82° 45' 46" E respectively.
- (iii) Joint Venture: Not Applicable
- (iv) Coal Linkage: Renusagar Thermal Power of M/s Hindalco Industries by pipe conveyor system and basket linkage.
- (v) Employment generated/to be generated: 634 (Sanctioned manpower as per RPR/Mine Plan) 464 (Actual man power as on 29.02.2016)???
- (vi) Benefits of the project: The project is supplying planned quantity of coal to Renusagar Thermal Power of M/s Hindalco Industries by pipe conveyor system thus meeting the energy needs of the country.
- (vii) The land usage of the project will be as follows:

Pre-Mining:

S. No.	LAND USE	Within ML	Outside ML	Total
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		Area (Ha)	area (Ha)	
1.	Tenancy Land(Agricultural land)	10.29	NIL	10.29
2.	Forest Land	720.89	NIL	720.89
3.	Wasteland	-	NIL	-
4.	Grazing land	-	NIL	-
5.	Surface water bodies	-	NIL	-
6.	Settlements	-	NIL	-
7.	Others (Government land)	120.60	NIL	120.60
Total		851.78	NIL	851.78

- (viii) The total geological reserve is 102.24 MT. The mineable reserve 99.12 MT, extractable reserve is 99.12 MT. The per cent of extraction would be 96.94 %.
- (ix) The coal grade is G-8. The stripping ratio is 3.38 Cum/tonne. The average Gradient is 2 to 3 degrees. There will be Three seams with thickness ranging

Coal Seam	Thickness (m)	
	From	To
Purewa Top	3	9
Purewa Bottom	10	13
Turra	19	25

- (x) Water requirement: There is no change in water requirement for 6.25 MTPA?????. Arrangement for reuse/recirculation of treated water shall also be made. The level of ground water ranges from 0 .40 m to 13.79 m below ground level.
- (xi) The Method of mining would be Opencast or Underground or Combine??? combined system of mining deploying dragline and shovel-dumper. Introduction of one surface miner is also envisaged for Eco-friendly mining.
- (xii) There are 2 external OB dumps with Quantity of 61.37 Mbcm in an area of 164.80 ha with height of 90 meter above the surface level and 2 internal dumps with Quantity of 273.97 Mbcm in an area of 435.75 ha.
- (xiii) The final mine void would be in 34.05 Ha with depth varying from 30 to 40 m. and the total quarry area is 469.80 Ha. Backfilled quarry area of 435.75 Ha shall be reclaimed with plantation. A void of 34.05 ha with depth varying from 30 to 40 m which is proposed to be converted into a water body
- (xiv) The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- (xv) The life of mine is 14 Years.
- (xvi) Transportation: Coal transportation in pit by rear dumper from in pit to pit head coal handling plant, Surface to Siding by tippers and loading at siding by rail and belt pipe conveyor system to power plant directly.
- (xvii) There is no R & R involved. There are no PAFs.
- (xviii) Cost: Total capital cost of the project is Rs. 741.62 Crores. CSR Cost Rs. 1.61. R&R Cost Nil. Environmental Management Cost Rs. 23.01 Lakhs.
- (xviii) Water body: No river/Nallah flowing adjacent to the proposed mine.
- (xix) Approvals: Board's approval obtained on 21.06.2013 Mining plan has been approved on 21.06.2013. Mine closure plan is an integral part of mining plan. Whether Mining plan approval obtained for intended capacity.

- (xx) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xxi) Forestry issues: Total forest area involved in the project is 720.89 ha and FC for the entire area has been obtained.

Area (Ha)	Stage-1 FC issued vide letter no. &	Validity period of FC
235.99	Letter No. 8-64/2004-FC dated:	Upto Mine Life
258.00	Letter No. 8-5/94-FC dated: 23.05.1996	Upto Mine Life
65.50	Letter No. 8-98/97-FC dated:	Upto Mine Life
161.40	Letter No. SO(E) dated: 24.01.1975	Upto Mine Life
720.89	Total	

- (xxii) Total afforestation plan shall be implemented covering an area of 164.08 ha at the end of mining. Green Belt over an area of 657.98 ha. Density of tree plantation 2500 trees/ ha of plants.
- (xxiii) There is Court case No 1799/2014 dated 06.06.14 in court of CJM Sonebhadra (UP); At the time of granting EC for 5 MTPA, a case was lodged by RO Sonebhadra (UP)/UPPCB as per the direction of MOEF vide number J-11015/243/2011-IA.II(M) dated 12/03/2014.
- (xxiv) Public Hearing was held on 06.10.2012 for earlier EC capacity of 4.0 MTPA.

55.1.4 The compliance report of the, Regional Office, MoEFCC at Lucknow dated 18th July, 2013 was presented during the EAC meeting. The Committee, after detailed deliberations **(in the 55th meeting on 11th -13th May, 2016)** noted there was no compliance report for the last EC of 5 MTPA (given in August 2014), which was considered mandatory in terms of this Ministry's OM dated 30th May, 2012 for consideration of the instant proposal.

55.1.5 *The proposal was, therefore, deferred and the project proponent was advised to obtain the latest compliance report from the RO against the present EC of 5 MTPA dated 22nd August, 2014.*

Agenda 55.2

Pit Head Coking Coal Washery of 3.5 MTPA in Tasra Coal Block located in Jharia Coalfields, District Dhanbad (Jharkhand) of M/s Steel Authority of India Ltd - For consideration of EC

55.2.1 The proposal is for grant of environmental clearance to Pit Head Coking Coal Washery of 3.5 MTPA in an area of 20 ha in Tasra Coal Block located in Jharia Coalfields, District Dhanbad (Jharkhand) of M/s Steel Authority of India Ltd.

55.2.2 The proposal was earlier listed for consideration in 53rd EAC meeting held on 17th -18th March, 2016. However, the proposal was deferred because the EIA/EMP reports and the related documents were not received by the members in time.

55.2.3 The details of the project, as per the documents submitted by the project proponent, and also as informed during the EAC meetings, are reported to be as under:-

- (i) The project was accorded TOR vide letter No.J-11015/365/2009-IA.II (M) dated 25th February, 2013. Approval for extension of validity of TOR up to 24.02.2016 was issued vide letter on 27th July 2015.

- (ii) It is a two product washery.
- (iii) The latitude and longitude of the project are 23° 40' 01.33"; 23° 39' 54.16" N and 86° 27' 02.67": 86° 27' 48.29" E respectively.
- (iv) Joint Venture: There is no joint venture.
- (v) Coal Linkage : Raw coal requirement will be about 3.5 MTPA. Coal will be sourced from Tasra open cast project of SAIL. The raw coal quality varies from Washery Grade-II to Washery Grade-IV, mainly being Washery Grade-III & IV.
- (vi) Employment generated/to be generated: 166 Persons
- (vii) Benefits of the project: The proposed project will result in improvement of infrastructure as well as up-liftment of social structure in the area. The people residing in the nearby areas will be benefited directly and indirectly. It is anticipated that the proposed washery plant will provide benefits for the locals.
- (viii) Land requirement for the project is 20 ha. of which 18 ha is for the washery and 2 ha for the railway siding.
- (ix) Total estimated water requirement is 1740 m3/day.
- (x) The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- (xi) The life of the proposed washery has been considered as 23 years after its commissioning. A total period of 18 months has been considered for construction and commissioning of Tasra washery including trial operation and Performance Guarantee Tests (PGT).
- (xii) Transportation: Coal transportation in pit by covered conveyor from in pit to pit head coal handling plant, Surface to Siding by covered conveyor belt to Pre-weigh Bin and loading at siding by Rail.
- (xiii) There is no R & R involved. There are no PAFs.
- (xiv) Cost: The estimated total initial capital investment for washery under departmental option has been estimated at Rs.171.83 crore and the same under outsourcing option has been estimated as Rs.30.77crore (As per PFR of 2009). R&R Cost - Nil. Environmental Management Cost Rs. 130 Lakhs, Recurring Cost will be about Rs.32.0 Lakhs per annum.
- (xv) Water body: Domohani jore and Cilatu are the two seasonal jores flowing in the east and west side of the project area.
- (xvi) Wildlife issues: There are no national parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xvii) Forestry issues: There is no forest area involved.
- (xviii) Green Belt over an area of 3.2 ha.
- (xix) There are no court cases/violation pending with the project proponent.
- (xx) Public Hearing was held on 30th January, 2016 at P.O. Motinagar, District Dhanbad. The issues raised in the public hearing include employment to the local residents, constitution of committee to solve the problem of former employee of Bihar super Phosphate Factory. arrangement for supply of safe drinking water in nearby villagers, apprehension for the negative impact of washery on agricultural crops of the area, formation of committee to look the welfare scheme of education, to organize medial camp and utilization of CSR fund for needy persons.

55.2.4 The Committee, after detailed deliberations **(in the 55th meeting on 11th -13th May, 2016)** noted the following:

- (i) The Committee noted that the proposed washery with its technology firmed up/finalized, was yet to get the approval of Board of the project proponent.

(ii) The project proponent presented wind rose for one quarter only. Whereas, the meteorological data should have been for a minimum period of one year to have a consistent and reasonable picture of wind directions.

(iii) The project proponent is also required to give data on emission factor for various sources of fugitive emissions, which would be generated from the washery. Based on these emission factors, predicted air quality values should be provided both for controlled and uncontrolled emissions.

(iv) The project proponent mentioned that at places where high values of PM 10 were observed, mitigative measures would involve construction of a separate internal road by-passing the habitated areas. This is in addition to providing conveyor system for coal transportation and silo loading at the sidings, which is proposed. Works on these measures were asked to be expedited.

(v) The Committee noted that 132 kV sub-station supplying power to major industries was adjacent to the washery, whereas, BIT Sindri and Patherdih township are at 2 & 2.5 km away respectively. The mitigative measures taken for air pollution need to be confirmed.

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

Agenda 55.3

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

55.3.1 The proposal is for amendment in EC granted on 21st 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.

55.3.2 The proposal was earlier considered in 51st EAC meeting held on 5th February, 2016 and 53rd EAC meeting held on 17th -18th March, 2016. During the meeting held in February, 2016, the observations of the Committee were as under:-

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

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

- increase in quarry area from 337 ha to 528 ha,
- proposed/existing discharge of water into local nalas,
- possible contamination of soil due to inadvertent spillage of oil etc (sl 4.9 of Form-I),

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

55.3.3 During the meeting held on 17th -18th March, 2016, the proposal was deferred because no senior officer present during the meeting on behalf of the project proponent as required.

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

- The desired correction in EC capacity has been made accordingly.
- EC has been granted for four proposed OC patches, namely, Bonbahal OC, NewKenda OC, West Kenda OC and Shankarpur OC. Another OC mine, namely, Shankarpur/C L Jambad was exhausted and being backfilled at the time of application. Thus, total area already quarried / proposed to be quarried was 337.5 Ha.
- The revised mining plan proposes three new quarries, namely, Shankarpur /C L Jambad OC, Siduli OC and Haripur OC. Thus, total area to be quarried within the cluster will increase from 337.5 ha to 528.5 ha. This is further elucidated in the table given below:-

#	Name of OC Mine	Within Leasehold of Mine	Quarry as Existing (Ha)	area per EC	Additional Quarry area proposed / Additional Area (Ha)	Remarks
1	Bonbahal OC	Chora Block Incline UG	25.0		-	The quarry area is within the mine lease boundary; there is no increase in mine lease area and overall area
2	Shankarpur / C L Jambad OC	Chora 7, 9 & 10 Pit UG	52.0 (Already Exhausted)		46.0 (Extension)	
3	New Kenda OC	New Kenda UG	169.5		-	
4	West Kenda OC	-do-	49.0		-	

5	Shankarpur OC	Shankarpur UG	42.0	-	of the cluster
6	Haripur OC	Haripur UG		100.0	
7	Siduli OC	Siduli UG		45.0	
Total			337.5	191.0	
Grand Total			528.5		

- (iv) Industrial Waste Water: The cluster generates about 12721 m³/day of waste water out of which 670 m³/day needs to be routed through O & G traps while the remainder can be discharged after settling of suspended particulates for irrigation / into local nallahs
- (v) Domestic Waste Water: The cluster generates about 4130 m³/day of domestic waste water which is routed to soak-pits.
- (vi) The impact assessment has been carried out for a production of 10.9 MTY. Necessary control measures have already been suggested in the EIA & EMP and are reproduced below –
- A. Additional Measures suggested in the EMP
1. Provision of 6 additional mobile water sprinklers with a capital provisioning of Rs. 2.1 Crore for enhanced water spraying on transport roads
 2. Provision of fixed type sprinklers at Railway Sidings and Pit – top tipplers and coal depots with capital provisioning of 84 Lakh
 3. Repairing and upkeep of transport roads with capital provisioning of 9 Crore
 4. Annual provisioning of Rs 10 Lakh / annum for pollution control
- B. The present status of implementation is as given below –
1. Existing Water Tankers – 4 * 12 KL each (Departmental)
 2. Planned to increase fleet by another 4 * 12 KL each (Hired) to reduce impact of proposed New Kenda and West Kenda OC Patches on surrounding areas
 3. One 40 T dumper has also been planned to be converted into mobile water sprinkler especially for Shankarpur OCP. This will take care of predicted increase in PM₁₀ at Shankarpur Village
 4. Dedicated pumps and piping system for mine-water spraying on coal faces and active dumps
 5. LPG reimbursement in place of supply of fuel coal is already carried out in respect of ECL employees
 6. Peripheral 3-tier greenbelt plantation will be developed around railway sidings.
- (vii) The baseline data for the cluster was generated during the winter season (Jan – Mar) of 2013. It is further informed that ECL have started fortnightly monitoring of AAQ w.e.f. May, 2015 at 8 (eight) stations fixed for Cluster no. 11. Apart from these 8 stations there are other AAQ stations fixed for Cluster Nos. 10 & 12 which fall within the buffer zone of Cluster no. 11. The results during the period from May, 2015 till January, 2016, have been found within the prescribed limits barring a few occasions at a few stations. Control measures are being taken to ensure less contribution to the pollution from mining activities. It is pertinent to mention here that there are several industries spread all over the mining areas which contribute significantly to pollution over which no direct control can be exercised.
- (viii) R & R cost for cluster 11 is Rs. 492.55 crore (Rupees Four Hundred Ninety Two crore Fifty Five Lakh) only. Thus total capital for the cluster will be Rs 1570.78 Crores out of which R & R Cost is Rs 492.55 Crore.
- (ix) Mine closure plan has been revised and approved along with the Revised Mine Plan for the cluster on 30.01.2016.

- (x) These are mixed mines where UG and OC operations will be carried out within the same leasehold. However, the individual mine capacities will not be reached simultaneously as the UG mines will reach peak capacity only after the exhaustion of the opencast workings. As such, due to phasing of UG and OC productions, peak output of the mine has been taken as the highest capacity reached by adding both UG and OC productions during a year as per schedule.
- (xi) As per the letter received from CGWA, the area does not come under water scarce area and as such, does not require groundwater clearance.

55.3.5 The Committee, after detailed deliberations (in the 55th meeting held on 11-13 May, 2016), the noted the following:-

(i) It was seen from the documents submitted by the project proponent that despite the EAC having pointed out in its February meeting that there was lack of clarity regarding the production capacity and capacity for which EC amendment was being sought, this time also the same lack of clarity is persisting. The project proponent was, therefore, advised that the EC amendment for capacity change should be sought using the mine wise capacity (both normative as well as peak) mentioned in the EC letter dated 21st July, 2015. In addition, the changes in the method of production from UG to OC and vice-versa in each of the mine should also be brought out and its effect on the air pollution.

(ii) During the meeting held in February, 2016, several inconsistencies in the documentation submitted at that stage were pointed out. The EAC was unhappy to note that for the present meeting on 11th May, there were further inconsistencies in the compliance report now being submitted by the project proponent with reference to its earlier observations. The project proponent was advised to submit clear cut responses on various observations made by the EAC during its earlier meetings to take a decision on the instant proposal.

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

Agenda 55.4

Expansion of Cluster No.2 group of mixed mines project of 0.45 MTPA to 1.10 MTPA in a combined ML area of 1018 ha located in District Burdwan (West Bengal) of M/s Eastern Coalfield Limited - EC under clause 7(ii) of the EIA Notification, 2006 - For further consideration.

55.4.1 The proposal is for grant of 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 in combined ML area of 1018 ha located in District Burdwan (West Bengal) of M/s Eastern Coalfields Limited.

55.4.2 The proposal was earlier considered by the EAC in its 39th meeting held on 16th -17th July, 2015, 47th meeting held on 30th November- 1st December, 2015 and 49th meeting held on 7th -8th January, 2016.

(a) During the meeting held in January, 2016, the observations of the Committee were as under:-

‘The Committee during the presentation noted that many of the specific conditions of the EC granted earlier had not been complied with as per the report of the Regional Office. Since compliance of EC conditions is a pre-requisite for consideration of such cases, the case was deferred till the certified copy is received from the Regional Office. The project proponent, however, with reference to compliance to EC conditions also mentioned that some of the EC conditions were not feasible for the project proponent to implement. Accordingly, the project proponent stated that they would re-consider the matter and first apply for modification of the existing EC conditions. In view of above, the proposal was deferred’

(b) While deliberations during the meeting held in January, 2016, the EAC was not convinced with the presentation and the documentation provided by the project proponent. The Committee insisted for methodological approach in presenting the case, and thus deferred the proposal.

(c) The proposal was listed for consideration in 53rd EAC meeting held on 17th -18th March, 2016. But the proposal was deferred due to no senior officer present during the meeting on behalf of the project proponent.

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

(i) The project was accorded EC vide letter No.J-11015/37/2011-IA.II (M) dated 16th January, 2015 for 0.45 MTPA capacity in a lease area of 1018 ha.

(ii) Now the proposal is for one time capacity expansion from 0.45 MTPA to 1.10 MTPA, i.e., additional capacity of 0.65 MTPA under clause 7(ii) of the EIA Notification, 2006.

(iii) 3 existing mines (1 UG mine and 2 OC mines) within the cluster. Total cluster capacity is proposed to be increased from 0.45 MTY to 1.10 MTY, i.e an additional capacity of 0.65 MTY. Nearly 140% increase in cluster capacity. It is for the one time capacity enhancement of less than 1MTY.

S No.	Name of Mine	Lease Area (Ha)	Peak production Capacity (EC Capacity)		Life of mine (years)	
			As per EC	Proposed Revision	As per EC	Balance Life from 2015 – 16
1	Kumardhubi UG	667.0	0.10	0.10	20	18
2	Barmuri OC	59.0	0.23	0.50	10	6
3	Rajpura OC	292.0	0.12	0.50	5	6
Total		1018.0	0.45	1.10		

(iv) The latitude and longitude of the project are latitude 23°, 44' N & 23°, 46' N and longitude 86°, 46' E & 86°, 49', E respectively.

(v) Joint Venture: No Joint Venture

(vi) Coal Linkage:

Sl. No.	Name of the mine	Targeted Consumer
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1	Kumardhubi UG	- The West Bengal Power Development Corporation Limited (WBPCDCL). - Mejia Thermal Power Station-Bankura, West Bengal. - Sipat Super Thermal Power Station or Rajiv Gandhi Super Thermal Power Station at Sipat Bilaspur district Chhattisgarh. - GMR Energy Limited Kamalanga thermal power plant, Odisha. - Aravali Power Company Private Limited, Haryana. - Kahalgaon Super Thermal Power Station (KhSTPP), Kahalgaon, Bhagalpur, Bihar.
2	Barmuri OC	
3	Rajpura OC	

(vii) Employment generated/to be generated: The three mines of the cluster together employ a total of about 1000 personnel.

(viii) Benefits of the project: The proposed expansion will also bring enhanced socio-economic benefits to the local population of the project area by way of direct and indirect employment, improvement in infrastructure and growth of ancillary facilities.

(ix) The land details/usage of the project will be as follows:

Sl. No.	Landuse	Pre-Mining			Post-Mining		
		Within ML Area (Ha)	Outside ML Area (Ha)	Total (Ha)	Within ML Area (Ha)	Outside ML Area (Ha)	Total (Ha)
1	Agricultural Land	40.0	-	40.0	40.0	-	40.0
2	Forest Land	-	-	-	-	-	-
3	Danga/Waste Land	251.0	-	251.0	-	-	-
4	Grazing Land						
5	Surface water bodies	31.30	-	31.30	66.80	-	66.80
6	Settlements	282.60	-	282.60	282.60	-	282.60
7	Others						
a)	Top Soil Dump						
b)	Excavation & OB Dump	123.0	-	123.0	122.50 Ha area will come under plantation		
c)	Roads & Railways	221.60	-	221.60	221.60	-	221.60
d)	Built-up Area	-	-	-	-	-	-
e)	Green Belt	11.50	-	11.50	393.50	-	393.50
f)	Plantation/Vegetation						
j)	Colliery Infrastructure/Other	57.0	-	57.0	13.50	-	13.50
Total		1018	-	1018	1018.0	-	1018.0

(x) Water body: On the south side of NH2 there is a seasonal stream named BarmuriJore which flows from north to south and merges into Barakar River. Barakar River and BarmuriJore along with its tributaries control the main drainage of the mine.

(xi) Approvals: Mining plan has been approved on 27.11.2015 (for expansion to production capacity of 1.10 MTPA). Mine closure plan is an integral part of mining plan. Mine Closure plans of all three mines have been approved in September, 2013.

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

(xiii) Forestry issues: There is no forest land within the cluster boundary.

(xiv) Total afforestation plan shall be implemented covering an area of 401.4 Ha (out of which 189.9 Ha is already reclaimed and planted by ECL) at the end of mining. Green Belt over an area of **393.50** ha. Density of tree plantation 1600 saplings/ha of plants.

(xv) There are no court cases/violation pending with the project proponent.

(xvi) Public Hearing was held on 09.09.2013 in Officers Club, Mugma Area, Dhanbad, Jharkhand. The issues raised in the PH includes water supply; Coal transportation; arrangements for repair and upkeep of this road; development of the local population; poor voltage and overhead lines; on pollution etc.

(xvii) The action taken by the project proponent on the certified report by RO, MOEF&CC, Ranchi with present status of compliance of EC conditions, was submitted and explained.

55.4.4 The Committee, after detailed deliberations **(in the 55th meeting on 11th -13th May, 2016)** noted the following:-

(i) During public hearing, several persons have raised the issue of dust pollution during coal transport through habitated areas.

(ii) The Committee had earlier suggested for railway siding near the mine within 2 km at Kumardhubhi. As per the documents submitted, presentations and deliberations, it was noted that no action was taken in this regard. However, the project proponent informed that there has been some progress in respect of mechanically covered trucks.

(iii) The project proponent should explore the use of nearby sidings and intimate status to the Ministry within three months.

(iv) The project proponent may continue the present arrangement of transfer to the siding 8 km (approx.) away with tarpaulin covered trucks.

55.4.5 *The Committee, after detailed deliberations (in the 55th meeting on 11-13 May, 2016) recommended the project for grant of Environmental Clearance subject to all specific and generic conditions for such projects.*

Agenda 55.5

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

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

55.5.2 The proposal was earlier listed for consideration in 53rd EAC meeting held on 17-18 March, 2016. But the proposal was deferred due to no senior officer present during the meeting on behalf of the project proponent as required.

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

- (i) The Ministry granted EC for Pauni II OC vide letter No.J-11015/71/2005-IA.II (M) dated 2nd February, 2006 for 0.60 MTPA in mine lease area of 316.30 ha.
- (ii) The Latitude and Longitude of the project are N 19° 47' 59" to N 19° 49' 45" and E 79° 13' 41" to E 79° 16' 15".
- (iii) Joint Venture : There is no Joint venture.
- (iv) Coal Linkage: Thermal Power Plants of Mahagenco and Miscellaneous consumers.
- (v) Employment generated / to be generated: Direct employment to be given in the mine from internal / land oustees is 242. Further, about 300 indirect employments will be generated through contractual and miscellaneous works.
- (vi) Benefits of the Project: The proposed expansion will bridge the gap between demand and supply of non-coking coal for the Power houses and other consumers to the extent of the mine capacity.
- (vii) The land usage of the project is as under –

Pre - Mining :

Sl.No.	Particulars	Land (Ha)
1	Agricultural land / Tenancy land	1050.99
2	Forest land	12.07
3	Government land / Waste land	89.60
	Total land	1152.66

Post – Mining :

Sl. No.	Particulars	Land (Ha)
1	Plantation	569.40
2	Water body	188.35
3.	Public use	8.50
4	Undisturbed area	386.41
	Total land	1152.66

- (viii) The total geological reserve is 35.82 Mt. The mineable reserve is 30.63 Mt. The extractable reserve is 30.63 Mt. The percentage of extraction would be 85.51.
- (ix) The coal grade is G9. The stripping ratio is 6.19 cum/tonne. The average gradient is 1 in 6 to 1 in 7. There is one thick Composite seam varying in thickness from 15 m to 20 m, having two sections i.e. top and bottom.
- (x) Total estimated water requirement is 880 kl/day. The level of ground water ranges from 1.00 m to 22.10 m below ground level.
- (xi) The method of mining would be Open Cast with Shovel-Dumper combination.
- (xii) There would be two permanent Overburden (OB) dumps (Dump 'A' and 'D') covering an area of 214.57 ha and one top soil dump covering an area of 35.40 ha. There is one internal dump (Pauni-III) of 107.00 ha. Besides the above, there would be an embankment constructed with 2.82 Mm³ of excavated OB.
- (xiii) The final mine void at Pauni-II OC would be 63.45 ha at 120 m depth and 124.90 ha at 200 m depth in Pauni-III OC.
- (xiv) The base line environmental data would be generated and documented in the Environment Impact Assessment (EIA) / Environment Management Plan (EMP).
- (xv) The life of the mine will be 14 years considering annual coal production target of 3.25 MTPA.
- (xvi) Transportation: Coal from mine face to CHP will be transported through dumpers. It is

proposed that a cross Country Conveyor Transportation (CCT) of 1400 / 1600 mm wide belt will be installed for Gouri, Pauni and Sasti group of mines. A Rapid Loading System (RLS) will be commissioned at Sasti Siding for loading of wagons through 4,000 tonne capacity Silo.

(xvii) R & R: There are no house oustees. Rehabilitation involves for Land oustees only.

(xviii) Cost: The Capital cost of the project is Rs. 499.0042 Crores. CSR cost as per the extant policy is 2% of last 3 year's average net profit or Rs. 2/- per tonne of coal production of previous year, whichever is higher. The total cost of R&R is Rs.317.08 crores. Environmental Management Cost has been estimated at Rs. 97.09 Lakhs under Capital head and Rs. 6/- per tonne under Revenue head for Environmental protection measures.

(xix) Water body: Lendi nullah, Sakhri nullah and one seasonal nullah flows over the property, which are proposed to be diverted.

(xx) Approvals: Ground Water Clearance is not applicable as it is not falling in critical area as per CGWA. The Project Report / Mining Plan has been approved by WCL's Board in its 266th meeting held on 26/06/2015. The Mine Closure Plan, being an integral part of Project Report / Mining Plan, has also been approved on 26/06/2015.

(xxi) Wild Life issues: There is no National Park, Wildlife Sanctuary, Bio-sphere reserves located in the 10 Km Buffer Zone.

(xxii) Forestry Issues: In this project, 12.07 ha of forest land is involved in the proposed Pauni-III OC mine area. The application for Forestry Clearance under Forest (Conservation) Act, 1980 has been submitted and is under process at CCF level.

(xxiii) Total Afforestation Plan shall be implemented covering an area of 569.40 ha at the Post-Mining stage. Density of tree plantation would be 2,500 plants / ha.

(xxiv) There are no court cases / violation pending with the Project Proponent.

(xxv) The ToR for Pauni-III OCP of 1.25 MTPA (Normative)/1.55 MTPA (Peak) in ML area of 821.84 ha in District Chandrapur (Maharashtra) of M/s Western Coalfields Ltd, was granted on 27th June, 2011.

55.5.4 The Committee, after detailed deliberations (in the 55th meeting on 11th -13th May, 2016) noted the following:

(i) Earlier there was a proposal for Pauni-III OCP for which the ToR has been obtained in 2011. However, since that proposal was not pursued, the EAC noted the ToR for Pauni -III OCP had lapsed. In effect, therefore, the EAC of the view Pauni-III OCP did not actually exist as of now. Agreeing with this, the project proponent clarified that the present proposal was actually the expansion of Pauni-II by amalgamating the areas under the erstwhile Pauni-III ToR.

(ii) The erstwhile Pauni-III OCP involved 12.07 ha of forest land for which they had earlier also applied for FC, and accordingly shown it in the documentation submitted to this EAC meeting. The project proponent were advised to name their proposal and considering the same as an expansion of Pauni-II without reference to erstwhile Pauni-III. This was important because the entire documentation submitted by the project proponent in the present meeting continuously referred to Pauni-II and Pauni-III features which need to be amalgamated.

55.5.5 *The proposal was accordingly deferred for want of the above clarification from the project proponent and resubmission of fresh documentation. While doing so, the project proponent was also advised to reduce land degradation, and to consider sequential mining to reduce the land for external OBD,(excavation) and void area. The project proponent was requested to study MoC guideline on mine plan toward this.*

The project proponent was also advised that they would need to appropriately correct their pending application also for FC.

Agenda 55.6

Amalgamated Yekona - I & II OCP in 2.75 MTPA (Normative) and 3.44 MTPA (Peak) in an area of 1701.32 ha in Village Marda, District Chandrapur (Maharashtra) of M/s Western Coalfields Limited - For further consideration of ToR

55.6.1 The proposal is for TOR for amalgamation and expansion 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 of M/s Western Coalfields Ltd (Maharashtra)

55.6.2 The proposal was earlier considered by the EAC in its 47th meeting held on 30th November-1st December, 2015 and 53rd meeting held on 17-18 March, 2016.

(a) During the meeting held in 30th November-1st December, 2015, the observations of the Committee were as under:-

The project proponent while presenting stated that the mine activities had been started in Yekona-II. It was pointed out to the project proponent that in their application/document submitted to the Ministry and circulated to the EAC members, as well as in the presentation, it was clearly stated that both Yekona- I & II project could not be started yet because of land acquisition problems despite both having valid EC of 2006. In the application, the PP had called this a new project whereas in the presentation, it appears/transpires that it is not a new project but more in the nature of expansion project. PP informed during presentation that work has been started in yekona-II in Oct.2015. The Committee was unhappy with the manner in which WCL had approached Ministry for processing the application as it was clear that the application contained incorrect facts. The Committee, therefore, advised PP to decide on further course of action before approaching the EAC again.

(b) The proposal was listed for consideration in 53rd EAC meeting held on 17th -18th March, 2016. But the proposal was deferred due to no senior officer present during the meeting on behalf of the project proponent.

55.6.3 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 EC for Yekona-I was granted vide letter No.J-11015/175/2006-IA.II(M)-dated 17th October, 2006 for a production capacity of 0.40 MTPA in mine lease area of 265.60 ha. The EC for Yekona-II was accorded vide letter No.J-11015/182/2006-IA.II(M) dated 17th October, 2006 for a production capacity of 0.60 MTPA in mine lease area of 414.56 ha.

(iii) The latitude and longitude of the project are 20° 13' 42" to 20° 16' 10" N and 78° 55' 00" to 78° 58' 30"E respectively.

(iii) Joint Venture: There is no joint venture.

(iv) Coal Linkage: Thermal Power Plants of MAHAGENCO & Miscellaneous consumers.

(v) Employment generated / to be generated: Direct Manpower for the proposed expansion proposal is 257 which will be arranged through internal resources and /or land oustees. In addition,

with the proposed expansion, about 300 Nos of indirect employment opportunities will be created.

(vi) Benefits of the project: The proposed expansion will bridge the gap between demand & supply of coal to the extent of the peak capacity.

(vii) The land usage of the project is as under:

Pre - Mining:

Sl.No.	Particular	Land (ha)
1.	Agricultural land	1617.18
2.	Waste Land	84.14
	Total	1701.32

Post – Mining :

Sl. No.	Land use	Land (ha)
1.	Plantation	847.02
2.	Water body including Mine void	395.55
3.	Public use	147.37
4.	Undisturbed/Relclaimed	311.38
	Total	1701.32

(viii) The total geological reserve is 67.65 MT. The mineable reserve 57.85 MT, extractable reserve is 57.85 MT. The per cent of extraction would be 85.51%.

(ix) The coal grade is G8. The stripping ratio is 7.82 cum/tonne. The average Gradient is 1 in 4.8 to 1 in 14. There is one composite seam of average thickness of 9.94 m.

(x) The total estimated water requirement is 920 m³ /day. The level of ground water ranges from 2.60 m to 10.20 m bgl.

(xi) The Method of mining would be Opencast with Shovel-Dumper Combination.

(xii) There would be 3 nos. of permanent external OB dumps to store 133.50 Mm³ of OB over 320.02 ha. Maximum height of OB dump would be 90 mtrs. An embankment would also be constructed with 2.42 MM³ of excavated OB. Also, there would be 2 nos. of internal OB dumps storing 322.53 Mm³ OB over an area of 352.20 ha.

(xiii) The final mine void would be 337.20 ha with the depth of 150 m against the total quarry area of 689.20 ha. The backfilled quarry area of 352.00 ha shall be reclaimed with plantation. The mine void of 337.20 ha with depth 150 m is proposed to be converted into a water body.

(xiv) The baseline environmental data would be generated and documented in EIA/EMP.

(xv) The life of mine is 25 years.

(xvi) Transportation: Coal from mine face will be transported by dumpers to pit head CHP. From CHP, coal will be taken by road to the railway siding to be constructed nearer to the CHP for minimizing road transportation. At railway siding, coal will be loaded from ground stock onto wagons by pay loaders.

(xvii) R&R: There is one village named Marda which is proposed to be re-located/resettled. As per 2011 census, there are 208 households having a population of 864 Nos. A capital provision of Rs 41.1908 Crores has been made in the project for resettlement of Marda village.

(xviii) Cost: The capital cost of the project is Rs. 745.83 Crores (Additional capital Rs. 727.38 Crores). The CSR cost as per extant CSR Policy is 2% of last three years average net profit or Rs. 2/tonne of coal production of previous year, whichever is higher. A capital provision of Rs 41.1908 Crores has been made in the project for resettlement of Marda village. In the approved project report, Environmental Management Cost of Rs. 97.09 lakhs has been envisaged for Environmental protection measures under Capital head & @ Rs 6.00/tone under revenue head.

- (xix) Water body: Wardha River passes at a distance of 125 mtrs from the mine site.
- (xx) Approvals: Ground water clearance is not applicable as it is not falling in critical area as per CGWA. The project report/Mining plan has been approved by WCL's Board on 12.08.2015. Mine closure plan being an integral part of project report/mining plan has also been approved on 12.08.2015.
- (xxi) Wildlife issues: There are no national Parks, Wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xxii) Forestry issues: There is no Forest land involved in the project.
- (xxiii) Total afforestation plan shall be implemented covering an area of 847.02 ha at the end of mining. Green Belt over an area of 175.00 ha. Density of tree plantation would be 2500 trees/ha of plants.
- (xxiv) There are no court cases / violation pending with the project proponent.

55.6.4 *The Committee, after detailed deliberations (in the 55th meeting on 11-13 May, 2016) recommended for grant of TOR with the additional scope of study as under:-*

- (i) *Diversion of irrigation canal.*
- (ii) *Diversion of part of PWD road from Wanoja to Marde, Warora to Madhari and Marda to Yekona.*
- (iii) *Diversion of water pipeline.*
- (iv) *Diversion of nallah.*
- (v) *The feasibility study should come out with alternative routes, the basic design and cost of such diversion works.*
- (vi) *Transport of coal from CHP to siding by belt conveyor and silo/pre weigh bin loading for cleaner environment.*
- (vii) *Sequential mining to reduce land degradation due to large area for external OB dump and void with depth of 150 m.*

Agenda 55.7

Kusmunda coal washery project of 25 MTPA in ML area of 41.23 ha in District Korba (Chhattisgarh) of M/s South Eastern Coalfields Limited - (EC based on TOR granted on 23.12.2015)

55.7.1 The proposal is for grant of EC to Kusmunda coal washery project of 25 MTPA capacity in an ML area of 41.23 ha of M/s South Eastern Coalfields Limited located in district Korba (Chhattisgarh).

55.7.2 The project proponent has informed that the said proposal for grant of EC to Kusmunda Washery was uploaded on the MoEFCC website on 29th March, 2016 for consideration. The request has been made with the public hearing documents for Kusmunda OC as the washery is proposed to be constructed in the core zone of Kusmunda OCP.

Meanwhile, it has been reported that Public Hearing for Kusmunda Washery has conducted on 11th April, 2016, the proceedings of which are awaited from Chhattisgarh Environment Conservation Board (CECB), Raipur. After incorporation of the public hearing proceedings, the final EIA/EMP would be submitted to the Ministry for consideration by the EAC. Taking into consideration the above mentioned facts, the project proponent expressed their inability to present the 55th EAC meeting scheduled for 12th May, 2016.

55.7.3 *The EAC noted the request made by the project proponent, and deferred the proposal.*

Agenda 55.8

Jagannath Washery of 10 MTPA in an area of 29.94 ha in village Hensmul, District Talcher (Odisha) of M/s Mahanadi Coalfields Ltd - For consideration of EC

55.8.1 The proposal is for grant of EC to Jagannath Washery of 10 MTPA in an area of 29.94 ha, in village Hensmul, District Talcher (Odisha) of M/s Mahanadi Coalfields Ltd.

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

- (i) The project was accorded ToR vide letter No.J-11015/203/2015-IA-II (M) dated 13th August, 2015. Amendment in ToR was issued vide letter dated 1st February, 2016.
- (ii) The latitude and longitude of the project site are 20° 57' 59" N to 20° 58' 43" N and 85° 09' 10" E to 85° 11' 37" E respectively.
- (iii) Joint Venture: No
- (iv) Coal Linkage: Linked to Bhubaneswari Opencast Project of 25MTPA.
- (v) Employment generated/to be generated: Washery will be constructed on BOM concept. Hence, employment would be generated by the BOM operator.
- (vi) Benefits of the project: Beneficiation/washing of coal will lead to reduction in particulate emission, improvement in performance of power plant, reduction in load on Railway Network, reduction in handling and transportation cost of coal and solid waste.
- (vii) Land usage of the project will be as follows: Total land involved for washery is 29.94 ha (20.04 ha for washery site + 9.9 ha for temporary reject storage). Present land use breakup is as follows:
Govt. Forest land – NIL (2.55 ha.- mined out and regularized forest land for Temporary reject sage);
Govt. Non-forest land - 2.30 ha ;
Non Forest Land (Tenancy) - 25.09 ha;
The entire land (29.94 ha) has already been acquired by MCL and is in physical possession of MCL.
- (viii) The coal grade is G11.
- (ix) The total estimated water requirement is 2271 KL/D at 0.084 KL/T of coal washed.
- (x) The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- (xi) The life of Washery is 18 years for computation of economics.
- (xii) Transportation: By covered conveyor belt (for Raw coal, Washed coal & Reject).
- (xiii) There is no R & R involved. There are no PAFs.
- (xiv) Cost: As per Revised Conceptual Report (RCR): 26535.00 Lakh. As per Lowest Bidder: 34875.00Lakhs.
- (xv) Water body : Brahmani river at 6 km (E), Nandira jhar at 9 km (S), Singada jhar at 12 km (W) from the mine boundary.
- (xvi) Approvals: Board's approval obtained on 5th November, 2014.
- (xvii) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xviii) Forestry issues: For Washery site - Nil; For temporary reject storage-2.55 ha; (Already mined out and regularized); FC for 2.55 ha forest land for proposed temporary reject storage has

been obtained for Ananta OCP and mined out.

(xix) Green Belt over an area of Approx. 3.67 ha around washery site and 5.37 ha around reject storage site. The density of tree plantation 1600 nos. per ha.

(xx) There are no court cases/violation pending with the project proponent.

(xxi) Public Hearing was first held on 16th February, 2016 and then again on 12th April, 2016.

55.8.3 The Committee, after detailed deliberations **(in the 55th meeting on 11th -13th May, 2016)** noted the following:

(i) The Committee noted that the proposed washery with its technology firmed up/finalized, was yet to get the approval of Board of the project proponent.

(ii) The project proponent presented wind rose for one quarter only. Whereas, the meteorological data should have been for a minimum period of one year to have a consistent and reasonable picture of wind directions.

(iii) The project proponent is also required to give data on emission factor for various sources of fugitive emissions, which would be generated from the washery. Based on these emission factors, predicted air quality values should be provided both for controlled and uncontrolled emissions.

(iv) The project proponent mentioned that at places where high values of PM 10 were observed, mitigative measures would involve construction of a separate internal road by-passing the habitated areas. This is in addition to providing conveyor system for coal transportation and silo loading at the sidings, which is under implementation. Works on these measures were asked to be expedited.

(v) The project proponent during presentation informed that water storage bodies on the rise side of the mine excavated area in Ananta OCP. The project proponent was advised to examine this as it may endanger the dip side workings.

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

Agenda 55.9

2.5 MTPA Coal Washery in an area of 9.85 ha at Ghutku Village, Tehsil Takhatpur, District Bilaspur District (Chhattisgarh) by M/s Paras Power & Coal Beneficiation Ltd – For TOR

55.9.1 The proposal is for grant of TOR to 2.5 MTPA coal washery based on heavy media cyclone technology in an area of 9.85 ha at Ghutku Village, Takhatpur Tehsil, Bilaspur District, Chhattisgarh at Ghutku Village, Tehsil Takhatpur, District Bilaspur (Chhattisgarh) by M/s Paras Power & Coal Beneficiation Ltd.

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

- i. The project for grant of TOR
- ii. The latitude and longitude of the project are 22° 08' 9.17" N to 22° 09' 2.84" N and 82° 05' 21.74" E to 82° 05' 31.95" E respectively.
- iii. Joint Venture: Not Applicable
- iv. Coal Linkage : Letters of interest obtained for approx. 1.78 MTPA
- v. Employment generated / to be generated: Construction – approx. 200 persons; Operation – 65 persons; Indirect employment – approx. 250 persons.

- vi. Benefits of the project: The project will improve the socio-economic status of the society in the region by generating direct and indirect employment opportunities. The project will contribute additional revenue to the State & Central exchequers in the form of taxes, cess, etc
- vii. The land usage of the project: Project land is generally barren. There are a few patches of single crop. The site is more or less flat. Total land required for the proposed project is 24.36 acres, of which 75% is under possession of the management. 30% of the total project area will be developed as greenbelt
- viii. Transportation: The raw coal for beneficiation will be brought from the SECL mines, located within approx. 70 km, like Gevra, Deepka, Kusmunda by road and rail.
- ix. Cost: Total capital cost of the project is Rs 24.00 crores excluding EMP & railway siding costs.
- x. Approvals: The water requirement of 61m³/hr for the proposed project will be met from ground water with prior approval of CGWA.
- xi. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xii. Forestry issues: no forest area involved.
- xiii. There are no court cases/violation pending with the project proponent.

55.9.3 The Committee, after detailed deliberations **(in the 55th meeting on 11th -13th May, 2016)** noted the following:

- (i) The water required by the washery is proposed through ground water. The ground water withdrawal and as such, permission from Central Ground Water Authority (CGWA) needs to be obtained.
- (ii) The project proponent has proposed transportation of raw coal from Gevra, Kusmunda and Dipka mines situated 65-100 km away, by rail or road. The railway siding which is 6 km away from the plant, is proposed to be used till their own siding comes up. The Committee desired that the transport capacity of the road through which the coal is to be transported, needs to be examined and permission from the required authority to be taken.
- (iii) The project proponent presented the base line data w.e.f. March, 2016, which was accepted by the EAC.

55.9.4 *The Committee, after detailed deliberations (in the 55th meeting on 11-13 May, 2016) recommended the proposal for grant of ToRs for preparation of EIA/EMP along with Public Hearing subject to all generic conditions applicable for washeries, and the additional scope of work as under:-*

- *The ground water permission from Central Ground Water Authority (CGWA) be obtained*
- *The project proponent has proposed transportation of raw coal from Gevra, Kusmunda and Dipka mines situated 65-100 km away, by rail or road. The railway siding which is 6 km away from the plant, is proposed to be used till their own siding comes up. The Committee desired that the transport capacity of the road through which the coal is to be transported, needs to be examined and permission from the required authority to be taken.*

Agenda 55.10

Expansion of Chotia-II Captive coal mining Project from 0.25 MTPA to 1.0 MTPA in ML area of 411 ha located in Salaigot Village, Tehsil Podiuprodha, District Korba (Chhattisgarh) of

M/s Bharat Aluminium Company Limited (BALCO) - TOR - For further consideration

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

55.10.2 The proposal was earlier considered by the EAC in its 42nd meeting held on 31st August-1st September, 2015, 44th meeting held on 8 - 9 October, 2015.

(a) During the meeting held on 8 - 9 October, 2015, the observations of the Committee were as under:-

- (i) The EC dated 10th November, 2005 for Chotia –II is for 0.25 MTPA UG mine as per first mine plan approval.
- (ii) The PP informed that in the year 2010, modification in the Mine Plan was made for 0.5 MTPA OC and 0.3 MTPA UG.
- (iii) Stage -I FC received on 04.01.2011 and Stage –II on 07.06.2011.
- (iv) The project proponent informed that the application for FC was made by the earlier proponent for both OC and UG mine. However, they were requested to look into the details and submit the detailed documents to clarify whether the FC was given for both OC & UG without taking note of the EC which is for UG mine only.
- (v) In the year 2010, revised mine plan was approved with OC & UG. However, no application for amendment of EC was submitted by the earlier PP.
- (vi) PP has applied for revision of Mine Plan with OC & UG to MOC, which is still awaited.

55.10.3 In view of the above observations, the committee had suggested the project proponent to apply for amendment in the EC after approval of revised mine plan. However, the Ministry observed and communicated the project proponent as under:-

- (i) The earlier EC for Chotia-II was issued for 0.25 MTPA all underground, and now ToR has been applied for expansion from 0.25 MTPA UG to 1 MTPA UG&OC.
- (ii) The application for ToR should be filed taking Chotia-II as a fresh project and not expansion as no mining work has begun at site, so no question of expansion.
- (iii) The proposal calls for a new mine plan and fresh EC.

55.10.4 The Committee, after detailed deliberations **(in the 55th meeting on 11th -13th May, 2016)** noted the following:

- (i) The project proponent has proposed transportation of coal by road to for a distance of about 70 km. The project proponent mentioned that the predecessor company M/s Prakash Industry was also transporting coal of the same quantity (1 MTPA) on the same National Highway for a longer distance of more than 100 km. The Committee was, however, of the view that traffic load were continuing to increase on all roads, and hence desired that the carrying capacity of the road is required to be studied while conducting EIA study.
- (ii) The project proponent informed that presently there is no rail connectivity. They were advised to take details of new railway lines proposed in the area for coal transportation and also to pursue with concerned authorities. They were also advised to inform the status at the time of presentation of EC.

(iii) The project proponent requested to consider the monitoring data of air quality carried out by them during October to December as well as for water quality (ground water and surface water). While considering their request, the Committee asked for conducting additional one month study for monitoring prior to monsoon with additional monitoring data of ground water around the mine through peizometric wells (minimum three).

(iv) The project proponent shall not use any water resources other than mine water requirement during operation of the mine.

(v) The surface drainage channel which is at South-East part of mine lease area subjected to diverted water from the catchment, should move into natural drainage pattern.

55.10.5 The Committee, after detailed deliberations (in the 55th meeting on 11-13 May, 2016) recommended the project for grant of following additional standard TORs for preparation of EIA/EMP along with Public Hearing.

- *The ground water permission from Central Ground Water Authority (CGWA) be obtained*
- *To assess traffic load carrying capacity of the road while conducting EIA study.*
- *Details of new railway lines proposed in this area for use of transportation of coal need to be submitted.*
- *Additional one month study for monitoring prior to monsoon with additional monitoring data of ground water around the mine through peizometric wells (minimum three).*
- *No use of water resources during operation of the mine.*
- *Surface drainage channel in South-East direction of mine lease area subjected to diverted water from the catchment, should move into natural drainage pattern*

Agenda 55.11

Shivkar Lignite Coal Mine of 1.0 MTPA in ML area 1855.45 ha located in Tehsil & District Barmer (Rajasthan) of M/s Rajasthan State Mines & Minerals Limited - For consideration of TOR

55.11.1 The proposal is for grant of ToR for Shivkar Lignite Coal Mine 1.0 MTPA in ML area of 1855.45 ha located in Tehsil & District Barmer (Rajasthan) of M/s Rajasthan State Mines & Minerals Limited (RSMML).

55.11.2 The proposal was earlier listed for consideration in 53rd EAC meeting held on 17th -18th March, 2016. However, it was later decided to take up the case in the next EAC meeting, and the project proponents were informed accordingly.

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

- The proposal is for grant of ToR to Shivkar Lignite Coal Mine of 1.0 MTPA in ML area 1855.45 ha.
- The Latitude and Longitude of the project are N 25° 43' 52.5" to N 25° 45' 07.6" and E 71° 26' 14.9" to E 71° 28' 55.6" respectively.
- Joint Venture: No
- Coal Linkage : Linked with Thermal Power Plant (Unit-1 & 2, 125 x2 MW) Already installed

by Rajasthan Vidyut Utpadan Nigam.

(v) Employment generated/to be generated: Direct and In-direct Employment will be generated.

(vi) Benefits of the project: It will facilitate the augmentation of Power generation in this power deficit state.

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

S.No.	Landuse	Within ML area (ha)	Outside ML area (ha)	Total
1.	Agricultural land	1140.29	Nil	1140.29
2.	Forest land	Nil	Nil	Nil
3.	Wasteland	410.31	Nil	410.31
4.	Grazing land	49.94	Nil	49.94
5.	Surface water bodies	6.90	Nil	6.90
6.	Settlements	28.75	Nil	28.75
7.	Others (specify)	219.26	Nil	219.26
	TOTAL	1855.45	Nil	1855.45

Pre-Mining: 1855.45 ha

Post- Mining: 1346.69 ha

S. No.	Land use during Mining	Land Use (ha)					Total
		Plantation	Water body	Public Use	Undisturbed /indirectly effected	Other Statutory Barrier	
1.	External OB Dump	264.25	0	0	0	0	264.25
2.	Top Soil Dump	0	0	0	0	0	0
3.	Excavation	843.67	160.77	0	0	0	1004.44
4.	Roads	0	0	14.0	0	0	14.0
5.	Built up area	3.0	0	01.0	0	0	4.0
6.	Greenbelt	60.0	0	0	0	0	60.0
7.	Undisturbed Area	0	0	0	235.0	273.36	508.76
	Total	1167.92	160.77	18.0	235.0	273.36	1855.45

Core area : 1855.45 ha (ML area).

(viii) The total geological reserve is 137.26 MT. The mineable reserve 59.74 MT, extractable reserve is 56.76 MT. The per cent of extraction would be 95%.

(ix) The coal grade is Calorific value 3000-400 k.cal/kg. The stripping ratio is 19.63 Cum/tonne. The average Gradient is $01^0 - 3.0^0$ there will be 7-13 seams with thickness ranging 0.30 -11.60 m.

(x) Total estimated water requirement is 280 m³/day. The level of ground water ranges 140-150 m bgl.

(xi) The Method of mining would be Opencast.

- (xii) There is one external OB dump with Quantity of 127.67 Mbcm in an area of 264.25 ha with height of 60 meter above the surface level and One internal dump with Quantity of 986.37 Mbcm in an area of 843.67 ha.
- (xiii) The final mine void would be in 160.77 Ha with depth varying 10 m. and the Total quarry area is 1004.44 ha. Backfilled quarry area of 843.67 Ha shall be reclaimed with plantation. A void of 160.77 ha with depth 10 m which is proposed to be converted into a water body.
- (xiv) The life of mine is 58 years.
- (xv) Transportation: Coal transportation in pit by Dumper from in pit to pit head coal handling plant, Surface to Siding by Truck / Dumper and loading at siding by truck/dumper.
- (xvi) There is R & R involved. There are 550 PAFs.
- (xvii) Cost: Total capital cost of the project is Rs. 632.32 Crores. CSR Cost Rs. 583. R&R Cost Rs. 63.85 Crores. Environmental Management Cost to be determined.
- (xviii) Water body : No
- (xix) Approvals: Ground water **clearance** will be obtained if required, Board's approval to be obtained Mining plan yet not approved, Mining Plan & Mine Closure has been re-submitted to MoC on 3rd November, 2014. Mine closure plan is an integral part of mining plan.
- (xx) Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- (xxi) Forestry issues: No forest area involved.
- (xxii) Total afforestation plan shall be implemented covering an area of 264.25 ha at the end of mining. Green Belt over an area of 60 ha and the density of tree plantation is 60000 Nos of plants.
- (xxiii) There are no court cases/violation pending with the project proponent.

55.11.4 The Committee, after detailed deliberations **(in the 55th meeting on 11th -13th May, 2016)** noted the following:

- (i) It was seen from the documents submitted by the project proponent as well as from the presentation that an area of approximately 1855 ha was proposed to be acquired in different phases. The project proponent informed that in the documents submitted by them it had been indicated that this lignite would be supplied to the power station located at some distance. However, the State Government revised its decision, and it is now proposed to develop the 1 MTPA mine to set up of a 125 MW pit head thermal power plant. The project proponent showed though this correction had not been met in the documents submitted, but submitted letter dated 12th April, 2016 from M/s Rajasthan Rajya Vidyut Prasaran Nigam Ltd to the above effect.
- (ii) Land use pattern indicated in the presentation shows that out of the 1855 ha, approximately 1637 ha is agricultural land and another almost 50 ha is Gauchar land. The project proponent informed that land compensation would be paid as per prevailing State Government policies and the average cost per hectare is approximately Rs. 60 lakh (corresponding to approximately Rs. 10 lakh per bigha). It was observed by the Committee that on this basis, the total land cost works out to slightly more than Rs 1100 crores for setting up of small 125 MW power plant.
- (iii) In addition, an area of approximately 18.5 km² of primarily agricultural land in State like Rajasthan, would get permanently destroyed. The Committee therefore, advised the project proponent to carry out a detailed cost benefit analysis of the entire project from an institute of national repute. The analysis should clearly bring out the alternative options available for setting up such small capacity power generating units along with exploring other units such as solar power which would otherwise have minimal environmental impacts.

(iv) The proposed mine is very close (only 8 km) to existing major urban agglomeration i.e. Balmer town. Normally sites on which polluting processes/industries are to be set up, should not be located near such township.

55.11.5 *The proposal was therefore, deferred for want of inputs/clarifications from the project proponent on the above lines.*

Agenda 55.12

Coal Washery of 2.5 MTPA in ML area 12.14 ha in Tehsil Masturi, District Bilaspur (Chhattisgarh) of M/s Chhattisgarh Power and Coal Beneficiation Ltd – For consideration of TOR

55.12.1 The proposal is for TORs for Coal Washery of capacity 2.5 MTPA in ML area 12.14 ha in Tehsil Masturi, District Bilaspur (Chhattisgarh) of M/s Chhattisgarh Power and Coal Beneficiation Ltd.

55.12.2 The proposal was earlier listed for consideration in 53rd EAC meeting held on 17th -18th March, 2016. However, it was later decided to take up the case in the next EAC meeting, and the project proponent were informed accordingly.

55.12.3 *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 55.13

Coal Washery of 5.0 MTPA in ML area 12.65 ha in Tehsil Rengali, District Sambalpur (Odisha) of M/s Aryan Ispat & Power Pvt - For consideration of TOR

55.13.1 The proposal is for TORs for Coal Washery of 5.0 MTPA capacity in ML area 12.65 ha in Tehsil Rengali, District Sambalpur (Odisha) of M/s Aryan Ispat & Power Pvt

55.13.2 The proposal was earlier listed for consideration in 53rd EAC meeting held on 17 -18 March, 2016. However, it was later decided to take up the case in the next EAC meeting, and the project proponent were informed accordingly.

55.13.3 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 proposal is for grant of TOR.
- (ii) The latitude and longitude of the project are 21° 42' 39.1"- 21° 42' 49.6" N and 84° 02' 25.2" - 84° 02' 43.9" E respectively.
- (iii) Joint Venture: there are no JV.
- (iv) Coal Linkage: Letters of interest obtained for approx. 3 MTPA
- (v) Employment generated / to be generated: Construction – approx. 200 persons; Operation – 70 persons; Indirect employment – approx. 250 persons
- (vi) Benefits of the project: The project will improve the socio-economic status of the society in

the region by generating direct and indirect employment opportunities. The project will contribute additional revenue to the State & Central exchequers in the form of taxes, cess, etc

(vii) The land usage of the project: The entire project area is under possession of project proponent. Land use is industrial

(viii) Transportation: Raw coal will be sourced on behalf of the clients from MCL mines, namely, Basundra & Kulda [110 km], Samleswari [37 km], Belpahar [38 km], Lakhanpur [64 km], located within about 100 km. Washed Coal will be transported by road and rail; Private freight terminal (PFT) - railway siding existing inside the steel plant of AIPPL is 100 m from the proposed washery site.

(ix) Cost: Total capital cost of the project is Rs 60.07 crores excluding EMP cost.

(x) Water requirement: 55 m³/hr water requirements will be met from the existing rain water harvesting reservoirs of AIPPL's integrated steel plant. 3m³/hr ground water will be used for domestic purpose.

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

(xii) Forestry issues: there are no forest area involved in the project site

(xiii) There are no court cases/violation pending with the project proponent.

55.13.4 The Committee, after detailed deliberations **(in the 55th meeting on 11th-13th May, 2016)** noted the following:-

(i) The project proponent has identified the three sites which are close to each other, in the same area, and close to the Hirakud reservoir. Generally, washery is required to be located close to the mines or to the user. In the present case the proposed site is not a pit head washery and of a large capacity of 5 MTPA and it has not meant for captive purpose.

(ii) The project proponent has proposed transportation of raw coal including washed coal as well as middling and rejects through both road and rail.

(iii) It was informed by project proponent that the critically polluted area in the region was about 10 km from proposed site.

(iv) Considering that site proposed is close to the Hirakud reservoir, and about 10 km distance from critically polluted area, and washery being a highly polluted activity, the site selected is not considered to be appropriate. It should be far away from the reservoir and should be close to the coal mine requiring minimal road transportation. The project proponent, therefore, may come up with some alternative site, keeping in view the above environmental consideration.

55.13.5 *The proposal was, therefore, deferred.*

Agenda 55.14

Expansion of Ghonsa OCP of 0.60 MTPA from 128.79 ha to 278.683 ha located in District Yavatmal (Maharashtra) by M/s Western Coalfields Ltd - For consideration of EC

55.14.1 The proposal is for grant of EC to Ghonsa OCP of capacity of 0.60 MTPA with increase in area from 128.79 ha to 278.683 ha located in District Yavatmal (Maharashtra) by M/s Western Coalfields Ltd.

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

- (i) The Ministry granted EC to expansion of Ghonsa OCP from 0.45 MTPA to 0.60 MTPA in ML area of 128.79 ha located in District Yavatmal (Maharashtra) of M/s Western Coalfield Ltd, under 7(ii) of EIA Notification, 2006 vide letter No.J-11015/165/2009 -IA.II (M) dated 8th December, 2014.
- (ii) The Ministry granted forest Clearance vide letter No.6-MHC-30/2014-BDQ/181 dated 8th March, 2016 for diversion of forest land of 24 ha in District Yavatmal (Maharashtra) in favour of M/s WCL Ltd for mining coal at Ghonsa OC mine project

55.14.3 The Committee, after detailed deliberations (in the 55th meeting on 11th -13th May, 2016) noted the following:

- (i) Public hearing was conducted on 9th August, 2011 for expansion of the project in an area of 293 ha. Since the public hearing (even though it was for 293 ha) is nearly 5 years old, fresh public hearing needs to be held.
- (ii) The existing EC for 0.6 MTPA was granted in December, 2014 involving an area of 128.79 ha. Now, the project proponent is approaching for 0.6 MTPA in an area of 278.683 ha instead of 293 ha.
- (iii) The compliance report received through the Regional Office is of May, 2014, and that too for the previous EC capacity of 0.45 MTPA. Since the current EC is for 0.6 MTPA, fresh RO report on the latest EC of December, 2014 is essentially required.
- (iv) The project proponent should also get fresh data of air and water quality for a period of at least one month for the stations of earlier core and buffer zone for the locations used in the original EIA/EMP reports.

55.14.4 *The proposal was, therefore, deferred for want of inputs/clarifications on the above lines.*

Agenda 55.15

Pakri Barwadih Coal mine project of 15 MTPA Capacity in an area of 3319.42 ha in North Karanpura Coalfields, District Hazaribagh (Jharkhand) of M/s NTPC Ltd – For amendment in EC

55.15.1 The proposal is for amendment in the EC dated 19th May, 2009 granted to Pakri Barwadih Coal mine project of 15 MTPA in an area of 3319.42 ha located in Tehsil Barkagaon, District Hazaribagh (Jharkhand) of M/s NTPC Ltd due to change in mining sequence, and subsequent change in land use and transportation of coal by road from crusher point to the Banadag railway siding.

55.15.2 The proposal was earlier considered by the EAC in its 33rd meeting held on 9-10 April, 2015 and 49th meeting held on 16-17 July, 2015.

(a) During the meeting held in April, 2015, the observations of the Committee were as under:-

- (i) Ministry of Coal (MOC) has permitted NTPC for change in mining sequence vide letter dated 24th June, 2015
- (ii) A comparative statement of the original proposal for which Environmental Clearance was granted and the changes now being proposed along with alternatives regarding over burden management has been submitted.

During the meeting the Committee sought following information:-

- (i) Revised Mine plan approval from MOC for the proposed changes in mining sequence.
 - (ii) Comparative statement of the original proposal for which EC was granted and the changes now being proposed along with alternatives regarding OB management.
- (b) While deliberations during the last meeting held in July, 2015, the EAC was not convinced with the presentation and the documentation provided by the project proponent.

55.15.3 The Committee, after detailed deliberations **(in the 55th meeting on 11th -13th May, 2016)** noted the following:

- (i) The Ministry of Coal has approved the revised Mine Plan.
- (ii) Operation of Eastern quarry is for a production of 1.9 MTPA in two years as approved in the Mine Plan, with an additional OB dump, which would be completely re-handled and filled back into the Western quarry.
- (iii) During first two years of Eastern quarry operation, the river embankment along the stretch of the quarry, should be strengthened in a way to prevent flooding of water as per the DGMS requirement. After two years of operation, the Eastern quarry would be re-opened only from 25th year as scheduled.
- (iv) The conveyor system has been extended from 6 km to 13 km as per FC requirements, requiring coal transport to Banadag railway station 13 km away. The same was reported to be in progress. The project proponent informed that it would take approximately two years to complete the conveyor system and the silo loading arrangements at the railway siding. In view of the above, coal transport has been requested through State Highways and public roads for approx. 35 km to Banadag railway siding. Further, it was informed that a road was being constructed along the conveyor system which would reduce the siding distance to approximately 13 km. The Committee asked for expediting this to reduce road transport distance and avoid use of public road.

55.15.4 *In view of above, the EAC, after deliberations, recommended for amendment in the EC dated 19th May, 2009 in respect of coal transportation through roads for a period of two years instead of conveyor system. The Committee also advised the project proponent for early completion of the road along the conveyor system and its use.*

Agenda 55.16

Parsoda Opencast Coal Mine Project of 0.80 MTPA (Normative) & 1.04 MTPA (peak) in an area of 611.83 ha in District Yavatmal, (Maharashtra) of M/s Western Coalfields Ltd - For extension of validity of TOR

55.16.1 The proposal is for extension of validity of TOR granted vide letter No.J-11015/06/2013-IA-

II (M) dated 25th February, 2014 to Parsoda Opencast Coal Mine Project of 0.80 MTPA (Normative) & 1.04 MTPA (peak) in an area of 611.83 ha in District Yavatmal (Maharashtra) of M/s Western Coalfields Ltd.

55.16.2 As per 'D' below

Agenda 55.17

Padmapur Extn. Deep Opencast Mine for the capacity of 2.50 MTPA (Normative) and 3.25 MTPA (Peak) in an area of 837.19 ha in Tehsil Chandrapur, Dist Chandrapur (Maharashtra) of M/s Western Coalfields Limited - For extension of validity of TOR

55.17.1 The proposal is for extension of validity of TOR granted vide letter No.J-11015/390/2012-IA-II(M) dated 25th February, 2014 to Padmapur Extn. Deep Opencast Mine for the capacity of 2.50 MTPA (Normative) and 3.25 MTPA (Peak) in an area of 837.19 ha in Dist Chandrapur (Maharashtra) of M/s Western Coalfields Ltd.

55.17.2 As per 'D' below

Agenda 55.18

Nandan-II UG Extn. Coal Mining Project for the capacity of 0.405 MTPA in an area of 656.14 ha in tehsil Junnardeo, District Chhindwara (MP) of M/s Western Coalfields Limited - For extension of validity of TOR

55.18.1 The proposal is for extension of validity of TOR granted vide letter No.J-11015/371/2013-IA-II(M) dated 23rd May, 2014 to Nandan-II UG Extn. Coal Mining Project of 0.405 MTPA in an area of 656.14 ha in District Chhindwara, (Madhya Pradesh) of M/s Western Coalfields Limited

55.18.2 As per 'D' below

Agenda 55.19

Dhori Group of Mines of 8.25 MTPA (Normative) and 11 MTPA (Peak) in an area of 315.05 ha in District Bokaro (Jharkhand) of M/s Central Coalfields Limited - For extension of validity of TOR

55.19.1 The proposal is for extension of validity of TOR granted vide letter No.J-11015/75/2013-IA-II (M) dated 25th February, 2014 to Dhori Group of Mines of 8.25 MTPA (Normative) and 11 MTPA (Peak) in an area of 315.05 ha in District Bokaro, (Jharkhand) of M/s Central Coalfields Limited.

55.19.2 As per 'D' below

D. The EAC (in the 55th meeting on 11th-13th May, 2016) was informed, and also as brought in the documents submitted by the PPs that in all the four cases, the TORs were issued in 2014 (Nandan -II in May 2014 and other three cases in February 2014). At that stage, the validity of ToR as per Ministry's Notification and OMs, was for an initial period of two years. Subsequently the Ministry had issued another Notification in October, 2014 extending the initial period of validity of TOR from 2 to 3 years.

All the above mentioned cases were seeking extension of validity in terms of the Ministry's original Notification from 2 to 3 years. The Committee was informed that the Ministry has recently taken a decision on how to deal with such requests for ToR validity extension in light of their subsequent Notification/OM of October, 2014. However, no OM in this regard had been yet issued by the Ministry.

The Committee therefore, was of the view that the Ministry may take the appropriate decision in all the above four cases.

Agenda 55.20

Discussion under any other item

PARTICIPANTS IN 55th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 11th – 13th May 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 N. K. Verma	Member
5.	Shri G. S. Dang	Member
6.	Dr. S. K. Paliwal	Representative (CPCB)
7.	Shri N. S. Mondal	Representative (CEA)
8.	Shri S. K. Shrivastva	Member Secretary

PARTICIPANTS IN 55th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 11th – 13th May 2016 ON COAL SECTOR PROJECTS.

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

1. Shri Atal Bihari
2. Shri Prateesh V. P
3. Shri V. N. Dupattawala
4. Shri U C. Dumka
5. Shri Kishor Chaudhary
6. Shri Rakesh Kumar
7. Shri Sunil Kumar
8. Shri B. K Sharma
9. Shri J. L Singh

55.2 Pit Head Coking Coal Washery in Tasra Coal Block of M/s Steel Authority of India Ltd.

1. Shri Abhay kumar Singh
2. Dr. T. B. Singh
3. Dr. R. K. Tiwary
4. Shri Sarab Kumar
5. Shri G. V. R. Rao
6. Shri K Sinha
7. Shri H. P. Sharma
8. Shri Shashi Shekhar
9. Shri D. Sen
10. Shri D. Bangai
11. Shri N. kala
12. Shri R. K. Prasad

55.3 Cluster 11 of M/s Eastern Coalfield Limited.

1. Shri K. S. Patra
2. Shri G. Prasad
3. Shri Kishore chaudhary
4. Shri P Banarjee
5. Shri S. Chakraborty
6. Shri Anand Shekhar
7. Shri Sunil Kumarl

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

8. Shri K. S. Patra
9. Shri G. Prasad
10. Shri Kishore chaudhary
11. Shri P Banarjee
12. Shri S. Chakraborty
13. Shri Anand Shekhar
14. Shri Sunil Kumarl

55.5 Expansion of Pauni -II of M/s Western Coalfields Ltd.

1. Shri B K Mishra
2. Vijay Krishna Nagda
3. Shri R M wanare
4. Shri Praveen K Maurya
5. Shri H. K. Ghanvat
6. Shri Kishore chaudhary
7. Shri S C Shankar
8. Shri T. K. Shrivastava
9. Shri K Chakraborty

55.6 Amalgamated Yekona I & II of M/s Western Coalfields Ltd.

1. Shri B K Mishra
2. Vijay Krishna Nagda
3. Shri R M wanare
4. Shri Praveen K Maurya
5. Shri H. K. Ghanvat
6. Shri Kishore chaudhary
7. Shri S C Shankar
8. Shri T. K. Shrivastava
9. Shri K Chakraborty

55.7 Kusmunda coal washery project of M/s South Eastern Coalfields Limited.

1. Absent

55.8 Jagannath Washery of M/s Mahanadi Coalfields Ltd

1. Shri J. P. Singh
2. Shri R.K. Srivastava
3. Shri P K Mishra
4. Shri R P Gupta

5. Shri G K Vaishnav
6. Ms Kusum Kumari
7. Shri D K Singh
8. Shri V Arora

55.9 2.5 MTPA coal washery by M/s Paras Power & Coal Beneficiation Ltd.

1. Shri Prashant Jain
2. Shri K K Jain
3. Shri Shashi Shekhar
4. Shri G V R Rao
5. Shri Warga Bhawan
6. Shri Sunil Kumar

55.10 Expansion of Chotia-II Captive coal mining Project of M/s Bharat Aluminium Company Limited.

1. Shri Ramesh Nair
2. Shri Afroz
3. Shri Ramesh Narang
4. Shri Shashi Shekhar
5. Shri J Sunil Kumar
6. Shri G V R Rao
7. Shri Tushar Sainger
8. Shri Warga Bhawan

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

1. Shri R. V. Romano
2. Shri P. R. Gehlot
3. Shri N. S. Negi
4. Shri K. C. Sharma
5. Shri P. R. Prajapat

55.12 Coal Washery (capacity of 2.5 MTPA In an ML area 12.14 ha) of M/s Chhattisgarh Power And Coal Beneficiation Ltd

1. Absent

55.13 5.0 MTPA Coal Washery of M/s Aryan Ispat & Power Pvt. Ltd.

1. Shri K. K. Jain
2. Shri P. K. Waish
3. Shri N. Kumar
4. Shri Ankur Jain
5. Shri G. V. R. Rao

55.14 EC for Ghonsa OC Expansion (Phase-II) of M/s Western Coalfields Ltd.

1. Shri B K Mishra
2. Vijay Krishna Nagda
3. Shri R M wanare
4. Shri Praveen K Maurya
5. Shri H. K. Ghanvat
6. Shri Kishore chaudhary
7. Shri S C Shankar
8. Shri T. K. Shrivastava
9. Shri K Chakraborty

55.15 Pakri Barwadih Coal mine of M/s NTPC.

1. Shri Sharad Anand
2. Shri P. M Prasad
3. Shri Sunil Jamde
4. Shri R K Baderia
5. Shri Ajay Kumar
6. Shri P R Rao
7. Shri Ravi Verma

55.16 Parsoda Opencast Coal Mine Project of M/s Western Coalfields Ltd.

1. Shri B K Mishra
2. Vijay Krishna Nagda
3. Shri R M wanare
4. Shri Praveen K Maurya
5. Shri H. K. Ghanvat
6. Shri Kishore chaudhary
7. Shri S C Shankar
8. Shri T. K. Shrivastava
9. Shri K Chakraborty

55.17 Padmapur Extn. Deep Opencast Mine Project of M/s Western Coalfields Ltd.

1. Shri B K Mishra
2. Vijay Krishna Nagda
3. Shri R M wanare
4. Shri Praveen K Maurya
5. Shri H. K. Ghanvat
6. Shri Kishore chaudhary
7. Shri S C Shankar
8. Shri T. K. Shrivastava
9. Shri K Chakraborty

55.18 Nandan-II UG Extn. Coal Mining Project of M/s Western Coalfields Ltd.

1. Shri B K Mishra
2. Vijay Krishna Nagda
3. Shri R M wanare
4. Shri Praveen K Maurya
5. Shri H. K. Ghanvat
6. Shri Kishore chaudhary
7. Shri S C Shankar
8. Shri T. K. Shrivastava
9. Shri K Chakraborty

55.19 Dhor Group of Mines project of M/s Central Coalfields Limited.

1. Shri P. K. Tiwari
2. Shri S. Singh
3. Shri Pushkar
4. Dr. Manoj Kumar
5. Shri J. Chakravorty.

Generic ToR for coal washery

- i. Siting of washery is critical considering to its environmental impacts. Preference should be given to the site located at pit head; in case such a site is not available, the site should be as close to the pit head as possible and coal should be transported from mine to the washery preferably through closed conveyer belt to avoid air pollution.
- ii. The washery shall not be located in eco-sensitive zones areas.
- iii. The washery should have a closed system and zero discharge. The storm drainage should be treated in settling ponds before discharging into rivers/streams/water bodies.
- iv. A thick Green belt of about 50 m width should be developed surrounding the washery.
- v. A brief description of the plant alongwith a layout, the specific technology used and the source of coal should be provided.
- vi. The EIA-EMP Repot should cover the impacts and management plan for the project of the capacity for which EC is sought and the impacts of specific activities, including the technology used and coal used, on the environment of the area (within 10km radius), and the environmental quality of air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts for the rated capacity. Cumulative impacts for air and water should be a part of EIA in case coal mine, TPP and other washeries are located within 10km radius. The EIA should also include mitigative measures needed to minimize adverse environmental impacts.
- vii. A Study Area Map of the core zone as well as the 10km area of buffer zone showing major industries/mines and other polluting sources should be submitted. These maps shall also indicate the migratory corridors of fauna, if any and areas of endangered fauna; plants of medicinal and economic importance; any ecologically sensitive areas within the 10 km buffer zone; the shortest distance from the National Park/WL Sanctuary Tiger Reserve, etc. alongwith the comments of the Chief Wildlife Warden of the State Govt.
- viii. Data of one-season (non-monsoon) primary- base-line data on environmental quality of air (PM₁₀, PM_{2.5}, SO_x and NO_x, noise, water (surface and groundwater), soil be submitted.
- ix. The wet washery should generally utilize mine water only. In case mine water is not available, the option of storage of rain water and its use should be examined. Use of surface water and ground water should be avoided.
- x. Detailed water balance should be provided. The break-up of water requirement as per different activities in the mining operations vis-a-vis washery should be given. If the source of water is from surface water and/or ground water, the same may be justified besides obtaining approval of the Competent Authority for its drawl.
- xi. The entire sequence of mineral production, transportation, handling, transfer and storage of mineral and waste, if any, and their impacts on air quality should be shown in a flow chart with specific points where fugitive emissions can arise and specific pollution control/mitigative measures proposed to be put in place. The washed coal and rejects should be transport by train as far as possible. Road transport of washed coal and rejects should generally be avoided. In case, the TPP is within 10km radius, it should be through

conveyer belt. If transport by rail is not feasible because of the topography of the area, the option for transport by road be examined in detail and its impacts along with the mitigation measures should be clearly brought out in EIA/EMP report.

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

Environment (Protection) Act, 1986

- xxiii. Details of washed coal, middling and rejects along with the MoU with the end-users should be submitted.

GENERIC TOR FOR AN OPENCAST COALMINE PROJECT for EC

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

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

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

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

- (xii) Break-up of lease/project area as per mining plan should be provided.
- (xiii) Impact of changes in the land use due to the project if the land is predominantly agricultural land/forestland/grazing land, should be provided.
- (xiii) One-season (other than monsoon) primary baseline data on environmental quality - air (PM₁₀, PM_{2.5}, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
- (xiv) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
- (xv) Study on the existing flora and fauna in the study area (10km) should be carried out by an

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

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

mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.

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

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

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

8.	Area around buildings and Infrastructure					
	TOTAL					

* As a representative example

Table 2 : Stage Wise Cumulative Plantation

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

* As a representative example

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

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

S.N.	Land use during Mining	Land Use (ha)				
		Plantation	Water Body	Public Use	Undisturbed	TOTAL
1.	External OB Dump					
2.	Top soil Dump					
3.	Excavation					

4.	Roads					
5.	Built up area					
6.	Green Belt					
7.	Undisturbed Area					
	TOTAL					110

- (xxx) Flow chart of water balance should be provided. Treatment of effluents from workshop, township, domestic wastewater, mine water discharge, etc. should be provided. Details of STP in colony and ETP in mine should be given. Recycling of water to the max. possible extent should be done.
- (xxxi) Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given.
- (xxxii) Risk Assessment and Disaster Preparedness and Management Plan should be provided.
- (xxxiii) Integration of the Env. Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.
- (xxxiv) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxxv) 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.
- (xxxvi) 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.
- (xxxvii) Corporate Environment Responsibility:
- The Company must have a well laid down Environment Policy approved by the Board of Directors.
 - The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
 - To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- (xxxviii) Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same

should be provided.

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

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

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

GENERIC TORs FOR AN UNDERGROUND COALMINE PROJECT

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

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

Area under Surface Rights

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

- (viii) Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora and fauna, or if the area is occasionally visited or used as a habitat by Schedule-I species, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan along with the appropriate budgetary provision should be prepared and submitted with EIA-EMP Report; and comments/observation from the CWLW of the State Govt. should also be obtained and furnished.
- (ix) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included. The Progressive mine development and Conceptual Final Mine Closure Plan should also be shown in figures. Details of mine plan and mine closure plan approval of Competent Authority should be furnished for green field and expansion projects.
- (x) Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
- (xi) Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (xii) One-season (other than monsoon) primary baseline data on environmental quality - air (PM₁₀, PM_{2.5}, SO_x, NO_x and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season

for AAQ collection period should be provided.

- (xiii) Map (1: 50, 000 scale) of the study area (core and buffer zone) showing the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources, should be provided. The number and location of the sampling stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Observed values should be provided along with the specified standards.
- (xiv) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
- (xv) Study on subsidence including modeling for prediction, mitigation/prevention of subsidence, continuous monitoring measures, and safety issues should be carried out.
- (xvi) Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the Competent Authority in the State Govt. and impacts vis-à-vis the competing users should be provided.
- (xvii) Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, noise and vibrations should be provided.
- (xviii) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xix) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xx) Details of various facilities to be provided to the workers in terms of parking, rest areas and canteen, and effluents/pollution load resulting from these activities should also be given.
- (xxi) The number and efficiency of mobile/static water sprinkling system along the main mineral transportation road inside the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality should be provided.
- (xxii) Impacts of CHP, if any on air and water quality should be given. A flow chart showing water balance along with the details of zero discharge should be provided.
- (xxiii) Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the pre- mining status should be provided. A Plan for the ecological

restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be furnished.

(xxiv) Greenbelt development should be undertaken particularly around the transport route and CHP. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be submitted.

(xxv) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.

(xxvi) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.

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

(xxviii) Corporate Environment Responsibility:

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

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

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

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

- (xxxii) Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.
- (xxxiii) Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.

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

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

GENERIC TORs FOR AN OPENCAST-CUM-UNDERGROUND COALMINE PROJECT

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

**55th EAC (THERMAL & COAL MINING PROJECTS) MEETING
SCHEDULED FOR 11th -13th May, 2016**

AGENDA

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

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

Important Note:

- i. Please send the information as per Annexure 1 by E-mail in word format and also a signed & scanned copy, to the Member-Secretary at sk.smree66@nic.in at least one week prior to the EAC meeting.**
- ii. Please 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.**

COAL MINING PROJECTS

Wednesday 11th May, 2016

- 78.1 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) - Further consideration**
- 78.2 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)**
- 78.3 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**
- 78.4 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.**

- 78.5** 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**) - **Further consideration.**
- 78.6** **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**) - **Further consideration.**

Thursday 12th May, 2016

- 78.7** **Kusmunda coal washery** project of 25 MTPA capacity in an ML area of 41.23 ha of **M/s South Eastern Coalfields Limited** located in district Korba (Chhattisgarh).- (**EC based on TOR granted on 23.12.2015**)
- 78.8** **Jagannath Washery** (10.0 MTPA in an area of 29.94 Ha) of M/s Mahanadi Coalfields Ltd., located in villages Hensmul District Talcher, Orissa – (**EC based on TOR granted on 13.08.2015 & amendment in TOR on 01.02.2016**)
- 78.9** 2.5 MTPA coal **washery** based on heavy media cyclone technology in an area of 9.85 ha by **M/s Paras Power & Coal Beneficiation Ltd** at Ghutku Village, Takhatpur Tehsil, Bilaspur District, Chhattisgarh at Ghutku Village, Takhatpur Tehsil, Bilaspur District, Chhattisgarh-**TOR**
- 78.10** 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**
- 78.11** **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**)
- 78.12** 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**)
- 78.13** 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. Sambalpur (**Odisha**)-(**TOR**)

Friday 13th May, 2016

- 78.14** EC for **Ghonsa** OC Expansion (Phase-II) for capacity of 0.60 MTPA with Expansion of Land from 128.79 ha to 278.683 ha. located in **dist. Yavatmal, Maharashtra** by **M/s Western Coalfields Ltd** – FC submitted- EC may be granted dop-tailing the phase I EC .

- 78.15 Pakri Barwadih** Coal mining – Change in mining sequence & land use and transportation of coal by road from crusher point to the Banadag railway siding for barwadih coal mine block – by **M/s NTPC** (EC granted on 19.05.2009)– **further consideration**
- 78.16 Parsoda** Opencast Coal Mine Project of (0.80 MTPA normative, 1.04 MTPA peak over 611.83 ha of M/s Western Coalfields Ltd., Dist. Yavatmal, (**Maharashtra**)- (TOR granted on 25.02.2014) – **(Extension of Validity of TOR)**
- 78.17 Padmapur** Extn. Deep Opencast Mine for the capacity of 2.50 MTPA (Normative) and 3.25 MTPA (Peak) in an area of 837.19 ha of **M/s Western Coalfields Limited** in Tehsil Chandrapur, Dist Chandrapur (**Maharashtra**) - (TOR granted on 25.02.2014) - **Extension of validity of TOR.**
- 78.18 Nandan-II** UG Extn. Coal Mining Project for the capacity of 0.405 MTPA in an area of 656.14 ha of M/s Western Coalfields Limited in tehsil Junnardeo, District Chhindwara, (**Madhya Pradesh**) - (TOR granted on 23.05.2014) - **Extension of validity of TOR.**
- 78.19 Dhor**i Group of Mines project for the capacity of 8.25 MTPA (Normative) and 11 MTPA (Peak) in an area of 315.05 ha of **M/s Central Coalfields Limited** in District Bokaro, (**Jharkhand**) - (TOR granted on 25.02.2014) - **Extension of validity of TOR.**
- 78.20** Discussion under any other item:
