

Minutes of the 4th meeting of the EAC held on 30th - 31st January, 2017 for Thermal & Coal Mining Sector projects

A. The 4th meeting of the Expert Appraisal Committee (EAC) for Thermal & Coal mining projects was held on **30-31 January, 2017** in the Ministry to consider the proposals relating to coal mining sector. The list of participants and the project proponents are at Annexure-I & II respectively.

B. Details of the proposals considered during the meeting, deliberations made and the recommendations of the Committee, are explained in the respective agenda items as under:-

Agenda 4.1

Expansion of of ‘Parsa East and Kanta Basan’ Opencast Coal Mine from 10 MTPA to 15 MTPA and expansion of Pit Head Coal Washery from 10 MTPA to 15 MTPA of M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd, located in Hasdeo-Arand Coalfields in District Sarguja (Chhattisgarh) - For Consideration of EC

4.1.1 The proposal is for grant of environmental clearance to the expansion project of Parsa East and Kanta Basan Opencast Coal Mine from 10 MTPA to 15 MTPA and expansion of Pit Head Coal Washery from 10 MTPA to 15 MTPA, promoted by M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd, in a total area of 2711.034 ha located in Hasdeo-Arand Coalfields in District Sarguja (Chhattisgarh).

4.1.2 The details of the project, as per the documents submitted by the project proponent, and also as presented during the meeting, are as under:-

(i) The Environment Clearance for the Parsa East Kanta Basan OCP of 10 MTPA was accorded vide letter dated 21st December, 2011, which was further revalidated/amended vide letters dated 25th June, 2015 and 29th December, 2015.

(ii) EC amendment for permission to set up interim washery was granted on 4th March, 2013.

(iii) The Terms of Reference (ToR) for the proposed expansion of the OCP and the washery was granted by MoEFCC vide letter dated 10th September, 2014.

(iv) The latitude and longitude of the project site are 22° 47’39” and 22°51’12” N and 82° 46’38” and 82°50’51” E respectively.

(v) Joint Venture: no joint venture

(vi) Coal Linkage :

Sl. No.	Name of specified end use plant	Units	Capacity
1.	Chhabra TPP Unit -3 to 6, District- Baran, Rajasthan	2 x 250 MW 2 x 660 MW	1820 MW
2.	Kalisindh TPP Unit – 1 & 2, District- Jhalawar, Rajasthan	2 x 600 MW	1200 MW
3.	Suratgarh Supercritical TPP, Unit- 7 & 8, District- Shriganganagar, Rajasthan	2 x 660 MW	1320 MW

(vii) Employment generated/to be generated: About 1805 persons will get direct employment in various services till 5th year of mine operation (target achieving year), which will develop due to the project and the persons employed in the project

(viii) Benefits of the project:

- Coal from this project will be used in power generation in Rajasthan, which will help in reducing gap in demand and production of electricity in the state.
- Based on the requirement of the people of the project area, the development activities will be taken up. The basic requirement of the community will be strengthened by extending health care, educational facilities developed in the township to the community, providing drinking water to the villages affected, building/strengthening of existing roads in the area etc.
- Project will generate direct as well as indirect employment in the area

(ix) The land usage of the project area, both pre-mining and post mining, shall be as follows:

Pre-Mining:

S.No.	Land use	Within ML Area (ha)	Outside ML Area (ha)	TOTAL
1.	Agricultural land	701.786	Nil	701.786
2.	Wasteland			
3.	Grazing land			
4.	Settlements			
5.	Surface water			
6.	Forest land	1871.118	Nil	1871.118
7.	Others (Government Land)	109.952	Nil	109.952
	TOTAL	2682.856	Nil	2682.856

Post- Mining:

S. No.	Type	During Mining (ha)	End of Life (ha)	Land Use (ha)					Total
				Plantation Grass/	Water Body	Public Use	Agriculture land	Disman tled	
1.	External OB Dump	112.655	112.655	112.655	-	-	-	-	112.655
2.	Top soil Dump	5.000	5.000	5.000	-	-	-	-	5.000
3.	Excavation Area	2328.247		2127.555	260.692				2328.247
	(i) Backfilled area		2157.560						
	(ii) Excavated void		230.687						
4.	Road & Infrastructure	137.435	137.435	13.744	-	32.601	-	91.090	137.435
5.	Rationalization Area	39.518	39.518	35.931	-	3.588	-	-	39.518
	TOTAL	2682.856	2682.856	2294.884	260.692	36.189	-	91.090	2682.856

(x) Total geological reserve is 516.40MT. The mineable reserve 452.46 MT, extractable reserve is 452.46 MT. The per cent of extraction would be 87.62%.

(xi) The coal grade is F, stripping ratio 5.24 Cum/tonne with an average gradient of 1 in 15. There will be three seams with the details as under:-

Seam	Units	Seam Thickness Maximum
Seam-VI	M	2.27
Seam-V	M	8.37
Seam-IV	M	9.72

(xii) Total estimated water requirement is 13,195 m³/day. The level of ground water ranges from 0.30 m to 8.20 m.

(xiii) Method of mining: Overburden removal by shovel-dumper & coal mining by surface miner.

(xiv) There shall be two external OB dumps with quantity of 52.07 Mbcm in an area of 112.655 ha with height of 60 m above the surface level, and two internal dump with quantity of 2316.65 Mbcm in an area of 1059.092 ha.

(xv) The final mine void would be in 230.687 ha with depth of 30 m, and the total quarry area is 2388.247 ha. Backfilled quarry area of 2127.555 ha shall be reclaimed with plantation. A void of 230.687 ha with depth 30 m which is proposed to be converted into a water body.

(xvi) The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.

(xvii) The life of mine is 34 Years.

(xviii) Transportation: Coal transportation in pit by belt conveyor from in pit to pit head coal handling plant, Surface to Siding by belt conveyor to Pre-weigh Bin and loading at siding by SILO with inbuilt Rapid Loading System. Wagons while in motion hauled by loco.

(xix) There is R & R involved. In Kente village 89 PAFs rehabilitated out of total 114 PAFs (increased by 23 nos. from base line data of 91) with monitory rehabilitation package & 1 employment to each family. Rehabilitation village has been developed with full facilities of electricity supply, roads with street lighting, piped water supply, school etc. Ghatbarra village with 203 PAFs will require relocation only after 15 years

(xx) Total capital cost of the project is Rs.2369 crores. CSR Cost Rs.10 Crore towards capital costs and Rs. 5/T of coal as revenue expenditure (which shall be up scaled after adjusting for depreciation of the rupee).. R&R Cost Rs. 82 Crore. Environmental Management Cost (capital cost Rs.1460 Lakh annual recurring cost Rs. 350 Lakh.

(xxi) Atem Nadi is flowing at a distance of 2.7 km from Northern Boundary of the block. A seasonal nala namely Parsa nala flows on the South Eastern part of the block and discharge its water into Atem Nadi. No nala diversion is involved in the project.

(xxii) Ground water clearance 23rd September 2009, Board's approval obtained on 26th July 2012. Mining plan has been approved on 12th August 2016. Mine closure plan is an integral part of mining plan.

(xxiii) There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone. There are no endemic, endangered species having habitat in the core zone of the study area. The species observed in the core zone were of common occurrence, mostly common birds such as Munias, Wablers, Babblers bulbuls, Egrets and the commonly noted mammals were Porcupine, Mongoose, Indian hare and common fox. A wildlife conservation plan with an estimated cost of Rs. 22 Crore has been prepared by

retired IFS officer Mr. P.C Agrahari, which was revised based on the comments of the director Wildlife Institute of India (WII), Dehradun. The same has been approved by Government of Chhattisgarh

(xxiv) Total forest area involved 1871.118 ha for mining. Forest Clearance obtained vide F.No.8-31/2010-FC on 15th March 2012.

(xxv) Total afforestation plan shall be implemented covering an area of 2294.884 ha at the end of mining. Green Belt over an area of 54.675 ha. Density of tree plantation 2500 trees/ ha of plants.

(xxvi) There are court cases/violation pending with the project proponent.

(a) Civil Appeal No.4395 of 2014 'Rajasthan Rajya Vidyut Utpadan Nigam Ltd Vs Sudiep Shrivastava & Others' before the Hon'ble Supreme Court of India

- Approval u/s 2 of the Forest (Conservation) Act, 1980 was granted to the Appellant in respect of PEKB Coal Block on 28th March, 2012.
- Mr. Sudiep Shrivastava filed an Appeal (i.e. Appeal No.73 of 2012) before the National Green Tribunal against the order dated 28th March, 2012 passed by the Forest Department, State of Chhattisgarh.
- NGT, vide its judgment dated 24th March, 2014, set aside the order dated 23rd June, 2011 and the consequential order dated 28th March, 2012 passed by the Government of Chhattisgarh under section 2 of the Forest (Conservation) Act, 1980. Further, the case was remanded to MoEF with directions to seek fresh advice of FAC within reasonable time on all aspects of the proposal. NGT also directed suspension of all works, except the work of conservation of existing flora and fauna, till further orders are passed by MoEF.
- Aggrieved against the judgment passed by NGT, RVUNL preferred a civil appeal (CA No.4395 of 2014) before the Hon'ble Supreme Court of India.
- Vide order dated 28th April, 2014, the Hon'ble Court has stayed the direction in the impugned order whereby NGT had directed that all works commenced by the RVUNL pursuant to the order dated 28th March, 2012 passed by the State of Chhattisgarh under Section 2 of the Forest Conservation Act, 1980 shall stand suspended till further orders are passed by the Ministry of Environment and Forests.

Present Status

- Post completion of all pleadings, the Registrar Court of Hon'ble Supreme Court has referred this matter to main bench on 23/11/2016 for final arguments.

(a) Forest Right Committee Ghatbarra vs Union of India & Ors. Writ Petition (C) No. 1346/2016 pending before The Hon'ble High Court of Chhattisgarh. Matter is regarding Forest Rights of the Community over the forest land.

(xxvii) Public Hearing was held on 11th September 2016 which was organized successfully by Chhattisgarh Environment Conservation Board (CECB) in village Basan, District Surguja (Chhattisgarh). About 1200 persons from surrounding villages attended the public hearing and expressed their views. The issues raised in the PH include mine discharge, arrangement of treatment of polluted water, transportation of coal, employment, culture and traditions, Rehabilitation etc.

(xxviii) Parsa East and Kanta Basan Coal Block allotted to RVUNL by the Ministry of Coal vide letter No.13016/74/2006-CA-I dated 19th/25th June, 2007 and re-allotted vide Order No. 103/13/2015/NA dated

31st March, 2015 for developing captive opencast coal mine for power generation at linked power plants of RVUNL.

(xxix) Mine Plan for 10 MTPA capacity was approved by Ministry of Coal vide letter No.13016/74/2006-CA-I dated 16th July, 2009. The revised mine plan for expansion project from 10 to 15 MTPA was accorded in principle approval on 3rd February, 2012. Mining Plan (first revision) of 15 MTPA was approved by MoC on 19th November, 2013. Mining Plan 15 MTPA (second revision) was approved by MoC on 12th August, 2016 to accommodate FBC Power Plant within Mine Lease area as per EC condition.

(xxx) 10 MTPA pit top Jig Washery commissioned. Additional 5 MTPA Washery is proposed. Coal washery has been planned for yield of 77.5% of clean coal with an ash content of about 30% based on throughput quality of ROM coal. Salient features of the coal washery are as under:-

Description	Details		
Capacity	10 MTPA (Present Capacity)	5 MTPA (Additional Washery)	15 MTPA (Total Capacity After Expansion)
Hourly Throughput capacity	1700 TPH	800 TPH	2500 TPH
No. of Annual working Hours	6000 hrs	6000 hrs	6000 hrs
Washing Technology	Wet washing process	Wet washing process	Wet washing process
Plant Process	Wet process comprising of crushing, screening, washing and material handling		
Land Requirement	28.381 ha (no additional land requirement for expansion)		
Water Requirement	3750 m ³ /day	1950 m ³ /day	5700 m ³ /day
Source of Water	Mine discharge		
Power Requirement & source	10 MVA from existing 33kv Substation		15 MVA from 132 kv Sub-station (under construction)

(xxxi) The compliance report of the Regional Office, MoEFCC at Nagpur monitored on 11th September, 2016 and forwarded vide their letter No.3-3/2012(Env)/1080 dated 21st November 2016 has been submitted.

4.1.3 While deliberations on the proposal, the EAC noted that the proposed expansion of Opencast Coal Mine and the Coal Washery by 5 MTPA each, although within the same mine lease area, may cause significant impacts on the surrounding environment including socio-economic aspects.

The Committee was also not convinced with the compliance status of EC conditions, and desired to make a site visit by 2-3 of its members. Meanwhile, and in terms of the EC conditions stipulated therein, the project proponent were asked for the Wild Life Conservation Plan.

The Committee also took cognizance of the representation received in the Ministry from one of the NGO against the proposed expansion of the OCP and the Coal Washery. The project proponent were asked to submit para wise response to the said representation.

4.1.4 *The proposal was, therefore, deferred with the above observations and for the needful.*

Agenda 4.2

Parsa Opencast Coal Mine Project of 5 MTPA and Pit Head Coal Washery of 5 MTPA of M/s Rajasthan Rajya Vidyut Utpadan Nigam Limited in a total area of 1252.447 ha at Hasdeo-Arand Coal Field in Districts Surguja & Surajpur (Chhattisgarh) - For consideration of TOR

4.2.1 The proposal is for grant of ToR for Parsa Opencast Coal Mine Project of 5 MTPA and Pit Head Coal Washery of 5 MTPA promoted by M/s Rajasthan Rajya Vidyut Utpadan Nigam Limited (RRVUNL) in a total area of 1252.447 ha at Hasdeo-Arand Coal Field, Tehsil - Udaipur & Premnagar in Districts Surguja and Surajpur (Chhattisgarh).

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

(i) Parsa Coal Block was earlier allotted to Chhattisgarh State Power Generation Company Ltd (CSPGCL) (erstwhile Chhattisgarh State Electricity Board) for coal mining by the Ministry of Coal vide letter dated 2nd August, 2006. As per the terms of reference (ToR) issued by MoEF vide letter dated 14th May, 2013 for Parsa OCP of 5 MTPA, collection of baseline data was done during March to May 2013 and public hearing was conducted on 28th February, 2014 in Surajpur District and 1st March, 2014 in Surguja District, and thus the EIA/EMP report was prepared for the project. Mine Plan and Mine Closure Plan for its capacity of 5 MTPA was approved by Ministry of Coal vide letter dated 19th May, 2014.

(ii) Hon'ble Supreme Court of India through its Judgment dated 25th August, 2014 & 24th September, 2014 cancelled the allotment of 204 coal blocks including Parsa Coal block. Subsequently, the coal block was allotted to RVUNL vide vesting order dated 8th September, 2015 issued by the Nominated Authority in the Ministry of Coal, to meet the coal requirement of their three thermal power projects. Approval of Mine Plan and Mine Closure Plan issued to CSPGCL was suo-moto transferred to RVUNL from the date of allotment.

(iii) RVUNL requested MoEF&CC for transfer of ToR dated 14th May, 2013 issued to CSPGCL. After examining their request vis-à-vis the extant provisions, MoEF&CC vide letter dated 6th September 2016 suggested to apply for ToR afresh. Application for fresh ToR submitted online (Proposal No.IA/CG/CMIN/59215/2016) on 27th September 2016. Mine Plan & Mine Closure Plan (1st Revision) was approved by Ministry of Coal vide letter 10th November 2016.

(iv) The earlier ToR was for coal mine of 5 MTPA only. However, the present proposal is for fresh ToR for 5 MTPA open cast coal mine and also for 5 MTPA coal washery.

(v) Latitude and longitude of the project site are 22° 48' 57.01" and 22° 51'56.85" N and 82° 45' 10.50" and 82° 47' 22.86" E respectively.

(vi) Joint Venture: Not applicable

(vii) Coal Linkage :

Sl. No.	Name of specified end use plant	Units	Capacity
1.	Chhabra TPP Unit -3 to 6, District- Baran, Rajasthan	2 x 250 MW 2 x 660 MW	1820 MW
2.	Kalisindh TPP Unit – 1 & 2, District- Jhalawar, Rajasthan	2 x 600 MW	1200 MW

3.	Suratgarh Supercritical TPP, Unit- 7 & 8, District- Shriganganagar, Rajasthan	2 x 660 MW	1320
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(viii) Employment generated / to be generated: The mining project will generate direct & indirect employment. About 768 people will get direct employment.

(ix) Benefits of the project:

- Coal from this project will be used in power generation in Rajasthan, which will help in reducing gap in demand and production of electricity in the state.
- Based on the requirement of the people of the project area, the development activities will be taken up. The basic requirement of the community will be strengthened by extending health care, educational facilities, providing drinking water to the villages affected, building/strengthening of existing roads in the area etc.
- Project will generate direct and in-direct employment in the area.

(x) Land use of the project site, both during pre-mining and post mining, would be as follows:

Pre-Mining:

S.N.	LANDUSE	Within ML area (ha)	Outside ML area (ha)	TOTAL
1.	Agricultural land	365.366	Nil	365.366
2.	Wasteland			
3.	Grazing land			
4.	Settlements			
5.	Surface water			
6.	Forest land	841.538	Nil	841.538
7.	Others (Government)	45.543	Nil	45.543
	TOTAL	1252.447	Nil	1252.447

Post- Mining:

S. N.	Type	During Mining (ha)	End of Life (ha)	Land Use (ha)					TOTAL
				Plantation	Water Body	Public Use	Agriculture land	Grass/greenbe	
1.	External OB Dump	64.084	64.084	40.706	-	-	-	23.378	64.084
2.	Top soil Dump	2.600	2.600	-	-	-	-	2.600	2.600
3.	Excavation	1129.37	1129.37	371.513	317.767	-	440.095	-	1129.37
4.	Coal evacuation	2.370	2.370	0.474	-	1.896	-	-	2.370
4.	Electric Line & infrastructure	13.228	13.228	2.646	-	10.582	-	-	13.228
5.	CHP &	13.586	13.586	2.718	-	8.694	-	2.174	13.586
6.	Diversion of	14.801	14.801	-	-	14.801	-	-	14.801
7.	Settling Ponds	2.260	2.260	-	2.260	-	-	-	2.260
8.	Green Belt	-	-	-	-	-	-	-	-
9.	Rationalization Area	10.143	10.143	10.143	-	-	-	-	10.143
	TOTAL	1252.447	1252.44	428.200	320.027	35.973	440.095	28.152	1252.44

(xi) Total geological reserve is 256.40 MT. The mineable reserve 184.26 MT, extractable reserve is

200.41 MT. The per cent of extraction would be 78.16 %.

(xii) The coal grade is E to G. The stripping ratio is 6.12 cum/tonne with the average gradient of 2° to 6°. There will be Three seams with thickness ranging

Seam	Units	Mean Thickness
Seam-VI	M	1.83
Seam-V	M	5.03
Seam-IV	M	8.62

(xiii) Total estimated water requirement is 2385 m³/day. The level of ground water ranges from 3 m to 25 m.

(xiv) The method of mining would be overburden removal by shovel-dumper & coal mining by surface miner.

(xv) There would be two external OB dumps with quantity of 21.02 Mbcm in an area of 64.084 ha with height of 60 m above the surface level and two internal dumps with quantity of 1206.17 Mbcm in an area of 1059.092 ha.

(xvi) The final mine void would be in 70.278 ha with depth 30 m. and the Total quarry area is 1129.375Ha. Backfilled quarry area of 1059.092 Ha shall be reclaimed with plantation. A void of 70.278 ha with depth varying 30m which is proposed to be converted into a water body.

(xvii) The life of mine is 45 Years.

(xviii) Coal transportation in pit by belt conveyor from in pit to pit head coal handling plant, Surface to Siding by belt conveyor to Pre-weigh Bin and loading at siding by SILO with inbuilt Rapid Loading System. A 75 Km railway line is under construction to connect adjacent Parsa East & Kanta Basan Coal block of RVUNL to Surajpur Railway Station, out of which 33 Km is under operation.

(xix) There is no R & R involved. There are 442 PAFs.

(xx) Total capital cost of the project is Rs.1450 Crores. CSR Cost As per approval of MoEF. Environmental Management Capital Cost: Rs. 4.98 Crore & Recurring Cost: Rs. 6.47 Crore as per draft EIA/EMP prepared by Prior Allottee.

(xxi) The area is incised by a nala flowing from SW to NE in the northern part of the block and joins the Atem Nadi. The drainage within the block is controlled by several small streamlets joining the above nala. This nala needs to be diverted along the western boundary of the block. The Atem Nadi and this stream together control the drainage of the area. Atem Nadi is flowing at a distance of 1.9 km from North Eastern Part of the block. The southern part of the block is free from the presence of any prominent nala. Small ponds and dug wells are common in the area. These are utilized for irrigation and drinking water purpose.

(xxii) Board's approval obtained on 11th May, 2016. Mining plan has been approved on 10th November, 2016. Mine closure plan is an integral part of mining plan.

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

(xxiv) Total forest area involved 841.538 ha. Application for diversion of forest land submitted vide proposal number FP/CG/MIN/20742/2016 dated 4th August 2016. Proposal is being processed at Divisional Forest Officer (DFO) level.

(xxv) Total afforestation plan shall be implemented covering an area of 456.349 ha at the end of mining. Green Belt over an area of 28.152 ha. Density of tree plantation 2500 trees/ ha of plants.

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

(xxvii) Salient features of coal washery are as below:-

Description	Details
Capacity	5 MTPA

Hourly throughout capacity	800 TPH
No. of Annual working Hours	6000 hrs
Washing Technology	Wet washing process
Plant Process	Wet process comprising of crushing, screening, washing and material handling
Land Requirement	13.586 ha
Source of Water	Mine discharge
Power Requirement & source	Power requirement (5-7 MVA) will be met from the nearest Substation.

4.2.3 The Committee, after detailed deliberations, recommended the proposal for grant of ToR to Parsa Opencast Coal Mine Project of 5MTPA and Pit Head Coal Washery of 5 MTPA in a total area of 1252.447 ha in Hasdeo-Arand Coalfields in District Sarguja and Surajpur (Chhattisgarh), for preparation of EIA/EMP reports along with public consultation, subject to the scope of work as defined in the Standard ToR notified by this Ministry for such projects/activities.

Agenda 4.3

Gare Palma Sector-I, Phase-I Coal Mine Project of 15 MTPA Opencast and 6.00 MTPA Underground of M/s Gujarat State Electricity Corporation Limited in ML area 5738.75 ha in District Raigarh (Chhattisgarh) - For consideration of TOR

4.3.1 The proposal is for grant of Terms of Reference for Gare Palma Sector-I, Phase-I Coal Mine Project of 15 MTPA Opencast and 6 MTPA Underground of M/s Gujarat State Electricity Corporation Limited (GSECL) in ML area of 5738.75 ha in District Raigarh (Chhattisgarh).

4.3.2 The details of the project, as per the documents submitted by the project proponent, and also as presented during the meeting, are as under:-

- i. The project is for obtaining fresh ToR for the OCP and the UG Coal mine project.
- ii. The latitude and longitude of the project site are 22°04'00"N to 22°08'51.495"N and 83°25'18.088"E to 83°33'47.714"E respectively.
- iii. Joint Venture: there no joint venture.
- iv. Coal Linkage : Captive Block (coal will be for different projects of GSECL)
- v. Employment generated / to be generated: The proposed peak manpower of the OCP has been estimated as 2724 for the mine to be operated departmentally.
- vi. In addition there will be requirement of unskilled manpower for different activities who may be employed by outsourcing means. About 390 unskilled manpower will be used in the proposed coal block project. No manpower has been provided for vehicles to be used in the mine, reclamation equipment, canteen etc, as these activities will be carried out by outsourcing means.
- vii. Underground operation is proposed to be started at 15th years of opencast operation. About 950 manpower will be required for underground mining. About 300 manpower will be required for washery which is the part of Gare Palma Sector-I Coal Block.
- viii. Benefits of the project: The project is providing employment to local people indirectly. Indirect employees are shopkeepers, mechanic, drivers, transporters etc. The lessee (proponent) will

responsible for providing better social infrastructure benefits such as drinking water, health care measures, educational facilities, promotion of culture and religious activities in surroundings.

ix. The project is of utmost importance to the area/region for interest of mineral development and improves the socio-economic conditions of the local habitants. The operation of the proposed project will bestow various social and economic benefits to the local communities of the area in addition to the existing benefits due to provide better employment opportunities and improvement in social infrastructure of the area, apart from increased financial benefits accruing to State and Central agencies by ways of taxes, royalties, cesses etc

x. The land usage of the project will be as follows:

As per Satellite Image:

Sl. No.	Land-use	Within ML Area (ha)	Outside ML Area (ha)	Total
1	Agricultural land	2622.12	26557	29179.12
2	Forest land	59.41	30187	30246.41
3	Wasteland	23.89	307	330.89
4	Grazing land	-	-	-
5	Surface water bodies	28.97	503	531.97
6	Settlements (built-up)	155.53	1845	2000.53
7	Others (specify)	693.9	18316	19009.9

As per Mine Plan:

Sl. No.	Particulars	Total land required in ha
1	Quarry Excavation	1620.31
2	External OB Dump	1447.50
3	Infrastructure (Opencast and Underground)	
	Opencast	113.65
	Underground	34.29
4	Siding and Conveyor belt from Washery	71.74
5	Colony (Opencast and Washery)	48.68
6	Other (Road diversion, nala diversion, embankment, open space etc.)	212.19
7	UG below protected forest	35.46
Total		3583.81

- xi. Total geological reserve is 1936.08 MT. The mineable reserve 1290.82 MT, extractable reserve is 725.76 MT. The per cent of extraction would be 70.50% through opencast and 43.56% underground.
- xii. The coal grade is G13, stripping ratio 6.55 Cum/tonne with an average gradient varying from 2⁰ to 4⁰. There will be 34 seams including splits with average thickness between 0.32 m and 12.36 m.
- xiii. Total estimated water requirement is 3.396 m³/ day. The level of ground water ranges from 5 m to 10 m bgl.
- xiv. The method of mining would be Opencast and underground both.
- xv. There is one external OB dump with quantity of 949.82 Mbcm in an area of 1447.50 ha with height of 90 m above the surface level and one internal dump with quantity of 1854.29 Mbcm in an area of 1126.79 ha.

- xvi. The final mine void would be in 1068.79 Ha with depth 266 m. and the Total quarry area is 1620.31 Ha. Backfilled quarry area of 723.16 Ha shall be reclaimed with plantation. A void of 954.96 ha with depth 60 m which is proposed to be converted into a water body.
- xvii. The life of mine is 80 Years.
- xviii. Coal transportation from pit to pit head coal handling plant by dumpers, surface to siding by conveyor belt and loading at siding by Railway.
- xix. R & R involved are yet to be calculated.
- xx. Total capital cost of the project is Rs.8458 crore.
- xxi. Kelo River is flowing in the western part of the proposed coal block area and it constitutes the main drainage system. The main subsidiary stream channels draining in the block flow from north-west and south-east & joins the Kelo River at the extreme western part of the area. The subsidiary stream channel is fed by number of small tributaries rising from all hills both from north and south. Kelo River bifurcating the block into East and West. The river has not been proposed to be disturbed.
- xxii. Mining plan has been approved on 30.12.2016. Mine closure plan is an integral part of mining plan.
- xxiii. There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxiv. Protected Forest 48.22 ha and Revenue Forest 134.54 ha. Forest proposal is under preparation.
- xxv. Total afforestation plan shall be implemented covering an area of 2430.90 ha at the end of mining. Green Belt over an area of 158.04 ha. Density of tree plantation is 2500 trees/ha.
- xxvi. There are no court cases/violation pending with the project proponent.

4.3.3 While deliberations on the proposal, the Committee in the first instance, observed large scale mismatch between the project details submitted and that presented during the meeting. Even the scope of the project, total area involved and the land use details, were found differing and no clarifications could be provided by the project proponent in this regard. The Committee also pointed out that the project proponent has not submitted any proposal for obtaining stage-I FC, and as such, the proposal should not have been listed even.

4.3.4 *Given the discrepancy and the casual approach, the proposal was not taken forward and was deferred.*

Agenda 4.4

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

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

4.4.2 The proposal was last considered in the 55th EAC meeting held on 11th -13th May, 2016., wherein 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 proposed. Works on these measures were asked to be expedited.

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

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

(i) The technology for the proposed washery was firmed up through the Feasibility Report prepared by M/s Central Mine Planning & Design Institute Limited (CMPDIL), Ranchi in January 2009. Subsequently in February 2009 based on the report for development of Tasra-Chasnalla Block prepared by M/s CMPDIL, the integrated project proposal for coal mining of 4 MTPA capacity and coal washery with 3.5 MTPA input of raw coal was approved by SAIL Board in its 347th Meeting held on 20th February, 2009.

(ii) The wind rose for the study area based on site specific meteorological data generated during base line data generation covering one complete season (December 2012-February 2013) is given in EIA Report as per the EIA Notification 2006. However, as sought by EAC, meteorological data for the whole year from January, 2013 to December, 2013 covering the study period as observed at weather station installed at CSIR - CIMFR Campus, Dhanbad has been compiled.

(iii) Emission factors for the dust prone activities of the washery like screening, crushing, handling operations etc. both for controlled and uncontrolled emission scenarios have been taken from the USEPA AP42 emission factors and factors developed by CSIR-CIMFR under the S&T project of Ministry of Environment & Forest. Air Quality Modeling to predict dust levels (PM₁₀ and PM_{2.5}) both for controlled and uncontrolled emissions from various sources of Tasra Coal Washery has been carried out with the help of Fugitive Dust Model (FDM). Baseline site specific air quality data (PM₁₀ and PM_{2.5}) of winter season and maximum coal washing capacity i.e. 700t/hr have been used for predictive air quality modeling to assess the worst-case scenario.

(iv) As suggested by Hon'ble EAC during the appraisal of the project, instead of road transportation, SAIL will use Long Distance Belt Conveyor (LDBC) System involving an estimated cost of about Rs. 40 Crore for transportation of raw coal from Tasra Coal Pit to proposed Washery, covering a length of 2 km with water sprinkling arrangements at all transfer points. In addition to this, the following major dust control measures have been envisaged;

- Dry Fog Dust Suppression system in order to control the fugitive dust emissions during different stages of handling of coal from Receiving Pit to Desliming Unit will be installed.
- Rapid Loading System with Silos for loading of washed coal & middlings to wagons.

- Black topping of all the internal roads within in the washery area
- Green belt covering 3.2 ha will be developed using local species all along the periphery of the site, along the roads and in vacant space and transfer and loading points.

(v) The location of the proposed Tasra coal washery is at the abandoned site of Bihar State Superphosphate Factory (BSSF), and lies in the Sindri Industrial area, which is about 26 km south of the Dhanbad town. The 132 KV Sub-station is located adjacent to proposed washery site in the southern side. Whereas the BIT Sindri and Patherdih Township are located in South-East and North-West direction respectively. The expected air quality at these receptor locations have been predicted through Air Quality Modelling studies.

4.4.4 *The EAC, after detailed deliberations, found the clarifications to the earlier observations as satisfactory, and recommended the proposal for grant of Environmental clearance to the proposed **Pit Head Coking Coal Washery of 3.5 MTPA in Tasra Coal Block of M/s Steel Authority of India Ltd. located in Jharia Coalfields, District Dhanbad (Jharkhand)**, subject to the compliance of all generic conditions applicable for washery as well as fulfillment of other conditions as under:*

- *The technology so chosen for the washery should conform to 'Zero Liquid Discharge'.*
- *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 and rejects by rail with wagon loading through silo.*
- *Disposal of washery rejects shall be in accordance with the extant policy and guidelines, and environment friendly.*

Agenda 4.5

Expansion of Dipka Opencast Coal Mine from 31 MTPA to 35 MTPA in an ML area 1999.293 ha of M/s South Eastern Coalfields Limited in District Korba (Chhatishgarh) - For consideration of TOR

4.5.1 The proposal is for grant of Terms of Reference for Dipka Opencast expansion Project from 31.00 MTPA to 35.00 MTPA in an ML area 1999.293 Ha of M/s South Eastern Coalfield Limited at district Korba (Chhatishgarh).

4.5.2 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 project was earlier accorded EC vide letter no. J-11015/487/2007-IA.II (M) dated 06.02.2015 for the expansion from 25 MTPA to 30 MTPA in an Area of 1999.293 ha under 7(ii) of EIA Notification, 2006.
- (ii) The project was accorded amendment to the EC vide letter no. J-11015/487/2007-IA.II (M) dated 06.02.2015 for incremental difference in the production capacity i.e. from 30 MTPA to 31 MTPA in accordance to the OM J-11015/30/2004-IA.II (M) dated 19th December, 2012 which inter-alia stipulated an upper limit of 5 MTPA, was further amended vide OM J-11015/30/2004-IA.II (M) dated 2nd September, 2014.
- (iii) The latitude and longitude of the project are 22018'59" to 22019'43" N and 82030'47" to 82033'34"

E respectively.

- (iv) Joint Venture: no Joint Venture
- (v) Coal Linkage : NTPC Seepat & various other power plants
- (vi) Employment generated / to be generated: 2594 persons
- (vii) Benefits of the project: Project will considerably improve the socio-economic status of the adjoining areas. This will result in following benefits:

- Contribution to the Exchequer
- Meet energy requirement
- Post-mining Enhancement of Green Cover

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

Pre-Mining:

Activity	Types of land are (Ha)			Total Area (Ha)
	Forest	Tenancy/ Agricultural	Govt.	
Nil	409.056	1409.244	180.993	1999.293

Post- Mining:

S No	Pattern of utilization	Area (ha)
1.	Reclaimed External and Internal dumps	986.00
2.	Green belt	23.000
3.	Final void /Water body	222.053
4.	Built up area (Infrastructure, colony, roads, R & R site)	633.874
5.	Safety zone: Undisturbed area	130.366
6.	Roads	4.00
	Total	1999.293

Core area :

SN	Particulars	Forest Land	Tenancy Land	Government Land	Grand Total
				others	
1	*Quarry Area	52.889	858.314	90.850	1002.053
2	External OB Dump	54.718	125.212	26.070	206.00
3	Infrastructure, workshop, administrative building etc.	279.242	313.518	41.114	633.874
4	Safety Zone	22.207	85.200	22.959	130.366
5	Green belt		23.00		23.00
6	roads		4.00		4.00
Total land already Acquired		409.056	1409.244	180.993	1999.293

- (ix) The total geological reserve is 617 MT. The mineable reserve 359.19 MT, extractable reserve is 359.19 MT. The per cent of extraction would be 100 %.

- (x) The coal grade is E / G10. The stripping ratio is 1:20 Cum/tonne. The average Gradient is 3.37-6.34 degree. There will be 03 seams with thickness ranging (E&F Seam- 12.70- 19.05 m; Upper Kusmunda-

24.69- 35.82 m; Lower Kusmunda (Top Split) - 34.70-44.85 m; Lower Kusmunda (Bottom Split) - 2.19-24.50 m).

(xi) The total estimated water requirement is 4360 m³/day. The level of ground water ranges (CGM Office- Avg 8.275 m; Pragati Nagar- Shallow Avg-3.125 m & Deep Avg-19.17 m).

(xii) The Method of mining would be Open cast mining.

(xiii) There is 03 external OB dump with Quantity of 81.00 Mbcm in an area of 206.00 ha with height of 50 meters above the surface level and 03 internal dump with Quantity of 534.00 Mbcm in an area of 780.00 ha.

(xiv) The final mine void would be in 222.053 Ha with depth 80m and the total quarry area is 1001.929. Backfilled quarry area of 187.00 Ha shall be reclaimed with plantation. A void of 222.053 ha with depth upto 80 m which is proposed to be converted into a water body

(xv) The life of mine is 11 Years.

(xvi) Transportation: Coal transportation From face to In pit crusher: By Trucks. Surface to siding: By Trucks ; Siding to Consumer : Rail

(xvii) There is R & R involved. There are 1660 PAFs.

(xviii) Total capital cost of the project is Rs. 1950.86 Crores. CSR Cost According to New CSR policy, the fund for the CSR should be allocated based on 2% of the average net profit of the Company for the three immediate preceding financial years or Rs. 2.00 per tonne of coal production of previous year whichever is higher. R&R Cost Rs. 51.49 Crores. Environmental Management Cost Rs. 11749220.00 for the FY (2015-16).

(xix) Hasdeo river about 8.00Kms, Lilagarh Nadi , Kholar Nalla & small channels joining Hasdeo river.

(xx) Ground water clearance issued on 25.03.2004. Board's approval obtained on 13.05.16. Mining plan has been approved on 13.05.16. Mine closure plan is an integral part of mining plan.

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

(xxii) Total forest land 409.056 ha, Status of Forest clearance: In process. Stage-1 FC available for 409.056Ha of forest land

(xxiii) Total afforestation plan shall be implemented covering an area of 248.51ha at the end of mining including green Belt over an area of 23 ha. Density of tree plantation 2500 trees/ ha of plants.

(xxiv) There are court cases/violation pending with the project proponent as per the following details:-

Case No.	Court	Parties	Brief	Present status
1217/2007	Judicial Magistrate Class I, Korba transferred to Bilaspur HC, criminal revision in the year 2010	Regional Officer, CGEPB Vs Gevra & CGM Dipka Area	Increase of production without EC	Pending
26/2009	1) JMFC, Katghora Case no.-26/2009	CGEPB, Korba Vs Debasis Chatterjee, Ex CGM Dipka.	Increase of production without EC	Case disposed. Appeal preferred by CECB, Korba against order in Bilaspur High Court. Case No. CRMP 859/2009

4.5.4 During deliberations, the EAC noted the following:-

(i) The proposal is for grant of ToR to the expansion project of Dipka opencast coal mine from 31 to 35 MTPA in the existing mine lease area of 1999.293 ha. Out of the total forest land of 409.149 ha, Stage-I forest clearance has been obtained for total forest land of 409.056 ha. For diversion of the remaining forest land of 0.093 ha, request has been made.

(ii) Earlier, the EC was issued for expansion of Dipka opencast coal mine from 25 to 30 MTPA vide letter dated 12th February, 2013 with the exemption from public hearing as provided under the Ministry's OM dated July, 2014. The capacity of the coal mine was further enhanced to 31 MTPA, and the fresh EC was issued on 6th February, 2015, again exempting from public hearing in terms of the subsequent OM dated 2nd September, 2014.

(iii) In addition to the request for grant of ToR to the above expansion project, the project proponent has also requested for grant of EC to the said project without any ToR and fresh public hearing. The Committee, in the first instance, observed the proposal not admissible in terms of the extant provision contained in this Ministry's OMs in this regard.

(iv) The compliance status of earlier EC conditions was not much satisfactory as many of these conditions were reported as being complied, partially complied or not complied (formation Wildlife Conservation Plan).

(v) Ambient air quality values for PM₁₀, SO₂ and NO_x at the monitored locations were within the prescribed norms with adequate mitigative measures put in place.

(vi) Different works taken up under the CSR during last three years were satisfactory:-

4.5.5 The EAC, after deliberations, recommended the proposal for grant of ToR to the expansion of Dipka opencast coal mine from 31 to 35 MTPA, and for preparation of EIA/EMP reports with public consultation subject to compliance of all conditions as specified and notified in the standard ToR applicable for coal mining projects.

While considering the request for grant of EC to the project without the requirement of fresh ToR and the public hearing, the EAC suggested for a third party assessment of baseline environmental parameters and the prediction of likely impacts including socio-economic, due to the said expansion. The same may be undertaken through NEERI or any other expert agency identified by the Ministry.

Agenda 4.6

Expansion of Gevra Opencast Coal mine from 41 MTPA to 45 MTPA in ML area of 4184.486 ha of M/s South Eastern Coalfields Limited at district Korba (Chhatishgarh)- For consideration of TOR

4.6.1 The proposal is for grant of Terms of Reference for expansion of Gevra Opencast coal mine project from 41 MTPA to 45 MTPA in ML area of 4781.788 ha of M/s South Eastern Coalfields Limited in District Korba (Chhatishgarh)

4.6.2 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 expansion project of Ghevera open cast from 35 MTPA to 40 MTPA was accorded EC vide letter no. J-11015/85/2010-IA.II (M) dated 31.01.2014 for the expansion from 35 MTPA to 40 MTPA in terms of para 7(ii) of EIA Notification, 2006 and subsequent OM issued to facilitate one time capacity expansion without public hearing.
- (ii) The project was accorded amendment in the EC vide letter No. J-11015/85/2010-IA.II (M) dated 06.02.2015 for incremental difference in the production capacity from 40 MTPA to 41 MTPA as provided in the OM dated 2nd September, 2014.
- (iii) The Gevra OC project is a running project currently producing 41 MTPA but has the potential to produce and dispatch 45 MTPA with the existing infrastructure. Hence, expansion has been planned for 45.
- (iv) The latitude and longitude of the project site are 22° 18'00" to 22° 21'42" N and 82° 32'00" to 82° 39' 30" E respectively.
- (v) Joint Venture: no
- (vi) Coal Linkage : NTPC & Various thermal power plants
- (vii) Employment generated / to be generated: 4391 Persons
- (viii) Benefits of the project: Project will considerably improve the socio-economic status of the adjoining areas. This will result in benefits such as Improvements in Physical Infrastructure; Improvements in Social Infrastructure; Increase in Employment Potential; Contribution to the Exchequer; Meet energy requirement ; Post-mining Enhancement of Green Cover.
- (ix) The land usage of the project will be as follows:

Pre-Mining:

SR. NO.	LAND USE	WITHIN ML AREA (Ha.)	OUTSIDE ML AREA (Ha.)	TOTAL (Ha.)
		ALREADY ACQUIRED	ALREADY ACQUIRED	
1	Agricultural land	1273.426	1247.145	2520.571
2	Forest land	441.410	575.002	1016.412
3	Waste Land	0.000	0.000	0.000
4	Grazing Land	0.000	0.000	0.000
5	Surface Water Bodies	7.000	0.000	7.000
6	Settlements	0.000	0.000	0.000
7	Others (Specify) Govt. Land (Including Waste Land & Grazing Land)	315.414	325.089	640.503
	TOTAL	2037.250	2147.236	4184.486

Post- Mining:

S No	Pattern of utilization	Area (ha)
1.	Reclaimed External and Internal dumps	1858.00
2.	Green belt	5.670
3.	Final void /Water body	659.250
4.	Built up area (Infrastructure, colony, roads, R & R site)	1243.392

5.	Safety zone: Undisturbed area	418.174
	Total	4184.486

Core area :

S N	Particulars	Tenancy land (ha)	Forest land (ha)	Government Land (ha)					Grand Total (ha)
				Grazing land	Waste land	Water body	Others	Total	
1	Quarry area	1285.888	441.410	0.000	0.000	7.000	297.952	304.952	2032.250
2	Area for Top Soil in quarry	0.000	0.000	0.000	0.000	0.000	5.000	5.000	5.000
3	External dump	291.310	0.000	0.000	0.000	0.000	188.690	188.690	480.000
4	Infrastructur e, etc	504.509	509.434	0.000	0.000	0.000	88.839	88.839	1102.782
5	Roads	6.000	0.000	0.000	0.000	0.000	0.000	0.000	6.000
6	Residential Colony	65.000	0.000	0.000	0.000	0.000	0.000	0.000	65.000
7	R & R site	69.280	0.000	0.000	0.000	0.000	0.000	0.000	69.280
8	Explosive magazine	0.000	6.000	0.000	0.000	0.000	0.000	0.000	6.000
9	Nala Diversion, if any	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	Safety Zone	311.046	59.568	0.000	0.000	0.000	47.560	47.560	418.174
	Total Land (in ha)	2533.033	1016.412	0.000	0.000	7.000	628.041	635.041	4184.486

(x) Total geological reserve is 1378.22 MT, the mineable reserve 1240.40 MT and extractable reserve is 1240.40 MT. The per cent of extraction would thus be 90%.

(xi) The coal grade is G10, the stripping ratio is 1.30 Cum/tonne. The average gradient is 1 in 6 to 1 in 12 having 6 seams with thickness ranging 3.14 m to 57.86 m.

(xii) Total estimated water requirement is 26000 KL/day. The level of ground water ranges from 2.31 m to 9.90 m.

(xiii) The method of mining would be Opencast.

(xiv) There are 7 external OB dumps with quantity of 147.60 Mbcm in an area of 480 ha with height of 90 m above the ground level, and 8 internal dumps with quantity of 1119.40 Mbcm in an area of 1378 ha.

(xv) The final mine void would be in 659.250 ha with depth 40 m which is proposed to be converted into a water body. Backfilled quarry area of 376.60 ha shall be reclaimed with plantation. A void of 659.250 ha with depth of 40 m.

(xvi) The life of mine is 12 Years.

(xvii) Transportation of coal: From face to In pit crusher by trucks. In pit belt conveyor is under construction & will be completed within Dec.'2016; Surface to siding: By Conveyor System through Silo; siding at loading by Rail & MGR

(xviii) There is R & R involved. There are 2420 PAFs.

(xix) Total capital cost of the project is Rs. 11816.40 Crores. CSR Cost According to New CSR policy, the fund for the CSR should be allocated based on 2% of the average net profit of the Company for the three immediate preceding financial years or Rs. 2.00 per tonne of coal production of previous year whichever is higher. R&R Cost Rs. 564.44 Crores (as per approved PR of 70.00 MTPA). Environmental Management Cost Rs. 184.38 Crores.

(xx) Hasdeo river is the main drainage of the area. The study area includes a number of seasonal nallah & tributaries of Hasdeo river like Ahiran, Kholar nallah. Lilagar river also flows through the study area of project.

(xxi) Ground water clearance obtained on 18.06.2004. Mining plan has been for the intended capacity of 45 MTPA was approved by the Board of SECL on 25th July, 2016. Mine closure plan is an integral part of mining plan.

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

(xxiii) Total forest area involved 1016.412 ha, the status of diversion of forest land for non - forestry purposes is as under:-

Area (in ha)	Registration/Stage-1 /Final FC issued vide letter no. & date	Status and Validity period of FC
100.898	vide MoEF Clearance L no.8-33/2005-FC Dtd.: 05.05.2008	Status: Final/Stage-II Forestry Clearance obtained. Validity: Co-terminus with the Mining Lease or 20 years, whichever is less
46.198	vide MoEF Clearance L no.8-81/ 2006-FC Dtd : 20-04-2015	
192.046	vide MoEF Clearance L no.8-77/2006 – FC,Dtd: 20-04-2015	
564.885	vide MoEF Clearance L no.8-79/2006 – FC, Dtd : 20-04-2015	
904.027	Total forest land for which final/Stage-II Forestry Clearance obtained	
112.385	On-line application was submitted on 11-06-2015. Registered vide Ref:FP/CG/MIN/13199/2015	Stage 1 approval awaited

(xxiv) Total afforestation plan shall be implemented covering an area of 2438.672 ha at the end of mining. Green Belt over an area of 5.670 ha. Density of tree plantation 2500 trees/ ha of plants.

(xxv) There are court cases/violation pending with the project proponent as per the following details:-

Sl No	Year of Violation	Production	Cas e No	Court	Parties	Brief	Present Status
1	2001-02 to 2004-05	More than 10 MTY	1217 /2007	J.M.C , Class I, Korba	CECB, Korba. Vs. CGM Dipka Extension Gevra area SECL	Regarding Cr. Complaint filed under Sec.15 & 17 of EP Act.	Pending for examination of proposed accused

2	31.7.2000	Consent not renewed and capacity expanded from 10 MTY	613/2007	HC of BSP	CECB, Korba. Vs. SECL Gevra Project	Regarding Cr. Complaint filed under Sec.15 & 17 of EP, 1986. Criminal revision.	Pending
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(xxvi) **Certified EC Compliance Report:** The Regional Office of MoEF&CC at Nagpur has carried out the site inspection on 11th November, 2016 to verify the status of compliance of EC conditions for Gevra opencast expansion project from 35 MTPA to 40 MTPA, and then 41.00 MTPA. The monitoring report was forwarded to this Ministry vide their letter No. 3-28/2014(Env) dated 4th November, 2016, which was deliberated in the EAC meeting. The project proponent presented the action taken on each of the observations made by Regional Office during the site visit.

4.6.3 During deliberations, the EAC noted the following:-

(i) The proposal is for grant of ToR to the expansion project of Gevra opencast coal mine from 41 to 45 MTPA in the existing mine lease area of 4184.486 ha. Out of the total forest land of 1016.412 ha, Stage-II forest clearance has been obtained for 904.027 ha. For diversion of the remaining forest land of 112.385 ha, request has also been made.

(ii) Earlier, the EC was issued for expansion of Gevra opencast coal mine from 35 to 40 MTPA vide letter dated 31st January, 2014 with the exemption from public hearing as provided under the Ministry's OM dated July, 2014. The capacity of the coal mine was further enhanced to 41 MTPA, and the fresh EC was issued on 6th February, 2015, again exempting from public hearing in terms of the subsequent OM dated 2nd September, 2014.

(iii) In addition to the request for grant of ToR to the above expansion project, the project proponent has also requested for grant of EC to the said project without any ToR and fresh public hearing. The Committee, in the first instance, observed the proposal not admissible in terms of the the extant provisions contained in this Ministry's OMs in this regard.

(iv) The compliance status of earlier EC conditions was not much satisfactory as many of these conditions were reported as being complied, partially complied or not complied.

(v) Ambient air quality values for PM₁₀, SO₂ and NO_x at the monitored locations were within the prescribed norms with adequate mitigative measures put in place.

(vi) Different works taken up under the CSR during last three years were satisfactory:-

4.6.5 *The EAC, after deliberations, recommended the proposal for grant of ToR to the expansion of Gevra opencast coal mine from 41 to 45 MTPA, and for preparation of EIA/EMP reports with public consultation*

subject to compliance of all conditions as specified and notified in the standard ToR applicable for coal mining projects.

While considering the request for grant of EC to the project without the requirement of fresh ToR and the public hearing, the EAC suggested for a third party assessment of baseline environmental parameters and the prediction of likely impacts, including socio-economic, due to the said expansion. The same may be undertaken through NEERI or any other expert agency identified by the Ministry.

Agenda 4.7

Expansion of Bermo Coal Mine Project from 0.4 MTPA to 2.62 MTPA of M/s Damodar Valley Corporation in a total area of 269.094 ha located in District Bokaro (Jharkhand) - For further consideration of TOR)

4.7.1 The proposal is for grant of Terms of Reference for 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).

4.7.2 The proposal was last considered in the 58th EAC meeting held for 23-24 June, 2016, wherein observations of the Committee were as under:-

- (i) The proposed OB dump 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.

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

- (i) The transportation and dumping of OB to nearly 5 km away not being economically and/or environmentally sustainable, studies were undertaken for other viable options.
- (ii) DVC had approached Central Coalfield Limited (CCL) requesting them to identify areas which could be given to them for OB dumping. M/s CCL carried out an exercise for the same and informed the DVC that no area could be made available to DVC for the OB dumping.
- (iii) The permutations and combinations of excavation and dumping were carried out for accommodating the OB within the existing ML area, but not found feasible to accommodate the OB within the ML area by multiple re-handling of the OB. A total of 101.75 Mcum (B) of overburden is estimated to be generated during life of mine. Out of this, 15.53 Mcum (equivalent to about initial 3 and half years) OB generated from the NE corner of area will be accommodated (temporary dump) over the SW corner of the X-X area within the ML. The OB from 2nd half of 4th year onwards will be disposed off (in temporary dump) over Y-Y area

within the ML. It has been estimated that Y-Y area will be adequate to accommodate the temporary dump, till the backfilling in X-X void can be done concurrent with mining without requiring any additional area outside the ML area for external surface dump. It is important to note that the OB dumped over the coal bearing area on SW corner of X-X area and over the whole Y-Y area will be later backfilled into the void of X-X area by re-handling.

As a result of the above exercise, the net project area would be reduced from 269.094 ha to 169.094 ha.

4.7.4 While deliberations on the proposal, the Committee noted the following:-

(a) Damodar Valley Corporation has accorded in-principle approval for capacity enhancement of Bermo Mines from 0.4 MTPA to 2.62 MTPA in its meeting held on 16th September, 2016.

(b) Total proposed area of 269.094 ha includes forest land of ha, for which stage-I FC is yet to be obtained.

(c) The earlier observations of the EAC in its meeting held in June, 2016 were suitably replied, and found to be in order and convincing.

4.7.5 *The Committee, after detailed deliberations, recommended the proposal for grant of ToR to the expansion project of Bermo Coal Mine from 0.4 MTPA to 2.62 MTPA in a total area of 269.094 ha, for preparation of EIA/EMP reports along with public consultation, subject to the scope of work as defined in the Standard ToR notified by this Ministry for such projects/activities, and further subject to the condition that the project proponent shall obtain stage-I FC before making an application for grant of the Environmental Clearance.*

Agenda 4.8

Moher & Moher Amlohri Extension coal blocks project (expansion from 16 MTPA to 20 MTPA) of M/s Sasan Power Ltd in an area of 2037 ha located in District Singrauli (Madhya Pradesh) - For Consideration of Amendment/Modification in EC

4.8.1 The proposal is for amendment/modification in the environmental clearance dated 30th June, 2015 to the expansion project of Moher & Moher Amlohri Extension coal blocks from 16 MTPA to 20 MTPA of M/s Sasan Power Ltd in a total area of 2037 ha [15.39 Km² (Moher Block –10.70 Km² & Moher Amlohri Extension Block - 4.69 Km²)] located in District Singrauli (Madhya Pradesh).

4.8.2 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) EC was granted to the project on 30th June, 2015.

(ii) As per the mine plan of Moher & Moher Amlohri Extension coal blocks, an estimated 1893 Mm³ of OB will be generated during the entire life of mine, out of which 204 Mm³ of OB will be dumped externally in an earmarked area covering 3.2 sq km. As per the Special Condition No. (xxxix) of the above referred EC, maximum height of external OB dump should not exceed 90 m.

(iii) Further, as per the Mine Plan of Moher & Moher Amlohri Extension coal blocks, 498 ha is earmarked for external OB dumping and mine Infrastructure. Out of 498 ha, 312 ha is Private Land which is being acquired and rest is forest and Govt Land which is already under the possession of the project proponent.

(iv) **Sasan Power Ltd (SPL)** has been continuously pursuing the matter with the Authorities as well as private individuals in possession of the identified land, to make available for dumping the overburden from Moher & Moher Amlohri Extension coal mine. Despite all efforts and even after incurring huge additional costs, SPL could get possession of only part of the said land and a substantial part of such private land continues to be unavailable to SPL. The land forms part of the land acquired by the Central Government under the Coal Bearing Areas (Acquisition and Development) Act, 1957 and vested in Northern Coalfields Limited (NCL). In view of objections raised by NCL and the legal complexities involved in acquisition/vesting of such land, availability of such land to SPL in near future is uncertain. Delay in availability of OB dump land is adversely affecting external OB dumping activity.

(v) As interim and emergency measures, SPL has relocated mine infrastructure facilities such as workshops, Admin Building etc in order to free up land for external OB dumping. However, land made available by such steps is grossly inadequate and these efforts have brought about only temporary relief.

(vi) Moher & Moher-Amlohri extension coal block is part of 3,960 MW Sasan UMPP, the largest integrated coal and power project in the world entailing an investment of over Rs. 27,000 Cr. Power from the project is supplied to 14 discoms in 7 states at the most competitive levelized tariff of Rs. 1.19/kWh benefitting a population of 42 Crore.

(vii) Due to the delay in acquisition of identified OB land, it is becoming practically impossible to continue mining operation at Moher & Moher-Amlohri extension coal block. Further, if mine operations at Moher & Moher-Amlohri extension coal block is halted due to unavailability of land for external OB dumping it will directly impact power supply from Sasan UMPP, thus adversely affecting a large population of 42 crore across 7 States.

(viii) Increasing the height of external OB dumping from 90 m to 150 m will help in accommodating more OB over land that is already under SPL's possession. This will also help SPL continue mining operation and buy more time for acquiring remaining private land earmarked for external OB dumping.

4.8.3 While deliberations on the proposal, the Committee expressed its concern over stability of the proposed OB dump of 150 m height, and insisted for necessary safeguards backed up by scientific studies in this regard. The Committee further asked for the requisites/approvals in respect of the following:-

(a) Permission required, if any, from the Director General of Mines Safety (DGMS),

(b) Approval from the Ministry of Coal for the Mine Plan revised to extending the OB dump height from 90 to 150 m.

(c) Compliance status of EC conditions from the concerned Regional Office of MoEF&CC,

4.8.4 *The proposal was, therefore, deferred for the needful on the above lines.*

Agenda 4.9

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

4.9.1 The proposal is for grant of environmental clearance to the expansion of Ghonsa OCP of capacity 0.60 MTPA of M/s Western Coalfields Ltd with increase in land area from 128.79 ha to 278.683 ha located in District Yavatmal (Maharashtra).

4.9.2 The proposal was last considered by the EAC in its 55th meeting held on 11-13 May, 2016, wherein observations of the Committee were as under:-

(i) The existing EC for 0.6 MTPA was granted in December, 2014 involving an area of 128.79 ha. Now, the project proponent is approaching for 0.6 MTPA in an area of 278.683 ha instead of 293 ha.

(ii) Public hearing was conducted on 9th August, 2011 for expansion of the project in an area of 293 ha. Since the public hearing (even though it was for 293 ha) is nearly 5 years old, fresh public hearing needs to be held.

(iii) The compliance report received through the Regional Office is of May, 2014, and that too for the previous EC capacity of 0.45 MTPA. Since the current EC is for 0.6 MTPA, fresh RO report on the latest EC of December, 2014 is essentially required.

(iv) The project proponent should also get fresh data of air and water quality for a period of at least one month for the stations of earlier core and buffer zone for the locations used in the original EIA/EMP reports.

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

(a) The land area has been re-assessed and the Mining Plan / Project Report for 0.6 MTPA in an area of 278.683 ha has been duly approved along with the provision of mine closure.

(b) The proposal for expansion of Ghonsa Opencast Coal Mine involving an increase in production capacity from 0.30 MTPA to 0.45 MTPA and ML area from 128 ha to 293.65 ha was earlier discussed in the EAC meeting held on 3-4 January, 2012. The mine lease area of 293.65 ha involved 24 ha of forest land, for which the stage-I FC was not available while considering the proposal for grant of EC at that stage. In order to meet the production target, the EC for enhancement was granted for 0.45 MTPA in the existing land area without forest land i.e. 128.79 ha as Phase-I. Regarding phase-II for production capacity 0.45 MTPA in the extended ML area of 293.65 ha, EAC recommended the project for EC, mentioning about the Public Hearing (PH) conducted 9th August, 2011. The Stage-I Forestry Clearance has since been obtained vide MoEF's letter dated 8th March, 2016.

(c) The latest status of compliance of PH along with details of CSR activities (from 2010-11 to 2013-14) taken up in the subject mine as well as various pollution control measures taken up in the surrounding operating mines of Wani North Area of WCL have been compiled in the form of a booklet. It may be seen that all the issues raised in the Public Hearing have been duly addressed and the work completed. Further, additional works beyond the works committed during PH have also been completed and listed in the booklet.

As such, since the Public Hearing has been duly completed for the mining area of 293 ha and the present area of 278.683 ha is within the same land area of 293 ha and there is no change in location, type of mining etc. All the issues of Public Hearing have been duly complied with, as such, fresh Public Hearing may kindly be exempted.

(d) Re-inspection by the Regional Office, MoEF&CC has been conducted and the fresh Regional Office's report as received vide no. 3-29/2012 (ENV) dated 7th September, 2016 has been submitted. It may be seen from the report that all the conditions of the Environmental Clearance letter, except condition no. li, have been recorded as complied in the fresh RO report. Regarding non-compliance of condition li which quotes 'Mine Closure Plan is to be submitted', the reply/action taken report given to MoEF&CC vide our letter no. WCL/HQ/ENV/11-B & 20-C /447 dated 20.09.2016 is also enclosed. In this regard, it is to clarify that the Mine Closure Plan (MCP) for the existing Mine vis-a-vis existing Environmental Clearance (EC) has been prepared and duly approved by WCL Board. This has also been confirmed in our compliance report. Further, based on the existing EC and the Project Report, the Escrow Account details as well as details of Corpus have also been submitted along with our compliance report. As such, the final Mine Closure Plan vis-a-vis the existing mine / existing EC is not applicable, hence not prepared. However, the progressive Mine Closure Plan for the expansion project (with enhanced land area) as per Ministry of Coal's guidelines dated 07.01.2013 has been prepared and approved. A copy of the same is enclosed herewith for ready reference.

(e) Fresh air quality and water quality data are enclosed.

4.9.4 While deliberations on the proposal, the Committee noted the following:-

(a) The project of Ghonsa OCP of capacity 0.45 MTPA in an area of 128.79 ha was accorded EC on 29th February, 2012 in phase-I, based on the ToR granted on 8th July, 2009 followed by public hearing on 9th August, 2011.

(b) Further, vide letter dated 8th December, 2014, the expansion project of Ghonsa OC was granted EC for increase in capacity from 0.45 MTPA to 0.60 MTPA, but in the same area of 128.79 ha.

(c) The area of 278.683 ha, now proposed for expansion, constitutes the same land pocket of 293.65 ha for which public hearing was earlier conducted on 9th August, 2011. As such, the public hearing is actually more than 5 years old.

(d) Total forest land involved is 24 ha, for which stage-I FC has been obtained on 8th March, 2016.

(e) Mine Plan was approved by the Board of M/s Western Coalfields Ltd on 21st August, 2015 with the production capacity of 0.60 MTPA in the increased area of 278.683 ha. Mine Closure Plan is an integral part of the Mine Plan.

(f) The Regional Office of this Ministry has forwarded the compliance status of EC conditions on 7th September, 2016, which is found in order.

4.9.5 *The Committee, after detailed deliberations, observed that the proposal involves increase in mine lease area, and thus necessitates public hearing. Since the earlier public hearing conducted on 9th August,*

2011 covered the total area of 293.65 ha, fresh public hearing may not be essentially required. However, the EAC insisted for a public notice to be issued in two local newspapers (both in English and Hindi) for inviting comments, clearly mentioning about the proposal and thus fulfilling the requirement of public consultations.

The proposal was, therefore, deferred.

Agenda 4.10

Expansion of Naheriya Underground Coal Mine Project from 0.36 MTPA to 0.54 MTPA of M/s Western Coalfields Limited in the existing ML area of 300 ha located in Tehsil Parasia, District Chhindwara (Madhya Pradesh) - For further consideration of EC

4.10.1 The proposal is for grant of environmental clearance to the expansion of Naheriya Underground Coal Mine Project from 0.36 MTPA to 0.54 MTPA of M/s Western Coalfields Limited in the existing ML area of 300 ha located in Tehsil Parasia, District Chhindwara (Madhya Pradesh).

4.10.2 The proposal was earlier considered by the EAC in its meetings held in March, 2016 and then on 23-24 August, 2016, wherein main observations of the Committee were as under:-

(i) During the last meeting held in August, 2016, and while going through the presentation, the EAC opined that of the various issues raised by the Committee, the project proponent had dealt with the following three issues in the presentation i.e. low pH level on pages 6-16, environmental monitoring data with reference to air quality, and subsidence on pages 20-23 of the presentation.

(ii) The EAC noted with regret that in the said presentation on the above three issues, except in the matter of mine water treatment system, the project proponent had re-submitted to the Ministry its submission and conclusions made earlier to the EAC in March, 2016, which the EAC had not found satisfactory or adequate. The EAC was further constrained to note that nowhere in the presentation, had any impression been conveyed to the Ministry that the EAC had desired additional information and nowhere had it been mentioned that the additional data sought by the EAC was being looked into by the project proponent.

(iii) The EAC had, in its March meeting, recommended immediate stoppage of existing operations but the same was not done. In response, the project proponent informed that they had taken steps to install the water treatment system, which had become functional since 1st June 2016. On enquiry, as to why the operations were not stopped till the system became functional, the project proponent stated that there were no instructions/communication from the MoEF&CC in this regard.

(iv) Further, the project proponent had arrived at certain conclusions on the three issues of pH level, air ambient quality and subsidence. However, no technical supporting data was made available during the presentation, except conclusions. The EAC also noted that the project proponent failed to provide satisfactory answers on (a) the volume of water treated, (b) dosage of lime, (c) the disposal of waste residues, (d) use of treated water, (e) the enhancement of pH from 6.9 to neutral pH (± 7.2) and (f) other details such as quality of water before and after treatment. The air quality data presented were also not adequately explained in terms of clarifications sought earlier. Similarly, no additional information was provided on subsidence particularly on the predictions using models.

(v) The EAC insisted for certain data to be submitted which would include, Water of mine needs to be drained out/pumped out rather than intake before start of mine working, Treatment technology for increasing the pH of water (i.e. making it neutral from acidic nature) needs to be clearly brought out defining water flows (indicating number of streams), lime treatment doses, removal of lime sludge, including water characteristic before and after water treatment etc. Hydrology part also needs to be clearly written using correct English as well. Form I entries under environment sensitivity part (item no.12) need to be spelt out. It was also desired to examine the need for extra streams to take the load when the proposed single stream is under cleaning/ stopped for repair etc. Details of the subsidence studies were also required to be submitted.

4.10.3 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) Ambient air quality in Naheriya Village

Naheriya Village is located about 610 m in WEST direction from the Naheriya U/G mine. The predominant wind direction is from NORTH WEST. Coal transportation road is about 100 m SOUTH with respect to habitation. As such, there is no impact of mining and allied activities on the ambient air quality of Naheriya village. The impact is due to local domestic & transport activities.

(ii) Acidic nature of mine discharge

Acidic nature of mine water is a recent phenomenon and is intermittent in nature. Presently entire mine water coming out of the mine, after sedimentation and lime dozing (whenever required) is used inside the mine premises for dust suppression (both in UG and on surface), plantation etc., and there is no discharge from the mine. However, for futuristic safeguards, additional treatment plant with lime bed and Typha plants is under construction, proposed to be made operational by 30th May, 2016.

4.10.4 While deliberations on the proposal, the Committee noted the following:-

(a) The project of Naheriya U/G Coal Mine of capacity 0.36 MTPA in an area of 300 ha was accorded EC on 15th November, 2002, after the public hearing conducted on 11th August, 2001.

(b) The instant proposal is for expansion of Naheriya Underground Coal Mine from 0.36 MTPA to 0.54 MTPA without any change in total mine lease area and/or the mining process/technology. In terms of this Ministry's OM dated , 2012, the EAC in its due diligence may consider exempting the proposal from fresh public hearing.

(c) Out of the total area of 300 ha, forest land involved is 206.562 ha, for which stage-I FC has been obtained on 11th April, 2001.

(d) Mine Plan was approved by the Board of M/s Western Coalfields Ltd on 12th January, 2016. with the production capacity of 0.54 MTPA in the existing mine lease area of 300 ha. Mine Closure Plan is an integral part of the Mine Plan.

(e) The Regional Office of this Ministry at Bhopal has forwarded the compliance status of EC conditions on 18th November, 2015, which is found in order.

(f) With the proposed coal handling/transportation arrangements and the mitigative measures, the predicted air quality values in terms of particulate matter (PM10) and other gaseous pollutants, are within the prescribed standards. Also, to take care of the acidic mine water discharge, if any, the installed treatment system seems to meeting the desired purpose and the statutory provisions.

4.10.5 *The Committee, after detailed deliberations, decided for exempting the proposal from the requirement of fresh ToR and fresh public hearing, and recommended the proposal for grant of EC to the expansion of Naheriya Underground Coal Mine Project from 0.36 MTPA to 0.54 MTPA, subject to specific and general conditions as applicable, and the additional conditions as under:*

- *The project proponent shall obtain Consent to Establish from the State Pollution Control Board for the proposed capacity of 0.54 MTPA prior to commencement of the increased production.*
- *Transportation of coal should be carried out through covered trucks. Mitigative measures to be undertaken to control dust and other fugitive emissions all along the roads by providing adequate water sprinklers.*
- *Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.*
- *Controlled blasting technique should be adopted to control ground vibrations and fly rocks.*

Agenda 4.11

Expansion of Mugoli Nirguda Extension Deep OC Mine Project from 4.0 MTPA to 4.375 MTPA with increase in land area from 818.05 ha to 1317.55 ha of M/s Western Coalfields Limited located in District Yavatmal (Maharashtra) - For consideration of TOR

4.11.1 The proposal is for grant of Terms of Reference for Mugoli Nirguda Extension Deep OC Mine Project from 4.0 MTPA to 4.375 MTPA with increase in land area from 818.05 ha to 1317.55 ha of M/s Western Coalfields Limited located in District Yavatmal (Maharashtra)

4.11.2 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-11015/180/2014-IA.II (M) dated 30/09/2014.
- ii. Latitude and Longitude of the project site are 19° 50' 54.36" to N 19° 54' 57.17" N and 79° 05' 24" to 79° 07' 34.02" E respectively.
- iii. Joint Venture: no JV
- iv. Coal Linkage : Linked to thermal power plants of MAHAGENCO
- v. Employment generated / to be generated: Existing Manpower is 839
- vi. Benefits of the project: This project will bridge the gap (to the extent of the peak production capacity of the project) between demand & supply of non – coking coal for power houses & other bulk consumers of Northern as well as Southern part of the country.
- vii. The land usage of the project will be as follows:
- viii. Pre-Mining: Agriculture land – 435.30 Ha + 62.00 Ha (for railway siding and Mungoli village rehabilitation) Govt. Land - 75.07 Ha
Land already acquired – 788.37 Ha

Post- Mining:

S.No	Particulars	Total Land (Ha)
1	Quarry / exposed area (including existing quarry)	513.47
2	External OB dump (including existing dumps)	295.00
3	Embankment around quarry (including existing Embankment)	70.00
4	Proposed Top Soil dump (to be rehandled)	80.00
5	Land for proposed relocated Magazine	8.00
6	Land for proposed relocated Mungoli village	12.00
7	Infrastructure including colony (Approx.)	25.00
8	Residential Colony	7.60
9	Roads (Existing and proposed including diversions)	30.00
10	Railway siding*	50.00
11	Blasting / safe zone	123.79
12	Rationalisation of boundary	102.69
Total		1317.55

Core area : As given above

- ix. Total geological reserve is 59.45 MT. The mineable reserve 45.85 MT, extractable reserve is 45.85 MT. The per cent of extraction would be 77 %.
- x. The coal grade is G9. The stripping ratio is 1:6.12 Cum/tonne. The average Gradient is 1 in 10 to 1 in 16.5. There will be one seam with thickness ranging upto 15.20 m .
- xi. Total estimated water requirement is 910 m³/day. The level of ground water ranges from 1.02 m to 13.70 m bgl.
- xii. The method of mining would be Opencast with Dragline & Surface miner & Shovel dumper combination along Dozer with ripper.
- xiii. There is 2 external OB dump with Quantity of 54.31Mbcm in an area of 295.00 ha with height of 90 meter above the surface level and one internal dump with Quantity of 221.45 Mbcm in an area of 217.82 ha.
- xiv. The final mine void would be in 295.65 ha with depth 150 m and the total quarry area is 513.47 ha. Backfilled quarry area of 217.82 ha shall be reclaimed with plantation. A void of 295.65 ha with depth 150 m which is proposed to be converted into a water body.
- xv. The life of mine is 14 years (Excluding pre-construction period of 1 year).
- xvi. Transportation: Coal will be transported by Trucks. 13258 TPD, 663 Trucks/Day having 20 Te. Capacity.
- xvii. There is R & R involved. There are 600 PAFs.
- xviii. Total capital cost of the project is Rs. 461.8319 Crores (Excluding WDV) and Rs. 36.5857 Crores (WDV Cost). CSR Cost Rs. 2.00 per tone of coal production. R&R Cost Rs. 59.7557. Environmental Management Cost Rs. 6.00 per tone.
- xix. Wardha river is flowing near the mine lease boundary of the project on one side and Penganga river on the other side.
- xx. Applied for Ground water clearance to CGWB, Nagpur vide letter No.WCL/ENV/HQ/17-U/387 dated 16.08.2016. Mine Plan approved on 24th November, 2015 by the Board of M/s WCL. Mine closure plan is an integral part of mining plan.

- xxi. Wildlife issues: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxii. Forestry issues: There is No forest land involved.
- xxiii. Total afforestation plan shall be implemented covering an area of 760.30 ha at the end of mining. Green Belt over an area of 760.30 ha. Density of tree plantation 2500 trees/ ha of plants.
- xxiv. There are no court cases/violation pending with the project proponent.

4.11.3 *The Committee, after detailed deliberations, recommended the proposal for grant of ToR to the expansion project of Mugoli Nirguda Extension Deep OC Mine Project from 4.0 MTPA to 4.375 MTPA with increase in land area from 818.05 ha to 1317.55 ha, for preparation of EIA/EMP reports along with public consultation, subject to the scope of work as defined in the Standard ToR notified by this Ministry for such projects/activities.*

Agenda 4.12

Coal Washery of 10 MTPA capacity in an area of 39.35 ha by M/s Mahanadi Coalfields Limited located at Ib Valley in Lakhanpur area in district Jharsuguda (Odisha)- (For further consideration of EC)

4.12.1 The proposal is for grant of environmental clearance for Coal Washery of 10 MTPA capacity in an area of 39.35 ha by M/s Mahanadi Coalfields Limited located at Ib Valley in Lakhanpur area in district Jharsuguda (Odisha)

4.12.2 The proposal was last considered by the EAC in its 1st meeting held on 27th December, 2016. During the meeting, the observations of the Committee were as under:-

(i) The yield of the washery would be only 78.7%. Therefore, the rejects generated by the washery will be approximately 2.13 MTPA. The storage of such a huge quantity of rejects may lead to spontaneous combustion and thus pose environmental hazards. For effective utilization of rejects, firm line of action on signing of Memorandum of Understanding with the potential consumers would be required. The same was the requirement of the ToR issued for the project, but not yet complied by the project proponent

4.12.3 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. A detailed note on the proposed measures for utilisation/ disposal of washery rejects in an environmentally friendly manner has been submitted to MOEF&CC vide letter no. MCL/SBP/GM(ENVT.)/Ib Valley Washery/2017/7676 dated 02/01/2017
- ii. Priority wise options of utilisation/disposal of Rejects:
 - Option 1- In FBC Power Plants to be set up by joint venture of CIL & NTPC (CNUPL) as decided in 27th Board Meeting of CNUPL held on 26.04.2016.
 - Option 2- Till FBC Plants is set up, washery rejects is to be sold to prospective buyers either through e-auction or MoU route for use in FBC/TPP(as per decision of MCL Board in its 155th meeting held on 05.02.2014).
 - Option 3- If not usable in FBC Plants or not saleable by e-auction/ MOU route (due to high ash/low GCV), the rejects is to be dumped in the mine voids of Belpahar OCP in an Environmentally friendly

manner.

iii. Why MoU can't be done at this stage:

- Setting-up of FBC plants by JV of CIL-NTPC is the first priority for utilizing rejects of upcoming washeries of MCL. MoU may be done in case of delay in setting-up of FBC Plants of JV.
- Without knowing the firm time frame of commercial operation of the Washery & availability of rejects, its exact quantity and quality, it may not be feasible to arrive at the base price of the rejects and enter into the MoU with prospective buyers. Hence, MoU with buyers may be done at a later stage.
- Request for Expression of Interest (REoI) was invited in Jan,2014 by MCL to know the interest of the prospective consumers of washery rejects for their captive use in FBC/ TPP.
- Against this REoI, expression of interest shown for purchase is more than the quantity of reject to be generated from the washeries. Therefore, no problem in disposal of rejects through MoU route or e-auction route in environmentally friendly manner is anticipated

4.12.4 The EAC, after detailed deliberations, found the clarifications to the earlier observations as satisfactory, and recommended the proposal for grant of Environmental clearance to the proposed **Coal Washery of 10 MTPA capacity in an area of 39.35 ha by M/s Mahanadi Coalfields Limited located at Ib Valley in Lakhanpur area in District Jharsuguda (Odisha)** subject to the compliance of all generic conditions applicable for washery as well as fulfillment of other conditions as under:

- The technology so chosen for the washery should conform to 'Zero Liquid Discharge'.
- 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 and rejects by rail with wagon loading through silo.
- Disposal of washery rejects shall be in accordance with the extant policy and guidelines, and environment friendly.

Agenda 4.13

Restructuring of Cluster no. 9 group of 15 mines project of 6.25 MTPA (Normative)/8 MTPA (Peak) in ML area of 7145.4 ha M/s Eastern Coalfields Limited in District Burdwan (West Bengal) - For amendment in the EC

4.13.1 The proposal is for grant amendment in environmental clearance of Cluster no. 9 group of 15 mines project of 6.25 MTPA (Normative)/8 MTPA (Peak) of M/s Eastern Coalfields Limited in mine lease area of 7145.4 ha located in District Burdwan (West Bengal).

4.13.2 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 project 'Cluster No.9 Group of 15 Mines' in Raniganj Coalfield was granted EC vide letter dated 23rd January, 2015 for a peak capacity of 8.00 MTPA in combined cluster mine lease area of 7145.40 ha.

(ii) Subsequently, in line with the 1 BT program of CIL by 2020, there have been a few changes in the Mining Plan for the cluster vis-à-vis approved EC which has been approved by the Board of Directors, ECL on 31st August, 2016. These changes are only in respect of re-assessment of mine capacities and some new mining proposals within the cluster, and as such, necessitating amendment in the EC. However, there has been no change in the cluster boundary, its area or overall capacity.

(iii) In 39th meeting of the EAC held on 16-17 July, 2015, the EAC discussed different capacity change scenarios regarding consideration for EC under the cluster concept. The committee was of the opinion that the project proponent may apply for amendment in EC of any Cluster if a change in the production capacities of one or other mine within the cluster is required. Mining plan approval for changed capacities is also needed for amendment in EC.

(iv) The amendment has been sought in the EC granted with the details as under:-

S. No	As per the existing EC					Proposed amendment as per the Revised Mine Plan		
	Name of the Mine	Lease Area (ha)	Normative Production Capacity (MTY)	Peak Production Capacity (MTY)	Mine Life (Years)	Proposed Amendment / New Proposal	Proposed Production Capacity (MTY)	Mine Life (Years)
1	Ratibati UG	249	0.09	0.12	> 40	Capacity reduced	0.04	> 40
2	Chapuikhas UG	412	0.05	0.06	> 50	No change	0.06	> 50
3	Amritnagar UG	279	1.14	1.14	> 30	Capacity reduced	0.60	> 50
4	Tirat UG	214.5	0.06	0.08	> 10	Mines merged	0.15	> 10
5	Kuardih UG	615	0.05	0.07	> 10			
	Kuardih OC Patch (20 Ha)		0.30	0.40	2	Capacity reduced	0.25	2
6	Nimcha UG	890.2	0.31	0.40	> 50	Capacity enhanced	1.08	> 40
	Damalia OC Patch (5 Ha)		0.40	0.40	1	No change	0.40	1
						Amkola/Nimcha OC Patch	0.25	3
7	Ghusick UG	376	0.05	0.10	> 50	Merged with New Ghusick UG and Muslia UG & OC	1.93	> 25
8	Kalipahari UG	299.5	0.05	0.10	> 50	No change	0.10	> 50
	Kalipahari OC Patch A		0.16	0.22	2	Capacity reduced	0.30	Sequential

S. No	As per the existing EC					Proposed amendment as per the Revised Mine Plan		
	Name of the Mine	Lease Area (ha)	Normative Production Capacity (MTY)	Peak Production Capacity (MTY)	Mine Life (Years)	Proposed Amendment / New Proposal	Proposed Production Capacity (MTY)	Mine Life (Years)
	(24 Ha)							operation for 4 years
	Kalipahari OC Patch B (20 Ha)		0.15	0.20	2			
	Kalipahari OC Patch C (10 Ha)		0.15	0.15	1			
	Kalipahari OC Patch D (10 Ha)		0.15	0.15	1			
9	Muslia UG	948	0.04	0.05	> 50	Merged with mine at Sl. No. 7		
	Muslia OC Patch (140 Ha)		0.40	0.55	5			
10	New Ghusick UG	224	0.04	0.05	> 40	Merged with mine at Sl. No. 7		
11	Jemehari UG	118	0.03	0.04	> 10	No change	0.04	> 10
12	J K Nagar UG	1237	0.35	0.87	> 30	Capacity reduced	0.20	> 50
	J K Nagar OC Patch (21 Ha)		0.30	0.40	3	No change	0.40	3
	Pure Searsole OC Patch (8 Ha)		0.12	0.12	1		0.12	1
	MallickBasti OC Patch (8 Ha)		0.26	0.26	1		0.26	1
13	Damra UG	249	0.04	0.06	> 10		Capacity reduced	0.05
14	Mahabir UG	241.2	0.02	0.03	> 25	No change	0.03	> 25
	Mahabir OC (26 Ha)		0.20	0.40	4	Capacity reduced	0.30	3
	Narainkuri OC Patch (60 Ha)		0.40	0.55	4	Capacity reduced	0.40	4
	Egara OC		0.25	0.35	5	No change	0.35	5

S. No	As per the existing EC					Proposed amendment as per the Revised Mine Plan		
	Name of the Mine	Lease Area (ha)	Normative Production Capacity (MTY)	Peak Production Capacity (MTY)	Mine Life (Years)	Proposed Amendment / New Proposal	Proposed Production Capacity (MTY)	Mine Life (Years)
	Patch (19 Ha)							
15	Narainkuri UGP	793	0.54	0.54	> 25	No change	0.54	> 25
	Total	7145.40	6.25	8.00		No overall change in area and capacity	8.00	

(v) With the restructuring of individual mines so proposed, the combined production capacity of the Cluster would be same i.e. 8.00 MTPA with the mine lease area remaining the same.

4.13.3 While deliberations on the proposal, the Committee observed that the proposal for amendment in the EC dated 23rd January, 2015 due to re-structuring/re-assessment of capacity of individual mines in the Cluster with the combined production capacity of 8 MTPA (peak) remaining the same, and within the same mine lease area of 7145.40 ha, may not involve any additional environmental concern. Also, the conditions already stipulated in the said EC shall ensure all environmental safeguards. Further, the proposed re-assessment is as per the revised Mine Plan, and has been approved by the Board of M/s Eastern Coalfields Ltd.

4.13.4 The EAC, after deliberations, agreed to the proposal and recommended the proposed amendment in the EC dated 23rd January, 2015 for Cluster No.9 Group of 15 Mines Project, in respect of re-assessment of capacity of individual mines only with the combined production capacity of 8 MTPA and within the same mine lease area of 7145.40 ha, as explained in para 4.13.2 (iv) above.

Agenda 4.14

Bellampalli OC Mine Extension Project-II from 0.40 MTPA to 1.00 MTPA of M/s Singareni Collieries Company Ltd in ML area of 191.98 ha located in village Abbapur, Mandal Tandur, District Adilabad (Telangana) - For further consideration of EC

4.14.1 The proposal is for grant of environmental clearance to Bellampalli OC Mine Extension Project-II with increase in capacity from 0.40 MTPA to 1.00 MTPA of M/s Singareni Collieries Company Ltd in mine lease area of 191.98 ha located in village Abbapur, Mandal Tandur, District Adilabad (Telangana).

4.14.2 The proposal was earlier considered by the EAC in its meeting held on 11-12 June, 2015. During the meeting, the observations of the Committee were as under:-

(i) Mine Plan/ Mine Closure Plan approvals for the intended capacity for which EC is being sought.

- (ii) Updated status on implementation of Public Hearing issues held on 15th December, 2004.
- (iii) Diverted nallah should be connected to the original channel.
- (iv) Revised note on management of external and internal OB dump including backfilling of one void to ground level from Abbapur OCP as proposed by PP.

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

- (a) Ministry of Coal has approved the Mine Plan vide letter No.13016/10/2006-CA II dated 26th July, 2016 for the intended capacity of 1 MTPA.
- (b) Updated status on implementation of the issues raised during the public hearing held on 15th December, 2004 was submitted.
- (c) The project involves diversion of two nallahs namely Bejjal nallah passing over Block-B extension and Sonapur nallah passing over Block-D. It is proposed to join these two nallahs to the original course.
- (d) Revised note on management of external and internal OBD including backfilling of one void to ground level from Abbapur OCP, as proposed by the project proponent are as under:

- (i) Solid Waste Management

The extractable coal reserves in BPA OC-II Extension project were 7.00 MT and OB removal was 45.51 M.Cum with a stripping ratio of 6.50 Cu.m/T from the three blocks. Out of 45.51 M.Cum of OB to be handled, 43.72 M.Cum is hard OB and the balance 1.79 M.Cum is topsoil. 2.40 MT of Coal has already been excavated from **Block - C** by removing 9.61 M.Cum of OB. The balance extractable reserves in the project are 4.60 Mt and the balance OB to be removed is 35.90 M.Cu.m.

The gradient of all the blocks is more than 1 in 3.5 and the extent of the blocks is too small for concurrent back filling. Hence, it was envisaged to accommodate most of the OB in the de-coaled pits except for a quantity of 3.60 MBCM which is to be dumped in the external dump yard of Abbapur village up to a height of +30m above ground level.

- (ii) The details of hard OB dumping is given below –

OB Management					
Location of dump	Quantity Dumping		Excavated From		Total
	H OB	Topsoil	H OB	Topsoil	
De-coaled area of Block-A of BPA OC-II	9.17	0.25	C	B Ext	9.42
Abbapur external dump	3.60	0.29	B Ext	B Ext	3.89
De-coaled area of Block-C	9.53	0.46	B Ext	D	9.99
De-coaled area of Block-B Ext	21.41	0.36	D	D	21.77
Dumps of Block-A & E of BPA OC-I		0.44		C	0.44
Total	43.71	1.80			45.51

- (iii) Location of Dump Yards

Block-C:

The total OB produced from the **Block - C** is 9.61 M.Cum, out of which 9.17 M.Cum is hard OB. The total hard OB is dumped in the de-coaled area of **Block - A** (BPA OC-II).

Block-B Extension:

The total hard OB from the **Block - B Ext** is 13.13 M.Cum. out of which It is proposed to accommodate the 9.53 M.Cum of hard OB in the voids of the **Block - C** and 3.60 M.Cum of hard OB in the Abbapur external dump yard.

Block-D:

The hard OB from the **Block - B Ext** is 21.11 M.Cum. It is proposed to accommodate the entire hard OB from the **Block - D** in the voids of the **Block - B Extn and Block - B**.

(iv) Overburden

Total hard OB to be produced in the project is 43.41 M.Cum (**Block - C** - 9.17 M.Cum + **Block - B Ext.** - 13.13 M.Cum + **Block - D** - 21.11 M.Cum). The removal of 9.17 M.Cum of hard OB from **Block - C** is already completed. The balance hard OB to be produced from the remaining two blocks will be 34.24 M.Cum. There is a dump yard over the **Block - D**, so 0.30 M.Cum of OB is to be rehandled. Hence the total balance hard OB to be handled in this proposal is 34.54 M.Cum, which will be accommodated in the external yards as shown below.

(In M.Cu.m.)

Location of dumping	Total Hard OB	OB already Dumped	Balance OB	Max. Dump Height(m)
Backfilled area of Block-A (BPA OC-II)	9.17	9.17	0	+60
Abbapur dump yard	3.60	0.00	3.6	+30
Voids of the Block-C	9.53	0.00	9.53	0
Voids of the Block-B Extn	21.41	0.00	21.41	0
Total	43.71	9.17	34.54	

(v) Topsoil

Total top soil to be produced from all the blocks is 1.80 M.Cum. The quarrying of **Block - C** has produced 0.44 M.Cum of top soil which was already spread over the dumps of **Block - E and A** of **BPA OC-I**. The balance topsoil to be produced from the remaining two blocks is 1.36 M.Cum. Out of 1.36 M.Cum of topsoil 0.25 M.Cum will be spread over **Block - A** dump yard of BPA OC-II, 0.29 M.Cum will be spread over the Abbapur dump yard, 0.46 M.Cum will be spread over **Block - C** dump yard and the balance 0.36 M.Cum of topsoil will be spread over the **Block - B Ext.** dump yard. All the topsoil will be spread on finished dumps directly, there will not be any temporary storage of the top soil.

(vi) Final Void

The **BPA OC - II Extension project** consists of three pits namely **Block - C, Block - B Ext., and Block - D.** It is proposed to fill the voids of the **Block - C and Block - B Extension** with the OB from the **Block - B Extension and Block- D** respectively. Hence, void in **Block - D** was proposed to be left after final operations. The maximum depth of the final void at the end of mining operations of the **Block - D** is 130 m. The volume of the void is **23.82 M.Cum** covering an area of **40.64 Ha.**

However, this dumping plan has been re-examined and now it is proposed that void of Block – D will be filled with OB removed from Abbapur OCP (which will be opened adjacent to **Block – D**).

(vii) The details of land in post mining scenario will be as follows:-

Sl. No	Description	END LAND USE DETAILS (Ha.)				
		Plantation	Water body	Public Use	Other Uses	Total
1	Excavation Area					
	(a) Backfilled area (Block C & B Ext.)	49.87	-	-	--	49.87
	(b) Void in Block-D	--	40.64	--	--	40.64
2	External waste dump	19.16	---	---	---	19.16
3	Diversion of Nallah	---	13.58	---	---	13.58
4	diversion of public road	---	---	5.08	---	5.08
5	Area utilized for rehabilitation and resettlement	---	---	22.7	---	22.7
6	CHP	3.1	---	---	---	3.1
7	Protective bund around quarry & dump yard, safety distance & drains	37.85	---	---	---	37.85
TOTAL		109.98	54.22	27.78		191.98

(viii) Details of revised dumping proposal for filling the void of Block – D

Sl. No	Description	END LAND USE DETAILS (Ha.)				
		Plantation	Water body	Public Use	Other Uses	Total
1	Excavation Area					
	(a) Backfilled area (Block C & B Ext.)	49.87	-	-	-	49.87
	(b) Void in Block-D	40.64	-	-	-	40.64
2	External waste dump	19.16	-	-	-	19.16
3	Diversion of Nallah	-	13.58	-	-	13.58
4	diversion of public road	-	-	5.08	-	5.08
5	Area utilized for rehabilitation and	-	-	22.7	-	22.7

	resettlement					
6	CHP	3.10	-	-	-	3.1
7	Protective bund around quarry & dump yard, safety distance & drains	37.85	-	-	-	37.85
TOTAL		150.62	13.58	27.78		191.98

4.14.4 While deliberations on the proposal, the Committee noted that the proposal is for grant of environmental clearance to the expansion of Bellampalli Opencast Mine Extension Project-II from 0.40 MTPA to 1 MTPA in mine lease area of 191.98 ha without the prior ToR and the fresh public hearing. The project proponent requested the Committee to consider the proposal in terms of para 7(ii) of the EIA Notification, 2006, and subsequent OMs providing for exemption from public hearing with the due diligence of the EAC. However, in the instant case, the Committee noted that the earlier public hearing (while granting the EC for 0.40 MTPA capacity) was quite old and that too under the earlier EIA Notification, 1994, which has since been superseded.

4.14.5 *The Committee desired that the project proponent should seek fresh ToR for the project. The proposal was, therefore, deferred.*

Agenda 4.15

Kistaram Opencast Coal Mine Project of 2 MTPA in ML area of 435.68 ha of M/s The Singareni Collieries Company Limited, located at District Khammam (Telangana) - For further consideration of EC

4.15.1 The proposal is for grant of environmental clearance to Kistaram Opencast Coal Mine Project of 2 MTPA in mine lease area of 435.68 ha of M/s The Singareni Collieries Ltd, located in District Khammam (Telangana).

4.15.2 The proposal was earlier considered by the EAC in its meeting held on 23-24 June, 2016. During the meeting, the observations of the Committee were as under:-

- (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 in pit to mine surface is reported to be through dumpers. Whereas, during presentation, it was informed that in pit 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.

4.15.3 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) 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.

In AQIP modeling, the PM₁₀ values have not been properly reflected in the table showing the total predicted GLCs (i.e., Baseline + Incremental rise) and the PM₁₀ value of Jaganathapuram Village has not been included in the table, which has resulted in a mis-match of baseline values with the predicted incremental values. Also, the total predicted PM₁₀ concentration has been arrived at by considering maximum value of baseline PM₁₀ concentrations. Accordingly, the corrected table is given hereunder:

Table showing total GLCs of PM₁₀ in the study area of the project

(All figures in µg/m³)

Stn ID	Location	Maximum Baseline Conc.	Predicted Incremental rise in Conc.	Total GLC	Standard
CA1	Jagannathapuram	70	7.87	77.87	100
BA1	Ramachandrapur	73	4.45	77.45	100
BA2	Cherukupalli	76	1.48	77.48	100
BA3	Guruvaigudem	72	8.19	80.19	100
BA4	Kistaram	81	14.67	95.67	100
BA5	Vengalrao nagar	78	12.98	90.98	100
BA6	Toggudem	70	19.07	89.07	100
BA7	Gudipadu	85	7.73	92.73	100
BA8	Kommugudem	71	6.28	77.28	100
BA9	Kommepalli	73	9.03	82.03	100

As per the revised table, the maximum value of baseline PM₁₀ concentration recorded at Gudipadu village is 85 µg/m³, the predicted incremental rise is 7.73 µg/m³ and the total GLC of PM₁₀ after commencement of mining operations will be 92.73 µg/m³, which is within the limits stipulated by CPCB.

Total predicted PM₁₀ concentration at Gudipadu village is high in comparison to other receptor sites though this receptor site is in upwind direction and 3 km from the project boundary. The higher PM₁₀ baseline concentrations recorded at the village falling in the upwind direction may be due to vehicular movement on the unpaved roads. Hence, adequate air pollution control measures will be taken during coal mining and transport activities to mitigate the particulate emissions. Accordingly, continuous water spraying arrangements will be made at all the dust generating sources in order to contain the particulate levels in the surrounding villages within the stipulated limits.

(ii) Water to be supplied to the villages needs to be treated in a system with aeration and filtration including fluoride control.

The Government of Telangana has formulated “MISSION BHAGIRATHA” Scheme for providing drinking water to every village. SCCL is actively participating in the programme as a part of CSR activities. Also, SCCL will install RO plants in the surrounding villages, wherever required, for supply of treated water for drinking purpose.

(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.

SCCL is proposing to construct five check dams across Lothu vagu, Chilla vagu and streams of Lankapalli tank in the villages of Gourigudem, Yerugatla and Lankapalli as suggested by State Ground Water Department while according ground water clearance for the proposed Kistaram Opencast Project for augmentation of ground water recharge at an estimated cost of Rs. 4-5 Lakhs per each check dam.

Also, the excess mine discharge water will be diverted in to the nearby tanks viz, Kistaram tank, Jagannadhapuram tank etc., after necessary treatment.

Further, SCCL will take necessary measures like de-silting of nearby tanks thereby increasing the storage capacity and ground water recharge.

(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 including forest area, increasing quantity of internal dump and reducing the external OB dumping from presently ten years to bare minimum.

At the project formulation stage, it was planned to utilize an area of 159.05 Ha for external dumping of OB up to a height of 90 m. MoEF&CC, while considering the project proposal for issue of ToR in the year 2009, advised SCCL to protect Jagannathapuram tank falling in external OB dump area. Subsequently, OB dumping strategy has been revised and a fresh ToR has been obtained in September 2014 for the revised project proposal, in which external dump area has been restricted to 131.14 Ha and dump height has been increased from 90 m to 120 m., leaving the land to an extent of 27.91 Ha for protection of the Jagannadhapuram Tank.

The mining operations are planned in such a way that the land requirement for external dumping of overburden is kept minimum.

a) The dumping strategy is planned with optimum utilization of land as shown below-

- i) In the initial period of the quarry, the entire OB is to be accommodated in external dump as void created is not sufficient for internal dumping.
- ii) The land extent is optimized by merging external dump and increasing the height of the dump to +120m. However, till merging with the internal dump, it will not be possible to increase the dump height beyond +90.
- b) The internal dump gets restricted as it is necessary to maintain a haul road to the final depth of 170 m of the quarry and at least 70 m is to be left between the toe of the internal dump & edge of the haul road. Dump management plan is carefully made to meet this basic requirement.
- c) Sequential mining is planned for achieving the objective of placing maximum overburden in the internal dump. The internal dumping of OB in to the voids of Kistaram OCP will start from 3rd year of coal mining operations and will continue till the end of the project. Thus, the total quantity of OB to be accommodated in internal dumps is 55.26 M.Cu.m including 0.27 M.Cu.m. of Top soil and in external dumps is 74.32 M.Cu.m. including 0.74 M.Cu.m. of Top soil.

(v) *Prediction of PM_{2.5} should also be done.*

The incremental rise in PM_{2.5} concentration has also been predicted using AQIP modeling by considering maximum values of baseline PM_{2.5} concentration and the details are furnished in **Annexure - I**.

(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.*

The fauna listed in EIA/EMP consists of mostly common and generalist species and none of them is threatened globally as per the IUCN records. However, as per the Wildlife Protection Act 1972, there are some animals which fall under different schedules.

Information on the faunal elements was mostly collected from the concerned divisional forest officers and from the local people regarding wildlife availability in and around protected forests. Field survey team did not come across any wildlife during collection of environmental baseline data as a part of EIA studies.

It is opined during the EAC meeting that leopard may also exist in the surrounding forest, but there is no incidence of citing of leopard by local villagers.

In order to protect the adjoining forest land, a conservation plan will be prepared in consultation with the State Forest and Wildlife Departments after obtaining Stage - II forest clearance for diversion of 285.44 ha of forest land, as is being formulated in other projects where forest land is involved.

As there are no wildlife corridors or eco-sensitive zones in the proposed project site, the diversion of forest land for the project will not lead to any change in the presence as well as in the habitat of wildlife.

(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.*

There is a proposal to accommodate OB generated from the proposed JVR OCP - III in the final void of Kistaram OCP to reduce the void area and also to avoid additional requirement of land for external dump of JVR OCP - III.

(viii) *The transport of coal from in pit to mine surface is reported to be through dumpers. Whereas, during presentation, it was informed that in-pit crushing and transport would be done by belt conveyor to mine*

surface into a hopper. This needs to be documented properly.

While preparation of FR, keeping in view of the geological conditions, life of the project and progress of the quarry operations, it was proposed to transport the coal from in-pit to surface through dumpers. For the given quarry configuration, it is difficult to maintain proper location for the crusher inside the quarry without sacrificing the internal dump area. This will necessitate additional land for external dump and increase in the lead for OB dumpers, offsetting the advantage in the reduction of the lead of coal dumpers.

However, SCCL is exploring for new technologies like steep angle conveyors along high wall for transportation of coal, which may be considered at the later stages, but are not considered at this stage.

(ix) Presently, the coal from the mine is being dispatched through Rudrampur 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.

Field survey work for the new railway line has been completed. Railway authorities have submitted the cost estimates for laying of railway line. The work commences shortly and it is anticipated that the railway line will be commissioned by 2019-20.

(x) Reply to the issues raised by one of the NGOs and detailed Action Plan for public hearing issues and the budgetary allocations.

A detailed point wise clarification for the issues raised by eRc on EIA/EMP report is furnished in **Annexure - II** and a detailed Action Plan for addressing public hearing issues along with budgetary provision is furnished in **Appendix - B of Annexure - II**.

(xi) CSR details of expenditure for the years 2006-07, 2009-10 and from 2012-13 onwards.

The details of works along with amount spent towards CSR activities in and around the proposed project are furnished hereunder.

Work undertaken	Amount spent (in Rs.lakhs)										Total (in Rs. Lakh)
	2004-05	2005-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	
Road Infrastructure	21.00	55.04	39.70	0.00	0.00	108.00	115.00	0.00	0.00	226.49	565.23
Drainage Sanitation &	3.00	27.32	47.30	0.00	0.00	18.00	37.00	0.00	0.00	0.00	132.62
Education	0.00	15.00	0.00	5.70	0.40	8.50	2.15	1.30	0.55	1.10	34.70
Drinking Water Supply	8.50	5.00	0.00	0.00	0.00	0.00	0.00	0.00	27.75	0.00	41.25
Others	30.50	36.00	0.00	0.00	0.00	5.00	0.00	19.16	0.00	17.94	108.60
Total	63.00	138.36	87.00	5.70	0.40	139.50	154.15	20.46	28.30	245.53	882.40

SCCL allocated funds to the tune of 138.36 lakhs for CSR works during the year 2005-06 and the amount was spent through the Government Agencies in the years 2006-07 and 2007-08 for taking up various

developmental works in surrounding villages of the project site. Hence, no additional funds were allocated during the years 2006-07 and 2007-08.

(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.

A capital fund provision of Rs.100 lakhs has been made towards CSR activities in the Revised Cost Estimates of Kistaram OCP.

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

SCCL has submitted a proposal to MoEF&CC for diversion of 285.44 ha of forest land involved in the Kistaram Opencast Project. During the FAC meeting held on 20-21 October, 2014, it was recommended that a decision on grant of approval under the Forest (Conservation) Act, 1980 for diversion of forest land may be deferred till EIA/EMP and proceedings of public hearing are considered by EAC for grant of EC. Meanwhile, FAC requested the State Government to give certain clarifications and justification for diversion of forest land. SCCL submitted the justification report to PCCF, Hyderabad on 23rd February 2016. PCCF, Hyderabad advised CF/DFO, Khammam to inspect the site and submit a report on the information furnished by SCCL. DFO, Khammam submitted his report to CF Khammam. CF, Khammam has to forward the same to PCCF for onward transmission to MoEF&CC through State Government for placing the proposal before FAC.

4.15.4 While deliberations on the proposal, the EAC took note of the following:-

(a) The observations of the FAC in its meeting held on 20-21 October, 2014 [as at para 4.15.3 (xiii) above], and subsequent clarifications sought from the State Government, need to be clarified by the project proponent for its compatibility with the EIA/EMP reports and the public hearing. The Committee desired that the proposal may be considered by the FAC in parallel, and without any prejudice to the observations of the EAC.

(b) Source of Fluoride in the ground/surface water need to be identified/assessed to suitably address the observations of the EAC.

(c) Year wise expenditure incurred on CSR activities indicate no definite trend with no firm planning and the budget estimate accordingly.

4.15.5 *The proposal was, therefore, deferred for want of information on the above lines.*

Discussion on any other item

Agenda 4.16

Review of conditions of the EC dated 12th June, 2012 for operating Gare IV/2 & IV/3 Coal Block by M/s South Eastern Coalfields Limited - Compliance of the direction of NGT (CZ) at Bhopal in OA No.319/2014 (CZ)

4.16.1 The agenda item was placed before the EAC as a matter of compliance of the orders 3rd February, 2016, 5th April, 2016, 1st August, 2016 & 31st January, 2017 of NGT (CZ) at Bhopal in OA No.319/2014 in the matter of „Sri Dukalu Ram & others Vs Union of India & others“.

4.16.2 EAC was informed about the background of the matter as under:-

(i) The Ministry had earlier issued for the capacity of 6.25 MTPA and 0.75 MTPA respectively, Environmental Clearance (EC) to Gare IV/2 & IV/3 Open Cast and Under Ground coal mines in favour of M/s Jindal Power Ltd. vide letter No.J- 11015/288/2007-IA-II(M) dated 12th June, 2012

(ii) Subsequent to cancellation of coal blocks in pursuance of the orders of Hon^{ble} Supreme Court, Ministry of Coal vide Order No. F.No. 13016 /2/2015-CA-3 dated 30.03.2015 appointed M/s Coal India Ltd as custodian in respect of these mines.

(iii) The Chairman, Coal India Ltd. vide letter No.CIL/CH/Custodian/27/1609 dated 31.03.2015 directed one of its subsidiaries namely M/s SECL to work as custodian on behalf of CIL and do the needful for operating the mines.

(iv) Subsequent M/s SECL requested for modification in EC conditions which was earlier considered by the EAC and granted vide letter No.J-11015/288/2007-IA-II(M) dated 16th April, 2015. Accordingly, Consent to Operate under the Water Act, 1974 and the Air Act, 1981 were renewed by CECB, Raipur.

(v) M/s Jindal Power Ltd filed the WP (C) No.3001 of 2015 before Hon^{ble} High Court of Delhi challenging the decision of Ministry of Coal for not declaring their company as the successful bidder during e-auction held in February, 2015. The judgment in the matter was reserved, and is still awaited.

(vi) Hon^{ble} Tribunal vide order dated 3rd February, 2016 has observed as under :- “The MoEF also, in our opinion, needs to review the entire issue and refer the matter to EAC particularly when the Hon^{ble} High Court of Delhi has concluded the hearing and the judgement has been reserved in the Writ Petition filed by Respondent No. 4 in the matter of M/s Jindal Power Ltd. V/s Union of India & Ors. wherein the cancellation of the coal block allocation is subjudice. Since the matter has come up before us not against the original EC but in the matter pertaining to enhancing the capacity and it is alleged that even while granting the original EC, the siting guidelines were not given due consideration in respect of inhabited areas of villages Kosampalli and Sarasmal which as per the Applicant and also some of the material placed before us are reportedly in close proximity varying from 80-160 meters. It has also been stated before us during the hearing that there is no surety that even after the above measures are adopted for dealing with the raging fires and their detention and extinguishing, they may not reoccur. In that view of the matter, at any given point of time either for re-allocation or in terms of the directions issued by the Hon^{ble} High Court to any of the parties including the Petitioner before the Hon^{ble} High Court (Respondent No.4 herein) the issue which have arisen post the grant of EC and enhancement capacity need to be reviewed at the level of EAC and additional measures by way of precautionary principles as may be suggested by the expert bodies like ISM, CIMFR and CMPDI and / or any other expert body which the EAC may consider appropriate may be taken. We would accordingly direct that a copy of this order may be sent to the MoEF for necessary action in this behalf.”

(vii) Hon^{ble} Tribunal in its further Orders dated 5th April, 2016 and 1st August, 2016 has asked for the status in this regard. The concerned Division was informed by the panel counsel about the matter in the last days of July, 2016, and the proposal was placed before the EAC in its meeting held on 23-24 August, 2016.

(viii) After the proposal having been listed in the agenda for the meeting (proposed for August, 2016), M/s Jindal Power Ltd vide their letter No.JPL/Environment/2016 dated 12th August, 2016 to the MoEFCC has stated that „Any decision by EAC (coal mining) and MoEF&CC in the matter may have direct implication on JPL (being the preferred bidder for the said coal blocks in the recent e-auction) in the event the Hon^{ble} Delhi High Court accepts the plea of JPL in the aforesaid W.P. (C) No.3001 of 2015.“ They have requested that the representatives of JPL be invited to be present during the deliberations on the subject in the EAC (Coal Mining) meeting scheduled in August, 2016.

(ix) The present custodian of the coal blocks M/s SECL also submitted their submission vis-à-vis fulfillment of the orders of Hon^{ble} Tribunal in this matter.

(x) As per the decisions taken during the earlier meeting of the EAC held in August, 2016, the Regional Office at Bhopal was requested vide letter dated 17th October, 2016, to make a site visit for on the spot assessment of ground reality and submit its report. At the same time, ISM, CIMFR and CMPDIL were also requested for their comments and recommendations vis-à-vis the observations of NGT contained in their above said orders.

4.16.3 During deliberations, the EAC took note of the compliance status of EC conditions forwarded by the Regional Office, Nagpur in response to this Ministry's letter dated 17th October, 2016. The Committee noted the observations made in the said report summarizing the compliance status as under:-

1. Conditions being complied with by the PP:

Specific conditions no. (i), (ii), (xvii), (xxxvii), (xlii)

General conditions no. (i), (ii), (iii), (iv), (vi), (ix), (x), (xiii), (xvi)

2. Conditions being partially complied with by the PP:

Specific conditions no. (viii), (ix), (xi), (xviii), (xxv), (xxx), (xxxv), (xxxvi), (xl), (xli)

3. Conditions not complied with by the PP

Specific conditions: (iii) to (vii), (xix), (xxiii), (xxiv), (xxvi), (xxix), (xxx), (xxxii), (xxxiv), (xxxviii),

General condition: (viii), (xi), (xii)

The Committee desired that the present custodian of the coal block M/s SECL be asked for their comments and the actions taken thereon to ensure satisfactory compliance of the EC conditions. The same needs to be endorsed by the concerned Regional Office also.

The Committee was further informed that there has been no response from ISM/ CIMFR/CMPDIL to this Ministry's request as per the recommendations of the EAC. It was desired that these institutions may be asked for submitting their report urgently along with firm recommendations.

Agenda 4.17

Expansion of Ashok OCP from 10 MTPA to 14 MTPA of M/s Central Coalfields Limited located in ML area of 793.14 ha in Tehsil Tandwa District Chatra (Jharkhand)

4.17.1 The proposal is for grant of environmental clearance to the expansion of Ashok Opencast Coalmine Project from 10 MTPA to 14 MTPA of M/s Central Coalfields Limited in ML area of 793.14 ha located in Tehsil Tandwa, District Chatra (Jharkhand).

4.17.2 The proposal was last considered by the EAC in its 1st meeting held on 27th December, 2016. During the meeting, the observations of the Committee were as under:-

(i) The mitigating measures undertaken to check the dust and other fugitive emissions seem to be adequate, as the particulate matter concentration at monitored locations is within the prescribed norms.

(ii) The project proponent has applied to the SPCB on 31st March, 2016 for the Consent to Establish for expansion from 10 MTPA to 12 MTPA, but the same has not been issued as yet. Similarly, Consent to Operate, the statutory requirement under the Air Act, 1981 and the Water Act, 1974, has also not been obtained for the earlier capacity of 10 MTPA.

4.17.3 In response to the observations of EAC, it was informed that the project proponent has obtained Consent to Establish from the State Pollution Control Board for the enhanced capacity of 12 MTPA. The Consent to Operate for the existing capacity of 10 MTPA dated 1st February, 2017 was also obtained and submitted to the Ministry.

4.17.4 *The Committee, after having taken note of the earlier deliberations and satisfactory fulfillment of the requirements, recommended the proposal for grant of Environmental clearance to the expansion of Ashok OCP from 12 MTPA to 14 MTPA of M/s Central Coalfields Ltd in ML area of 793.14 ha subject to specific and general conditions as applicable, and additional conditions as under;*

- *Transportation of coal should be carried out by covered trucks. Mitigative measures to be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient numbers of water sprinklers.*
- *Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.*
- *Controlled blasting techniques should be adopted to control ground vibration and fly rocks.*

LIST OF EAC MEMBERS PARTICIPATED IN 4th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 30-31 JANUARY, 2017 ON COAL SECTOR PROJECTS.

Sl. No.	List Of Participants Expert Appraisal Committee (Coal Mining)	
1.	Dr. Navin Chandra	Chairman
2.	Dr. Narmada Prasad Shukla	Member
3.	Shri N Mohan Karnat	Member
4.	Dr. Sharachchandra Lele	Member
5.	Prof. S K Sinha	Representative (ISM, Dhanbad)
6.	Dr. R K Giri	Representative (Indian Meteorological Department)
7.	Shri S K Paliwal	Representative (CPCB)
8.	Shri S. K. Shrivastva	Member Secretary

LIST OF PROPONENTS PARTICIPATED IN 4th EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL & COAL MINING) MEETING HELD ON 30 - 31 JANUARY, 2017 ON COAL SECTOR PROJECTS.

4.1 Expansion of of 'Parsa East and Kanta Basan' Opencast Coal Mine M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd

1. Shri Uma Shankar
2. Shri Brijesh Kumar Singh
3. Dr. B Chand
4. Shri N K Kothari
5. Shri Satya Prakash
6. Shri Rajesh Agrawal
7. Shri Prakash Israni
8. Shri K R Singh
9. Shri N K Prasad
10. Shri Dayanand
11. Shri B S Sodhi
12. Shri Sanjay Tibrewal
13. Shri Man Mohan Bisht
14. Shri Ashish Kumar
15. Shri Sonini Bonthala
16. Shri M R Manohar
17. Shri G V Rao
18. Shri Pramod kumar

4.2 Parsa Opencast Coal Mine Project of M/s Rajashtan Rajya Vidyut Utpadan Nigam Limited.

1. Shri Uma Shankar
2. Shri Brijesh Kumar Singh
3. Dr. B Chand
4. Shri N K Kothari
5. Shri Satya Prakash
6. Shri Rajesh Agrawal
7. Shri Prakash Israni
8. Shri K R Singh
9. Shri N K Prasad
10. Shri Dayanand
11. Shri B S Sodhi
12. Shri Sanjay Tibrewal
13. Shri Man Mohan Bisht
14. Shri Ashish Kumar
15. Shri Sonini Bonthala
16. Shri M R Manohar
17. Shri G V Rao
18. Shri Pramod kumar

4.3 Gare Palma Sector-I, Phase 1 coal mine project of M/s Gujarat State Electricity Corporation Limited

1. Shri P R Dohke
2. Shri H N Baxi
3. Shri Lilanjan Das
4. Shri K D Choudhary
5. Shri M D Joshi
6. Shri D P Singh

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

1. Shri M Srinivasu
2. Shri S K Basak
3. Shri N S Prasad
4. Shri M Saxena
5. Shri V Banuje
6. Shri H P Sharma
7. Shri Naveen Kala
8. Shri Sunil Singh
9. Shri Arun Kapoor
10. Shri Krishna Praveen
11. Shri Inderpal Dhull
12. Shri Sammu Kumar
13. Shri Kartik Sinha
14. Shri Prasant Sharma
15. Shri B S Sagar
16. Dr. S K Singh

4.5 Dipka Opencast expansion Project of M/s South Eastern Coalfield Limited.

1. Shri P K Sinha
2. Shri Manoj Kumar
3. Shri S S Sinha
4. Shri J G singh
5. Shri D Srinath
6. Shri A S Bapat
7. Shri Hemant Sharad Pande
8. Shri Rakesh Kumar
9. Shri S Janani Hemalatha
10. Shri Anmol R Panikar
11. Ms. Aishwarya C Shekhar
12. Shri Ashutosh Kumar
13. Shri S K Malviya
14. Shri T Chakraborty
15. Shri T D guin
16. Shri A K Gupta

4.6 Gevra Opencast expansion Project of M/s South Eastern Coalfield Limited.

1. Shri P K Sinha
2. Shri Manoj Kumar
3. Shri S S Sinha

4. Shri J G singh
5. Shri D Srinath
6. Shri A S Bapat
7. Shri Hemant Sharad Pande
8. Shri Rakesh Kumar
9. Shri S Janani Hemalatha
10. Shri Anmol R Panikar
11. Ms. Aishwarya C Shekhar
12. Shri Ashutosh Kumar
13. Shri S K Malviya
14. Shri T Chakraborty
15. Shri T D guin
16. Shri A K Gupta

4.7 Bermo coal mine Project of M/s Damodar valley Corporation (DVC)

1. Shri. A K Thakur
2. Shri P Kumar
3. Shri A R Chowdhury
4. Shri A K Kashyap
5. Shri J K Mandiye

4.8 Moher & Moher Amlori Extension coal blocks project of M/s Sasan Power Ltd

1. Shri N K Deo
2. Shri B Mishra
3. Shri Jagat Paikra
4. Shri Unnikrishnan

4.9 Ghonsa OCP of capacity 0.60 MTPA by M/s Western Coalfields Ltd located

1. Shri T N Jha
2. Shri E M Wanare
3. Shri K Chakraborty
4. Shri Shankar Subramaniam
5. Shri U S Shah
6. Shri V K Nagda
7. Shri Gaurav Kumar

4.10 Naheriya Underground coal mine project of M/s Western Coalfields Limited

1. Shri T N Jha
2. Shri E M Wanare
3. Shri K Chakraborty
4. Shri Shankar Subramaniam
5. Shri U S Shah
6. Shri V K Nagda
7. Shri Gaurav Kumar

4.11 Mugoli Nirguda Extension Deep OC Mine Project of M/s Western Coalfields Limited

1. Shri T N Jha

2. Shri E M Wanare
3. Shri K Chakraborty
4. Shri Shankar Subramaniam
5. Shri U S Shah
6. Shri V K Nagda
7. Shri Gaurav Kumar

4.12 IB Vally Coal Washery of M/s Mahanadi Coalfield Limited

1. Shri O P Singh
2. Shri C Jayadev
3. Dr. A K Samantaray
4. Shri M G Brahamapkar
5. Shri Anil Kuma

4.13 Cluster no. 9 group of 15 mines project of M/s Eastern Coalfield Limited.

1. Shri A K Singh
2. Shri A Panday
3. Shri G Prasad
4. Shri S Kunda
5. Shri A Shekhar
6. Shri A K Singh
7. Shri S Chakraborty
8. Shri P Banergee

4.14 Bellampalli OC Mine Extension Project – II of M/s Singareni Collieries Company Ltd.

1. Shri A Manohar Rao
2. Shri Antony Raja
3. Shri P Ravi Kumar
4. Shri K Raghu Kumar
5. Shri W Vivek
6. Shri N Srinivasa Rao
7. Shri P Mahendar Reddy

4.15 Kistaram Opencast Project of M/s Singareni Collieries Company Ltd.

1. Shri A Manohar Rao
2. Shri Antony Raja
3. Shri P Ravi Kumar
4. Shri K Raghu Kumar
5. Shri W Vivek
6. Shri N Srinivasa Rao
7. Shri P Mahendar Reddy

Generic ToR for coal washery

- i. Siting of washery is critical considering to its environmental impacts. Preference should be given to the site located at pit head; in case such a site is not available, the site should be as close to the pit head as possible and coal should be transported from mine to the washery preferably through closed conveyer belt to avoid air pollution.
- ii. The washery shall not be located in eco-sensitive zones areas.
- iii. The washery should have a closed system and zero discharge. The storm drainage should be treated in settling ponds before discharging into rivers/streams/water bodies.
- iv. A thick Green belt of about 50 m width should be developed surrounding the washery.
- v. A brief description of the plant alongwith a layout, the specific technology used and the source of coal should be provided.
- vi. The EIA-EMP Report should cover the impacts and management plan for the project of the capacity for which EC is sought and the impacts of specific activities, including the technology used and coal used, on the environment of the area (within 10km radius), and the environmental quality of air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts for the rated capacity. Cumulative impacts for air and water should be a part of EIA in case coal mine, TPP and other washeries are located within 10km radius. The EIA should also include mitigative measures needed to minimize adverse environmental impacts.
- vii. A Study Area Map of the core zone as well as the 10km area of buffer zone showing major industries/mines and other polluting sources should be submitted. These maps shall also indicate the migratory corridors of fauna, if any and areas of endangered fauna; plants of medicinal and economic importance; any ecologically sensitive areas within the 10 km buffer zone; the shortest distance from the National Park/WL Sanctuary Tiger Reserve, etc. alongwith the comments of the Chief Wildlife Warden of the State Govt.
- viii. Data of one-season (non-monsoon) primary- base-line data on environmental quality of air (PM₁₀, PM_{2.5}, SO_x and NO_x, noise, water (surface and groundwater), soil be submitted.
- ix. The wet washery should generally utilize mine water only. In case mine water is not available, the option of storage of rain water and its use should be examined. Use of surface water and ground water should be avoided.
- x. Detailed water balance should be provided. The break-up of water requirement as per different activities in the mining operations vis-a-vis washery should be given. If the source of water is from surface water and/or ground water, the same may be justified besides obtaining approval of the Competent Authority for its drawl.
- xi. The entire sequence of mineral production, transportation, handling, transfer and storage of mineral and waste, if any, and their impacts on air quality should be shown in a flow chart with specific points where fugitive emissions can arise and specific pollution control/mitigative measures proposed to be put in place. The washed coal and rejects should be transport by train as far as possible. Road transport of washed coal and rejects should generally be avoided. In case, the TPP is within 10km radius, it should be through conveyer belt. If transport by rail is not feasible because of the topography of the area, the option for transport by road be examined in detail and its impacts along with the mitigation measures should be clearly brought out in EIA/EMP report.
- xii. Details of various facilities proposed to be provided in terms of parking, rest areas, canteen etc. to the personnel involved in mineral transportation, workshop and effluents/pollution load from these activities should be provided.
- xiii. Impacts of CHP, if any, on air and water quality should also be spelt out alongwith Action Plan.
- xiv. O.M. no. J-II013/25/2014-IA.I dated 11th August, 2014 to be followed with regard to CSR activities.
- xv. Details of Public Hearing, Notice(s) issued in newspapers, proceedings/minutes of Public Hearing, points raised by the general public and response/commitments made by the proponent along with the Action Plan and budgetary provisions be submitted in tabular form. If the Public Hearing is in the regional language, an authenticated English translation of the same should be provided. Status

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

GENERIC TOR FOR AN OPENCAST COALMINE PROJECT for EC

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

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

Sl. No.	Landuse	Within ML area (ha)	Outside ML area (ha)	Total
1.	Agricultural land			
2.	Forest land			
3.	Wasteland			

4.	Grazing land			
5.	Surface water bodies			
6.	Settlements			
7.	Others (specify)			
	TOTAL			

- (xii) Break-up of lease/project area as per mining plan should be provided.
- (xiii) Impact of changes in the land use due to the project if the land is predominantly agricultural land/forestland/grazing land, should be provided.
- (xiv) 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.
- (xv) 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.
- (xvi) 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.
- (xvii) 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.
- (xviii) 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.
- (xix) 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.
- (xx) Detailed water balance should be provided. The break-up of water requirement for the various mine operations should be given separately.
- (xxi) 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.
- (xxii) Impact of mining and water abstraction from the mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater

should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.

- (xxii) Impact of blasting, noise and vibrations should be given.
- (xxiii) Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided.
- (xxiv) Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop etc, management plan for maintenance of HEMM and other machinery/equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
- (xxiv) Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP/ Silo into wagons and trucks/tippers.
- (xxv) Details of waste OB and topsoil generated as per the approved calendar programme, and their management shown in figures as well explanatory notes tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use should be given. OB dump heights and terracing based on slope stability studies with a max of 28° angle as the ultimate slope should be given. Sections of final dumps (both longitudinal and cross section) with relation to the adjacent area should be shown.
- (xxvi) Efforts be made for maximising progressive internal dumping of O.B., sequential mining , external dump on coal bearing area and later rehandling into the mine void.--to reduce land degradation.
- (xxvii) Impact of change in land use due to mining operations and plan for restoration of the mined area to its original land use should be provided.
- (xxviii) Progressive Green belt and ecological restoration /afforestation plan (both in text, figures and in the tabular form as per the format of MOEFCC given below) and selection of species (native) based on original survey/land-use should be given.

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

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

* As a representative example

Table 2 : Stage Wise Cumulative Plantation

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

* As a representative example

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

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

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

(xxx) Flow chart of water balance should be provided. Treatment of effluents from workshop, township, domestic wastewater, mine water discharge, etc. should be provided. Details of STP in colony and ETP in mine should be given. Recycling of water to the max. possible extent should be done.

(xxxi) Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given.

- (xxxii) Risk Assessment and Disaster Preparedness and Management Plan should be provided.
- (xxxiii) Integration of the Env. Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.
- (xxxiv) Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
- (xxxv) Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
- (xxxvi) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
- (xxxvii) Corporate Environment Responsibility:
 - a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
 - d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- (xxxviii) Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of Public Hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.
- (xxxix) In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
- (xl) Status of any litigations/ court cases filed/pending on the project should be provided.
- (xli) Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.
- (xlii) Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval. NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.

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

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

GENERIC TORs FOR AN UNDERGROUND COALMINE PROJECT

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

S.N	ML/Project Land use	Area under Surface Rights(ha)	Area Under Mining Rights (ha)	Area under Both (ha)
1.	Agricultural land			
2.	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.

**4th EAC (THERMAL & COAL MINING PROJECTS) MEETING
SCHEDULED FOR 30th - 31st January, 2017**

AGENDA

**Venue: Bhramaputra, 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](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 and ensure the receipt of same.**
- iii. Non receipt of the project will lead to deferment of the project.**
- iv. Without this information, EAC has discretion to invite the proponent for the meeting.**
- v. Please also provide a hard copy of presentation to the EAC Members during the meeting.**
- vi. No consultant is permitted into the meeting who has no accreditation with Quality Council of India (QCI) /National Accreditation Board of Education and Training (NABET) as per the MoEF OM dated 2nd December, 2009.**

COAL MINING PROJECTS

Monday: 30th January, 2017

Time: 9.30 AM

- 8.1 Expansion of of 'Parsa East and Kanta Basan' Opencast Coal Mine (from 10 MTPA to 15 MTPA) and Expansion of Pit Head Coal Washery (from 10 MTPA to 15 MTPA) in total project area is 2711.034 ha of **M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd**, located in Hasdeo-Arand Coalfields in District Surguja (Chhattisgarh) – **(for Consideration of EC)****
- 8.2 Parsa Opencast Coal Mine Project (5 MTPA) & Pit Head Coal Washery (5 MTPA) in a total land area of 1252.447 ha of **M/s Rajasthan Rajya Vidyut Utpadan Nigam Limited (RRVUNL)** at Hasdo-Arand Coal Field, Udaipur & Premnagar Tehsil, Surguja & Surajpur Districts, Chhattisgarh State.- **(For consideration of TOR)****
- 8.3 Gare Palma Sector-I, Phase 1 coal mine project (Capacity 15.00 MTPA Opencast and 6.00 MTPA Underground in an ML area 5738.75 ha) of **M/s Gujarat State Electricity Corporation Limited (GSECL)** at District Raigarh, State Chhattisgarh.- **(For consideration of TOR)****

---LUNCH BREAK---

- 8.4 Proposed Pit Head Coking Coal Washery (3.5 MTPA) in Tasra Coal Block of **M/s Steel Authority of India Ltd.** located in Jharia Coalfields, District. Dhanbad, Jharkhand - **(For consideration of EC)**
- 8.5 Dipka Opencast expansion Project from 31.00 MTPA to 35.00 MTPA in an ML area 1999.293 Ha of **M/s South Eastern Coalfield Limited** at district Korba (Chhatisgarh).- **(For consideration of TOR)**
- 8.6 Gevra opencast expansion project from 41.00 MTPA to 45.00 MTPA Phase –1 , 70.00 MTPA Phase – 2 in an ML area 4781.788 Ha of **M/s South Eastern Coalfield Limited** at district Korba (Chhatisgarh).- **(For consideration of TOR)**
- 8.7 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 further consideration of TOR)**
- 8.8 Moher & Moher Amlori Extension coal blocks project (expansion from 16 MTPA to 20 MTPA, in area of 2037 ha; [15.39 Km² (Moher Block –10.70 Km² & Mohe rAmlohri Extension Block - 4.69 Km²)] of **M/s Sasan Power Ltd.**, located at district. Singrauli, (Madhya Pradesh) - **(For Consideration of Amendment/Modification in EC)**

Tuesday: 31st January, 2017

Time: 9.30 AM

- 8.9 Expansion of land area from 128.79 ha to 278.683 ha of Ghonsa OCP of capacity 0.60 MTPA by **M/s Western Coalfields Ltd located** in District Yavatmal (Maharashtra) - **(For further consideration of EC)**
- 8.10 Expansion under 7(ii) of EIA Notification, 2006 of Naheriya Underground coal mine project from 0.36 MTPA to 0.54 MTPA of **M/s Western Coalfields Limited** within the existing ML area of 300 ha located in tehsil Parasia, District Chhindwara (Madhya Pradesh) - **(For further consideration of EC)**
- 8.11 Mugoli Nirguda Extension Deep OC Mine Project from 4.0 MTPA to 4.375 MTPA with increase in land area from 818.05 ha to 1317.55 ha of M/s Western Coalfields Limited located in district Yavatmal (Maharashtra) - **(For consideration of TOR)**
- 8.12 Coal Washery of 10 MTPA capacity in an area of 39.35 Ha by **M/s Mahanadi Coalfields Limited** located at Ib Valley in Lakhanpur area in district Jharsuguda (Odisha)- **(For further consideration of EC)**

---LUNCH BREAK---

- 8.13 Cluster no. 9 group of 15 mines project of (6.25 MTPA (Normative) to 8 MTPA (Peak) in an ML area of 7145.4 ha **M/s Eastern Coalfield Limited, located at distt. Burdwan, West Bengal.- (For Consideration of Re-assessment of the EC capacity)**

- 8.14 Expansion under 7(ii) of EIA Notification, 2006 of Bellampalli OC Mine Extension Project – II (from 0.40 MTPA to 1.00 MTPA in an ML area of 191.98 ha of **M/s Singareni Collieries Company Ltd.**, located in village Abbapur, Mandal Tandur, District Adilabad (Telangana) **-(For further consideration of EC)**
- 8.15 Kistaram Opencast Project of (2.00 MTPA in ML area of 435.68 Ha of **M/s The Singareni Collieries co. Limited**, located at dist. Khammam **(Telangana) - (For further consideration of EC)**
- 8.16 Discussion on any other item
