

**MINUTES OF THE 58th EAC (THERMAL & COAL MINING PROJECTS) MEETING HELD
ON 23-24 June, 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 55th EAC meeting held on 11-13 May, 2016.

C. The following proposals were considered.

Agenda 58.1

Expansion of Talcher Coal Washery from 2.34 MTPA to 5 MTPA capacity of M/s Aryan Energy Pvt Ltd in a total project area of 10 acre in District Angul(Odisha)- For consideration of EC

58.1.1 The proposal is for grant of EC to expansion of Talcher Coal Washery from 2.34 MTPA to 5 MTPA capacity of M/s Aryan Energy Pvt Ltd in a total project area of 10 acre in District Angul (Odisha).

58.1.2 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-11015/229/2014-IA.II (M) dated 30.12.2014
- ii. The latitude and longitude of the project site are 85° -10' -10.11" East longitude and 20° - 55' -25.22" North latitude respectively.
- iii. Joint Venture: No JV
- iv. Coal Linkage Raw coal from Bhubaneswari OCP for consumer having FSA will be washed
- v. Employment generated / to be generated: 88 Nos for expansion.
- vi. Benefits of the project: Provides washed coal for power plants & helps in employment generation and peripheral development.
- vii. Land use:

Items	Area in Acres
Roads	1.00
Greenery	3.50
Office Area	0.25
Coal Storage yard	1.0
Plant Structure	1.25
Pond	2.0
Open area	0.50
Expansion	0.50
Total Area	10.0 Acres

viii. Salient features:

Sl. No.	Particulars	Existing	Proposed (Additional)	Total
1	Capacity	2.34 million TPA	2.66 million TPA	5.0 million TPA
2	Raw Material Req. - Coal	2.34 million TPA	2.66 million TPA	5.0 million TPA
3	Product	1.75 million TPA	1.95 million TPA	3.7 million TPA
4	Reject	0.6 million TPA	0.7 million TPA	1.3 million TPA
5	Land	10 acres	--	10 acres
6	Water	90 KLD	110 KLD	200 KLD
7	Power	800 KW	700 KW	1.5 MW
8	Employment	81	88	169 no.
9	Waste Water	Zero discharge	Zero discharge	Zero discharge
10	Source of Raw Material	Talcher Coal fields of Mahanadi Coal Fields Ltd. (MCL)	Talcher Coal fields of Mahanadi Coal Fields Ltd. (MCL)	Talcher Coal fields of Mahanadi Coal Fields Ltd. (MCL)

ix. Technology Proposed:

EXISTING	PROPOSED
<p>BARREL WASHER</p> <ul style="list-style-type: none"> • Pre crusher Screening • Crushing • Scalping (Screening) • Barrel Washing • Dewatering • Vibrating Screen • Waste Water Treatment and 	<p>Heavy Media Bath/Drum</p> <ul style="list-style-type: none"> • Crushing • Screening • Heavy Media Bath/Drum Separation • Recovery of Heavy Media • Waste Water Treatment and Recycle <p><u>Merits</u></p> <ul style="list-style-type: none"> • The process has good efficiency of separation for coal above 10/ 13 mm size. • Insensitive to variations in feed rate and / or characteristics.

Recycle	<ul style="list-style-type: none"> • Easy to adjust the separating gravity. • Wide range of separating gravity (1.30 – 1.90). • Fairly good EP (E-cart Probable means Error Probable) of around 0.06 can be achieved. • In size analysis, 0 – 13mm size coal quality is more or less comparable to raw coal.
---------	--

- x. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits
- xi. Transportation: The raw coal shall be transported by mechanically covered Trucks, whereas the transport of Clean Coal/ Rejects shall be by Rail.
- xii. There is no R & R involved. There is no PAFs.
- xiii. Cost: Total capital cost of the project is Rs. 20.00 Crores/-; Rs. 80.00 Crores Per Annum Revenue cost; CSR Cost Rs. 0.20 Crores Per Annum R&R Cost Nil; Environmental Management Cost Rs. 1.60 Per Annum.
- xiv. Water body : No water body exist adjacent to the project; however river Brahmani flows at distance of approx, 04 Km East of the project and a perennial Nala Nandi Jher is at a distance of approx 3.5 Km South of the Project.
- xv. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xvi. There is no forest area involved.
- xvii. There are no court cases/violation pending with the project proponent.
- xviii. The plant is located in industrial estate, Talcher, and thus public hearing not applicable as per the EIA Notification, 2006.
- xix. EC compliance report: The plant was established before 2006. No EC was mandatory at that time. Presently the plant is running with the Consent to Establish and Consent to Operate from SPCB, Odisha.

58.1.3 The Committee, after detailed deliberations **(in the 58th meeting on 23-24 June, 2016)** observed as under:

- (i) The chemical composition of washed coal and rejects needs to be re-examined.
- (ii) Linkages from the mines and the consumer of the washed coal to be identified and submitted in view of washeries being constructed by the MCL themselves. The project proponent informed that the coal linkages presently to the Andhra Pradesh Power Generation Company and Andhra Pradesh power Development Company which are presently taking washed coal are linked to Bhubneshwar mine.
- (iii) The project proponent agreed for installation of belt conveyor system from washery to siding and silo loading into railway wagons and for the raw coal transport to the washery which is approximately 8 km, 6 km in mine lease area and 2 km in the industrial estate road as informed by project proponent, transport by belt conveyor feasibility needs to be studied and the study report shall be submitted. In the ToR, the proponent has already proposed coal transport by road /railway from the sidings of the MCL.
- (iv) On enquiry, the project proponent informed that the increase in raw coal handling capacity from 2.34 to 5 MTPA will take place by increasing speed of the existing conveyor and addition of

one washing plant to handle 13 mm to 50 mm of raw coal. The Committee noted that in their presentation (slide 12) they have shown and confirmed during discussion that separate washery will be erected of 500 TPH of raw coal capacity. This is in contrary to what the project proponent explained that they use existing facilities by increasing the speed. In view of such discrepancies, the Committee requested the project proponent to come up with a project report indicating technical feasibility of the system they have proposed.

(v) There is no linkage for water source.

(vi) The waste water re-generation should be correctly reported.

(vii) The project proponent is required to provide regular monitoring data for air quality (104 observations) for the existing plant. Also they need to provide emission data of the stack attached to the washery. The compliance report from SPCB was also asked as existing washery doesn't have EC (not applicable as washery came before 2006 Notification)

(viii) The project proponent should submit details of rejects utilization with respect to FBC boiler.

(ix) CSR activities undertaken by the Company appear to be very dismal. The project proponent have however, agreed to undertake these CSR activities seriously with an annual budget of Rs. 20 lakh (Twenty Lakh). They will also submit a detailed action plan in this regard to the EAC.

(x) In the EIA report, the monitoring data have been given with respect to PM10, PM2.5, SO₂ and Nox. The data for other parameters as applicable to air quality standards are not provided. Regarding prediction, the data required for fugitive emission from various sources of washery both in terms of un-control and control, have not been provided. The data of stack emission have also been provided compared to limits prescribed by SPCB for the existing plant.

(xi) In the surface water analysis data wherever the element is not detected the detection limit of the instruments is to be mentioned.

58.1.4 In view of the above, the proposal was deferred, and it was decided by the Committee that to ascertain the ground reality, a sub-committee consisting of Sh. J L Mehta, Sh. N K Verma and Sh. G S Dang with one representative of Ministry, should visit site and submit a report.

Agenda 58.2

Expansion of Karo OCP from 1.5 MTPA to 15 MTPA and Integrated Karo Washery of 7.0 MTPA of M/s Central Coalfields limited in an area of 552.84 ha located in village Karo, Amlo, Kargali & Baid Karo, District Bokaro (Jharkhand) - For consideration of EC

58.2.1 The proposal is for grant of EC to the expansion of Karo OCP from 1.5 MTPA to 15 MTPA, and Integrated Karo Washery of 7.0 MTPA of M/s Central Coalfields limited in an area of 552.84 ha located in village Karo, Amlo, Kargali & Baid Karo, District Bokaro (Jharkhand)

58.2.2 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 environmental clearance for 1.5 MTPA was granted by the Ministry vide letter No.J-11015/544/2009-IA-II(M) dated 24th December, 2014.
- ii. The proposal was accorded TOR vide letter No. J-11015/544/2009-IA-II (M) dated 3rd November, 2015.
- iii. It is a two product washery.
- iv. PP requested for correction in the total area I.e 575.36 ha to 552.84 ha
- v. The latitude and longitude of the project are 23^o 47' 02" N to 23^o 48' 38" N and 85^o 57' 27" E to 85^o 58'38" E respectively.
- vi. Joint Venture: There is no Joint venture.
- vii. Coal Linkage: Steel, power and other miscellaneous consumers KaroWashery (7 MTPA capacity) linked to Karo Expansion OCP (Nominal Capacity: 11 MTPA, Peak Capacity : 15 MTPA).
- viii. Employment generated/to be generated: Approx. 133 employment will be provided.
- ix. Benefits of the project: Improvements in Physical Infrastructure, Improvements in Social Infrastructure, Increase in Employment Potential, Contribution to the Exchequer, Meet energy and steel sector requirement, The beneficiation/washing of coal will lead to improvement in performance of power plant, Reduction in particulate emission and fly ash at user end / power house, Reduction in load on Railway Network, Reduction in handling and transportation cost of coal and solid waste
- x. The land usage of the project will be as follows:

*outside core zone

SI no	Particulars of land	Forest (area in Ha)	Non- forest (area in Ha)	Total (area in Ha)
1.	Quarry	185.07	110.68	295.75
2.	External OB dump-1	24.73	13.27	38.00
3.	External OB dump-2	5.00	52.24	57.24
4.	Infrastructures	36.77	8.31	45.08
5.	Road, nala diversion, green belt/vacant land & Safety zone	52.53	32.72	85.25
6.	Res. colony*	0.00	5.00	5.00
7.	Conveyer to KargaliWashery/ siding *	7.50	19.02	26.52
	Total Land Required	311.6	241.24	552.84

Pre-Mining and Post Mining land Use

SI no	Particulars of land (Area Ha)	Pre-Mining land Use (In Ha) As per TOR	Pre-Mining land Use (In Ha)	Post-Mining land Use (In Ha)
1.	Quarry	295.75	295.75	42.58 (water body/void)
2.	External OB dump-1	38.00	38.00	Reclaimed & planted
3.	External OB dump-2	57.24	57.24	Reclaimed & planted

4.	Infrastructures	45.08	45.08	45.08
5.	Road, nala diversion, green belt/vacant land	107.77	85.25	85.25
6.	Res. colony*	5.00	5.00	5.00
7.	Conveyer to Kargali Washery/ siding *	26.52	26.52	-
8.	Plantation	-	-	374.93 (Including reclaimed external dump 1 & 2, green belt and plain plantation)
Total Land Required		575.36	552.84	552.84

Core Area:

SI no	Particulars of land	Forest (area in Ha)	Non- forest (area in Ha)	Total (area in Ha)
8.	Quarry	185.07	110.68	295.75
9.	External OB dump-1	24.73	13.27	38.00
10.	External OB dump-2	5.00	52.24	57.24
11.	Infrastructures	36.77	8.31	45.08
12.	Road, nala diversion, green belt/vacant land & Safety zone	52.53	32.72	85.25
13.	Res. colony*	0.00	5.00	5.00
14.	Conveyer to Kargali Washery/ siding *	7.50	19.02	26.52
Total Land Required		311.6	241.24	552.84

***Forest land-** 311.60 Ha includes 7.50 Ha for layout of conveyor outside core zone. 22.52 Ha of undiverted forest land falling within project boundary has been excluded.

- xi. The total geological reserve is 127.12 MT. The mineable reserve 105.17 MT, extractable reserve is 105.17 MT. The per cent of extraction would be 100 %.
- xii. The coal grade W-IV in upper seams and E-F in lower seams. There will be six seams with thickness ranging from 0.91 to 36.25 m.
- xiii. The total estimated water requirement is 2038.00 kl per day & 0.35 MGD for washery.
- xiv. The Method of mining would be Opencast. Drilling and Blasting with shovel dumper combination in OB and Surface Miner in Coal.
- xv. There are two external OB dump with Quantity of 10.68 MCuM and 23.45 MCuM for quarry I and quarry II respectively an area of OB-I : 38.00 Ha and OB-II : 57.24 Ha with height of 70-75 m above ground level and two internal dump with Quantity of 19.38 and 36.88 million m³ for quarry I and quarry II respectively in an area of 25 m and 40 m above GL for quarry I and quarry II respectively .

- xvi. The final mine void would be in 24.16 Ha and 18.42 Ha for quarry I and quarry II respectively with depth 110 m (before final mine closure). and the Total quarry area is 295.75 Ha. Backfilled quarry area of 172.14 Ha shall be reclaimed with plantation. A void of 42.58 ha with depth 110 m which is proposed to be converted into a water body (before final mine closure).
- xvii. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xviii. The total project life (mine 12years + washery 15 years) including 3 years washery development period.
- xix. Transportation: In pit by rear dumper, surface to siding by belt conveyer, siding at loading by rail. Washed coal & Reject transportation by covered belt Conveyor to railway siding.
- xx. There is R & R involved. There are 360 PAFs.
- xxi. Cost: Rs. 1626.92 Crore for OCP & Rs 269.88 Crores for coal washery. R & R Cost: Rs 1274.4 lakhs. Environmental management cost: Rs 11576.96 lakh.
- xxii. Water body: The drainage of the block is controlled by Karo and GatiNala flowing towards south which is at 1 km distance..
- xxiii. Approvals: Mining plan and Mine closure plan approved by CCL board in 425th board meeting held on 10th June 2016 for Karo Expansion OCP (11/15 MTPA) and Integrated Karowashery in 552.84 ha.
- xxiv. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxv. Forestry issues: 311.60 Ha including 7.50 Ha in conveyor layout outside core zone. FC granted for 77.43 ha forest land in core zone diverted vide letter number: F.No.8-22/2003-FC Dated 31st March 2004. FC applied for 226.67 ha forest land in core zone on 9.03.2006. Advance CAMPA fund of Rs 18.20 crore deposited on 31.03.2015. Enumeration of trees completed and its report has been submitted to DFO, Bokaro on 02.07.2015. Proposal forwarded to MoEFCC by state govt. for stage-I clearance. For coal washery 1.43 ha released as part of 77.43Ha of forest land vide letter number: F.No.8-22/2003-FC Dated 31st March 2004.
- xxvi. Total afforestation plan shall be implemented covering an area of 374.93 ha at the end of mining. Density of tree plantation 2500 trees/ ha of plants.
- xxvii. There are no court cases/violation pending with the project proponent.
- xxviii. Public Hearing: Public hearing was held on 05.01.2016 in District Bokaro. The issues raised in the PH includes land verification work; arrangement of drinking water, road, electricity etc; employment to local people; benefits to the project affected villagers, preservation of the top soil, land reclamation, after extraction of coal, participation of the public representatives in the CSR meeting; technical education and training arrangement for the youth etc.,

58.2.3 The Committee, after detailed deliberations **(in the 58th meeting on 23-24 June, 2016)** noted the following:

- (i) The RO, MoEFCC Ranchi has inspected Karo Expansion OCP on 22.01.2016, and the compliance report has been submitted.
- (ii) No road transport is involved in movement of coal from mine to washery and washery to consumer.

- (iii) The air quality data given in the EIA/EMP report indicate PM10 values exceeding the air quality standards of 100 ug/m³ at monitoring station A2 which is 1.5 km away in BaidyaKarobasti. On enquiry about mitigating measures, it was mentioned that the monitoring station falls under their working area and the basti will be evicted.
- (iv) The project proponent shall submit a revised proposal for re-location plan of the basti in a realistic manner.
- (v) The project proponent have to do social audit from some reputed institute.
- (vi) The project proponent has agreed to spend four crore towards CSR this year for both Karo and Konar. They will also submit an action plan in respect of public hearing issues depicting budgetary allocation also.
- (vii) The technology for the washery would be finalised as per the tenders received. The committee desired that after approval of the tender, the technology is to be submitted to the EAC for final EC.
- (viii) For meeting the water requirement for the washery, the project proponent is required to conduct study both for use of underground mine water as well as from reservoir created through check dams to be constructed on GatiNallah.
- (ix) Re-examine the management of OBDs and final voids and also for sequential mining to reduce the external OB dump area.
- (x) Action plan in compliance report need to be submitted by project proponent on the points raised in the monitoring report of RO of MoEF&CC particularly Part II of the report on the points requiring special attention.

58.2.4 In view of the above, the proposal was deferred.

Agenda 58.3

Expansion of Konar OCP from 4.10 MTPA (Normative)/ 5 MTPA (Peak) to 8.00 MTPA (Normative)/11.00 MTPA (Peak), Integrated Konar Non-coking Coal Washery of 7 MTPA capacity of M/s Central Coalfields limited, with increase in project area from 520.93 to 547.38 ha located in Bokaro and Kargali Area, District Bokaro (Jharkhand) - For consideration of EC.

58.3.1 The proposal is for grant of EC to the expansion of Konar OCP from 4.10 MTPA (Normative)/ 5 MTPA (Peak), to 8.00 MTPA (Normative)/11.00 MTPA (Peak); Integrated Konar Non-coking Coal Washery of 7 MTPA capacity of M/s Central Coalfields limited, with increase in project area from 520.93 to 547.38 ha located in Bokaro and Kargali Area, District Bokaro (Jharkhand).

58.3.2 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 TOR for the above proposal was granted vide letter No. J-11015/337/2005 -IA-II (M) dated 3rd November, 2015.
- ii. The Konar OCP was granted EC vide letter No. J-11015/337/2005 -IA-II (M) dated 2nd February, 2006 for 3.5 MTPA in an area of 301.37 ha.
- iii. The EC was granted to Khasmahal OCP vide letter No. J-11015/217/2007 -IA-II (M) dated 2nd August, 2010 for 0.6/1.5 MTPA in an area of 318.71 ha.
- iv. The total project area would be increased from the present 520.93 ha to 547.38 ha.
- v. The latitude and longitude of the project site are 23° 46' 0" to 23° 48' 38"N and 85° 44' 0" to 85° 56' 0"E respectively.
- vi. Joint Venture: Not Applicable
- vii. Coal Linkage: Steel, power and other miscellaneous consumers. Konar Washery (7 MTPA) linked to Konar Expansion OCP (8/11 MTPA)
- viii. Employment generated / to be generated: 110 approx
- ix. Benefits of the project: Improvements in Physical Infrastructure; Improvements in Social Infrastructure; Increase in Employment Potential; Contribution to the Exchequer; Meet energy and steel sector requirement; The beneficiation/washing of coal will lead to improvement in performance of power plant; Reduction in particulate emission; Reduction in load on Railway Network; Reduction in handling and transportation cost of coal and solid waste etc.
- x. The land usage for the project will be as follows:

Pre-Mining:

S N	Item	Land requirement (ha)		
		Forest	Non-forest	Total
1	Quarry	309.76	22.20	331.96
2	External OB dump	61.44	0.00	61.44
3	FBC Plant	30.00	0.00	30.00
4	Site for rejects	20.71	0.00	20.71
5	Infrastructures including washery	41.90	0.00	41.90
6	Rly siding	1.86	3.89	5.75
7	Approach /Coal transport Road	0.00	3.95	3.95
8	Safety Zone & Green Zone	41.60	10.07	51.67
Total		507.27	40.11	547.38

Post- Mining:

S No.	Description	Land-use (Ha)				Total
		Plantation	Water Body (Lagoon)	Public/CCL use	Landscape Quarry Batter	
1	External OB Dump	61.44	0.00	0.00	0.00	61.44
2	Top soil dump	0.00	0.00	0.00	0.00	0.00
3	Excavation/	253.15	41.75	0.00	37.06	331.96

	Backfilled					
4	Roads	0.00	0.00	3.95	0.00	3.95
5	Builtup area	0.00	0.00	98.36	0.00	98.36
6	Green belt	51.67	0.00	0.00	0.00	51.67
7	Undisturbed area	0.00	0.00	0.00	0.00	0.00
Total		366.26	41.75	102.31	37.06	547.38

- xi. The total geological reserve is 146.74 MT. The mineable reserve 115.65 MT, extractable reserve is 115.65 MT. The per cent of extraction would be 100 %.
- xii. The coal grade is W-IV grade in seam X and E-F grade in seam VI/VII & seam VIII The stripping ratio is 0.95 (Cum/Tonne). The average Gradient is 6- 10 deg. There will 4 seams (Seam X, Seam IX, Seam VIII and Seam VI/VII combined). Seam IX is thin so it is not considered with thickness ranging 8.65 m to 34.71m.
- xiii. The total estimated water requirement is 1207 m³/day potable water demand & industrial water demand of mine & washery is 1500 m³/day and 1600 m³/day respectively. The level of ground water ranges from 1.00 m to 8.07 m.
- xiv. The Method of mining would be Opencast. Seam X by shovel dumper and Surface Miner in Seam VI/VII & seam VIII
- xv. There is one external OB dump with Quantity of 23.21 Mbcm in an area of 61.44 ha with height of 30-90 m above GL and one internal dump with Quantity of 86.51 Mbcm in an area of 226.96 ha.
- xvi. The final mine void would be in 78.81 Ha with depth 180 m (after final mine closure) and the total quarry area is 331.96 Ha. Backfilled quarry area of 253.15 Ha shall be reclaimed with plantation. A void of 78.81 ha with depth 180 m which is proposed to be converted into a water body (after final mine closure).
- xvii. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xviii. The total project life (mine 14 years + Washery 3 years) including 3 years washery development period.
- xix. Transportation: In pit by rear dumper, surface to siding by belt conveyer, siding at loading by rail. Washed coal & Reject transportation by covered belt Conveyor to railway siding.
- xx. There is R & R involved. There are 685 PAFs.
- xxi. Cost: Total capital cost of the project is Rs. 1286.54 Crore for OCP and Rs 251.48 Crores for washery. CSR Cost as per CSR policy & Companies Act, 2013. R&R Cost 63.18 Crores. Environmental Management Cost Rs. 59.58 Crores.
- xxii. Water body: Goddonallah flows along eastern periphery of project and diversion of 800 m length of this nallah is proposed. Konar river is in South West of the project.
- xxiii. Mine Plan and Mine Closure Plan has been approved by CCL board in 425th board meeting held on 10th June, 2016 for Konar Expansion OCP (8/11 MTPA) and Integrated Konar Washery of 7 MTPA in 547.38 ha.
- xxiv. There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxv. The project involves 507.27 ha of forest land. Out of which 309.76 is for quarry. FC granted for 177.48 ha forest land for Khasmahal OCP vide letter number: F.No.8-37/2003-FC Dated 31st July 2006. FC granted for 26.94 Ha forest land for Khasmahal phase II vide letter number: F.No.8-37/2003-FC dated 6th June 2013. FC granted for 288.26 ha forest land for Konar OCP vide letter number: F.No.8-55/2009-FC Dated 23 Oct 2012.

xxvi. Density of tree plantation 2500 trees/ ha of plants.

xxvii. Public hearing was held on 05.01.2016 in District Bokaro. The issues raised in the PH includes Pollution Control Measures, washery construction should be in the form of model washery, Job and compensation, separate road for coal transportation, etc.

xxviii. There are no court cases/violation pending with the project proponent.

58.3.3 The Committee, after detailed deliberations **(in the 58th meeting on 23-24 June, 2016)** noted the following:

(i) The proposal envisages amalgamation of Konar OCP and the Khasmahal OCP (sanctioned /granted individually earlier) followed by integration with the proposed washery of 7 MTPA.. That would involve correction in area from the present of 620.08 ha. to 547.38 ha. The documentation needs to be revised accordingly.

(ii) The RO, MoEFCC Bhubaneswar has inspected the Khasmahal project on 23.08.2014 and Konar OCP on 04.09.2013. Another inspection for the Konar Expansion OCP was conducted on 17.06.2016. Certified EC Compliance report is awaited.

(iii) A large area has been occupied for external OBD and internal dump also of a height of 90 m above ground level matching with a height of external OBD. Whereas, much area has been left as void of depth of 180 m. The Committee observed that the same needs to be re-worked with minimum land degradation due to external OBD and in the form of mine void.

(iv) The washery proposal has been tendered and the technology will be finalised as per the tender received. The committee desired the submission of the Board's approval to the technology to be adopted and the details of technology should be also submitted for the perusal of Committee.

(v) The raw coal transportation from mine will be as under:-

(a) 1 million tonne coking coal from Kargliwashery by road approx. 8 km away

(b) 7 million tone of non-coking coal from CHP to Konarwashery by belt conveyor and washed coal will be conveyed by belt conveyor to the siding being made near the mine and would be loaded to railway wagons through silo. The Committee advised that the railway siding must come up within 3 years i.e. matching with the production of the non-coking coal.

(vi) Action Plan along with the proposed budgetary allocation should be submitted for issues during Public Hearing out of CSR Budget of Rs 400 Lakhs as agreed.

58.3.4 *In view of the above observations, the proposal was deferred till submission of the desired clarifications/inputs.*

Agenda 58.4

Coal Washery of 2.5 MTPA of M/s Chhattisgarh Power and Coal Beneficiation Ltd in an area 10.57 ha in Tehsil Masturi, District Bilaspur (Chhattisgarh) - For further consideration of TOR.

58.4.1 The proposal is for grant of TOR to the proposed Coal Washery of 2.5 MTPA of M/s Chhattisgarh Power and Coal Beneficiation Ltd in an area 10.57 ha in Tehsil Masturi, District

Bilaspur (Chhattisgarh)

58.4.2 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. It is a green field project for TOR.
- ii. Correction in the land area of the project i.e from 12.14 ha to 10.57 ha.
- iii. The latitude and longitude of the project site are 82^o 16' 03.41" E and 22^o 02' 54.24" N respectively.
- iv. Joint Venture: There is no joint venture.
- v. Coal Linkage :No Coal linkage available at present.
- vi. Employment generated / to be generated: 150 during operation phase
- vii. Benefits of the project: Employment Generation, Benificated coal for Power generation, Sponge iron industry.
- viii. The land usage of the project will be as follows:

S.N	LANDUSE	Area (ha)
1.	Agricultural land	10.57
2.	Forest land	NA
3.	Forest land	NA
4.	Grazing land	NA
5.	Surface waterbodies	NA
6.	Settlements	NA
7.	Others (specify)	NA
8.	TOTAL	10.57

- ix. Transportation: Coal transportation in pit by trucks from in pit to pit head coal handling plant, Surface to Siding by trucks and loading at siding by rail.
- x. There is no R & R involved. There are no PAFs.
- xi. Approvals: Ground water clearance shall be obtained.
- xii. There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xiii. There are no forest area involved in the project area.
- xiv. Total cost of the project is Rs. 19 Crore
- xv. There are no court cases/violation pending with the project proponent.

58.4.3 The Committee, after detailed deliberations on the proposal **(in the 58th meeting on 23-24 June, 2016)** noted the following:

(i) The project proponent have come up with two site options only, and that too within 10 km of the Bilaspur town, which may not be considered suitable from environmental considerations. It is

proposed to bring coal by road about a distance of 50 km from the mines of SECL.

- (ii) There is no availability of source of water.
- (iii) Discrepancies in Form I and the feasibility report need to be corrected.
- (iv) The project proponent may come with two alternative suitable sites close to the mines (within 10 km), with suitability of coal transportation (inward and outward) by rail only.

58.4.4 In view of the above observations, the proposal was deferred till submission of the desired clarifications/inputs.

Agenda 58.5

Proposed Coal Washery of 2.4 MTPA (Wet Process) by M/s Maheshwari Coal Beneficiation & Infrastructure Private Ltd in an area of 6.48 ha invillage Parsada, DistrictBilaspur (Chhattisgarh) - For consideration of TOR

58.5.1 The proposal is for grant of TOR to the proposed Coal Washery of 2.4 MTPA (Wet Process)by M/s Maheshwari Coal Beneficiation & Infrastructure Private Ltdin an area of 6.48 ha in village Parsada, DistrictBilaspur (Chhattisgarh).

58.5.2 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 proposal is for fresh TOR.
- ii. The latitude and longitude of the project site are 82⁰16'03.41"E and 22⁰02'54.24"N respectively.
- iii. Joint Venture: No JV
- iv. Coal Linkage :No Coal Linkage is available at present.
- v. Employment generated / to be generated: 150 during operation phase
- vi. Benefits of the project: Employment Generation; Benificated coal for Power generation; Sponge iron industry.
- vii. The land usage of the project will be as follows:

S.N	LANDUSE	Within ML	Area (ha)	Outside ML Area
1.	Agricultural land		10.57 (Single Crop)	NA
2.	Forest land	NA	NA	NA
3.	Forest land	NA	NA	NA
4.	Grazing land	NA	NA	NA

5.	Surface waterbodies	NA	NA	NA
6.	Settlements	NA	NA	NA
7.	Others (specify)	NA	NA	NA
8.	TOTAL		10.57	

viii. Transportation: 3.0MTPA (Source SECL mines Korba and Raigarh area), 285 trucks per day for raw coal & reject transportation. Washed Coal transportation is proposed by railway.

ix. There is no R & R involved.

x. Total capital cost of the project is Rs. 19 Crores.

xi. 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.

58.5.3 The Committee, after detailed deliberations on the proposal **(in the 58th meeting on 23-24 June, 2016)** noted that present project is not a green field project, but an expansion of the existing washery of 1.2 MTPA, and hence the project requires restructuring and resubmission of the details. The project proponent agreed to withdraw the application and then apply afresh

58.5.4 The proposal was, therefore, deferred.

Agenda 58.6

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

58.6.1 The proposal is for amendment in EC to the Cluster 11 (comprising of 11 mixed mines) with combined production capacity of 8.20 MTPA of M/s Eastern Coalfields Limited in ML area of 4218 ha located in Raniganj Coalfields, District Burdwan (West Bengal)

58.6.2 The proposal was earlier considered in 51st EAC meeting held on 5th February, 2016, 53rd EAC meeting held on 17th-18th March, 2016 and 58th meeting held on 11-12 May, 2016 During the meetings held in Feb and May, 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's 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)

(iii) 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.

(iv) During the meeting held in May, 2016, the EAC was unhappy to note that there were further inconsistencies in the compliance report 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.

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

(i) The corrections in EC capacity have been made with reference to the EC letter as desired by the EAC. However, instead of having 2 capacity figures, one for normative and the other for peak, the revision has been sought for single capacity figure which is the peak capacity and beyond which, no production will be achieved. The Form-I also has been modified accordingly and

re-submitted to MoEF&CC. Details of the proposed re-assessment of mine capacities sought for amendment in the EC are as under:-

(a) As per the EC letter dated 21st July, 2015

S. No	Name of Mine	Mine	UG/OC	ML Area (Ha)	Normative/ Peak Capacity (MTY)		Life (Years)
1	Krishnanagar	1	UG	772	0.24	0.30	>25
2	Haripur Group of Mines		UG+OC	853	1.99	2.27	>25
A	Haripur	2	UG		0.60	0.78	>25
B	Chora Block Incline	3	UG		0.99	0.99	>25
C	Chora 7,9 & 10 Pit	4	UG				
D	Bonbahal OC Patch (25 Ha)*	5	OC		0.40	0.50	3
E	Shankarpur / CL Jambad OC Patch/ mine (52 Ha)	6	OC	Exhausted and being backfilled			
3	New Kenda Group of Mines	7	UG+OC	742	3.71	4.79	>25
A	New Kenda		UG		0.11	0.14	>25
B	W Kenda OC Patch / Mine (49 Ha)*		OC		0.60	0.75	2
C	New Kenda OC Mine (240 Ha)*		OC		3.00	3.90	8
4	Bahula Group of Mines	8		676	0.42	0.55	>25
A	Lower Kenda		UG		0.13	0.17	>25
B	Bahula		UG		0.24	0.31	>25
C	CL Jambad		UG		0.05	0.07	>25
5	Siduli	9	UG	335	0.30	0.30	>25
6	Khandra	10	UG	388	0.39	0.39	>25
7	Shankarpur Project	11		452	2.00 [#]	2.30 [#]	
A	Shankarpur		UG		1.16	1.33	>25
B	Shankarpur OC Patch/ mine (42 Ha)*		OC		2.00	2.30	4
				4218	9.05	10.90	

* New proposed patches/mines (Area of the patch given in brackets); [#] Mining will be done in phased manner

(b) The present proposal (compared with peak capacity only)

S. No	Name of Mine	Mine	UG/OC	ML Area (Ha)	Existing Peak Capacity (MTY)	Proposed EC Capacity (MTY)	Life (Years)
1	Krishnanagar	1	UG	772	0.30	0.05	>25
#	Haripur Group of Mines		UG+OC	853	2.27	2.30	
2	Haripur	2	UG+OC		0.78	0.75	15
3	Chora Block Incline	3	UG		0.99	0.10	>25
4	Chora 7,9 & 10 Pit	4	UG				
5	Bonbahal OC Patch (25 Ha)*	5	OC		0.50	0.50	3

S. No	Name of Mine	Mine	UG/OC	ML Area (Ha)	Existing Peak Capacity (MTY)	Proposed EC Capacity (MTY)	Life (Years)
6	Shankarpur / CL Jambad OC Patch/ mine (52 Ha)	6	OC		Exhausted and being backfilled	0.80	6
7	New Kenda Group of Mines	7	UG+OC		4.79	2.00	
A	New Kenda		UG		0.14	0.05	>25
B	W Kenda OC Patch / Mine (49 Ha)*		OC	742	0.75	0.75	6
C	New Kenda OC Mine (240 Ha)*		OC		3.90	1.20	12
8	Bahula Group of Mines	8			0.55	0.45	>25
A	Lower Kenda		UG	676	0.17	0.15	>25
B	Bahula		UG		0.31	0.25	>25
C	CL Jambad		UG		0.07	0.05	>25
9	Siduli	9	UG+OC	335	0.30	1.20	>25
10	Khandra	10	UG	388	0.39	0.20	>25
11	Shankarpur Project	11			2.30[#]	2.00[#]	
A	Shankarpur		UG	452	1.33	1.16	>25
B	Shankarpur OC Patch/ mine (42 Ha)*		OC		2.30	2.00	4
				4218	10.90	8.20	

* New proposed patches/mines (Area of the patch given in brackets) [#] Mining will be done in phased manner

(c) Change in Capacity (Overall for Cluster)

Existing EC Capacity (MTY)		Proposed EC Capacity (MTY)		Decrease (MTY)	
UG	OC	UG	OC	UG	OC
4.45	6.45	2.30	5.90	- 2.15	- 0.55
10.90		8.20			

(ii) Parawise response to the earlier observations of the committee were submitted as under:-

(a) Increase in quarry area from 337 ha to 528 ha:

In the earlier proposal for which EC has been granted, there were 4 nos. of proposed OC patches/mines. In the revised proposal, 3 nos. of additional OC patches/mine extensions have been identified taking the total figures for OC patches to 7 (seven). As such, the total area to be quarried which earlier stood at 337.5 Ha has now increased to 528.5. However, it is to be noted that all the proposed/existing quarries lie within the leaseholds of individual mines and within the overall area of the cluster and no change has been sought in either of the two.

(b) Proposed/existing discharge of water into local nalas:

Total Mine pumping from all the mines within the cluster is 17510 m³/day. There is no discharge to Nala. After meeting the internal demand, the rest mine water is used for recharging groundwater through supply into ponds and for irrigation. In order to keep dry and safe working environment, the total mine pumping from the individual mines of the cluster is estimated as 17510 m³/day. The mine water will be effectively utilized to meet the domestic & community water supply (7618 m³/day) and mining requirements (4138 m³/day). Surplus water will be available for irrigation and discharge to local ponds for groundwater recharge. Since, the mine discharge quality meets the MoEF Schedule VI standards for discharge of effluents on land and into surface water bodies, no special treatment, except settling, is required.

Waste water generation from mining activities will be 1205 m³/day out of which 670 m³/day will be routed through O&G traps since this quantum of water will be discharged from workshops and HEMM washing facilities and as such is likely to contain higher concentrations of oil and grease. Domestic waste water will be routed to soak pits

Industrial Waste Water: The cluster generates about 1205 m³/day of waste water out of which 670 m³/day needs to be routed through O & G traps while the remainder 535 m³/day can be discharged after settling of suspended particulates for irrigation / into local nallahs

Domestic Waste Water: The cluster generates about 4132 m³/day of domestic waste water which is routed to soak-pits.

Surplus Mine Pumping: The cluster is likely to generate 5754 m³/day of surplus mine water which will be discharged on to land for irrigation and groundwater recharge purpose.

(c) Possible contamination of soil due to inadvertent spillage of oil etc (sl 4.9 of Form-I):

Hydraulic fluids / oils are used in HEMM for their operation. Even after careful preventive maintenance, occasional bursting of hoses and leakages of hydraulic fluid occurs sometimes and the fluids / oil gets spilt on the ground. This event has been identified in the EIA as a potential cause for soil contamination and, accordingly, immediate measures like scraping off the oil – soaked soil from the place of spillage has been suggested to prevent soil contamination. The oil-soaked soil is to be washed in water bath where the oil being lighter will rise to the surface and drained off into containers for disposal. After washing off the oil, the soil will be fit for use on landfills for reclamation after addition of manure.

(d) 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.:

Since, the award of EC in July, 2015, action has been initiated for opening up the proposed OC patches like obtaining Consent to Establish from the WBSPCB, land acquisitions, etc. Since, the dispatch of coal is being made from the mines to railway sidings situated within the cluster, it is anticipated that there would be a rise in dust pollution along the coal transport routes due to higher volume of transport as the production would increase from the present level of 1.3 MTY to 8.20 MTY.

(e) 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):

The baseline data for the cluster was generated during the winter season (Jan – Mar) of 2013. This was mentioned in the appropriate column submitted for the revised application, since the query reads as follows:-

“Whether ambient air quality seasonal data has been documented. If so, from which season to which season and whether the results are within the prescribed limits”

It is further informed that we 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 March, 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.

- (f) 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):**

Total capital cost for the mines in Cluster no. 11 as on 31.03.2015 is presently Rs 296 Cr. However, after inclusion of proposed projects of New Kenda OCP, Shankarpur / CL Jambad OCP, Shankarpur UG & OC and Siduli UG & OC, the total capital outlay would be Rs 1653.83 Cr. Out of the said capital, outlay for R & R is Rs. 492.55 crore.

- (g) 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:**

Mine closure plan has been revised and approved along with the Revised Mine Plan for the cluster on 30.01.2016

- (h) 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:**

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 (*and not by adding their respective capacities*).

- (i) 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)**

As per the letter no.21-04(17)/ER/CGWA/07-67dated 23.03.2007, received from CGWA in respect of Sonepur-Bazari OCP (now in Cluster 12), the area does not come under water scarce area and as such, does not require groundwater clearance.

Nevertheless, as a compliance to TOR conditions, we have submitted application for GW clearance to State Water Investigation Directorate, West Bengal after carrying out the hydro-geological investigations / studies vide letter no. ECL/ENV/14/400 dated 27.08.2014 and vide letter no. ECL/ENV/NS/16/10 dated 9.01.2016

58.6.4 The Committee, after detailed deliberations (**in the 58th meeting on 23-24 June, 2016**) noted the following:

(i) The details given in respect of re-appropriation of production capacities of mines (comprising of 11 mixed mines) mentioned in the EC dated 21st July, 2015 for the cluster seeking amendment were found in order for further consideration of the proposal on merits.

(ii) With the proposed restructuring and re-appropriation, the peak capacity of the cluster shall be reduced to 8.20 MTPA from 10.90 MTPA in the same mine lease area of 4218 ha.

(iii) The soil contamination through oil spillage/likage should either be bio-remediated using specific technology available in the market, or sent to secured land fill facility authorized by the SPCB.

(iv) The coal transport has been planned from mine to the railway siding by road with cluster capacity (peak) reduced from 10.90 MTPA to 8.2 MTPA. The road transport should take place with suitably covered trucks along with mitigating measures in the form of regular water sprinkling etc.

58.6.5 *The Committee, after detailed deliberation, recommended the proposal for amendment in the EC dated 21st July, 2015 stipulating the additional conditions as above.*

Agenda 58.7

Kistaram Coal Mining Opencast Project of 2 MTPA of M/s The Singareni Collieries Co. Ltd in ML area of 435.68 ha, in District Khammam(Telangana)- For consideration of EC

58.7.1 The proposal is for grant of EC to Kistaram Opencast Project of 2 MTPA of M/s The Singareni Collieries Co. Ltd in ML area of 435.68 ha in village Kistaram, Sathupalli Mandal, District Khammam (Telangana)

58.7.2 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 ToR vide letter No.J-11015/212/2014-IA-II(M) dated 20th November, 2014.
- ii. The latitude and longitude of the project site are 17°13'14" to 17°13' 57" (North) and 80°46'55" to E 80°47'28"(East) respectively.
- iii. Joint Venture: No joint venture
- iv. Coal Linkage : Basket Linkage

- v. Employment generated / to be generated: **Permanent: 370; Contractual: 400**
- vi. Benefits of the project: Generation of direct and indirect employment; Meeting the demand of coal in the region; Improvement in social infrastructure
- vii. The land usage of the project will be as follows:

Pre-Mining:

Land Use	Area
A. Agriculture	124.01
i. Crop land	59.22
ii. Fallow Land	38.20
iii. Plantation	26.59
B. Forest Land	285.44
i. Open Forest	0.00
ii. Dense Scrub	138.47
iii. Sparse Scrub	114.97
iv. Plantation	12.10
v. Forest Blank	12.60
C. Waste Land	20.68
i. Barren	0.00
ii. Land with/without Scrub	20.68
D. Others	12.85
i. Built-up Land	2.20
ii. Surface Water	10.65
Total Area	435.68

Core area :

Sl. No	Description	Forest Land	Non-Forest Land	Total Land
		(Area in ha)		
1	Quarry including drain, bund, safety zone around the quarry, etc.	200.72	27.30	228.02
2	External dump including drains, toe wall etc., around the dumps			
	Topsoil dump	13.98	0.78	14.76
	Hard OB dump	57.73	94.25	151.98
3	Service Buildings	4.36	0.00	4.36
4	Coal handling Plant & Coal Stock yard	8.65	0.00	8.65
5	Safety Zone		27.91	27.91
Total		285.44	150.24	435.68

- viii. The total geological reserve is 24.05 MT. The mineable reserve 21.61MT, extractable

reserve is 21.61MT. The per cent of extraction would be 89.85%.

- ix. The total estimated water will be in the range of 1000 KLD to 8000 KLD. Of this, 3960 KLD is required for dust suppression, 50 KLD is required for HEMM washing, 40 KLD is the domestic requirement, 50 KLD for fire fighting and 100 KLD is the plantation requirement. The balance 3800 KLD of surplus water is proposed to be let out into the local tanks and streams for use of the local people for their agricultural needs. This acts as constant source of recharge to the groundwater regime and improves the water levels around the mine. m³/day. The level of ground water ranges from 2.00 m to 12.20 m.
- x. The method of mining would be Opencast with shovel-dumper combination.
- xi. There is one external OB dump with Quantity of 128.57 M. Cu.m (which includes 73.58 M.Cu.m of external dump, and 54.99 M.Cum of internal dump)Mbcm in an area of 151.98 ha with height of 120 meter above the surface level and One internal dump with Quantity of 54.99 Mbcm in an area of 90.31 ha.
- xii. The final mine void would be in 137.71 Ha with depth varying from 35 m to 170 m. and the Total quarry area is 228.02 Ha. Backfilled quarry area of 90.31 Ha shall be reclaimed with plantation. A void of 137.71 ha with depth varying from 35 m to 170 m which is proposed to be converted into a water body
- xiii. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xiv. The life of mine is 13 Years.
- xv. Transportation: Coal transportation in pit by Dumpers from in pit to pit head coal handling plant, Surface to Siding by Trucks to Pre-weigh Bin and loading at siding by Trucks/ Rail.
- xvi. There is R & R involved. There are 200 and 120 respectively PAFs.
- xvii. Cost: Total capital cost of the project is Rs. 242.29 Crores. CSR Cost 3% of average net profits of the company made during last three years were allocated for CSR at company level. R&R Cost Rs. 19.525. Environmental Management Cost (capital cost Rs20.95 Crores (Direct) and 8.50 Crores (Indirect), Revenue 3.77 Crores/annum i.e., @ Rs. 18.86 per tonne of coal production.
- xviii. Water body : There are no major streams /nallahs in the proposed project area, except few 1st and 2nd order streamlets with a very small catchment area and a limited surface runoff. Jagannadhapuram tank will not be disturbed. The existing streamlets within the quarry area will be removed. Thus the existing drainage in the project area will be affected by the proposed mining activity. The 1st and 2nd order streamlets that are flowing over the quarry area will be re-oriented by the garland drain along the periphery of the quarry so that they meet the main course in the downstream.
- xix. Approvals: Ground Water Clearance was issued vide Lr.No. 447/T/IND/2014, dated 17.08.2015, Board's approval (Feasibility Report) has been approved by SCCL Board. Mine plan has been approved by the Ministry of Coal on 21.03.2014. Mine closure plan is an integral part of the MinePlan.
- 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 is 285.44 ha. The project proponenthas submitted a proposal to MoEF&CC for diversion of 285.44 ha of forest land. During the FAC meeting held on 20 -21 October 2014, it was recommended that decision on grant of approval for diversion of forest land may be deferred till preparation of EIA/EMP reports, and proceedings of public hearing are considered by the EAC for grant of EC. Meanwhile, the State Government has been requested to give certain clarifications and justification for diversion of forest land. SCCL has submitted justification report to PCCF, Hyderabad on 23-02-2016. PCCF, Hyderabad advised CF / DFO, KMM to inspect the site and submit a report

on the information furnished by SCCL.

- xxii. Total afforestation plan shall be implemented covering an area of 272.45 ha at the end of mining. Green Belt over an area of 28.46 ha. Density of tree plantation 2500 trees/ ha of plants.
- xxiii. There are no court cases/violation pending with the project proponent.
- xxiv. Public Hearing was held on 19th November, 2015. The issues raised in the PH includes compensated during the earlier land acquisition activities and demanded compensation on par with the land losers in the State of Odisha; Demanded that land losers covered under ROFR, Govt. assigned land and those possessing pattas should be compensated equally; Pointed out that there are pollution problems including depletion of ground water levels due to existing opencast mining activity and demanded that proper mitigation measures should be taken; Demanded SCCL to provide employment to the land losers; Demanded that the local coal transport contractors be given priority while awarding the coal transport contracts; Requested for de-siltation of tanks in Kistaram and Jagannadhapuram Villages; Requested to provide R & R site at a location acceptable to most of the PDFs.

58.7.3 During appraisal of the proposal, the Committee noted the environmental concerns in the area, especially air and water quality, and desired for more information for further consideration in respect of the following:-

- i. AAQ (predicted and baseline) at B-7 station, Gudipadu village is exceeding the permissible limit, and as such, mitigating measures are to be taken to bring the same below the standards.
- ii. Water to be supplied to the villages needs to be treated in a system with aeration and filtration including fluoride control.
- iii. For enhancing the ground water recharge, surface water bodies/ponds need to be augmented, particularly in the vicinity of villages, besides constructing check dams.
- iv. External OB dump both in terms of area occupied and height requires optimization. The OB management plan has to be re-worked, minimize the external OB dumping area presently planned and avoid forest areas for external dumping, increase the quantity of internal dump and reduce the external dumping from presently ten years to bare minimum.
- v. Prediction of PM_{2.5} should also be done.
- vi. Since the buffer area supports tropical dry deciduous forest and has Schedule 3 animal species like sambhar, wild boar and bear, it is expected that leopard may also exist. Therefore, the project proponent should prepare conservation action plan with the concerned forest authorities.
- vii. The final void, presently to a volume of 130 ha, also needs to be reduced by filling external OBD, planned at mine closure of 90 m height.
- viii. The transport of coal from inpit to mine surface is reported to be through dumpers. Whereas, during presentation, it was informed that inpit crushing and transport would be done by belt conveyor to mine surface into a hopper. This needs to be documented properly.
- ix. Presently, the coal from the mine is being dispatched through Rudrapuram railway siding 50 km away. During presentation, it was informed that the arrangement of railway siding inside the mine premises is being done, which would be completed within 3 years. The same has been provided in the EC of JVR OCP-II, and needs to be expedited.
- x. Reply to the issues raised by one of the NGOs and detailed Action Plan for public hearing issues and the budgetary allocations.
- xi. CSR details of expenditure for the years 2006-07, 2009-10 and from 2012-13 onwards.
- xii. A capital expenditure of Rs 100 lakh for the mine may be provided, as agreed to, for CSR

activities till the operation of the mine.

- xiii. The stage-I FC for diversion of 285.44 ha of forest land is to be expedited.

58.7.4 *In view of the above observations, the proposal was deferred.*

Agenda 58.8

Gare Palma Sector–II Coal mine Project of 23.60 MTPA (OC-22.0 MTPA + UG-1.6 MTPA) of M/s Maharashtra State Power Generation Company Ltd (MSPGCL) in an area of 2583.48 ha in District Raigarh (Chhattisgarh)-For consideration of ToR

58.8.1 The proposal is for grant of TOR to the Gare Palma Sector–II Coal mine Project of 23.60 MTPA (OC-22.0 MTPA + UG-1.6 MTPA) of M/s Maharashtra State Power Generation Company Ltd (MSPGCL) in an area of 2583.48 ha in District Raigarh (Chhattisgarh)

58.8.2 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. Earlier, the Gare Palma-II Coal Block in Tehsil Tamnar, District Raigarh (Chhattisgarh) was granted ToR on 19th March, 2013 in favour of M/s Maha Tamil collieries Ltd for the total production capacity of 23.60 MTPA (OC 22 MTPA, UG 1.6 MTPA) in a total area of 2583.48 ha.
- ii. Subsequent to cancellation by the orders of Hon'ble Supreme Court, the coal mine has now been allocated to M/s MSPGCL vide allotment order dated 31st August, 2015 issued by Ministry of Coal.
- iii. The above said ToR, neither valid as of now nor qualifies for transfer to the fresh allottee, the present proposal is for consideration of fresh ToR without any reference to the ToR issued earlier.
- iv. The latitude and longitude of the project site are

Boundary Point	Latitude	Longitude
A	22 ⁰ 08' 51.49" N	83 ⁰ 26' 15.48" E
B	22 ⁰ 10' 05.17" N	83 ⁰ 26' 15.43" E
C	22 ⁰ 10' 49.89" N	83 ⁰ 27' 26.62" E
D	22 ⁰ 09' 09.89" N	83 ⁰ 28' 57.87" E
E	22 ⁰ 08' 03.77" N	83 ⁰ 29' 49.27" E
F	22 ⁰ 06' 24.21" N	83 ⁰ 31' 12.63" E
G	22 ⁰ 07' 18.06" N	83 ⁰ 29' 13.85" E
H	22 ⁰ 06' 50.05" N	83 ⁰ 29' 15.31" E

- v. Joint Venture: Not applicable

- vi. Coal Linkage : Ministry of Coal has awarded allotment order under clause (C) of sub rule (2) of rule 7 and sub-rule (1) of rule 13; vide order No. 103/30/2015/NA dated: 31st August 2015
- vii. Employment generated / to be generated: 3400 (Underground + Open cast)
- viii. Benefits of the project: Direct Employment for people in the mining areas, indirect Employment opportunities for the people in the surrounding areas, enhanced livelihood opportunities for people, development of infrastructure facilities in the surrounding areas, improvement in quality of life, Self-Reliance among women groups through income generation activities, CSR activities aim at overall development of the region etc.
- ix. The land usage of the project will be as follows:

Pre-Mining:

S.No	Landuse	Area, Ha
1	Agricultural	2108.83
2	Non Agricultural (Grass/road/community land/barren)	127.35
3	Township/populated	79.82
4	Water Body	56.17
5	Protected Forest	75.94
6	Revenue Forest	135.37
Total		2583.48

- x. The total geological reserve is 1059.29 MT. The mineable reserve 582.292 MT (Opencast), 199.393 MT (Underground), extractable reserve is 553.17 MT (Opencast), 101.97 (Underground). The per cent of extraction would be 75.15 % (Opencast), 31.55% (Underground).
- xi. The coal grade is G3-G17. The stripping ratio is 4.99:1 m³/tonne. The average Gradient is 1:16. There will be 31 seams with thickness ranging from 12 m to 22 m.
- xii. The total estimated water requirement is 1995 KLD water will be required for the mine, residential colony after considering the reuse of 80% of water reclaimed from colony STP. The level of ground water varies from 4.67 to 12.34 m bgl during pre-monsoon period and from 1.43 to 9.35 m bgl during post monsoon period in the shallow aquifers.
- xiii. The Method of mining would be Shovel / dumper combination as well as Continuous Surface Miners-Opencast, Mechanized Room & Pillar without blasting and Semi mechanized Board & Pillar with blasting – Underground.
- xiv. There is One external OB dump with Quantity of 218.81 Mbcm in an area of 380 ha with height of 90 meter above the surface level.
- xv. The total void mine would be 331.06 Ha; 195.15 ha (in east pit) with a depth of 170 m upto pit floor and remaining 135.91 ha (in west pit) with a depth of 60 m due to partial backfilling.
- xvi. The life of mine is 29 Years for Opencast, 69 Years for Underground.
- xvii. Transportation: Coal transportation in pit by Opencast Mining:- Dumpers; Underground Mining:- shuttle cars and conveyors from in pit to pit head coal handling plant, Surface to

- Siding by Conveyor after the rail route planned through the northern part of block is in place. Trucks till the said Rly line is in place and loading at siding by Reclaiming and loading Conveyors Coal will be transported through rail from the nearest available Railway siding.
- xviii. There is R & R involved. There are 3500PAFs.
- xix. Cost: Total capital cost of the project is Rs. 7642 Crores. CSR Cost The CSR activities will be implemented over and above R&R package. A detailed study will be conducted to identify the actual needs of the people in the area to formulate CSR policy. R&R Cost Rs. 434 Crores. Environmental Management Cost It will be calculated during preparation of EIA report.
- xx. Water body: Kelo River is flowing across the mine lease area. A statutory 60m barrier will be left on either side of the river.
- xxi. Approvals: Ground water clearance not yet taken, Board's approval obtained on 18/03/2016. Mining Plan and Mine Closure Plan submitted to MOC vide letter No Mahagenco/ED (Fuel/Coal) dated 26.02.2016, and expected to be approved by the end of July, 2016. Mine closure plan is an integral part of Mining plan.
- xxii. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxiii. Forestry issues: 211.31 Ha (Protected Forest-75.94 Ha, Revenue Forest – 135.37 Ha)
- xxiv. Total afforestation plan shall be implemented covering an area of 194.76 ha at the end of mining. Green Belt over an area of 36.07 ha. Density of tree plantation 6318900 trees/ ha of plants.
- xxv. There are no court cases/violation pending with the project proponent.

58.8.3 The Committee, after detailed deliberations (**in the 58th meeting on 23-24 June, 2016**) noted the following:

- (i) River Kelo is passing through the mining area. To prevent the area from likely flooding, a distance of 60 m on either side will be left and barrier on both the sides will be constructed taking into account the HFL.
- (ii) For diversion of total forest land of 211.31 ha, the project proponent has applied for State-I FC as required under the Forest (Conservation) Act, 1980.
- (iii) All coal will be transported by rail and the silo loading into the railway wagons.
- (iv) The project would result in displacement of 14 villages with around 1700 families, mostly from minority communities. Therefore, a detailed socio-economic study is required through a reputed institute.
- (v) It has been reported that project area falls under elephant corridor, and thus requiring conservation Action Plan for the wildlife.
- (vi) A washery was mentioned in the project proposal and the item be deleted from the project proposal.
- (vii) The PP should examine the feasibility of completely back filling the void at the end of the mining.

58.8.4 *The Committee, after detailed deliberations, recommended the proposal for grant of ToR for preparation of EIA/EMP reports alongwith public consultation with the specific conditions, in addition to the generic conditions applicable for coal mines, as under:-*

- *The project proponent should submit the details of design of the protection works through a reputed organisation to take care of hydrology of the river during flood. Wherever drainage is intercepted the project proponent have to propose a suitable diversion of drains all along the*

project boundaries.

- A detailed socio-economic study to be conducted through a reputed institute.
- Conservation Action Plan for the wildlife to be prepared in consultation with State forest authorities. Issues raised by one of the NGOs to be adequately addressed.

Agenda 58.9

Expansion of Bermo coal mine Project from 0.4 MTPA to 2.62 MTPA of M/s Damodar valley Corporation (DVC) in a total area of 269.094 ha located in District Bokaro (Jharkhand) - For consideration of ToR

58.9.1 The proposal is for grant of TOR forexpansion of Bermo Coal mine Project from 0.4 MTPA to 2.62 MTPA of M/s Damodar valley Corporation (DVC) in a total area of 269.094 ha in District Bokaro (Jharkhand).

58.9.2 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 consideration of ToR afresh.
- The latitude and longitude of the project are 23°46'42.6288" to 23°47'24.0324" N and 85°57'28.008" to 85°59'9.5784" E respectively.
- Joint Venture: No
- Coal Linkage: Bokaro Thermal Power Station (BTPS) and Chandrapura Thermal Power Station (CTPS)
- Employment generated / to be generated: Present 115, Proposed after expansion 510.
- Benefits of the project: The existing and proposed expansion of mining establishment will increase employment opportunities under various cadres viz. management, supervisory, highly skilled, skilled, semi skilled and unskilled workmen etc. and indirectly, it will also help to sustain the coal production till the end of life of proposed linked thermal power station.
- The land usage of the project will be as follows:

Pre-Mining:

Sl. No	Landuse	Within ML Area (ha)	Outside ML Area (ha)	Total (ha)
1	Agricultural land	27.166	100	127.166
2	Forest land	120.313		
3	Wasteland	18.292		
4	Grazing land			
5	Surface water bodies	0.935		

6	Settlements			
7	Others (specify)	0.728		
	Total	167.434		

P
ost-
Mining:

Sl. No	Land use during Mining	Land use (ha)				Total
		Plantation	Water Body	Public Use	Un disturbed	
Within ML area						
1	External OB Dump	0				0
2	Top soil Dump	-				
3	Excavation	49.5	102.94			152.44
4	Road	-	-	-	-	
5	Built up area	6.884		2.00		8.884
6	Green Belt	6.11				6.11
7	Undisturbed area					
	Sub Total	62.494	102.94	2.00		167.434
Outside ML Area						
	External OB Dump	100				100
	Approach Road			1.66		1.66
	Sub Total	100		1.66		101.66
	Grand Total	162.494	102.94	3.66		269.094

- viii. The total geological reserve is 148.548 MT. The mineable reserve 81.38 MT, extractable reserve is 81.38 MT at inception stage-11.22 MT as on 01.04.2015= 70.16 MT as on 01.04.2015. The per cent of extraction would be 54.78 %.
- ix. The coal grade is IV The stripping ratio is 1.45 Cum/tonne. The average Gradient is 1 in 7 . There will be 8 seams with thickness 1 metre and above.
- x. The total estimated water requirement is 709m³/day. The level of ground water ranges from 1.93-5.54m.
- xi. The Method of mining would be Opencast. Opencast Mechanized.
- xii. There is 1 external OB dump with Quantity of 45 Mbcm in an area of 100 ha with height of 70 meter above the surface level and 1 internal dump with Quantity of 56.75 Mbcm in an

area of 52.609 ha.

- xiii. The final mine void would be in 102.94 Ha with depth 150m. And the Total quarry area is 167.434 Ha. Backfilled quarry area of 49.5 Ha shall be reclaimed with plantation. A void of 102.94 ha with depth 150 m which is proposed to be converted into a water body.
- xiv. The life of mine is 28 Years.
- xv. Transportation: Coal transportation in pit by through Dumper from in pit to pit head coal handling plant, Surface to Siding by tipping trucks at present and proposed by aerial ropeway or cross country conveyor to Pre-weigh Bin.
- xvi. There is R & R involved. There no PAFs.
- xvii. Cost: Total capital cost of the project is Rs. 50 Crores. CSR Cost Rs. 2.5 Crores. R&R Cost Rs. 63.57 Crores for shifting of Central Coalfields Ltd quarters built in our lease hold area. Environmental Management Cost Rs 15.97 Crore as per EIA study by CIMFR dt 2007.
- xviii. Karo&AmlonNallhaare flowing through Y-Y area of ML of Bermo Mines.
- xix. Approvals: Ground water clearance not required, Board's approval yet to be approved. Mining plan for expansion is under process. Mine closure plan is an integral part of mining plan.
- xx. There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxi. There is no forest land in our mining lease area.
- xxii. Total afforestation plan shall be implemented covering an area of 162.494 ha at the end of mining. Green Belt over an area of 6.11 ha. Density of tree plantation 2500 trees/ ha of plants.
- xxiii. There are no court cases/violation pending with the project proponent.

58.9.3 The Committee, after detailed deliberations (**in the 58th meeting on 23-24 June, 2016**) noted the following:

- (i) The proposed OB area of 100 ha is at a distance of nearly 5 km (in non-coal bearing area) from the coal mine which may not be economically and/or environmentally sustainable.
- (ii) The nearby coal mine of M/s Central Coalfields Ltd may be utilized for dumping of OB, and the option needs to be explored.
- (iii) In case this option not found/feasible, the project proponent may go for restricting their expansion, and explore the possibility for OB dumping within the existing mine lease area with reduction in production.

58.9.4 *In view of the above observations, the proposal was deferred.*

Agenda 58.10

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

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

58.10.2 The proposal was considered in 55th meeting of EAC held on 11-12 May, 2016. During the meeting, the observations of the Committee were as under:-

(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 dip 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.

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

(a) The technology for the proposed washery offered by the lowest bidder M/s S.K. Samanta & Co. Pvt Ltd through e-bidding route is 'Heavy Media Cyclone' under BOM concept. Approval for the same has been obtained in 177th meeting of the Board of Directors of MCL held on 26th May, 2016.

(b) The wind direction and calm conditions during different month of the year have been summarised.

(c) The data has been procured from the meteorological data of IMD station at Angul for the period of 1951 to 1980.

(d) Separate by-pass road has been planned through the mine backfilled area for which alignment has been surveyed and finalized and formation work is under progress. After construction of the formation, work will be awarded for construction of the road. This road will by-pass the heavily populated areas and will result in significant reduction of dust pollution in Talcher Coalfield. Also for transportation of coal from washery to the railway siding through covered belt conveyer/ tube conveyer and arrangement for loading through SILO is under tendering stage and it will be synchronized with the washery construction to avoid any mismatch.

(e) As per the study of surface runoff by NIT Rourkela, total annual runoff is 47.16 lakh m³ and the total annual strata seepage is 7.07 lakh m³. Thus, the total annual water generation in the mine is 54.23 lakh m³. Out of this, water accumulated in different sumps of the mine, annual

consumption in the mines is 10.12 lakh m³, evaporation loss 8.13 lakh m³ and recharge of aquifer 10.85 lakh m³. Balance surplus water is 15.58 lakh m³ and the capacity of the mine sumps is 53.41 lakh m³.

(f) Thus it can be observed that there is ample space in the mine to accommodate the surplus water. Also, regarding the apprehension of endangering of the dip side working, it may be mentioned that there are numerous faults in the mine property and the movement of water towards dip side is restricted by these fault planes and also there is continuous pumping from the dip side sump during monsoon to maintain the water level so that the coal extraction in the lower seams is not hampered. Thus local geological and geo-physical factors and geological disturbances play an important role and the coal seams are not in continuity for a long distance and there are vertical as well as horizontal shifting and all these localized factors decide how to access the coal reserve at different horizons (quarry no 1, 2, 3 etc.) and how to handle the water generated in mine voids due to strata seepage and due to rainfall.

(g) Ananta OCP being an old mine, efforts are continuing for internal shifting of sump water for a long without endangering the dip side working, and at the same time ensuring that there is no outside discharge, expect some exigencies during the heavy rainfall days, so that the stored water in the mine sumps can be utilized during the entire year as well as it recharges the aquifer below the bottom most coal seam.

(h) Hence after examination of the issue it is observed that dip side workings are not being endangered due to storage and internal shifting of water in the mine voids/sumps of Ananta OCP.

58.10.4 The PP further informed the following **(in the 58th meeting on 23-24 June, 2016)** which the Committee took note of it:

(i) The revised conceptual report (RCR) for Jagannath Washery on BOM concept was earlier approved by the Board of Directors of M/s Mahanadi Coalfield Ltd in their 162nd meeting held on 5th November, 2014.

(ii) As desired by the EAC, the proposal for firming up the technology for washery as proposed by the lowest bidder (L-I) was considered by the Board of Directors in its meeting held on 26th May, 2016.

(iii) The Board of Directors has considered the comprehensive proposal (technical as well as financial) submitted by the bidder and zeroed in/approved the technology for the washery as 'Heavy Media Cyclone'.

(iv) With regard to the requirement of controlled and uncontrolled emissions based on the technology suggested and meteorological data for whole year, the prediction for air quality value was required. While uncontrolled emission factor, was presented in tabular form, but the uncontrolled emission factor based on the technology suggested was not provided. Such control emission factors were reported to be based on EET manual for mining. It was mentioned that the bidder will have to comply with the controlled emission factor the table of which was not available.

(v) The predicted air quality values in terms of PM₁₀ & PM_{2.5} reflecting impact of incremental concentration on the baseline data were found to be meeting the prescribed norms. The project proponent also assured for more and more effective/mitigative measures during the operational stage of the washery.

(vi) The proposed washery close to the mine would result in better surroundings and aesthetics due to lesser coal transport generating lesser fugitive emissions and other hazards, and needs to be promoted with all environmental safeguards.

58.10.5 *The EAC, after detailed deliberations recommended for grant of EC to the proposed washery subject to the compliance of all generic conditions applicable for washery as well as fulfilment of other conditions as under:*

- *The washery shall be as per project report submitted and presented to EAC.*
- *Transport of raw coal through pipe belt conveyor and clean coal and reject by rail with wagon loading through silo.*
- *Reject will be utilized in power generation for which Joint Venture companies has been done with NTPC.*
- *The technology so chosen should conform to 'Zero Liquid Discharge'.*
- *Transportation of raw coal to be done through pipe conveyor and clean coal through silo.*
- *Thick green belt of 30-45 m width to be provided around the washery to mitigate/check the dust pollution. A 3-tier avenue plantation should also be developed along vacant areas, storage yards, loading/transfer points, and also along internal roads/main approach roads.*

Agenda 58.11

Dugda NLW Coal Washery of 2.5 MTPA of M/s Bharat Coking Coal Ltd in an ML area of 21 ha located in District Bokaro(Jharkhand) - For consideration of EC

58.11.1 The proposal is for grant of EC to the Dugda NLW Coal Washery of 2.5 MTPA of M/s Bharat Coking Coal Ltd in an ML area of 21 ha located in District Bokaro (Jharkhand).

58.11.2 The proposal was considered in 53rd meeting held on 17-18 March, 2016. During the meeting, the observations of the Committee were as under:-

(i) The data presented by PP in EIA report reveals that air quality is severely polluted at the proposed site i.e. PM₁₀ values are ranging between 471 and 492 µg/Nm³ at Station 1 and between 371 and 392 µg/Nm³ at Station 2 during the period - November 2010 to January 2011, as compared to standard of 100 µg/Nm³. In the buffer zone, the values of PM₁₀ are also high, but are much higher (ranging between 513 and 562 µg/Nm³) at Dugda Basti 1, which is 1.5 Km away from existing Dugda washery. The air quality at CISF camp in buffer zone, which is 7 km away from existing Dugda washery and 500 meters away from Madhuban washery, is still higher ranging between 416 and 585 µg/Nm³ during the period - April to June 2010. The PM₁₀ values at the reference station at ISM indicated is in the range of 60 to 80 µg/Nm³, which is well within the standard of 100 µg/Nm³.

(ii) The predicted incremental value of PM₁₀ at Station No. 2 in the proposed site has been indicated as 3704 µg/Nm³ without control and 60 µg/Nm³ after control. If correct, this means that the situation will further worsen. However, the incremental value 3704 µg/Nm³ is abnormally high and its reduction to 60 µg/Nm³ as reported with controls, also seems incorrect. Both values need to be confirmed.

(iii) During presentation, PP has shown air quality data for the period November 2015 to February 2016 for only one location i.e. at existing Dugda washery, which indicates that PM₁₀ value exceeded standard of 100µg/Nm³ and majority of the time values were above 200 µg/Nm³. The data at the proposed site for this period and other stations in buffer zone were not provided in presentation. During the presentation it was also mentioned that there are various units responsible for contribution of high level of PM including power plant in the area and they have initiated study on sources apportionment to identify the contributor of emission.

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

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

58.11.3 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 proposed washery is in the vicinity of a number of industries. Chandrapura Thermal power plant along with its fly ash dumping pond is 3 km west of Dugda washery. Bokaro steel plant is 6km south west of Dugda Washery and to the north west lies the coal mines of Central coalfield Limited. A number of coking plant lines the area north to the Dugda washery. Bokaro Thermal Power station lies 30 km west of Dugda Coal washery and to the east lies the Jharia Coalfields. The predominant wind direction in the winters is the north–west. Taking in account the meteorological attributes as well the geographical location of Dugda Coal washery in vicinity of active industries, it is apt to conclude that the PM₁₀ concentration at the existing Dugda washery was probably high due to pollution effect of nearby industries.

(ii) The value of PM₁₀ values are ranging between 471 and 492 µg/m³ at Station 1 and between 371 and 392 µg/m³ at Station 2 during the period – November 2010 to January 2011, as compared to standard of 100 µg/m³ whereas in the buffer zone, the values of PM₁₀ are also high, but are much higher (ranging between 513 and 562 µg/m³) at Dugda Basti 1, which is 1.5 km away from existing Dugda Washery which clearly indicated that additional polluting source were present apart from Dugda washery

(iii) The readings for PM₁₀ are high during November, 2010 to January, 2011 as compared to the standards of 100 µg/m³. This data is of time period during which moratorium under CEPI was stipulated by MoEFCC in 2010 in Dhanbad district, after which an action plan comprising of covering of coal loaded vehicles, making pucca roads, frequent water sprinkling on the way to suppress the dust etc was implemented by JSPCB and the pollution levels have come down significantly due to which the moratorium was lifted in Sept., 2013.

Such an abnormal reading is due to the software run error in the old version of ISCST done at CMPDI. The reporting of such erroneous reading is regretted.

(iv) At the time of presentation, the data for proposed site and buffer zone was not available. Due to the paucity of time and to meet the commitment to Govt. of India by CIL regarding implementation of the 15 new washery projects including Dugda, the presentation was made without data of proposed site. In this regard, a letter by Secretary (Coal) vide letter no.43012/10/2015-CPAM, dated 3rd Nov., 2015 has been addressed to Secretary, MoEFCC. Under the 15 new washery projects, two washeries proposed by M/s BCCL i.e. Dugda 2.5 MTPA and Bhojudih 2.0 MTPA also are covered under the priority list that are being monitored by Ministry of Coal and PMO. Terms of Reference of these washeries were granted by MoEFCC on 25.09.2015 and the relaxation for preparation of EIA/ EMP based on monitoring data had also been considered by MoEFCC vide letter no.D.O.No.Z-11013/57/2015-IA-II(Coal Mining), dated 13.11.2015. After this, BCCL has up-loaded the EIA/ EMP online based on the old and available environmental data. But the proposal was deferred by EAC stating that the data on PM₁₀ is high and beyond the norms. The reasons for high values being explained in point number 1. The existing Dugda Washery was based on old technology. Steps are being taken to upgrade the facilities which would bring down the PM₁₀ level.

(v) BCCL has taken action in this respect. Tender was floated twice in which none of the bidder qualified and hence not finalized for award of work. Further action has been taken to get the source apportionment study done through the agencies/ institutions of repute like IIT, NEERI Nagpur, ARAI Pune etc who have done such source apportionment study for MoEFCC in the past and has successfully submitted the report. Accordingly the MOU for getting the work done has been signed between CIL & NEERI, Nagpur. NEERI has consented to take up the work and complete it in 18 months.

(vi) An enquiry committee was constituted to enquire into the matter for the present status of damage occurring to land by entering of dirty water of washery. After inspection, the committee reported that there was no such flow/leakage of dirty water from washery campus into the surrounding land.

(vii) EAC has opined that the proposed washery cannot be considered at the proposed site and it also suggested for an alternative site. In this respect, BCCL has made all efforts for identification of an alternative site, but due to serious land acquisition problems in the Jharia Coalfield (as it is a city based and densely populated area) it would take at least 5 years, and establishing infrastructure like railway siding, power supply etc. after land acquisition / possession would take another two years which would seriously derail the commissioning schedule of the project that is being monitored by Ministry of Coal and PMO.

(viii) Dhanbad Action Plan is already in implementation comprising of mitigative measures for control of pollution. ISM, Dhanbad has been consulted with regards to study of inventory of polluting sources with pollution control methods. The study is expected to commence shortly. Competent authority of BCCL directed the Project Proponent to make EIA/EMP of the Proposed Dugda washery afresh which has been uploaded on the MoEFCC website. Keeping in the commitment to Govt. of India by CIL regarding implementation of the 15 new washery projects including Dugda which is being monitored by the PMO, the EAC is requested to consider the project for environment clearance with the revised EIA-EMP.

58.11.4 The PP further informed the following (in the 58th meeting on 23-24 June, 2016) which the Committee took note of it:

- (i) The BCCL board in its 260th meeting held on 30th August, 2008 has agreed for setting up of six washeries on BOM concept and accorded 'in-principle' approval for inviting of bids
- (ii) The contract finalization for award of work is in process and will take about a month time. The Committee directed that project proponent should submit the Board approval for the contract giving details of the process and the technology to the Ministry for processing the file for EC.
- (iii) The old washery of 2.5 MTPA established in 1959, should be phased out while the new washery puts in operation.
- (iv) The predicted air quality values in terms of PM10 & PM 2.5 reflecting impact of incremental concentration on the baseline data were found to be meeting the prescribed norms. The project proponent also assured for more and more effective/mitigative measures during the operational stage of the washery.
- (v) The proposed washery close to the mine would result in better surroundings and aesthetics due to lesser coal transport generating lesser fugitive emissions and other hazard, and needs to be promoted with all environmental safeguards.

58.11.5 The EAC, after detailed deliberations has recommended for grant of EC to the proposed washery subject to the compliance of all generic conditions applicable for washery as well as fulfilment of other conditions as under:

- The technology so chosen should conform to 'Zero Liquid Discharge'.
- Transportation of raw coal to be done through pipe conveyor and clean coal through silo.
- Thick green belt of 30-45 m width to be provided around the washery to mitigate/check the dust pollution. A 3-tier avenue plantation should also be developed along vacant areas, storage yards, loading/transfer points, and also along internal roads/main approach roads.
- Washery shall be as per project report submitted and presented to the EAC.
- Transport of raw coal, clean coal, midling & reject by rail with wagon loading through silo.
- Reject will be used in power generation for which jv co. has been formed between CIL & NTPC.
- The more than 60 yrs old washery at Dugda shall be shut down on commissioning of this new washery.
- Urgent action is required to reduce pollution from present washery.
- A CSR of Rs. 300 Lakhs be provided against Rs. 209.78 Lakhs as was agreed during deliberations

Agenda 58.12

Ramagundam Opencast-III Expansion Phase-II Project of M/s The Singareni Collieries Company Ltd in ML area of 2070.10 hain District Karimnagar (Telangana)- For amendment in EC.

58.12.1 The proposal is for amendment in EC granted on 11th May, 2015 for Ramagundam

Opencast-III Expansion Phase-II Project from 4.30 MTPA to 6.30 MTPA (Normative)/5.0 MTPA to 6.80 MTPA (Peak)of M/s The Singareni Collieries Company Ltd.with increase in ML area from 1393.81 ha to 2070.10 ha in District Karimnagar(Telangana).

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

EC Reference	Discrepancy observed in EC letter No. J-11015/43/2013-IA.II (M), Dated 11.05.2015	Corrections/amendments desired
	Para/Specific Conditions :	
Para 2 of xiii	The final mine void would be in 749.13 ha with depth of 35 m and total quarry area is 1113.30 ha. Back filled quarry area of 365.98 Ha shall be reclaimedwith plantation .A void of 747.72 Ha with depth of 35 m which is proposed to be converted into a water body.	The final mine voidwould be in 747.72 ha with depth of 35 m and total quarry area is 1113.70 ha . Back filled quarry area of 365.98 Ha shall be reclaimedwith plantation. A void of 747.72 Ha with depth of 35 m which is proposed to be converted into a water body.
A. xxix.	An estimated total 781.30 Mm ³ of OB will be generated during the entire life of mine. Out of which 172.34 Mm ³ of OB will be dumped in one external OB dumps an earmarked area covering an area of 444.15 ha of land with height of 90 m.608.96 Mm ³ of will be one internal OB dump covering an area of 365.98 ha with height of 40m .The maximum height of external OB dump for hard OB will not exceed 90m .The maximum slope of the dump shall not exceed 28°. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self-sustaining and compliance status shall be submitted to MoEF& CC and its regional Office on yearly basis.	An estimated total 781.30 Mm ³ of OB will be generated during the entire life of mine. Out of which 172.34 Mm ³ of OB will be dumped in one external OB dumps an earmarked area covering an area of 444.15 ha of land with height of 120 m .608.96 Mm ³ of will be one internal OB dump covering an area of 365.98 ha with height of 120 m .The maximum height of external OB dump for hard OB will not exceed 120 m .The maximum slope of the dump shall not exceed 28°.Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self-sustaining and compliance status shall be submitted to MoEF& CC and its regional Office on yearly basis.
A. xxxiv.	Of the total quarry area of 1113.30 ha the back filled quarry area of 365.98 ha shall be reclaimed with plantation and a void of 747.72 ha at a depth of 35 m which is proposed to be converted into water body shall be gently sloped and the upper benches shall be terraced and stabilized with plantation/afforestation by planting native plant species in consultation	Of the total quarry area of 1113.70 ha the back filled quarry area of 365.98 ha shall be reclaimed with plantation and a void of 747.72 ha at a depth of 35 m which is proposed to be converted into water body shall be gently sloped and the upper benches shall be terraced and stabilized with plantation/afforestation by planting native plant species in consultation

	with the local DFO/Agriculture Department. The density of trees shall be around 2500 plants per ha.	with the local DFO/Agriculture Department. The density of trees shall be around 2500 plants per ha.
--	---	---

58.12.3 The PP further informed the following **(in the 58th meeting on 23-24 June, 2016)** which the Committee took note of it:

(i) RG OC-III expansion project was accorded EC vide letter No.J-11015/267/2007-IA-II (M) dated 31st August, 2008 for normative capacity of 4.30 MTPA peak production of 5 MTPA in the ML area of 1393.81 ha.

(ii) The EC for RG OC-III expansion phase-II project for capacity enhancement from 4.30 MTPA to 6.30 MTPA (Normative) and from 5 MTPA to 6.80 (peak) with increase in mining lease/project area from 1393.81 ha to 2070.10 ha, was granted vide letter No.J-11015/43/2013.IA-II (M) dated 11th May, 2015.

(iii) Although, the project proponent have requested for corrections in the EC, but the Committee was of the view that the proposal would qualify for for amendment in the EC and not corrections due to no typographical error involved therein. the Committee further felt that hte relevant details were provided by the project proponent themselves and not stipulated by the ministry. this was finally agreed too by the project proponent.

58.12.4 *The EAC after verifying the documents and discussions, recommended the proposal for amendment in the EC, as desired by the project proponent in respect of para 2 (xiii) and para 4A (xxxiv).*

Agenda 58.13

Bhojudih NLW Coal Washery project of 2 MTPA of M/s Bharat Coking Coal Ltd in an area of 15 ha located in District Purulia (West Bengal) - For consideration of EC

58.13.1 The proposal is for grant of EC to Bhojudih NLW Coal Washery project of 2 MTPA of M/s Bharat Coking Coal Ltd in an area of 15 ha located in District Purulia (West Bengal).

58.13.2 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 ToR for the project was accorded vide letter No.J-11015/432/2013-IA.II(M) dated 25th September, 2014.
- ii. The latitude and longitude of the project site are 23⁰ 37' 3" N and 86⁰ 28' 56" E respectively.
- iii. Joint Venture: No JV
- iv. Coal Linkage : N/S Tisra OCP (Seam-I, II & III)
- v. Employment generated / to be generated: Washery will be manned with 123 employees.
- vi. Benefits of the project: The washery will produce environmental friendly clean coal to minimize the pollution levels. It will reduce volume of coal transportation which will reduce pollution. The rejects will be utilized for power generation in Fluidized Bed Combustion plants. The project will create employment opportunities both for skilled and semiskilled persons in the area. Business opportunity in Secondary & Tertiary sectors will increase. The

Washery will produce metallurgical grade coal to be used in steel plants thus resulting in savings to the national exchequer. CSR activities will improve social infrastructure in the area

- vii. The land usage of the project will be as follows: Approximately 15 Ha of land will be required for the proposed Washery installation.
- viii. The Method of Coal Washing (Heavy Media Cyclone technology)
- ix. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- x. The life of mine is 18 Years.
- xi. Transportation: Raw coal intake and product dispatch will be through conveyor at railway siding existing besides the proposed washery.
- xii. There is no R & R involved. There is no PAFs.
- xiii. Cost: Total capital cost of the project is Rs. 304.17 Crores. CSR Cost Rs. 2/- per Tonne of coal production. R&R Cost Nil. Environmental Management Cost Provision of Capital cost 226 lakhs and revenue cost of 45 lakhs.
- xiv. Water body : Damodar River (2.5 Km)
- xv. Approvals: Ground water clearance not applicable, Board's approval obtained on 27.07.2015 by BCCL Board, Mining plan has been approved on not applicable Mine closure plan is an integral part of mining plan.
- xvi. There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xvii. There is no forest area involved.
- xviii. There are no court cases/violation pending with the project proponent.
- xix. Public Hearing was held on 29th February, 2016. The issues raised in the PH includes should be given priority for skilled and unskilled employment and development of local infrastructures like road, School and health centre; storage/transportation of ash from the nearby Santhaldih Thermal Power Plant. They also emphasised on local infrastructural development e.g road network, school and health centre.

58.13.3 The PP further informed the following **(in the 58th meeting on 23-24 June, 2016)** which the Committee took note of it:

- (i) The BCCL Board in its 260th meeting held on 30th August, 2008 has agreed for setting up of six washeries on BOM concept, and accorded in principle approval for invitation of bids
- (ii) Out of three bids so received, for the washery, the proposal submitted by M/s ACB (India) Ltd was finally qualified and placed before the BCCL. Board approval and award of work.
- (iii) The Board has approved award of work and funding by BCCL for setting up of 2 MTPA Bhojudih NLW coal washery on BOM concept to the lowest bidder namely M/s ACB (India) Ltd based on 'Heavy Media Cyclone' technology.
- (iv) The predicted air quality values in terms of PM10 & PM 2.5 reflecting impact of incremental concentration on the baseline data were found to be meeting the prescribed norms. The project proponent also assured for more and more effective/mitigative measures during the operational stage of the washery.
- (v) The project proponent have confirmed that they would be spending Rs 100 lakhs per annum towards CSR activities in the vicinity of the coal washery, which would cater to the issues

raised during public hearing. Action Plan in this regard needs to be formulated.

(vi) The washery proposed close to the mine would result in better surroundings and aesthetics due to lesser coal transport generating lesser fugitive emissions and other hazard, and needs to be promoted with all environmental safeguards.

58.13.4 The EAC, after detailed deliberations, recommended for grant of EC to the proposed washery subject to the compliance of all generic conditions applicable for washery as well as fulfilment of other conditions as under:

- *The technology so chosen should conform to 'Zero Liquid Discharge'.*
- *Transportation of raw coal to be done through pipe conveyor and clean coal through silo.*
- *Thick green belt of 30-45 m width to be provided around the washery to mitigate/check the dust pollution. A 3-tier avenue plantation should also be developed along vacant areas, storage yards, loading/transfer points, and also along internal roads/main approach roads.*
- *Washery shall be as per project report submitted and presented to the EAC.*
- *Transport of raw coal, clean coal, middling & reject by rail with wagon loading through silo.*
- *Reject will be used in power generation for which jv co. has been formed between CIL & NTPC.*
- *The old washery at Bhojudih shall be shut down on commissioning of this new washery.*
- *Urgent action is required to reduce pollution from present washery.*

Agenda 58.14

Discussion under any other item:

PARTICIPANTS IN 58th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 23rd – 24th June, 2016 ON COAL SECTOR PROJECTS.

Sl. No.	List Of Participants Expert Appraisal Committee (Coal Mining)	
1.	Prof C. R. Babu	Member
2.	Shri J. L. Mehta	Member
3.	Shri T. K . Dhar	Member
4.	Shri N. K. Verma	Member
5.	Shri G. S. Dang	Member
6.	Dr. S. D. Attri	Member
7.	Dr. S. K. Paliwal	Representative (CPCB)
8.	Shri N. S. Mondal	Representative (CEA)
9.	Shri S. K. Shrivastva	Member Secretary

PARTICIPANTS IN 58th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 23rd – 24th June 2016 ON COAL SECTOR PROJECTS.

58.1 Talcher Coal Washery Project of M/s Aryan Energy private. Limited.

1. Shri K Patra
2. Shri D Mishra
3. Shri B. Patra
4. Shri D N Panday

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

1. Shri Pushkar
2. Shri Danish Meena
3. Shri Prabhu Prasad
4. Shri Vikas Kumar Singh
5. Shri Kishor Choudhary
6. Shri S P Sarangi
7. Shri R V Singh
8. Shri S Singh

58.2 Expansion of Konar OCP of M/s Central Coalfields limited.

1. Shri Pushkar
2. Shri Danish Meena
3. Shri Prabhu Prasad
4. Shri Vikas Kumar Singh
5. Shri Kishor Choudhary
6. Shri S P Sarangi
7. Shri R V Singh
8. Shri S Singh

58.4 Coal Washery (2.5 MTPA) of M/s Chhattisgarh Power And Coal Beneficiation Ltd

1. Shri Anurag Shrivastva
2. Shri Rajesh Shrivastava

58.5 Coal Washery 2.4 MTPA of M/s Maheshwari Coal Beneficiation & Infrastructure Private Ltd

1. Abhishek Goenka
2. Shri Rajesh Shrivastava

58.6 Cluster 11 of M/s Eastern Coalfield Limited.

1. Shri A M Mahathe

2. Shri G. Prasad
3. Shri B N Prasad
4. Shri S K Sinha
5. Shri Anand Shekhar
6. Shri A K Dinkar
7. Shri Kishore chaudhary
8. Shri R Jaipwiar
9. Shri S. Chakraborty
10. Shri P Marik

58.7 Kistram OCP of M/s SCCL.

1. Shri A Monohar Rao
2. Shri Vasanth Kumar
3. Shri N Srinivasa Rao
4. Shri K Raghu Kumar
5. Shri N Bhaskar

58.8 **Gare Palma Sector –II** Coal mine Project of **M/s Maharashtra State Power Generation Company LTD., (MSPGCL)**

1. Shri Pankaj Malik
2. Shri Sunil
3. Shri V R Hedao
4. Shri Prafulla Pathak
5. Shri V Vijay

58.9 Expansion of **Bermo** coal mine Project of M/s Damodar valley Corporation (DVC).

1. Shri B D Sharma
2. Shri D Chaudhari
3. Shri A K Banerjee
4. Shri A Roy Caudhary
5. Shri A K Thakur
6. Shri P Kumar
7. Shri J K Mandiye
8. Shri Marisha Sharma

58.10 **Jagannath** Washery of **M/s Mahanadi Coalfields Ltd.**

1. Dr. V Arora
2. Shri D K Sen
3. Shri J P Singh
4. Dr. Shambhav Jha
5. Shri R K Shrivastava
6. Shri P K Mishra
7. Shri R P Gupta
8. Shri Kishor Chaudhary
9. Shri Sonu G Kumar

58.11 Dugda NLW Coal Washery of **M/s Bharat Coking Coal Ltd.**

1. Shri V K Sinha
2. Shri D C Jha
3. Shri C S Prasad
4. Shri S N Singh
5. Shri B K Singh
6. Shri Kumar Ranjeev
7. Dr. EVR Raju
8. Shri Amarjeet Singh
9. Shri Kishor Chaodhary

58.12 **Ramagundam** Opencast-III Expansion Phase-II Project of M/s SCCL.

1. Shri A Monohar Rao
2. Shri Vasanth Kumar
3. Shri N Srinivasa Rao
4. Shri K Raghu Kumar
5. Shri N Bhaskar

58.13 **Bhojudih** NLW Coal Washery project of **M/s Bharat Coking Coal Ltd.**

1. Shri V K Sinha
2. Shri D C Jha
3. Shri C S Prasad
4. Shri S N Singh
5. Shri B K Singh
6. Shri Kumar Ranjeev
7. Dr. EVR Raju
8. Shri Amarjeet Singh
9. Shri Kishor Chaodhary

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 conveyer 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.
- (xxxii) Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given.
- (xxxiii) Risk Assessment and Disaster Preparedness and Management Plan should be provided.
- (xxxiiii) Integration of the Env. Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.
- (xxxv) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxxvi) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
- (xxxvii) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
- (xxxviii) Corporate Environment Responsibility:
- 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 Rights(ha)	Area Under Mining Rights (ha)	Area under Both (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.

58th EAC (THERMAL & COAL MINING PROJECTS) MEETING
SCHEDULED FOR 23rd – 24th June, 2016..

AGENDA

Venue: Brahamaputra 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

Thursday 23rd June , 2016

- 58.1 Talcher** Coal Washery Project (from 2.34 MTPA to 5 MTPA capacity in a total project area of 10 Acres; located in District-Angul, Odisha of **M/s Aryan Energy private. Limited**, (EC based on TOR granted on 30.12.2014) - **For consideration of EC**
- 58.2** Expansion of **Karo** OCP for increase in production capacity from 1.5 MTPA to 15 MTPA and integrated Karo Washery (7.0 MTPA) in an ML area of 575.36 ha located in village, Karo, Amla, Kargali & Baid Karo, District Bokaro (Jharkhand) of **M/s Central Coalfields limited** (EC based on TOR granted on 03.11.2015)- - **For consideration of EC**
- 58.3** Expansion of **Konar** OCP for production capacity (from 4.10 MTPA Normative to 8.00 MTPA Normative and 5.00 MTPA Peak to 11.00 MTPA Peak) ; Integrated Konar Non-coking Coal Washery (7 MTPA capacity) and expansion of project area from 520.93 ha to 729.40 ha located in Bokaro and Kargali Area District Bokaro (Jharkhand) of **M/s Central Coalfields limited** (EC based on TOR granted on 03.11.2015) - **For consideration of EC.**
- 58.4** 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 further**

consideration of TOR.

- 58.5** Proposed Coal Washery of 2.4 MTPA (Wet Process) in an area of 6.48 ha by **M/s Maheshwari Coal Beneficiation & Infrastructure Private Ltd.** at Village Parsada, Tehsil Bilaspur (Chhattisgarh) - **For Consideration of TOR**
- 58.6 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.**

Friday 24th June, 2016

- 58.7 Kistaram** Opencast Project of (2.00 MTPA in ML area of 435.68 Ha, located at dist. Khammam, Telangana of **M/s The Singareni Collieries Co. Limited** (EC based on TOR granted on 25.09.2014) - **For consideration of EC**
- 58.8 Gare Palma Sector –II** Coal mine Project of 23.60 MTPA (OC-22.0 MTPA + UG-1.6 MTPA) MTPA in an area of 2583.48 ha located of **M/s Maharashtra State Power Generation Company LTD., (MSPGCL)**, at District Raigarh (Chhattisgarh)- **For consideration of TOR**
- 58.9** Expansion of **Bermo** coal mine Project from 0.4 MTPA to 2.62 MTPA in a project area of 269.094 ha. located in Bokaro District (Jharkhand) of M/s Damodar valley Corporation (DVC) - **For Consideration of TOR**
- 58.10 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 further consideration of EC**
- 58.11 Dugda** NLW Coal Washery (2.5 MTPA in an ML area of 21 ha located in District Bokaro, Jharkhand of **M/s Bharat Coking Coal Ltd.**(EC based on TOR granted on 25.09.2014) - **For consideration of EC**
- 58.12 Ramagundam** Opencast-III Expansion Phase-II Project of (Expansion from 4.30 MTPA to 6.30 MTPA Normative and 5.0 MTPA to 6.80 MTPA Peak and expansion in an ML area from 1393.81 Ha to 2070.10 Ha.; located in District Karimnagar, Telangana of **M/s The Singareni Collieries Company Ltd.** (EC granted on 11.05.2015) - **For Correction in EC**
- 58.13 Bhojudih** NLW Coal Washery project of (2 MTPA in an ML area of 15 ha) located at District Purulia, (West Bengal) of **M/s Bharat Coking Coal Ltd** (EC based on TOR granted on 25.09.2014) - **For consideration of EC**
- 58.14 Discussion** under any other item:
